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(Submitted via email: spectrumplanning-planificationduspectre@ised-isde.gc.ca)

Subject: SMSE-016-25 - 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

Dear Josette Gallant,

Last December, Innovation Science and Economic Development Canada (ISED) issued the consultation entitled SMSE-016-25 – 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.

Transport Canada Civil Aviation (TCCA), NAV CANADA RPAS Solutions Engineering and Spectrum Engineering Groups, hereafter referred to as “The Aviation Stakeholders’ group” are grateful to ISED for the opportunity to comment/answer the Consultation SMSE-016-25. The comments presented herein reflect the consensus reached collectively by the Aviation Stakeholders’ group.

Sincerely,

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**The Aviation Stakeholder comments on
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**

Q1: ISED is seeking comments on the proposed changes to the CTFA, to add CXX, as detailed above and suppress footnote No. 5.444, as shown in Table 3 and subsequent updates to the Agreement with NAV Canada and regulatory documents.

The Aviation Stakeholders support ISED's proposed updates to the Canadian Table of Frequency Allocations (CTFA) to add new Canadian footnote CXX for the 5 030–5 091 MHz band and to suppress international footnote No. 5.444.

The Aviation Stakeholders recommends that any proposed CTFA changes preserve the safety-of-life purpose of the 5 030–5 091 MHz band. The Radio Regulations footnotes applicable to this band should confine AM(R)S/AMS(R)S use to internationally standardized aeronautical systems. Accordingly, the band plan and any associated licensing conditions should explicitly ensure that operations in 5 030–5 091 MHz are restricted to RPAS CNPC (non-payload) communications, and exclude payload/data transmission (e.g., imagery).

ISED is highly encouraged to closely coordinate with The Aviation Stakeholders when finalizing the CTFA text and the associated Agreement/Regulatory updates to ensure clarity of roles and continued protection of aeronautical operations.

Q2: ISED is seeking comments on whether there are other RPAS applications besides CNPC that could also be considered for use in the 5030-5091 MHz band under the AM(R)S and AMS(R)S allocations.

The Aviation Stakeholders do not support expanding use of the 5 030–5 091 MHz band under the AM(R)S and AMS(R)S allocations beyond command and non-payload communications (CNPC) for RPAS. It is important to reduce the risk of spectrum congestion and harmful interference from non-safety traffic, taking into account the need to protect adjacent-band operations.

Accordingly, The Aviation Stakeholders recommend limiting the use of the 5 030–5 091 MHz band for safety-of-flight CNPC only. Any flexibility should be restricted to functions integral to CNPC (e.g., essential control telemetry and contingency/lost-link communications...) and should explicitly exclude payload communications and general connectivity services, which should be accommodated in other appropriate bands/services (e.g., commercial mobile).

Q3: ISED is seeking comments on whether the high-level 5030-5091 MHz band plan proposed by ICAO or a band plan similar to the one being considered in the U.S. would be appropriate for RPAS use in Canada?

The Aviation Stakeholders support Canada aligning, to the extent possible, with the ICAO band plan, given the benefits of international harmonization and economies of scale for RPAS CNPC equipment.

However, recognizing that ICAO/FSMP¹ has not finalized a band plan 5030-5091 MHz, so many administrations have deferred final decisions till the ICAO work is finalised. The Aviation Stakeholders recommend that Canada avoid committing to a detailed and permanent channelization at this stage. The Aviation Stakeholders support an interim, limited implementation that remains compatible with the direction of ICAO discussions, while retaining flexibility to adjust once ICAO/FSMP published a final band plan.

Q4: ISED is seeking comments on any other considerations related to an appropriate 5030-5091 MHz band plan for RPAS use in Canada that may not have been specifically addressed in this consultation.

The Aviation Stakeholders recommend that any 5 030–5 091 MHz band plan for Canada (i) maintain a clear CNPC-only scope consistent with the aeronautical safety intent of AM(R)S/AMS(R)S, and (ii) remain as aligned as practicable with evolving ICAO/FSMP work to support harmonization, interoperability, and economies of scale.

The Aviation Stakeholders recommend an interim approach that includes practical coordination mechanisms, and that the band plan explicitly accounts for adjacent-band protection requirements (including RNSS protection per 5.443C unwanted emission constraints).

