

## **Innovation, Science, and Economic Development Canada (ISED) Consultation Comments**

### **Consultation on a Policy, Licensing and Technical Framework for Remotely Piloted Aircraft Systems (RPAS) in the 5030-5091 MHz Band and Certain Bands Used to Provide Commercial Mobile Services**

*Canada Gazette*, Part I  
SMSE-016-25  
December 2025

#### **Comments from Skydio, Inc.**

##### **Executive Summary:**

Innovation, Science, and Economic Development Canada (ISED) should allow RPAS connectivity on existing commercial mobile networks under mobile licensees' control, starting with public safety and other low altitude use cases, under existing technical rules and after Mobile Network Operator (MNO) device certification. No drone specific technical requirements or standards are necessary. ISED can monitor post implementation to ensure safe technical operation.

Allowing for the utilization of existing commercial mobile bands for RPAS will:

1. Enable safe and effective Beyond Visual Line of Sight (BVLOS) operations for public safety organizations to save lives and keep communities safe in dense urban environments where cellular connectivity is critical.
2. Improve wildfire response, search and rescue, and disaster recovery.
3. Unlock infrastructure inspection efficiencies for Canadian firms and improve their economic competitiveness.
4. Create Canadian economic opportunity and high-skilled jobs in a growing sector with significant potential.

Importantly:

- Most public safety "Drone as First Responder" (DFR) flights—in which public safety agencies respond to emergency calls for service—by Skydio customers are low altitude (below 150m) and short duration (less than 30 minutes). MNOs can manage aerial devices through existing LTE/5G controls and device certification.
- Skydio customers in the United States (U.S.) flew more than 500,000 safe and successful flights last year using cellular spectrum, demonstrating no systemic technical or safety issues in such use.
- Modern LTE/5G networks include interference mitigation and power control features that protect terrestrial users and Skydio RPAS are already being tested and certified by MNOs for use on their networks in Canada.
- Bandwidth allocation is also manageable for Skydio RPAS. First, Skydio RPAS are uplink-centric, require only moderate throughput, adapt bitrate to link conditions, and remain fully manageable within existing operator network controls. Second, Skydio RPAS bandwidth usage is limited to active flight time and mission needs: they are not continuously consuming network resources.

- We encourage ISED to consult MNOs; Skydio has engaged with carriers who support what we are proposing here.

Through this Consultation, Canada can responsibly unlock transformative public safety and economic benefits through the existing harmonized, technically sound spectrum framework. We look forward to assisting in any way we can.

### **Skydio Background:**

Skydio is North America's leading producer of dual-use small drones (RPAS) and the largest manufacturer outside of China. Founded in 2014, we have become the global leader in creating flying robots that help people do their work more safely and efficiently in NATO countries. Our products leverage computer vision and deep neural networks to create trustworthy, intelligent flying robots that give superpowers to those who protect us. Our drones support the military, police officers, firefighters, disaster response teams, and the workers who build and repair energy and transportation infrastructure.

Since 2014, Skydio has manufactured and delivered more than 60,000 flying robots to over 3,800 customers that span the globe. Excluding defense customers, our drones have flown over 3.145 million customer flights worldwide without incidents caused by the utilization of cellular broadband—from downtown Toronto, to Ukraine, and many places in between, helping to protect or support tens of millions of people.

Our customers encompass dozens of Canadian and American federal departments and agencies, including every branch of the U.S. military, the Canadian Department of National Defence, the RCMP, and multiple police/public safety, and critical infrastructure customers. Worldwide, Skydio and our drones support over 1,200 public safety agencies; more than 1,200 critical infrastructure companies; 450 energy utilities; more than 600 transportation, civil engineering, and construction organizations; and 29 allies or partner nations, including militaries and national agencies. All our defense drones utilize a MicroHard radio for their core command and communication link, a Calgary based electronics manufacturer, and we are proud to have a cohort of Canadian Engineering talent that help us design and produce the best drones in the world.

Further, Skydio and our drones currently support dozens of Canadian public safety customers who are using our products to save lives and provide situational awareness to police officers across the country daily. Our drones have also supported our public safety customers without safety incidents. Many public safety agencies view drones as being vital pieces of an officers/services toolkit to respond to critical events and to provide support for large scale events such as the 2026 FIFA World Cup. If drones are not allowed to utilize commercial broadband spectrum to support their critical operations, there is a risk that there will be an inability to meet operational demands in the field. Further, many agencies are already utilizing Beyond Visual Line of Sight (BVLoS) in their operations and being able to create redundancy with both radio and commercial broadband frequencies will enable a greater level of operational resiliency and

safety. Additionally, Skydio is currently in discussions with or working with several MNOs in Canada, including under developmental licences.

