

Executive Summary: Consultation Session on Remotely Piloted Aircraft Systems (RPAS) Regulations

On May 23th 2018, Transport Canada Civil Aviation (TCCA)'s Remotely Piloted Aircraft Systems (RPAS) Task Force (formerly known as UAS Task Force) hosted a consultation session with targeted stakeholders to discuss the comments received following the pre-publication of the regulations in *Canada Gazette Part I* (July 2017), and to share the Department's recommended changes for *Canada Gazette Part II*.

The session was well attended with approximately 55 stakeholders, representing manufacturers, commercial and recreational operators, associations, federations, academia, training providers, and others.

In his opening remarks, Felix Meunier, Director of the RPAS Task Force, highlighted that these consultations were a part of Transport Canada's (TC) continued commitment to maintaining an open dialogue with the Canadian drone industry. In addition, Mr. Meunier pointed out that in discussing the proposed CGII regulations, it must be kept in mind that the proposed regulations are subject to a broader approval process which can lead to changes. The Department's commitment in publishing the RPAS VLOS regulations in 2018 as had been indicated in prior consultations was also emphasized.

Feedback from *Canada Gazette Part I*

- Overall, those with commercial interests appreciated the need for a regulatory framework and predictability. However, they were concerned that the proposed CGI amendments were overly restrictive and complicated, which could inhibit innovation in a growing industry.
- Recreational users viewed the cost of compliance in owning and operating an RPAS as having a negative impact on present and future RPAS pilots. They also felt that the complexity of rules could lead to increased non-compliance.

The following regulatory areas received additional feedback:

Pilot: There were privacy concerns related to the requirement of writing personal information on the RPAS itself; however, there was support for de-identified numerical registration. Stakeholders were also concerned with the requirement for liability insurance (i.e. cost, availability, and risk rationale).

Product: With regards to the design standard, many were concerned about the complexity, cost, and ability to comply in the absence of industry standards. Stakeholders were also concerned with weight thresholds and a lack of evidence to support the weight cut-offs.

Procedures: Many stakeholders felt that real-world use cases challenged the prescribed stand-off distances, in terms of proposed minimum distances from crowds, buildings and aerodromes, altitude restrictions, speed limits, etc. Many stakeholders also voiced their concerns regarding communication with air traffic control in terms of: advance notification, authorizations, responsiveness, etc.

Proposed Changes in *Canada Gazette Part II (CG II)*

The RPAS Task Force took into consideration the feedback it received from CGI (above) in preparing the regulations for CGII publication. Some of the proposed changes are as follows:

- No distinction between recreational and non-recreational users.
- Operations in Canadian cities (and in controlled airspace) allowed, as long as the operation is authorized by Air Traffic Control (ATC). No longer will there be a requirement to get authorization seven days in advance.
- Two operating categories (based on risk to people/aviation), instead of three: Basic (formerly Limited) and Advanced (formerly Complex).
 - Basic category: not near or over people, not in a controlled airspace.
 - Advanced category: near or over people, or in a controlled airspace.

Pilot: The pilot knowledge and testing requirement will be maintained, but it will be simplified and streamlined according to conditions of Basic and Advanced operations. All testing will take place online; however, the flight review (required for Advanced operations) will be delivered in person by a third party. In the Basic category, the pilot will be required to take a basic knowledge test. In the Advanced category, pilots will be required to take a comprehensive knowledge test, and then a flight review (flight reviewer replacing flight attester) conducted by a TC-approved examiner in order to receive a pilot's certificate. Also, a new online portal will be set up for the following service transactions: RPAS registration, pilot exams, and pilot certificates.

Product and Registration: All RPAS will be required to register via the online portal. The RPAS Task Force is looking to implement safety objectives that manufacturers could choose to meet depending on the operations of their choice (i.e. operations near and over people, and in controlled airspace). For advanced operations, manufacturers must self-declare their system capabilities as per the RPAS SAFE (Safety Assured Flight Envelope) identified by TCCA. RPAS already on the compliant list from pre-CGI will be grandfathered for the life of the drone.

Safety Procedures: The concept of a built-up-area will be removed along with speed limits. Also, there will be no specified standoff distance from the pilot as the requirement will be that the drone must be in VLOS (Visual Line of Sight) at all times.

The maximum altitude allowed for all operators will be 400 feet AGL (Above Ground Level). In terms of distances from people, under Basic operations, the drone must be at least 30 m from people. For Advanced operations, depending on the RPAS safety assurance, the distance from people can vary between 30 m, 5 m near people, or less than 5 m over people.

Additionally, there will be a distinction between operations over people and operations over open air assemblies. Open air assemblies, which have been further refined to mean advertised events, will be permitted by a Special Flight Operations Certificate (SFOC). There will also be a distinction between aerodromes and airports/heliports. Basic operations will be permitted near an aerodrome as long as the operator remains clear of the established traffic pattern. Advanced operations will be permitted near airports/heliports as long as the operator follows an established RPAS procedure; for airports and heliports without an established RPAS procedure RPAS operations will be required to remain 3NM and 1NM away, respectively. RPAS operators will require an authorization from NAV CANADA prior to entering controlled airspace.

Terminology: Formerly referred to as Unmanned Aircraft Systems (UAS), CGII will use the term Remotely Piloted Aircraft Systems, or RPAS. This shift is mainly because the RPAS Task Force is moving towards gender neutral terminology. Additionally, RPAS is more of an accurate description of the technology.

Following the presentation, the floor was open for questions. The majority of questions touched upon the following areas:

1. Concerning recreational users operating light weight drones, how much regulation is necessary?
2. What are the criteria for the SAFE (Safety Assured Flight Envelope)?
3. What are the details of the compliant list?
4. Will there be sufficient flight reviewers and will that affect compliance?
5. Will TC regulate RPAS flight schools?
6. In terms of the terminology change, will sufficient time be given to digital service providers to update their online material?
7. Will there be a delay in the coming to force of the regulations?

Department officials provided some additional information in response to the questions and noted that they would further consider the comments from the consultation in drafting the final regulations.

Conclusions & Next Steps

The consultation was a positive experience for department officials and stakeholders. Transport Canada received insightful feedback and questions, adding depth to the Department's understanding on the implications of the proposed regulations. Canadian drone industry representatives commented on how the Department appeared to be taking the industry's views into consideration, and striking the right balance between its two primary objectives: aviation safety, and innovation.

In terms of next steps, Transport Canada will take into consideration the consultation discussion as it proceeds towards the publication of the regulations in 2018.