Q5: ISED is seeking comments on its proposal to issue radio licences as prescribed in the Regulations for terrestrial aeronautical stations communicating with associated aircraft stations (RPA) in the aeronautical service.

The Aviation Stakeholders support ISED's proposal to authorize terrestrial aeronautical stations, except onboard stations, for RPAS CNPC in the 5 030–5 091 MHz band through radio licences issued under the radiocommunication Regulations, operating under the AM(R)S, as well as applicable Transport Canada requirements.

¹ FSMP: Frequency Spectrum Management Panel of International Civil aviation Organisation.

It should be noted that ITU-R WP 5B is developing a preliminary draft new Recommendation: ITU-R M.[CNPC_CHAR_5GHZ]) addressing the characteristics and protection criteria for CNPC links in the 5 030–5 091 MHz band.

ISED should clarify any new term used in this consultation, to avoid terminology confusion, including “terrestrial” term ([Aeronautical service](#)).

Q6: For space stations *used* within an RPAS, ISED is seeking comments on its proposal to:

- a) issue space station spectrum licences to Canadian satellite operators planning to offer services globally and/or in Canada, or issue a FSA to foreign satellite operators**
- b) use a 20-year term for spectrum licences issued for Canadian commercial communications satellites, while FSA would not have an expiration date**
- c) apply the existing satellite fee order, SMSE-001-23, Fee Order for Space Stations, to space stations and generic earth station spectrum licences for RPAS**

The Aviation Stakeholders support ISED’s proposal to authorize RPAS-related space stations in the 5 030–5 091 MHz band through either (i) a space station spectrum licence issued to Canadian satellite operators planning to offer services globally and/or in Canada, or (ii) a Foreign Satellite Approval (FSA) for foreign-licensed satellite operators to provide services in Canada.

Given the safety requirements of communications in this band, such authorization should explicitly limit operations to AMS(R)S CNPC using internationally standardized aeronautical systems (e.g., ICAO Annex 10 Vol 6), and subject to applicable ITU coordination requirements.

It should be noted that ITU-R WP 5B is developing a preliminary draft new Recommendation: ITU-R M. [CNPC_CHAR_5GHZ]) addressing the characteristics and protection criteria for CNPC links in the 5 030–5 091 MHz band for both AM(R)S and AMS(R)S.

NAV CANADA recommend that ISED grant RPAS-related space-station licenses to Canadian operators for a term shorter than 20 years. This would balance financial risk to operators with flexibility to align with evolving ICAO/ITU-R standards.

Q7: For aircraft stations communicating with terrestrial aeronautical stations, ISED is seeking comments on its proposal to:

- d) provide for licence-exempt operations by updating RBR-01 to include the 5030-5091 MHz band and section 6.4 (Power restrictions) to restrict output power to a maximum of 10 watts**

e) modify RBR-01 to allow the 15.4 – 15.7 GHz band to be used for licence-exempt radionavigation

The Aviation Stakeholders support licence-exempt aircraft station operations in 5 030–5 091 MHz, provided that the 10W limit is clearly linked to a nominal gain of 2 dBi (as per RTCA DO-362A section R.2.2.1) and remains reviewable to align with evolving international standards (ITU-R, RTCA/EUROCAE, ICAO) and Canadian operational experience.

The Aviation Stakeholders support the modification of RBR-01 to allow use of the 15.4 – 15.7 GHz for licence-exempt radionavigation, while ensuring that it remains reviewable to align with evolving international standards (ITU-R, RTCA/EUROCAE, ICAO) and Canadian operational experience.

Q8: For aircraft stations communicating with space stations, ISED is seeking comments on its proposal to:

f) issue annual generic earth station spectrum licences which expire on March 31 of each year, with a high expectation of renewal

g) add the 5030-5091 MHz band in Annex A of CPC-2-6-03 as shown in Table 6 above in order to make aircraft earth stations eligible for generic earth station licensing

h) apply existing satellite fee order to generic earth station spectrum licences for RPAS

The onboard RPAS station communicating with space stations will most probably be the same as the onboard RPAS station communicating with terrestrial stations, for reasons of power and weight economy. Consequently, The Aviation Stakeholders recommend that they should be considered as license-exempt under RBR-01, and therefore, none of the above (03) bullets would apply following the ISED's policy. <https://ised-isde.canada.ca/site/spectrum-management-telecommunications/en/licences-and-certificates/licensing-exemptions>

Q9: Should ISED require RPAS equipment (both aeronautical and aircraft stations) operating in the 5030- 5091 MHz band to meet the minimum operational performance standards described in RTCA DO-362A to allow for an initial launch of services in the band? Are there any other technical standards that ISED should consider adopting in addition to, or instead of, RTCA DO-362A, or considerations that ISED should take into account?

