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Date: October 4, 2021

Shari Scott
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RE: Consultation on Updates to the Licensing and Fee Framework for Earth Stations and Space Stations in Canada, published August 2021, SMSE-009-21

Dear Ms. Scott,

The Canada Centre of Mapping and Earth Observation (CCMEO) is pleased to provide comments on ISED's Consultation on Updates to the Licensing and Fee Framework for Earth Stations and Space Stations in Canada, published August 2021, SMSE-009-21.

Sincerely,

Corinna Vester
Acting Director – CCRS Operations

Attachment

**The Canada Centre of Mapping and Earth Observation's
comments to the
Consultation on Updates to the Licensing and Fee Framework for Earth Stations and Space
Stations in Canada,
published August 2021, SMSE-009-21
Date: October 4, 2021**

Question 1a

CCMEO is supportive of a spectrum licence that authorizes multiple fixed earth stations (not necessarily identical) under a single licence. At the Inuvik Satellite Station Facility (ISSF), there are many fixed earth stations that need separate licences to communicate with space stations, requiring a duplication of radio licences despite the fact that only one earth station will be used at a time to communicate with a space station. The fixed earth stations at the ISSF predominately support earth observation and scientific space stations operating in a polar orbit. Given that fact that the contact time of these space stations is not constant and is limited to an average of 8 minutes several times over a 24 hour period, it makes sense to support as many space stations as is feasible. To have access to multiple earth stations helps with logistics and provides redundancy in case of earth station anomalies. CCMEO believes that several fixed earth stations could be “certified” to operate under a spectrum licence associated with a satellite system.

Question 1b

CCMEO would be supportive of a spectrum licence for a Tier 1 service area for fixed earth stations that are receiving data from earth observation and scientific space stations.

Question 2a

CCMEO thinks it would be appropriate as described in the consultation, to implement spectrum licences that require site approval for fixed earth licences in the frequency bands that are of interest to CCMEO, namely 2025 – 2120 MHz, 2200 – 2300 MHz, 8025 – 8500 MHz and 25.5 – 27 GHz, as these earth stations are receiving important data and providing tracking and commanding of space stations.

Question 2b

CCMEO supports the collection and assessment of the technical information listed in Annex B of CPC-2-6-01 for earth stations requiring site approval as part of the site licence process. Any streamlining of the application process for earth stations requiring site approval would be greatly appreciated.

Question 4

As noted above, fixed earth stations that support earth observation and scientific space stations in the frequency bands 2025 – 2120 MHz, 2200 – 2300 MHz, 8025 – 8500 MHz and 25.5 – 27 GHz should be subject to spectrum licences. A group of individual fixed earth stations, that are not necessarily identical, could be approved for use and would be included under a spectrum licence that would allow them to communicate with specific space stations and frequencies in a regional area (Tier 4) or Canada wide for receiving only earth stations.

Question 15

CCMEO supports assigning a consumption-based fee to earth station spectrum licences, where a one-time fee is collected to evaluate and add a fixed earth station to a spectrum licence. CCMEO is asking for an exception in the model that the rates per MHz decrease with an increase in the allocated frequency for the space operation frequency bands of 2025 – 2120 MHz and 2200 – 2300 MHz. The use of higher frequency allocations for space operation services is not ideal due to propagation characteristics at higher frequency bands. The proposed cost model provides an incentive to use spectrum efficiently, however spectrum efficiency is not a priority in terms of Tracking, Telemetry and Commanding (TT&C). Ensuring that one can track the location and monitor the health of the space station and maintain control of it are of utmost importance. Considering the important functions of tracking and controlling a space station, it is proposed that an exception be made in the per MHz cost, where a lower cost would apply for TT&C operations. With a proposed spectrum fee of \$100/MHz, CCMEO would see an increase of 4 to 8 times in their licences fees for the radio licences they operate in the 2 GHz bands.

In terms of CCMEO operations in the receive only bands of 8025 – 8500 MHz and 25.5 – 27 GHz, CCMEO supports assigning a consumption based fee to the earth station spectrum licence, which would be associated with multiple space stations and multiple fixed earth stations.