**European Union Aviation Safety Agency** 



**Opinion No 04/2024** 

in accordance with Article 76(1) of Regulation (EU) 2018/1139

### New air mobility

Continuing airworthiness rules for electric- and hybrid-propulsion aircraft and other non-conventional aircraft (Subtask 1)

Gyroplanes: flight crew licensing for private pilot licences and non-commercial operations conducted in visual flight rules by day and by night (Subtask 2)

RMT.0731 — SUBTASKS 1 & 2

#### EXECUTIVE SUMMARY

The objective of this Opinion is to support the development of new technologies and non-conventional aircraft, as well as the competitiveness of the EU industry in this regard.

The current common European regulatory framework for civil aviation safety, as established by Regulation (EU) 2018/1139, was initially designed for conventional aeroplanes, helicopters, balloons, airships and sailplanes, and assumes that propulsion is mostly provided by piston or turbine engines using fossil fuel. The introduction of new technologies and air transport concepts requires that regulatory framework to be redesigned.

This Opinion proposes amendments to Annexes I (Part-M), II (Part-145), III (Part-66), IV (Part-147), Vb (Part-ML) and Vd (Part-CAO) to Commission Regulation (EU) No 1321/2014 to address the regulatory gaps identified regarding non-conventional aircraft (i.e. aircraft other than aeroplanes, helicopters, balloons, airships and sailplanes) or aeroplanes or helicopters with a power plant other than a piston engine or turbine, e.g. where existing requirements are unnecessarily explicit regarding the list of aircraft categories or power plants considered. Further, new Part-66 training and experience requirements are proposed that would entitle privileges for the maintenance of these aircraft. Finally, it proposes to remove the existing alleviation using a piston engine as a discriminant of a simple aircraft to make the regulation more technology-agnostic.

Furthermore, new requirements are proposed for gyroplanes regarding flight crew licensing (Annex I (Part-FCL) to Commission Regulation (EU) No 1178/2011) and non-commercial operations (NCO) (Annexes I (Definitions) and VII (Part-NCO) to Commission Regulation (EU) No 965/2012) with gyroplanes conducted in visual flight rules by day and by night. According to Regulation (EU) 2018/1139, gyroplanes with a maximum take-off mass (MTOM) of more than 600 kg or with more than two seats fall within the scope of the common European rules in the field of civil aviation. However, there is a lack of suitable and appropriate European rules for the operation of such gyroplanes. This hinders both their introduction and operation, and the competitiveness of the EU industry that develops such gyroplanes.

<b>REGULATIONS TO BE AMENDED</b>	ED DECISIONS TO BE AMENDED/ISSUED
Regulations (EU) Nos <u>1321/2014</u> , <u>1178/2011</u> and <u>965/2012</u>	n/a

#### AFFECTED STAKEHOLDERS

National competent authorities; Part-145, Part-147, Part-CAMO and Part-CAO approved organisations, holders of licences issued under Part-66, type-certificate holders, and applicants for any of these approvals/licences/certificates; pilots; flight instructors; flight examiners; air operators; training organisations for gyroplanes

WORKING METHOD(S)						
Development	Impact assessment(s)	Consultation				
Subtask 1 & 2: by EASA with external support	Light	NPA — Public				

#### Related documents / information

- ToR RMT.0731 - New air mobility | EASA (europa.eu)

- NPA 2021-12 - New air mobility | Subtask 2 - Gyroplanes

- <u>NPA 2021-15 New air mobility | Subtask 1 Continuing airworthiness rules</u>
- CRD 2021-12; CRD 2021-15 (<u>Comment Response Documents | EASA (europa.eu</u>))

PLANNING MILESTONES: Refer to the latest edition of EPAS Volume II.



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#### 1. About this Opinion

#### **1.1.** How this regulatory material was developed

The European Union Aviation Safety Agency (EASA) identified the need to support the introduction and development of new technologies and air transport concepts (from multimodal to autonomous vehicles) for electric- and hybrid-propulsion aircraft and other non-conventional aircraft, and identified as well the lack of a suitable European regulatory framework for the operation of gyroplanes. The issue is further described in Chapters 2 and 3.

EASA, after having assessed the impacts of the possible intervention actions and having consulted those assessments with its Advisory Bodies, identified rulemaking as the necessary and appropriate intervention action.

This rulemaking activity is included in the 2024 edition of *Volume II* of the European Plan for Aviation Safety (EPAS)<sup>1</sup> under Rulemaking Task (RMT).0731:

- Subtask 1: continuing airworthiness rules for electric- and hybrid-propulsion aircraft and other nonconventional aircraft,
- Subtask 2: gyroplanes: flight crew licensing for private pilot licences and non-commercial operations conducted in visual flight rules by day and by night.

EASA developed the regulatory material in question in line with Regulation (EU) 2018/1139<sup>2</sup> (the Basic Regulation) and the Rulemaking Procedure<sup>3</sup>, as well as in accordance with the objectives and working methods described in the Terms of Reference (ToR)<sup>4</sup> for this RMT.

Regarding Subtask 1, EASA developed the regulatory material taking also into account advice from the Member States' Advisory Body (MAB).

Regarding Subtask 2, EASA developed the regulatory material in question with the support of external experts, including support from a national competent authority (NCA), which provided the necessary input as regards gyroplane-related expertise.

The draft regulatory material was publicly consulted in accordance with the ToR for this RMT as detailed below:

- Subtask 1: NPA 2021-15<sup>5</sup>, publicly consulted from 21 December 2021 until 4 April 2022.

<sup>&</sup>lt;sup>5</sup> <u>NPA 2021-15 - New air mobility | Subtask 1 — Continuing airworthiness (CAW) rules for electric and hybrid propulsion</u> <u>aircraft and other non-conventional aircraft | EASA (europa.eu)</u>



<sup>&</sup>lt;sup>1</sup> <u>European Plan for Aviation Safety (EPAS) 2024 - 13th edition | EASA (europa.eu)</u>

<sup>&</sup>lt;sup>2</sup> 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) (http://data.europa.eu/eli/reg/2018/1139/oj).

<sup>&</sup>lt;sup>3</sup> EASA MB Decision No 01-2022 on the Rulemaking Procedure, repealing MB Decision 18-2015 (by written procedure) | EASA (europa.eu)

<sup>&</sup>lt;sup>4</sup> <u>ToR RMT.0731 - New air mobility | EASA (europa.eu)</u>

— Subtask 2: NPA 2021-12<sup>6</sup>, publicly consulted from 15 November 2021 until 28 January 2022.

Comments were received from interested parties, including NCAs, aircraft manufacturers, pilots, and operators. EASA reviewed the comments received during the public consultations and duly considered them for the preparation of the regulatory material presented in this Opinion. Particularly for Subtask 1, EASA organised focused meetings to discuss some of the comments received during the public consultation, as an additional source of input to prepare this Opinion.