The Aviation Stakeholders support using RTCA DO-362A as the near-term minimum baseline for terrestrial (non-satellite) CNPC radios operating in 5 030–5 091 MHz, because it is a mature, safety-focused MOPS and is already referenced in the U.S. regulatory and FAA equipment authorization

approach. Flexibility to support future internationally recognized technical standards under development (e.g. ICAO Annex 10 Vol 6 and associated manuals) should be considered.

A key advantage of DO-362A is its recognition that the CNPC link may support other safety-related exchanges connected to operations (for example, communications between the remote pilot and ATC, and information flows involving detect-and-avoid (DAA), weather radar, and/or video systems carried on the aircraft).

Note that Transport Canada has recognized DO-362A within CAN-TSO-C213 per Airworthiness Manual 537.

Q10: Should the technical requirements being contemplated for adoption for licensed aeronautical stations and licence-exempt aircraft stations be incorporated into the Conditions of Licence and RBR-1, respectively, or should these requirements form the basis of new Radio Standards Specifications (RSSs) specific to all radio equipment operating in the 5030-5091 MHz band for RPAS operations? In providing comments to the above questions, respondents are asked to include supporting rationale and arguments.

The Aviation Stakeholders recommend a two-step approach:

1. Near-term (launch): implement interim technical limits and operational obligations in RBR-1 (aircraft stations) and Conditions of Licence (ground stations), referencing DO-362A for terrestrial CNPC .
2. Long-term (end-state) to establish an RSS for all RPAS CNPC radios in 5030–5091 MHz so compliance is enforced through certification, while following applicable ITU-R and ICAO recommendations and standards.

Q11: ISED is seeking comments on its proposal to establish an exclusion zone around DRAO, within which transmission and reception of signals for RPAS operations in the 5030-5091 MHz band would be prohibited. This exclusion zone would be defined in the relevant technical standard.

The Aviation Stakeholders recognize the need to protect the Dominion Radio Astrophysical Observatory (DRAO) from harmful interference and supports ISED in establishing appropriate protection measures for radio astronomy. However, because 5 030–5 091 MHz supports safety-related RPAS CNPC, The Aviation Stakeholders recommend that any exclusion zone be defined using transparent technical criteria of RAS receivers and implemented in a manner that minimizes unnecessary operational restriction while ensuring robust protection of DRAO. The Aviation Stakeholders recommend considering the feasibility of this approach for satellite systems.

Q12: ISED is seeking comments on its proposal to not require coexistence measures for FSS earth station licensees operating in the 5091-5150 MHz range.

The Aviation Stakeholders support ISED's proposal not to require coexistence measures for FSS earth station licensees operating in 5091–5150 MHz (Earth-to-space). Globalstar, who operates gateway earth stations in the 5091-5250 MHz band in USA, states that it is not aware of any technical concerns related to the development of UAS operations in the 5030-5091 MHz band.

The primary coexistence concern is RPAS receiver susceptibility (adjacent-band desensitization/blocking) when operating near high-power FSS uplinks, which has also been noted by Globalstar.

The Aviation Stakeholders recommend that ISED ensure FSS earth station information is readily available (and integrated into any DFMS advisory/assignment process) to alert RPAS operators to potential EMI near such sites, without creating new obligations on FSS earth station licensees.

Q13: ISED is seeking comments on any other co-existence considerations that should be taken into account for services in adjacent bands.

No other coexistence considerations would be recommended, based on FCC's review of this matter.

Q14: ISED is seeking comments on an appropriate interim approach to coordinate RPAS use until a formal approach such as a database management system can be developed.

The Aviation Stakeholders support adopting an Interim Access Mechanism (IAM)-type coordination framework to enable near-term RPAS CNPC deployment in 5 030–5 091 MHz while a formal coordination approach (e.g., DFMS/database) is developed. The IAM should draw on the experience of other administrations that have implemented interim measures until full DFMS deployment.