### **Skydio Comments:**

Skydio supports ISED's proposal to allow RPAS connectivity on existing commercial mobile networks under mobile licensees' control and under existing technical requirements and standards—nothing drone specific is required. Skydio also supports a phased rollout starting with public safety and other bounded low-altitude operations, paired with:

- MNO device certification and network authorization
- Defined operating limits (e.g., altitude; priority right of way for DFR and other emergency use)
- Technical requirements aligned with 3GPP and existing RSS/SRSP frameworks
- Monitoring and a clear process to investigate and address interference reports

ISED Question	Skydio Comments
Q1-20 re: 5030-5091 MHz band	<p>Skydio is focused on using existing spectrum rather than this 5MHz band because Skydio believes that the 5MHz band: 1) will take time to get operational; 2) will cost billions of dollars in investment from MNOs to become available for use across their networks due to tower/radio upgrades; and 3) is not what current RPAS operations and mechanical hardware are currently built around. As such, reliance on this proposed band for small UAS would limit options for Canadian drone users and delay their ability to operationalize technology that is already in play in other NATO countries.</p> <p>In the U.S., the FCC allocated 5030–5091 MHz to support protected, aviation-style command and control links for large UAS operating in controlled airspace. However, small UAS operating under Part 107 in the U.S. do not rely on dedicated aviation spectrum and instead use robust, nationwide LTE/5G networks and mature unlicensed bands (2.4/5 GHz) that already provide link reliability, capacity, and coverage.</p> <p>Skydio customers in the U.S. flew more than 500,000 flights last year alone using existing cell spectrum—safely and successfully in partnership with MNOs.</p>

<p>Q21: ISED is seeking comments on the proposed considerations to identify specific commercial mobile bands where the proposed RPAS framework will be applied.</p>	<p>Skydio supports identifying bands that:</p> <ul style="list-style-type: none"> <li>• Are widely deployed and/or provide sufficient bandwidth for RPAS operations.</li> <li>• In addition to the proposed commercial mobile bands, RPAS operation on BRS (2500 MHz) and C-Band (3300 - 4200 MHz) is highly desirable for performance reasons, as well as CBRS (3500 MHz) for private cellular deployments.</li> <li>• Support 4G LTE as well as 5G NR infrastructure.</li> <li>• Provide strong urban penetration.</li> </ul> <p>Urban canyon operations—in which public safety agencies fly between skyscrapers to respond to emergency calls for service (DFR)—are not feasible without cellular connectivity. This is because cellular connectivity dramatically mitigates operational risk caused by a lack of redundant connectivity and command links. In other words, other connectivity options—such as point-to-point—do not work reliably in such urban canyons, and thus BVLOS operations at scale are not possible without cellular connectivity.</p>
<p>Q22: ISED is seeking comments on other considerations it should take into account when identifying commercial mobile bands where the proposed RPAS framework will be applied.</p>	<p>ISED should consider:</p> <ul style="list-style-type: none"> <li>• Urban density.</li> <li>• Cross-border harmonization.</li> <li>• Network slicing capability for public safety.</li> <li>• State of nationwide deployment.</li> <li>• Available channel bandwidth for the respective bands.</li> </ul>
<p>Q23: ISED is seeking comments on its proposal to apply the RPAS framework to the following initial bands that provide commercial mobile bands:</p> <ul style="list-style-type: none"> <li>A. 600 MHz (617-652 MHz/663-698 MHz)</li> <li>B. 700 MHz (698-756 MHz and 777-787 MHz)</li> <li>C. AWS-1 (1710-1755 MHz/2110-2155 MHz)</li> <li>D. AWS-3 (1755-1780 MHz/2155-2180 MHz)</li> </ul>	<p>Skydio supports applying the RPAS framework to:</p> <ul style="list-style-type: none"> <li>• 600 MHz</li> <li>• 700 MHz</li> <li>• AWS-1</li> <li>• AWS-3</li> <li>• PCS</li> </ul> <p>These bands are already deployed and support robust LTE/5G service.</p> <ul style="list-style-type: none"> <li>• U.S. experience with 3 MNOs</li> </ul>