Information on the associated draft AMC and GM in respect of Subtask 1: Following stakeholder feedback received during the public consultation of NPA 2021-15, EASA had to make some significant changes to the proposed requirements for which the proposed associated AMC and GM had to be adapted. Therefore, EASA plans to launch a focused consultation with Member States on the amended AMC and GM. The draft AMC and GM will be made available before the draft implementing regulation is tabled for adoption.

EASA published the draft AMC and GM for Subtask 2 which are intended to be issued to support the application of the draft Commission Implementing Regulation proposed in this Opinion.

#### **1.2.** Structure of the explanatory note to this Opinion

This Opinion contains proposals for two very different subjects:

- Subtask 1: Continuing airworthiness rules for electric- and hybrid-propulsion aircraft and other non-conventional aircraft.
- Subtask 2: Gyroplanes: flight crew licensing for private pilot licences and non-commercial operations conducted in visual flight rules by day and by night.

Despite not being easily identifiable from the title of Subtask 1, it also covers gyroplanes when it comes to continuing airworthiness requirements for 'other non-conventional aircraft'. Therefore, gyroplane operations are fully covered with Subtask 1 and Subtask 2.

The explanatory part of this Opinion contains a dedicated chapter per subtask to describe why EASA decided to propose regulatory amendments (i.e. Chapter 2 for Subtask 1, and Chapter 3 for Subtask 2).

In Chapter 4, the expected benefits and drawbacks of the proposals stemming from both subtasks are described, divided into two sections, one per subtask.

Chapter 5 contains the proposed regulatory material for Subtask 1, and Chapter 6 contains the proposed regulatory material for Subtask 2.

Chapters 7 'Monitoring and evaluation', 8 'Proposed actions to support implementation' and 9 'References' are again divided into two sections each, one per subtask.

#### 1.3. The next steps

The Opinion is submitted to the European Commission which, based on the Opinion's content, shall decide whether to adopt the proposed amendments to the EU regulations.

<sup>&</sup>lt;sup>6</sup> <u>NPA 2021-12 - New air mobility</u> | Subtask 2 — Gyroplanes: Flight crew licensing for private pilot licences and noncommercial operations conducted in visual flight rules by day and by night | EASA (europa.eu)



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In parallel with the European Commission's adoption process, EASA will continue working on the development of the associated draft AMC and GM. EASA will adapt, as necessary, the draft AMC and GM to the potential changes that may be introduced in the final text of the subject EU regulations during the adoption process. The Decision containing the associated final AMC and GM will be published by EASA following the publication of the subject draft implementing regulation by the European Commission and its publication in the *Official Journal of the European Union*. When issuing the associated Decision, EASA will also provide feedback to the commentators and information to the public on who engaged in the process and/or provided comments on the draft AMC and GM during the consultation, which comments were received, how such engagement and/or consultation was used in rulemaking, and how comments were considered.



### 2. Continuing airworthiness rules for electric- and hybrid-propulsion aircraft and other non-conventional aircraft (Subtask 1) | In summary — why and what

#### 2.1. Why we need to act — issue/rationale

Existing continuing airworthiness requirements are not suited for *non-conventional aircraft* (i.e. aircraft other than aeroplanes, helicopters, balloons, airships, sailplanes) or aircraft using *non-conventional propulsion* (e.g. other than piston or turbine engines), most likely because non-conventional aircraft were not considered when the requirements were developed. Some recent industry projects for new aircraft fall into the non-conventional category (aircraft and/or power plants).

#### 2.1.1. Description of the issue

Continuing airworthiness requirements are sometimes too prescriptive and, in some cases, they apply to *conventional* aircraft while making no reference whatsoever to non-conventional aircraft. Therefore, the requirements are not fit for *non-conventional* aircraft. The situation is similar as regards aircraft power plants as, in most cases, only piston engines and turbines are covered in the requirements.

Also, the definition of 'complex motor-powered aircraft' (CMPA), which is used as a discriminant to identify aircraft subject to Part-M, includes 'tilt-rotor aircraft'. The definition of 'CMPA' implies that all tilt-rotor aircraft are subject to Part-M, regardless of how big or complex they are.

A different situation arises in certain scenarios for which the requirements provide for alleviation intended to be applicable for small aircraft. Often, the alleviation is introduced by referring to '... in the case of piston-engine aircraft ...' or similar formulation. This scenario does not cater for other simple aircraft that may not have a piston-engine power plant and that could also qualify for the same alleviation, resulting in a disadvantaged situation. A similar case to this one is, for instance, the definition of aircraft subject to Part-ML.

Lastly, the licensing system of Part-66 caters again, for certain privileges, only for conventional aircraft or aircraft with piston engine/turbine as power plant (conventional power plant). Different licence categories are established for each of those aircraft. For non-conventional aircraft there are no defined aircraft maintenance licence (AML) subcategories and, therefore, the current subcategories do not permit the release to service of certain maintenance work performed on aircraft that are not addressed in any of the existing subcategories/privileges (for more information on this, please refer to Chapter 4 'Impact assessment (IA)' of NPA 2021-15<sup>7</sup>).

The first aircraft for which it was identified that the requirements were not totally suitable (identified regulatory gap) was the electric variant of Pipistrel Virus SW121, a small aeroplane with an electric battery and engine as a power plant, that obtained an EASA Type Certificate for the electric variant (Virus SW 128) in June 2020. For this aircraft, some Members States granted an exemption in

<sup>&</sup>lt;sup>7</sup> <u>NPA 2021-15 - New air mobility | Subtask 1 — Continuing airworthiness (CAW) rules for electric and hybrid propulsion aircraft and other non-conventional aircraft | EASA (europa.eu)</u>



accordance with Article 71 'Flexibility provisions' of the Basic Regulation, allowing users to derogate from compliance with certain applicable requirements while imposing on them some mitigating measures tailored to a small electric aeroplane.

#### 2.1.2. Who is affected by the issue

Any person or organisation, authorities included, that shall apply the continuing airworthiness rules in respect of new air mobility aircraft are impacted by the issue.

#### 2.1.3. How could the issue evolve

As existing continuing airworthiness rules do not apply to non-conventional aircraft, not proposing rules that would cater for these aircraft would imply a situation of legal uncertainty for those aircraft and the stakeholders concerned. Operations with such aircraft would only be allowed as an exemption to the rule, if and when permitted under the Basic Regulation framework for exemptions.

#### 2.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. The proposals contained in this Opinion are expected to contribute to achieving the overall objectives by addressing the issues described in Section 2.1.

The specific objective of this Opinion is to establish the necessary legal framework in order to:

- ensure the continuing airworthiness of non-conventional aircraft and of aircraft with nonconventional power plants in instances where regulatory gaps have been identified;
- more generally, support the development of new technologies;
- ensure a smooth and flexible transition of AML holders in the current licence subcategories to obtain certification privileges for the maintenance of non-conventional aircraft; and
- support the competitiveness of the EU industry in this regard.

The above-mentioned legal framework is expected to provide for a level playing field while maintaining a high uniform level of civil aviation safety in the Union.