Where an interim approach is implemented, The Aviation Stakeholders recommend that it:

- Requires coordination and registration using an online process that captures key parameters, and that supports deconfliction and traceability; and
- Ensures protection of adjacent services by limiting operations to a centrally located portion of the band, until enough empirical evidence supports use of the full band.

Q15: ISED is seeking views on the use of a DFMS administered by a private third-party, or any other potential coordination

approaches to manage RPAS operations in the 5030-5091 MHz band.

The Aviation Stakeholders could accept the use of a DFMS administered by private third parties, if they meet clear safety, governance, technical, security, and accountability requirements.

This capability would be consistent with the approach adopted by the FCC, which relies on one or more DFMSs (run by private DFMS administrators) to manage short-term, protected assignments and includes requirements on DFMS functions, security, coordination between DFMSs, and fee oversight.

It should be noted that ISED has delegated to NAV CANADA the frequency selection, assignment, and notification of frequencies in the 5030-5091 MHz Band. NAV CANADA currently manages frequency assignments in this band.

Q19: ISED is seeking preliminary comments on the technical and operational implementation aspects for DFMS such as:

a. information required from licensed incumbents to define exclusion zone

The Aviation Stakeholders recommend that ISED considers the following parameters required by DFMS to compute exclusion/coordination zones consistently:

- Location (lat/long), site elevation, antenna height
- Frequencies/bandwidth and service type
- EIRP (or conducted power + losses) and activity factor (if applicable)
- Antenna pattern/gain, tilt, polarization (use standardized defaults if unknown)
- Protection criterion (where incumbent is the victim): threshold; reference bandwidth; and any other availability metric

b. criteria and propagation models used for exclusion zone determination

To ensure that “protected zones” are calculated consistently, The Aviation Stakeholders recommend ISED to define:

- A single protection framework per incumbent service (e.g., I/N or field strength/pfd) including aggregation rule and reference bandwidth; and
- Clear and specific rules on the radio propagation model applicable to each interference scenario (e.g., air-air, air-ground, ground-ground).

c. information required from non-networked RPAS users during the DFMS request process

The Aviation Stakeholders recommend ISED to consider the following essential information specific to each request:

- Certified equipment ID + profile class (Narrowband/Wider CNPC max EIRP/PSD class, antenna type, Narrowband/Wider CNPC)
 - Contact/operator ID for compliance/interference resolution
 - Timeframe of operations
 - Area (polygon/corridor)
 - Altitude envelope (AGL/AMSL; max altitude mandatory)
 - Bandwidth/channel need (e.g., number of 250 kHz-equivalent channels)
- d. **frequency of updates to licensee data within the DFMS**
- e. **necessary security and privacy protections for stored and transmitted data**

The Aviation Stakeholders recommend that being this data safety critical, the security and privacy protections should be commensurate. Aviation has applied cybersecurity frameworks such as NIST, ISO 27001, EUROCAE ED-201 to 206, & ASTM F3532 to support safety critical information systems.

Q20: ISED seeks comments on any additional factors, concerns or technical constraints that should be addressed when developing the DFMS standards in the Canadian context.

The Aviation Stakeholders recommend that DFMS standards in the Canadian context explicitly address cross-border constraints and rapid incorporation of any future Canada/U.S. coordination arrangements. This capability is needed because RPAS emissions at high altitude can cause cross-border interference; DFMS must be capable of automatically preventing cross-border interference issues.

Q21: ISED is seeking comments on the proposed considerations to identify specific commercial mobile bands where the proposed RPAS framework will be applied.

Commercial mobile bands can bring real value for payload / high-throughput data and some telemetry, but safety-of-life CNPC remains a different category: it typically requires an aviation-grade framework with standardized performance, predictable interference environment, and clear operational accountability. The Aviation Stakeholders recommend that ISED mandates additional safeguards for CNPC in these bands.

It is important to note that this ISED authorization is the first step in getting approval to operate RPAS. Compliance with the TCCA aviation safety regulatory framework (e.g. CAR Part IX) is still required.

Finally, as context, ISED's consultation itself notes that the U.S. has adopted a phased approach that prioritizes dedicated, protected CNPC spectrum in 5030–5091 MHz while broader arrangements continue to be studied; this reinforces the value of keeping CNPC protection objectives central when considering commercial mobile bands.

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.

The Aviation Stakeholders recommend that, in selecting commercial mobile bands for RPAS, ISED consider additional factors to ensure safe, scalable deployment and predictable coexistence. In particular, ISED should mandate additional safeguards for CNPC in these bands.