<p>MHz) E. PCS (1850-1915 MHz/1930-1995 MHz)</p>	<p>demonstrates safe aerial UE operation in these bands without harmful interference.</p> <ul style="list-style-type: none"> <li>• Testing in Canada utilizing developmental licences has confirmed the results from U.S. operations.</li> </ul> <p>Further, bandwidth allocation is also manageable for Skydio RPAS:</p> <ul style="list-style-type: none"> <li>• First, Skydio RPAS are uplink-centric, require only moderate throughput, adapt bitrate to link conditions, and remain fully manageable within existing operator network controls. These systems stream 720p or 1080p video from the aircraft to the network, making their traffic primarily uplink-centric, unlike most eMBB devices, which are typically downlink-heavy. Skydio systems require only ~20–100 Kbps on the downlink, while the uplink live video stream requires a moderate 3–5 Mbps to achieve optimal quality. When SNR decreases, the drone autonomously reduces video bitrate to maintain link reliability. Additionally, network operators retain full control over available bandwidth using existing network management and device identification mechanisms.</li> <li>• Second, Skydio RPAS are not continuously consuming network resources, with bandwidth usage limited to active flight time and mission needs. Instead, active network usage is directly tied to flight time, frequency of operation, and the specific mission use case.</li> </ul>
<p>Q24: ISED is seeking comments on any other bands that are used for commercial mobile services for which the RPAS framework should be applied.</p>	<p>ISED should maintain flexibility to include additional 5G mid-band and future allocations as technology evolves.</p> <p>Specifically, RPAS operation on BRS (2500 MHz) and C-Band (3300 - 4200 MHz) is highly desirable for performance reasons, as well as CBRS (3500 MHz) for private cellular deployments.</p> <p>Related to Q23 and the 700 MHz spectrum</p>

	<p>we also suggest considering the complete upper segment of the 700 MHz band, specifically the 788 – 798 MHz portion, to include band 14 in the RPAS framework.</p>
<p>Q25: ISED seeks comments on its proposal to remove the prohibition of RPAS operations from the Access Licensing framework, noting that RPAS operations would be limited to bands identified under the present RPAS framework consultation.</p>	<p>Skydio strongly supports removal of the RPAS prohibition.</p> <p>This change is critical to enabling scalable BVLOS operations, which are themselves critical to public safety DFR missions in urban canyons that save lives.</p>
<p>Q26: ISED seeks comments on its proposal to permit RPAS aerial UEs to communicate with authorized satellites under the SMCS framework, noting that RPAS operations using SMCS would be limited to bands common to both the SMCS framework and the RPAS framework.</p>	<p>Skydio supports permitting aerial UE connectivity via authorized satellites under SMCS, particularly for:</p> <ul style="list-style-type: none"> <li>• Remote areas</li> <li>• Northern communities</li> <li>• Infrastructure inspection</li> <li>• Use cases with low bandwidth requirements in general (e.g. C2/telemetry only, with video storage onboard)</li> </ul> <p>Skydio has successfully tested aerial UE connectivity with authorized satellites with operators in other countries, including the U.S. and Japan.</p>
<p>Q27: ISED is seeking comments on its proposal to modify the CTFA by adding new Canadian footnote CYY, as shown above, to permit RPAS aerial user equipment operations under the mobile service allocations in relevant commercial mobile bands.</p>	<p>Skydio supports adding CYY to permit aerial UE operations under mobile allocations.</p> <p>Harmonization with international regulatory practice reduces complexity.</p>
<p>Q28: ISED seeks comments on its proposal to permit RPAS aerial UE operations under the existing spectrum licence issued to commercial mobile licensees in specified bands. Third-party operators deploying RPAS services would be subscribers of the commercial mobile operator.</p>	<p>Skydio strongly supports permitting RPAS aerial UEs under existing commercial mobile licences.</p> <p>This approach:</p> <ul style="list-style-type: none"> <li>• Avoids spectrum fragmentation.</li> <li>• Preserves network operator control.</li> <li>• Enables rapid deployment.</li> <li>• Mirrors successful U.S. implementation.</li> </ul> <p>Third-party RPAS operators can operate as subscribers, ensuring accountability. At the</p>