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

It is proposed to close the gaps that currently exist in Commission Regulation (EU) No 1321/2014<sup>8</sup> (the CAW Regulation), which pose compliance difficulties in relation to the management of manned aircraft which are not conventional or have a power plant other than a piston engine or a turbine: where the requirement is explicit regarding certain aircraft categories or power plants, but it does not consider non-conventional aircraft or aircraft with non-conventional power plants — for instance, when defining permitted ratings for organisation approvals — the proposal is to amend the requirement to also refer to these aircraft / power plants. This proposal would not have any negative impact since the applicable requirements would not be specific to these aircraft.

<sup>&</sup>lt;sup>8</sup> Commission Regulation (EU) No 1321/2014 of 26 November 2014 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks (OJ L 362, 17.12.2014, p. 1) (<u>http://data.europa.eu/eli/reg/2014/1321/oj</u>).



Furthermore, EASA has assessed the existing alleviation in the requirements applicable to pistonengine aircraft and considered whether such alleviation should be extended to other small/simple aircraft with other power plants due to the lower risk entailed. Certain amendments are proposed accordingly.

Also, the proposal caters for the consistent use of the terms 'helicopter' and 'rotorcraft' across the regulation by mainly using the term 'helicopter', except in some areas for which the term 'rotorcraft' is appropriate. Part-66 licences in category B1 are also affected by the term used. Contrary to what it was proposed in NPA 2021-15, the B1.3 and B1.4 licence subcategories shall relate to 'helicopters'. This was discussed based on the comments received during the NPA public consultation and the decision was to not amend the Basic Knowledge Syllabus for obtaining these licences.

Lastly, regarding the maintenance licensing system (Part-66), this Opinion proposes amendments to Part-66 that would permit licence holders to obtain certification privileges for the release to service of maintenance of conventional aircraft with an electric power plant and of any non-conventional aircraft. Two different strategies are proposed: one for small aeroplanes with an electric power plant and another one for non-conventional aircraft. For more details, please see Section 4.1 and the proposed amending text in Chapter 5.

In the context of aiming to achieve all the above, there is also the intention to not affect the applicable processes and requirements when aiming to obtain a licence for an aircraft already covered by the applicable rules.

*Note:* Considering that, as per Article 4(4) of the CAW Regulation, organisations approved in accordance with Subpart F or Subpart G of Annex I (Part-M) to that Regulation ceased to exist after 24 March 2022, this Opinion does not propose amendments to these Subparts or to any other point that only affects these Subparts.

#### Legal basis

Article 17(1)(b) and (d) of the Basic Regulation empowers the Commission to adopt implementing acts laying down detailed provisions concerning the rules and procedures for the issuing of approvals to organisations responsible for the maintenance and continuing airworthiness of aircraft and organisations involved in the training of personnel and for the issuing of licences of personnel responsible for the release of an aircraft after maintenance.



#### 2.4. What are the stakeholders' views

#### 2.4.1. General

EASA sought stakeholders' views on the draft regulatory material via the public consultation of NPA 2021-15. 418 comments from 41 commentators were received.

The commentators are grouped as follows:

Category	Number of commentators	Number of comments
Industry	13	115
Individuals	4	22
Associations	12	128
National competent authorities	12	153
Total	41	418

The comments provided were placed on the following NPA chapters:

NPA 2021-15	Number of comments
'General' and Chapters 1 and 2	67
CAW rules (Chapter 3)	326
Other (Chapters 4 to 8)	25
Total	418

#### 2.4.2. Main comments received on NPA 2021-15

- (a) As explained in the NPA, the objective of the proposed amendments was to close the identified regulatory gaps by means of technology-agnostic proposals while ensuring that already regulated stakeholders would not be undesirably affected. This led to grammatically complex sentences; for instance, in points M.A.201 and ML.A.201 and the corresponding GM. Many commentators stated that the proposal is very hard to follow, and asked for simplification. At the Opinion stage, the proposal is simplified through the introduction of new terms/definitions and the use of simpler sentences.
- (b) To avoid overcomplicating Part-66 aircraft licence categories, the MAB requested the creation of only one new licence, i.e. the B1.E licence, in order to cover any electric aeroplane and rotorcraft. This concept has been very much contested by the NPA commentators since to cover such a wide scope of aircraft types, the basic syllabus proposed in the NPA for the B1.E licence subcategory covered all systems of both aeroplanes and rotorcraft (resulting also in the duration of the corresponding training being too long). Commentators considered this as going in the wrong direction. After further focused discussions with some NPA commentators, the concept has now been revised and the new B1.E licence proposed with the Opinion is limited to small electric aeroplanes only. As regards obtaining a Part-66 licence suitable for other



electric aircraft, an existing licence category shall be used, together with the corresponding type rating endorsement, as it is currently required for any Group 1 aircraft.

CRD 2021-15, containing the comments received during the consultation and how EASA reacted to them, is expected to be published shortly after the publication of this Opinion.

#### 2.4.3. MAB advice sought in accordance with Article 6(9) of the Rulemaking Procedure

After consideration of the comments to the NPA and subsequently adapting the strategy for the new requirements, EASA sought again the advice of the MAB, in accordance with Article 6(9) of MB Decision No 01-2022<sup>9</sup>, with regard to potentially and/or substantially divergent Member State views on the matter.

Member States did not have comments on the main principles that were presented to the MAB. The proposed detailed text was developed considering the input from representatives from the German and French NCAs.

#### 2.5. Other relevant information

Please, note that since the public consultation of the proposed amendments through NPA 2021-15, Commission Implementing Regulation (EU) 2023/989<sup>10</sup> and ED Decision 2023/019/R<sup>11</sup> have been published and used as the basis for the amendments put forward in this Opinion. Therefore, the basis for the proposed amendments contained in NPA 2021-15 and in this Opinion differs.

<sup>&</sup>lt;sup>11</sup> ED Decision <u>2023/019/R - Review of Part-66 | New training methods and new teaching technologies | EASA (europa.eu)</u>



EASA MB Decision No 01-2022 on the Rulemaking Procedure, repealing MB Decision 18-2015 (by written procedure) EASA (europa.eu)

<sup>&</sup>lt;sup>10</sup> Commission Implementing Regulation (EU) 2023/989 of 22 May 2023 amending Regulation (EU) No 1321/2014 on the continuing airworthiness of aircraft and aeronautical products, parts and appliances, and on the approval of organisations and personnel involved in these tasks, and correcting that Regulation (OJ L 135, 23.5.2023, p. 53) (http://data.europa.eu/eli/reg impl/2023/989/oj).

#### 3. Gyroplanes: flight crew licensing for private pilot licences and noncommercial operations conducted in visual flight rules by day and by night (Subtask 2) | In summary — why and what

#### **3.1.** Why we need to act — issue/rationale

#### 3.1.1. Description of the issue

According to the Basic Regulation, gyroplanes<sup>12</sup> with a maximum take-off mass (MTOM) of more than 600 kg or that have more than two seats fall within the scope of the common European rules in the field of civil aviation<sup>13</sup>. Single- and two-seater gyroplanes with a MTOM not exceeding 600 kg are still regulated by national rules.