Use for RPAS of commercial mobile bands adjacent to aviation safety bands should be carefully evaluated to ensure out-of-band emissions (or in-band power) will not adversely affect existing aircraft radio systems.

Q23: ISED is seeking comments on its proposal to apply the RPAS framework to the following initial bands that provide commercial mobile bands:

- a. 600 MHz (617-652 MHz/663-698 MHz)**
- b. 700 MHz (698-756 MHz and 777-787 MHz)**
- c. AWS-1 (1710-1755 MHz/2110-2155 MHz)**
- d. AWS-3 (1755-1780 MHz/2155-2180 MHz)**
- e. PCS (1850-1915 MHz/1930-1995 MHz)**

The Aviation Stakeholders support the use of existing commercial mobile networks to enable RPAS communications in the proposed initial commercial mobile bands (600 MHz, 700 MHz, AWS-1, AWS-3, PCS), provided the framework is structured so that aviation safety is preserved. Given its potential safety-of-life nature, CNPC should be protected.

The Aviation Stakeholders recommend that ISED ensure the RPAS framework for these commercial mobile bands includes the following safeguards:

- (i) Clear scope: The difference between using commercial mobile for RPAS operations (e.g., payload) and RPAS control (e.g., C2 Link) must be explicit. Continued connection to the defined aviation regulations is recommended.
- (ii) MNO permission and responsibility: RPAS aerial UEs should operate only with the mobile operator's approval, under the operator's existing spectrum licence, with the operator responsible for compliance and interference control.
- (iii) Technical limits: Set clear limits such as max power/EIRP (or PSD), power control, and altitude-related limits if needed, because airborne devices can affect a wider area than normal ground phones.
- (iv) Link failure: Require basic rules for accountability around reporting of outages, service level agreement violations, and service drops. Basic RPAS rules for loss of signal and minimum performance expectations are already covered by aviation regulation (CAR Standard 922.09).

- (v) Cross-border: DFMS/controls should be able to apply current and future cross-border coordination rules (e.g., Canada – USA), since airborne signals can cross the border.

Q24: ISED is seeking comments on any other bands that are used for commercial mobile services for which the RPAS framework should be applied.

The Aviation Stakeholders recommend that ISED not extend the RPAS commercial-mobile framework to additional bands beyond those already proposed, unless supported by band-specific coexistence studies and enforceable operational controls.

Should ISED consider additional commercial mobile bands, eligibility should be determined case-by-case based on:

- (vi) demonstrated protection of aviation and other incumbent services (including via no-transmit zones and additional OOB limits where required),
- (vii) a robust mechanism to identify aerial UEs and enforce altitude/geographic constraints,
- (viii) cross-border coordination feasibility, and
- (ix) clear network-operator authorization and accountability for airborne use.

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.

If ISED removes the prohibition of RPAS operations from the Access Licensing framework, The Aviation Stakeholders recommend adopting the following minimum constraints: (a) altitude/operating-area limits, (b) strict airborne EIRP limits, (c) mandatory network authorization/power control and (d) protection of CNPC.

The Aviation Stakeholders understand that white space is not considered part of the Access Licensing framework

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.

The Aviation Stakeholders supports ISED's proposal as an option to enable supplemental connectivity, particularly in remote or underserved areas, provided that ISED incorporates appropriate safeguards, including maintaining strong safety-of-life CNPC protections and

governance linked to aeronautical frameworks, and ensuring these are not diluted through broader commercial connectivity mechanisms. These safeguards should include:

— CNPC over SMCS only with a defined approval process: If CNPC is carried over SMCS, it should require a specific safety case and approval process, including demonstrated performance for availability, integrity, continuity, latency, resilience, and cybersecurity, aligned with Transport Canada oversight and relevant international aeronautical standards as they mature.

— Accountability and enforceability: ISED should clearly assign responsibilities among the SMCS satellite operator, any partner MNO, and RPAS operators, including enforceable capabilities to:

- identify RPAS aerial UEs,
- apply geographic/altitude/operational constraints where required,
- monitor compliance and performance, and
- promptly suspend/terminate non-compliant operations, supported by adequate logging/traceability for investigations.

— Coexistence and interference risk management: Given wide-area satellite footprints and airborne propagation characteristics, ISED should ensure SMCS-enabled RPAS use does not introduce harmful interference to other services in the applicable bands, and that any mitigation measures are scalable and enforceable.