	<p>same time this approach allows for wholesale relationships between the commercial mobile license holder and RPAS manufacturers like Skydio, providing additional revenue opportunities and new business models for the license holders.</p>
<p>Q29: ISED seeks comments on whether existing conditions of licence applied to commercial mobile licences for the applicable band are sufficient to enable RPAS UE operations.</p>	<p>Existing conditions are generally sufficient, as demonstrated in RPAS UE operations across 500k+ flights in the US.</p> <p>However, ISED may clarify:</p> <ul style="list-style-type: none"> <li>• Network control authority over aerial UEs.</li> <li>• Interference response obligations.</li> </ul>
<p>Q30: ISED seeks comments on its proposal to extend the generic SMCS earth station spectrum licences to also include RPAS aerial UEs connected via SMCS space stations in commercial mobile bands.</p>	<p>No comment.</p>
<p>Q32: ISED is seeking comments on the effectiveness of ISED's proposed licensing approach (i.e., permitting RPAS aerial UE operations under the existing spectrum licences issued to the commercial mobile licensees in specified bands) in facilitating intra-network coexistence with RPAS, as required.</p>	<p>Permitting aerial UEs under existing mobile licences is effective because:</p> <ul style="list-style-type: none"> <li>• Mobile operators retain full network control.</li> <li>• 3GPP standards already include aerial UE interference mitigation features.</li> <li>• U.S. deployments demonstrate coexistence viability.</li> <li>• Existing GSMA standards and mobile operator certifications ensure device level identification through IMEI and ICCID.</li> </ul>
<p>Q33: ISED is seeking comments on its proposal to apply the existing technical rules and coexistence measures, such as the maximum field strength or pfd, in the applicable Standard Radio System Plans (SRSPs) to networks operating RPAS aerial UEs.</p>	<p>Skydio supports applying existing SRSP rules.</p> <p>No evidence from U.S. operations suggests additional field strength limits are necessary.</p>
<p>Q34: ISED is seeking comments on its proposal to develop new technical requirements such as specific power limits and transmit power control provisions, in the relevant Radio Standards Specifications (RSS) for aerial UEs.</p>	<p>Each Canadian carrier should implement supported power class and Transmit Power Control (TPC) behavior to optimize use of their networks. All aerial UE's should comply with 3GPP standards. This has been sufficient in other regions (U.S. and Japan). No new technical requirements for drones</p>

	were necessary in these countries.
Q35: ISED is seeking comments on its proposal to not require any additional interference mitigation measures, beyond the existing out-of-block emission limits, to address adjacent block inter-network interference.	<p>Skydio agrees that existing emission limits are sufficient.</p> <p>U.S. operational history has not demonstrated harmful adjacent-block interference attributable to aerial UEs themselves, or the introduction to aerial UEs as additional participants on the network.</p>
Q36: ISED is seeking comments on its proposal to not require any additional interference mitigation measures, beyond the existing OOB limits, to address adjacent public safety services (in the 768-776 MHz band) and fixed point-to-point services (in the 1700-1710 MHz, 1780-1800 MHz and 1830-1850 MHz bands) interference.	<p>Existing OOB limits and network controls are sufficient.</p> <p>Additional measures should only be imposed if statistically significant evidence demonstrates real-world interference risk.</p>
Q37: ISED is seeking comments on its proposal to establish, in applicable bands, exclusion zones around DRAO, within which transmission and reception of signals for RPAS operations would be prohibited. These exclusion zones would be defined in the relevant technical standards.	<p>Skydio supports protection of DRAO, but recommends:</p> <ul style="list-style-type: none"> <li>• Narrowly tailored zones.</li> <li>• Evidence-based modeling.</li> <li>• Recognition that most RPAS operate below 150m.</li> </ul> <p>Overly broad exclusions could hinder public safety operations.</p>
Q38: ISED is seeking comments on whether existing technical rules for UEs, in the relevant RSS are sufficient to facilitate coexistence between RPAS operations and adjacent band MetSat operations in the 1695-1710 MHz band. If the existing technical rules are not sufficient, ISED is seeking comments on the appropriate interference mitigation measure such as a more stringent out-of-band emission limit adopted by CEPT and the 3GPP to protect MetSat earth stations from potential interference from aerial UEs.	<p>Existing RSS rules are sufficient.</p> <p>If additional OOB limits are adopted, alignment with CEPT and 3GPP standards would promote equipment harmonization and reduce cost.</p>
Q39: ISED is seeking comments on any other considerations related to RPAS use in commercial mobile bands which may not have been specifically addressed in this consultation.	No additional comment.