The airworthiness of the design of gyroplanes that fall within the scope of the common European rules may be certified according to Commission Regulation (EU) No 748/2012<sup>14</sup>, but no suitable rules exist in the following domains:

- Aircrew (Commission Regulation (EU) No 1178/2011 (the Aircrew Regulation)<sup>15</sup>), and
- Air Operations (Commission Regulation (EU) No 965/2012 (the Air OPS Regulation)<sup>16</sup>).
- Note 1: Where no suitable rules exist in the Continuing Airworthiness (CAW) domain, this is addressed by Subtask 1 (see Chapter 2).
- *Note 2:* The regulatory proposal is an enabler for the market development of gyroplanes with a MTOM of more than 600 kg or with more than two seats. EASA is currently in the process of issuing an EASA type certificate (TC) to the PAL-V gyroplane manufacturer<sup>17</sup>. The applicant targets for a TC by Q4/2025.

As it is difficult to estimate what could be the market size of such a gyroplane type under the Basic Regulation, some very high-level information is provided on the number of pilots that fly single- and two-seater gyroplanes with a MTOM not exceeding 600 kg. According to the information provided by 10 EASA Member States in 2019, approximately 3 000 pilots who are trained by approximately 300 flight instructors fly a gyroplane under national rules in those countries.

<sup>&</sup>lt;sup>17</sup> https://www.pal-v.com/



<sup>&</sup>lt;sup>12</sup> 'Gyroplane' means a heavier-than-air aircraft that is supported in flight chiefly by one or more non-engine-driven rotors.

<sup>&</sup>lt;sup>13</sup> Gyroplanes fell within the scope of Annex II to Regulation (EC) No 1592/2002 (the 'first Basic Regulation'). When said Regulation was repealed and replaced by Regulation (EC) No 216/2008, Annex II excluded gyroplanes with a MTOM of less than 560 kg. According to point 1(f) of Annex I to the current Basic Regulation, single- and two-seater gyroplanes with a MTOM not exceeding 600 kg are not subject to that Regulation. Such aircraft have to comply with the applicable national rules of the respective Member States (MSs).

<sup>&</sup>lt;sup>14</sup> 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 (recast) (OJ L 224, 21.8.2012, p. 1) (http://data.europa.eu/eli/reg/2012/748/oj).

<sup>&</sup>lt;sup>15</sup> Commission Regulation (EU) No 1178/2011 of 3 November 2011 laying down technical requirements and administrative procedures related to civil aviation aircrew pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 311, 25.11.2011, p. 1) (http://data.europa.eu/eli/reg/2011/1178/oj).

<sup>&</sup>lt;sup>16</sup> Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1) (http://data.europa.eu/eli/reg/2012/965/oj).

In summary — why and what

No comprehensive data is available at global level; however, the gyroplane training industry started in 2013 a collaboration project known as 'The International Association of Professional Gyroplane Training' (IAPGT)<sup>18</sup>. In 2023, there were 4 619 members (pilots and flight instructors) from 122 countries. The IAPGT has strongly supported the development of the FCL requirements with regard to gyroplanes.

#### **3.1.2.** Who is affected by the issue

The affected stakeholders are manufacturers, pilots, flight instructors, flight examiners, air operators, training organisations for gyroplanes, and NCAs.

#### **3.1.3.** How could the issue evolve

The lack of suitable European rules for the operation of gyroplanes with a MTOM of more than 600 kg and with more than two seats hinders their introduction and operation, thus hindering the development and competitiveness of the EU industry that is willing to develop such gyroplanes.

#### 3.2. What we want to achieve — objectives

The overall objectives of the EASA system are defined in Article 1 of the Basic Regulation. This Opinion will contribute to the achievement of the overall objectives by addressing the issues outlined in Section 3.1.

The specific objectives of this Opinion are to:

- more generally, support the development of new technologies and non-conventional aircraft;
- establish the necessary legal framework by introducing rules for flight crew licensing and for the operation of gyroplanes, thereby ensuring a uniform application of the essential requirements of the Basic Regulation; and
- support the competitiveness of the EU industry in this regard.

#### **3.3.** How we want to achieve it — overview of the amendments

For the introduction of common European requirements for the very first time into the Aircrew and the Air OPS Regulations, which will specifically apply to gyroplanes, a two-step approach is followed, according to market needs:

- (a) The scope of this Opinion is limited to non-commercial air operations in VFR Day/Night, and the corresponding aircrew requirements for private pilots.
- (b) When the need arises, the scope of the Aircrew and the Air OPS Regulations may be extended later to include also commercial air operations with gyroplanes.

Section 2.3 'How we want to achieve it — overview of the proposed amendments' of NPA 2021-12 gave an overview of the amendments proposed in this Opinion and how they are intended to achieve the objectives described above. In addition, this overview is complemented below with an overview

<sup>&</sup>lt;sup>18</sup> <u>https://www.iapgt.org/</u>



of the amendments proposed and which were introduced following the public consultation of that NPA.

This Opinion proposes new requirements for aircrews regarding private pilot licences (PPL) for gyroplanes and non-commercial air operations (NCO) in VFR Day/Night.

Since today operations with gyroplanes are not addressed by the Aircrew and the Air OPS Regulations, a full set of new requirements has to be developed. However, a gyroplane is a well-known type of aircraft that combines aeroplane and helicopter characteristics. In addition, it has characteristics that are specific only to gyroplanes.

Therefore, the approach was, firstly, to define the existing pilot licencing and NCO aeroplane and helicopter requirements which are also relevant to gyroplanes and secondly to develop gyroplane-specific requirements.

When developing the operational requirements, the approach was to introduce into the Air OPS Regulation a definition for 'rotorcraft', encompassing both helicopters and gyroplanes. This allows to have minimal changes by replacing 'helicopter' with 'rotorcraft' in most of the cases.

#### **3.3.1.** Highlights of the gyroplane specificities in the proposed regulation

#### 3.3.1.1 The Aircrew Regulation

#### 3.3.1.1.1 Licensing scheme

At the NPA stage (Section 2.3.1 'General approach'), when developing the proposal for the private pilot licence (gyroplane) (PPL(G)), the intention was to align with the PPL(A/H) considering that a gyroplane is an aircraft that uses the same airfields and the same airspace as aeroplanes and helicopters. This would also enable the drafting of the CPL(G) requirements when the need would arise in the future. The minimum amount of 45 training hours was chosen to be in line with the training requirements for the PPL(A/H). However, several commentators highlighted that too demanding training hours' requirements, which would not be proportionate for the gyroplane pilot needs, would result in pilots not being willing to fly gyroplanes.

After the review of the comments, it has been decided to apply the balloon pilot licence (BPL) principles when establishing the requirements for the gyroplane pilot licence (GPL) for leisure/private operations.