— Cross-border considerations: The framework should explicitly address Canada/U.S. coordination/roaming constraints where relevant, since SMCS operations can span large areas and may implicate cross-border interference and regulatory alignment.

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.

The Aviation Stakeholders support ISED's proposal to add a new Canadian Table of Frequency Allocations footnote CYY to permit RPAS aerial user equipment (UE) operations under the mobile service allocations in specified commercial mobile bands, if footnote CYY is modified as follows:

CYY: *Aerial user equipment for Remotely Piloted Aircraft System (RPAS) operations are permitted under the mobile service allocations in the following frequency bands: 617-652 MHz/663-698 MHz, 698-756 MHz and 777-787 MHz, 1850-1915 MHz/1930-1995 MHz, 1710-1755 MHz/2110-2155 MHz, and 1755-1780 MHz/2155-2180 MHz. RPAS operations in these bands are limited to command and non-payload communications (CNPC) and payload communications, subject to the RPAS framework conditions and applicable technical standards.*

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.

The Aviation Stakeholders support permitting RPAS aerial UE operations under the existing spectrum licence issued to commercial mobile licensees in specified bands, provided that appropriate protection and clear accountability mechanisms are in place for CNPC.

Where third-party operators deploying RPAS services are subscribers of the commercial mobile operator, ISED should explicitly maintain that the commercial mobile spectrum licensee (MNO) remains responsible for ensuring that RPAS aerial UE operations conducted by its subscribers comply with all licence conditions and technical requirements, including the ability to monitor, constrain, and promptly terminate non-compliant operations.

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.

The Aviation Stakeholders do not consider existing commercial mobile conditions of licence, as currently written, to be sufficient on their own to enable RPAS aerial UE operations. While amendments to RSS/SRSP can introduce necessary technical limits, ISED should also clarify and, where needed, augment licence conditions to address new potential interference scenarios and protect CNPC.

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.

The Aviation Stakeholders do not consider existing the generic Supplemental Mobile Coverage by Satellite (SMCS) earth station spectrum licences, as currently written, to be sufficient on their own to enable RPAS aerial UE operations. While amendments to RSS/SRSP can introduce necessary technical limits, ISED should also clarify and, where needed, augment licence conditions to address new potential interference scenarios and protect CNPC. In addition, and given that satellite footprints are inherently wide-area, the framework should include provisions for cross-border arrangements applicable to airborne operations.

Q31: ISED is seeking comments on the anticipated use cases and deployment considerations for RPAS aerial UEs, including their associated altitudes of operations, in commercial mobile bands, particularly with respect to how they could impact the interference environment with other users.

Current Aviation Regulations allow for the routine operations of RPAS up to 400 ft, and BVLOS away from populated areas. Specific approvals are needed for BVLOS operations above populated areas, in higher airspaces, and in controlled airspace. Considerations related to the appropriateness of commercial mobile bands to support C2 Link and safety critical data needs to be addressed. Interference considerations should at a minimum address this scope.

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.

The Aviation Stakeholders support, in principle, enabling RPAS aerial UE access to commercial mobile networks. However, permitting aerial UE operations solely under existing commercial mobile licences and using a standard subscriber model, may not be sufficient by itself to ensure effective intra-network coexistence.

Aerial UEs have different operational geometries from terrestrial UEs (e.g., increased line-of-sight to multiple cell sites), which can increase uplink and downlink interference risks and can degrade service for other network users unless additional controls are applied.

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.

The Aviation Stakeholders believe that existing SRSP limits are necessary but may not be sufficient for aerial UEs. Additional consideration tailored to aerial use may be required to ensure intra-network coexistence, given the different interference characteristics introduced by aerial UEs (e.g., increased line-of-sight and wider-area coupling to multiple sites). These considerations should assess aggregate impact rather than rely only on single-link assumptions, as well as realistic loading and congestion.

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.

The Aviation Stakeholders support ISED's proposal to develop aerial-UE-specific technical requirements in the relevant Radio Standards Specifications (RSS), including specific power limits and transmit power control provisions. These device-level measures will ensure that RPAS aerial UEs operate at the appropriate transmit power and will help keep co-channel inter-network interference into adjacent licence areas within acceptable levels, complementing the existing SRSP boundary coexistence framework.