To summarise:

- Create a GPL within Part-FCL Subpart C Private Pilot Licence.
- Keep the training syllabus as is, in line with the widely established industry standard. This will
  facilitate the conversion from national licences (based on the industry standard) into EU licences
  through conversion reports.
- Establish a requirement for the GPL training course to include at least 30 hours of flight instruction, in relation to the 30 exercises included in the GPL training syllabus (at AMC level) and considering the positive experience gained with that syllabus under national regulations; this would be an adequate standard for future leisure pilots.



- Use the system of recency used for the light aircraft pilot licence (LAPL) instead of a limited duration of the licence with expiring ratings.
- Use the Class 2 medical certificate as intended for the BPL and the sailplane pilot licence (SPL) and set out in NPA 2021-12.

A GPL keeps open the possibility to add further requirements to acquire commercial privileges as is the case with the BPL, without creating an additional CPL(G). The straightforward route from private to commercial pilot can be catered for with a minimum of additional regulation and within a single licence.

#### 3.3.1.1.2 MTOM, transitional period and credit hours

The transitional measures of the proposed Article 4g, as presented in this Opinion, are intended to expand the pool of available training aircraft in the introductory phase of Part-FCL gyroplane requirements. By this, flight instructors and flight examiners will be able to faster gain Part-FCL gyroplane training, testing and checking experience, which is important in the context of points FCL.900(b)(2) and FCL.1000(b)(2).

After reviewing the comments on the MTOM limit in the NPA phase, there is only a marginal change made. In order to expand the pool of available training aircraft in the introductory phase of Part-FCL gyroplane requirements, it was agreed to decrease the MTOM limit from 500 kg to 450 kg as a criterion for gyroplanes that would fall within the scope of the proposed Article 4g. This marginal change enables more training aircraft to be used according to Article 4g while ensuring that, also in the implementation phase of Part-FCL gyroplane requirements, training will be conducted solely on gyroplanes whose MTOM ensures characteristics similar to gyroplanes that fall within the scope of the Basic Regulation (i.e. gyroplanes above 600 kg or with more than two seats).

#### 3.3.1.1.3 Operational procedures and flight performance and planning

In Section 2.3.2.1 'The Aircrew Regulation' of the NPA, in the paragraph on 'Theoretical exam questions', differences were identified between the PPL(A) and the PPL(H) as regards the theoretical exam on 'operational procedures' and 'flight performance and planning'. However, these differences do not apply to gyroplanes, and in the NPA the assumption was that either the aeroplane or the helicopter exams on these subjects could be completed for obtaining a GPL.

Based on the comments received on the NPA and the decision to implement a GPL scheme, stakeholders pointed out that although the actual learning objectives are common for both aeroplanes and helicopters, there is a difference in the way they are presented in the training material for aeroplanes and helicopters; for instance, the diagrams and terminology are different. It would, therefore, be appropriate to have gyroplane-specific diagrams in both the training material and the exams. With this in mind, it was considered that having dedicated gyroplane-specific versions would be beneficial and would prevent that student pilots get confused. It would also mean that student pilots would no longer have to learn the additional items specific to aeroplanes or helicopters that are not relevant to gyroplanes.

#### 3.3.1.1.4 Privileges for gyroplane classes and types



This was a pending item in the NPA, which is now proposed to be addressed as follows: new Part-FCL requirements for gyroplanes will address privileges for both gyroplane classes and types ('privileges' instead of 'ratings', as is the case for the LAPL), since today it cannot yet be fully anticipated whether class privileges will be appropriate to cover all future gyroplane developments. For the introduction of gyroplane flight crew licensing requirements in Part-FCL, it is proposed to establish the following categorisation:

- (a) class privileges for single-propeller gyroplanes whose single centric propulsion unit may be powered by different engine designs (consistency with the redefinition of the SEP aeroplane class as proposed with Opinion No 05/2023<sup>19</sup>; and
- (b) type privileges for other gyroplanes, as determined during the certification process in accordance with the CAW Regulation.

#### **3.3.1.1.5** Deferred applicability date

A deferred applicability date of 1 year is proposed to allow Member States and NCAs to prepare for the implementation of the new FCL requirements, especially due to the time it takes to adapt related IT systems to the new type of licence (i.e. the GPL).

#### 3.3.1.2 The Air OPS Regulation and non-commercial air operations in VFR Day/Night

#### 3.3.1.2.1 Gyroplane-specific requirement

There is a proposed amendment to the Air OPS Regulation regarding a gyroplane-specific requirement, i.e. point NCO.SPEC.172 'Performance and operating criteria — gyroplanes'. When operating a gyroplane at a height lower than 150 m (500 ft) above a non-congested area, for the operation of a gyroplane that is not able to sustain level flight in the event of a critical engine failure, the pilot-in-command will have to establish operational procedures and brief crew members in the event of a forced landing.

#### 3.3.1.2.2 Designation for requirements in SUBPART D 'INSTRUMENTS, DATA AND EQUIPMENT' of Part-NCO

As regards the scope of SUBPART D 'INSTRUMENTS, DATA AND EQUIPMENT' of Part-NCO, and following the public consultation of NPA 2021-12, the vast majority of the commentators agreed with the NPA proposal, i.e. to keep the designation unchanged by keeping 'H' for helicopter instead of replacing it with 'R' for rotorcraft, even though, in running text, 'helicopter' is replaced by 'rotorcraft'.

#### Example:

'NCO.IDE.H.100 Instruments and equipment — general', instead of replacing it by 'NCO.IDE.R.100 ...'

Besides, where relevant, the term 'helicopter' has been changed to 'rotorcraft' which makes the requirements applicable to helicopters and gyroplanes. When a requirement is only applicable to gyroplanes, this is clearly indicated in the text.

<sup>&</sup>lt;sup>19</sup> Opinion No 05/2023 - Cruise relief co-pilots | Regular update of flight crew licensing and medical requirements | Better flight crew licensing requirements for general aviation | EASA (europa.eu)



This is done to minimise the impact of the amendments on helicopter operators — that is, by avoiding the need to update references in procedures and manuals.

#### 3.3.1.2.3 Definition of 'rotorcraft'

The definition of 'rotorcraft' is the one proposed in Commission Implementing Regulation 2024/1111<sup>20</sup> amending the Air OPS Regulation: 'rotorcraft' means a power-driven, heavier-than-air aircraft that depends principally for its support in flight on the lift generated by up to two rotors.)

#### 3.3.2. Legal basis

Article 23(1)(a) of the Basic Regulation empowers the Commission to adopt, in compliance with the essential requirements on aircrew set out in Annex IV to that Regulation, implementing acts laying down detailed provisions concerning the different categories of pilot licences and associated ratings and certificates.

Article 31(1)(a) of the Basic Regulation empowers the Commission to adopt implementing acts laying down detailed provisions concerning the specific rules and procedures for the operation of aircraft in compliance with the essential requirements contained in Annex V to that Regulation.

#### 3.4. What are the stakeholders' views

#### 3.4.1. General

EASA sought stakeholders' views on the draft regulatory material via the public consultation of NPA 2021-12.

151 comments from 18 commentators were received. The commentators are grouped as follows:

Category	Number of commentators	Number of comments
Industry — organisations represented in the SAB	2	5
Industry — other organisations	3	12
Individuals	4	32
National competent authorities	9	102
Total	18	151

The comments provided were submitted on the following sections:

NPA 2021-12	Number of comments
General (Chapters 1 and 2)	43
FCL rules (Section 3.1)	89

<sup>&</sup>lt;sup>20</sup> Commission Implementing Regulation (EU) 2024/1111 of 10 April 2024 amending Regulation (EU) No 1178/2011, Implementing Regulation (EU) No 923/2012, Regulation (EU) No 965/2012 and Implementing Regulation (EU) 2017/373, as regards the establishment of requirements for the operation of manned aircraft with a vertical take-off and landing capability (OJ L, 2024/1111, 23.5.2024) (<u>http://data.europa.eu/eli/reg\_impl/2024/1111/oj</u>).



3. Gyroplanes: flight crew licensing for private pilot licences and non-commercial operations conducted in visual flight rules by day and by night (Subtask 2)

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Air OPS rules (Section 3.2)	14
Other (Chapters 5 and 7)	5
Total	151

#### 3.4.2. Main comments received on NPA 2021-12

The following is a summary of the main subjects of interest for the commentators and the related EASA views and actions. For the individual responses to the comments received on NPA 2021-12 and more detailed conclusions, please refer to Comment-Response Document (CRD) 2021-12<sup>21</sup>.

Overall, the commentators supported the proposal to introduce into the FCL and the Air OPS Regulations requirements for non-commercial operations with gyroplanes. Their comments helped fine-tune the draft regulatory proposal.

The majority of the comments were on the FCL rules with proposals to revise the NPA approach aiming at establishing a PPL(G) type of licence and the conditions for a transitional period to facilitate the conversion of existing national licences into the European licensing scheme for gyroplanes with a MTOM of more than 600 kg or with more than two seats.

#### Licensing scheme

Commentators expressed concerns about the lack of proportionate FCL requirements if the PPL(G) is implemented, as proposed in NPA 2021-12, e.g. the draft point FCL.210.G 'PPL(G) — Experience requirements and crediting' establishing a total amount of 45 flight hours for the PPL(G).

Instead of the PPL(G), they proposed to use the LAPL scheme or the BPL/SPL scheme for gyroplanes, similarly to the approach taken for balloon or sailplane operations with proportionate requirements for such leisure activities with the possibility to also address commercial needs with additional requirements when the need for commercial operations with gyroplanes arises.

EASA reviewed these comments and proposed to implement the GPL, as explained in Section 3.3.1.1.1. This means, for instance, that the new point FCL.210.G 'GPL — Experience requirements and crediting' requires a total amount of 35 hours flight instruction instead of the previously proposed 45 hours.

#### MTOM, transitional period and credit hours

Several commentators highlighted the risk that the proposed requirements could not enable an adequate pool of instructors and aircraft to train student pilots in gyroplanes that fall within the scope of the Basic Regulation.

They indicated that the MTOM limit during the proposed transitional period should be below 500 kg as proposed in the NPA. The proposals were very diverse as regards the MTOM. EASA decided, for safety reasons, to agree on the use of gyroplanes with a minimum MTOM of 450 kg during the transitional period.

Reference to Article 4g is made in Section 3.3.1.1.2 'MTOM, transitional period and credit hours' to address these comments and to facilitate the transition to the FCL requirements for gyroplanes.

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TE.RPRO.00034-011 © European Union Aviation Safety Agency. All rights reserved. ISO 9001 certified. Proprietary document. Copies are not controlled. Confirm revision status through the EASA intranet/internet. Page 18 of 29 According to Article 4g, credits are granted for training that was completed under national training requirements in nationally certified gyroplanes (having at least a MTOM of 450 kg to ensure similarity to the MTOM limit as per the Basic Regulation). Through such credits, the required remaining training hours in a gyroplane that falls within the scope of the Basic Regulation (as part of a Part-FCL training course) may be reduced. This is expected to lead to greater availability of training aircraft in the introductory phase as:

- Student pilots that wish to make use of Article 4g may receive credit based on training hours completed on gyroplanes with a MTOM between 450 kg and below 600 kg in accordance with national training requirements for gyroplanes;
- this will limit the remaining training hours on a gyroplane that falls within the scope of the Basic Regulation.

#### Theoretical exam on 'operational procedures' and 'flight performance and planning'

Several commentators also pointed out that the theoretical exam on 'operational procedures' and 'flight performance and planning' cannot be addressed through either the aeroplane or the helicopter training because the difference with gyroplane operations is significant. As indicated in Section 3.3.1.1.3, student pilots will no longer have to learn the additional items specific to aeroplanes or helicopters that are not relevant to gyroplanes.

This means that there is a total of four topics for theoretical exam questions with significant differences compared to the theoretical exam questions for aeroplanes and helicopters:

- operational procedures,
- flight performance and planning,
- principles of flight,
- aircraft general knowledge.

#### Designation of the Air OPS requirements

As regards a question asked in NPA 2021-12 Section 2.3.1 'General approach' on the numbering of the requirements in SUBPART D 'INSTRUMENTS, DATA AND EQUIPMENT' of Part-NCO, the vast majority of the respondents agreed to keep the designation unchanged by keeping 'H' for helicopter instead of replacing it with 'R' for rotorcraft, even though, in running text, 'helicopter' is replaced with 'rotorcraft'.

#### Potential economic impact for national competent authorities (NCAs)

NCAs were asked to comment on the potential implementation cost with the FCL and Air OPS rules being extended to gyroplanes. 6 NCAs estimated the additional cost for competent authorities incurred by the implementation of the proposed requirements, especially in the field of licensing requirements.

Regarding whether this cost would create a significant economic impact not considered sustainable by the NCA resources, most of the NCAs indicated that even though the cost cannot be quantified, it is estimated to be sustainable.



Only 1 NCA indicated that the IT and staffing cost for the implementation of the FCL requirements seems disproportionate considering the low demand expected. Knowing that this comment was based on the assumption of the establishment of the PPL(G) scheme, it is estimated that the new approach with the GPL should reduce the economic impact.

#### Potential future development

Few commentators expressed the need to address also commercial operations in order to address in turn training requirements for future electrically powered gyroplanes.

Regarding commercial operations' development, EASA is working on a stepwise approach where noncommercial operations are first addressed with a regulatory framework that shall enable in the future the extension of these proposed requirements to commercial operations. For the time being, there is not enough evidence to support their development.

Regarding electrically powered gyroplanes, some commentators suggested that the new Part-FCL requirements for gyroplanes should also consider future gyroplanes with electric engines. Following these comments, the latest draft for point FCL.235 (outlining class and type privileges for gyroplanes) addresses gyroplanes with different engine designs (inspired by the framework proposed with Opinion No 05/2023<sup>22</sup> for revising the SEP aeroplane class rating). As regards the AMC to the gyroplane training requirements, additional training items related to electric engines will be included.

#### 3.4.3. MAB advice sought in accordance with Article 6(9) of the Rulemaking Procedure

EASA sought the advice of the MAB, in accordance with Article 6(9) of MB Decision No 01-2022<sup>23</sup>, with regard to potentially and/or substantially divergent Member State views on the matter.

Following careful consideration of the comments received on the NPA and the subsequent amendments EASA made to the NPA proposal, there were no substantially divergent views on the approach proposed and taken by EASA.

However, a MAB member highlighted that a new licence scheme (in that case, the GPL) still requires significant resources (especially for the adaptation of IT pilot licensing systems), which are highly disproportionate to the limited number of applicants expected.

A flexible approach giving Member States the possibility to opt out from the implementation of the new gyroplane pilot licensing requirements for a given number of years was assessed. Following careful consideration, such approach (usually referred to as 'opt-out approach') is not the preferred approach because it does not allow for an EU-level implementation with a common schedule.

Another approach was also assessed regarding the possibility to make use of Article 64 of the Basic Regulation allowing a Member State to issue a licence on behalf of another. However, there are several difficulties which prevent the efficient use of this Article, mainly due to the following:

the theoretical exam for the PPL is conducted in the national language;

<sup>&</sup>lt;sup>23</sup> EASA MB Decision No 01-2022 on the Rulemaking Procedure, repealing MB Decision 18-2015 (by written procedure) | EASA (europa.eu)



<sup>&</sup>lt;sup>22</sup> Opinion No 05/2023 - Cruise relief co-pilots | Regular update of flight crew licensing and medical requirements | Better flight crew licensing requirements for general aviation | EASA (europa.eu)

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- a Member State may refuse this reallocation of responsibility.

To address these concerns, EASA proposes a common deferred applicability date for the new pilot licensing requirements for gyroplanes that shall ensure an efficient approach.

Please, see Section 3.3.2.1.5 for the EASA proposal.



#### 4. What are the expected benefits and drawbacks of the regulatory material

## 4.1. Continuing airworthiness rules for electric- and hybrid-propulsion aircraft and other non-conventional aircraft

The impact assessment in Chapter 4 of NPA 2021-15 is mostly relevant for the draft regulatory material presented in this Opinion, except that, following the review and consideration of the comments received during the NPA public consultation, the regulatory material presented in this Opinion contains some differences compared to the NPA proposal. The main differences are presented below:

Definition of aircraft that are subject to Part-M and Part-ML: based on the comments received during the NPA public consultation, some aircraft that were proposed in the NPA to be considered Part-M aircraft, are now proposed to be Part-ML aircraft. This is the case for small tilt-rotor aircraft. The NPA did not propose to amend the current framework (i.e. Part-M) that applies to them, but stakeholders were consulted with the NPA and their views were sought whether they considered that small tilt-rotor aircraft should be treated as Part-ML aircraft instead. Following unanimous stakeholder agreement, the Opinion proposes that small tilt-rotor aircraft should be required to fulfil Part-ML requirements instead, similarly to other small aircraft, based on the limited impact in terms of affected people in the case of an accident. This intention is reflected in the Opinion by amending the definition of 'complex motor-powered aircraft', and the list of aircraft subject to Part-M versus Part-ML. To the knowledge of EASA, these amendments do not have a direct impact on already certified aircraft. This would have a positive economic impact as regards the operation of these aircraft with more proportionate cost by using Part-ML instead of Part-M.

The definition of 'rotorcraft' that was proposed in the NPA has been aligned in the Opinion with that already adopted by the Commission in Commission Implementing Regulation (EU) 2024/1111<sup>24</sup>. The definition of 'helicopter' also mirrors that from that Regulation. These amendments do not have a direct impact on already certified aircraft.

Scope of the proposed new B1.E licence subcategory: contrary to the NPA proposal, the B1.E licence subcategory would be required for small aeroplanes only. This licence subcategory, as proposed in the Opinion, would permit the endorsement on the licence of the proposed subgroup 2E (aeroplanes with electric powerplant other than those in Group 1), which provides a wide scope of aeroplanes that qualify to be covered by the license subcategory, without requiring individual type rating endorsement. However, the licence (sub)category for electric aircraft other than small aeroplanes would be determined through the OSD process and would require type endorsement of each aircraft to be released to service after maintenance. EASA amended its proposal compared to that presented in the NPA, since commentators stated that the basic knowledge syllabus proposed for the B1.E licence in the NPA was too lengthy and, therefore, not appealing to new applicants. The positive impact is that the B1.E licence would be easier to obtain, which would be convenient in respect of the maintenance of small electric aeroplanes, but might create some negative economic impact for licence

<sup>&</sup>lt;sup>24</sup> Commission Implementing Regulation (EU) 2024/1111 of 10 April 2024 amending Regulation (EU) No 1178/2011, Implementing Regulation (EU) No 923/2012, Regulation (EU) No 965/2012 and Implementing Regulation (EU) 2017/373, as regards the establishment of requirements for the operation of manned aircraft with a vertical take-off and landing capability (OJ L, 2024/1111, 23.5.2024) (<u>http://data.europa.eu/eli/reg\_impl/2024/1111/oj</u>).



holders that perform maintenance of other electric aircraft (e.g. small helicopters) for which aircraft type endorsement would be required.

The Opinion also proposes that the B1.3 and B1.4 licence subcategories shall be limited to helicopters only (instead to all rotorcraft, which was the proposal in the NPA), following the comments received during the NPA public consultation. Due to this, the regulatory material presented in the Opinion in this regard does not expand the Basic Knowledge Syllabus with new modules for these licence subcategories. The impact of this proposal is that some rotorcraft not being helicopters (for instance, gyroplanes) would need to be endorsed as type-rated aircraft on the maintenance licence as a condition for certifying staff to release these aircraft to service after maintenance. The endorsement of these aircraft on a licence would have to follow the same process as for other non-conventional aircraft. On the other hand, due to the fact that the requirements for gyroplanes differ from those applicable to helicopters, different weight limit thresholds are provided to establish when they should be considered complex motor-powered aircraft or not, or when an aircraft qualifies for Part-M or Part-ML, providing some more lean requirements for these aircraft.

## 4.2. Gyroplanes: flight crew licensing for private pilot licences and non-commercial operations conducted in visual flight rules by day and by night

The impact assessment in Chapter 2 of NPA 2021-12 is mostly relevant for the draft regulatory material presented in this Opinion, except that, following the review and consideration of the comments received during the NPA public consultation, the regulatory material presented in this Opinion contains some differences compared to the NPA proposal.

The expected benefits and drawbacks of the proposed amendments have been updated, compared to what was presented in NPA 2021-12, and are summarised below.

#### **Expected benefits**

The introduction of gyroplanes with a MTOM above 600 kg or with more than two seats into the common EU Aircrew and Air OPS regulatory framework for non-commercial operations in visual flight rules by day and by night will allow such gyroplane operations to be conducted in accordance with EU rules, thus ensuring a level playing field at EU level for private pilots and NCO operators of gyroplanes and for general aviation aircraft.

Hence, the establishment of gyroplane-specific requirements will facilitate the introduction of gyroplanes with a MTOM above 600 kg or with more than two seats into the general aviation sector.

Furthermore, they will support the EU competitiveness of the gyroplane manufacturing and training sector.

The following information from PAL-V gives an initial forecast of the gyroplane market above 600 kg MTOM or with more than two seats.

The European manufacturer PAL-V is a European manufacturer for flying cars<sup>25</sup>, providing also pilot training for its products. On the road, these flying cars are certified three-wheel vehicles complying with the European L5e class road certification (granted in October 2020). In the air, these flying cars

As of 1 July 2021, €80 million have been invested in the company by private and institutional investors from the European Union and five Member States.



are in the process to be certified as a gyroplane aircraft above 600 kg MTOM or with more than two seats by the Agency (expected year: 2025).

The production will begin in 2025 and the turnover is foreseen to grow to  $\leq$ 400 million in its first 5 years of production. 200 employees are working for the company (expected to be 600 by 2028-2030).

266 orders with down payments have been received, of which more than 100 are from European customers, with a continuous increase. 80 % of the customers are non-pilots.

#### Summary table — Key indicators from 2022 to 2031 based on PAL-V business plan basic scenario

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Production units				19	48	613	875	1076	1281	1484
Region				EU+CH+NO+IS	EU+CH+NO+IS+ Non-EU					
PAL-V trainees**		8	33	77	384	980	1259	1425	1562	1654
Instructors needed	5	5	5	8	34	84	108	123	134	142

\* 2025 is the planned year for the Type Certificate

\*\* Early adopter student pilots start their training in advance of their PAL-V delivery

#### **Expected drawbacks**

6 NCAs answered to the two questions posed in the NPA on the type of additional costs and whether these costs would create a significant economic impact. Most of the answers given were qualitative.

Regarding what would be the additional costs for NCAs incurred by the implementation of the gyroplane-specific FCL requirements, as proposed in Chapter 3 of the NPA (FCL requirements), the following elements were identified:

- training of staff,
- additional insurance costs,
- standardisation of examiners,
- preparation/verification of questions,
- possible update/replacement of IT software solutions.

1 NCA indicated a total implementation cost lower than EUR 15 000 considering the drafting of conversion and crediting reports, the drafting of theoretical knowledge questions and modifying examinations, implementation of licence format, and training costs. The same NCA considers that this is not a significant economic impact.

Regarding whether such costs would create a significant economic impact not considered sustainable by the NCA resources, most of the NCAs indicated that even though they cannot be quantified, they are estimated to be sustainable.

Only 1 NCA indicated that IT and staffing costs to implement the FCL requirements seem disproportionate considering the low demand expected. Knowing that this comment was based on



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the assumption of establishing the PPL(G) scheme, it is estimated that the new approach with the GPL should reduce the economic impact.

*Note:* A specific concern was related to the fact that the development and maintenance of the question bank for theoretical knowledge examinations falls under the NCAs' responsibilities for private licences, instead of being centralised by EASA with the ECQB. This creates additional workload, especially when setting up a new type of private pilot licence. However, this concern cannot be considered here since the approach regarding the ECQB is taken on a more general level in point ARA.GEN.300(b) of Annex VI (Part-ARA) to the Aircrew Regulation which makes the ECQB applicable solely for professional pilot licences and instrument ratings.

#### Conclusion

It is expected that the similarities of the proposed GPL pilot licensing framework with the existing SPL and BPL framework will considerably reduce implementation costs for NCAs. Nevertheless, a deferred applicability date is proposed for the implementation of the Part-FCL amendments (introduction of the GPL) (please, see Sections 3.3.2.1.5 'Deferred applicability date' and 3.4.3 'MAB advice sought in accordance with Article 6(9) of the Rulemaking Procedure').



## 5. Proposed regulatory material — Continuing airworthiness rules for electric- and hybrid-propulsion aircraft and other non-conventional aircraft

Please refer to the <u>annexes</u> to the Opinion.



# 6. Proposed regulatory material — Gyroplanes: flight crew licensing for private pilot licences and non-commercial operations conducted in visual flight rules by day and by night

Please refer to the <u>annexes</u> to the Opinion.



#### 7. Monitoring and evaluation

#### 7.1. Continuing airworthiness rules for electric- and hybrid-propulsion aircraft and other non-conventional aircraft

Once adopted and applicable, EASA shall monitor and evaluate the implementation of the requirements in question through regular standardisation activities. In addition, the implementation of the requirements shall be monitored through regular feedback received from the EASA Advisory Bodies. Such feedback will facilitate the assessment of how efficiently the adopted implementing act is implemented.

#### 7.2. Gyroplanes: flight crew licensing for private pilot licences and non-commercial operations conducted in visual flight rules by day and by night

Once adopted and applicable, EASA shall monitor and evaluate the implementation of the proposed requirements in question through regular standardisation activities. In addition, the implementation of the requirements shall be monitored through regular feedback received from the EASA Advisory Bodies. Such feedback will facilitate the assessment of how efficiently the adopted implementing act is implemented.

More specifically, because of the concerns over the NCA cost for the amendment of the existing IT licencing system, data on NCA implementation and operational costs should be gathered on a yearly basis for 3 years after the applicability date of the FCL gyroplane requirements. This would be performed with an annual survey sent to the MAB.



#### 8. Proposed actions to support implementation

## 8.1. Continuing airworthiness rules for electric- and hybrid-propulsion aircraft and other non-conventional aircraft

EASA intends to support the implementation of the regulatory amendments by organising (or contributing to the organisation of) and coordinating the following actions:

- development of AMC and GM to the new regulatory material;
- issue of amendments to CS-MCSD to adapt it to the regulatory amendments;
- provision of continued support to NCAs as regards rule implementation;
- focused communication at Advisory Body meetings (Member States and industry);
- addressing requests for clarification about the regulatory intention to stakeholders affected by its implementation.

## 8.2. Gyroplanes: flight crew licensing for private pilot licences and non-commercial operations conducted in visual flight rules by day and by night

As regards the regulatory amendments to the Air OPS Regulation on non-commercial operations with gyroplanes, EASA intends to support their implementation through the following actions:

- Focused communication at Advisory Body meeting(s) (MAB, SAB, Air OPS TeB, GA.COM, R.COM);
- Clarifications via electronic communication tools between EASA and NCAs.

As regards the regulatory amendments to the Aircrew Regulation on flight crew licensing for private pilot licences, EASA intends to support their implementation through the following actions:

- development of AMC and GM to the new Part-FCL requirements on GPL;
- provision of continued support to NCAs as regards rule implementation;
- focused communication at Advisory Body meetings (Member States and industry);
- answering requests for clarification about the regulatory intention to parties affected by their implementation.

