

BLANKET EARTH STATION LICENSE APPLICATION

SES Americom, Inc. (“SES”) seeks blanket authority for the operation of 10,000 Global Skyware 90-centimeter antennas (“90cm Antennas”) to communicate with the SES-17 geostationary orbit (“GSO”) spacecraft at 67.1° W.L.¹ and with other Ka-band satellites on the Approved Space Station List (“Approved Satellites”) using the 28.35-28.6 GHz and 29.3-30 GHz (uplink) bands and the 18.3-18.8 GHz and 19.7-20.2 GHz (downlink) bands. SES also seeks authority for the 90cm Antennas to communicate with SES-17 in additional downlink frequencies not included in the bands eligible for “Permitted List” operations under Section 25.103,² the 17.8-18.3 GHz, 19.3-19.4 GHz, and 19.6-19.7 GHz bands. Granting SES blanket authority to operate the 90cm Antennas will serve the public interest by facilitating high-throughput GSO data services for fixed satellite service (“FSS”) connectivity throughout the United States.

Uplink/Transmit/Earth-to-Space Frequencies

28.35-28.6 & 29.5-30 GHz

The 28.35-28.6 GHz and 29.5-30 GHz bands are allocated on a sole primary basis for GSO FSS systems,³ and these bands are available for use with Approved Satellites. The proposed operation of the 90cm Antennas with these spacecraft will not cause harmful interference to adjacent GSO systems.

29.3-29.5 GHz

The 29.3-29.5 GHz band is allocated on a co-primary basis to GSO FSS and non-geostationary orbit (“NGSO”) mobile-satellite service (“MSS”) operations⁴ and is available for use with Approved Satellites. Granting SES authority to operate the 90cm Antennas in these frequencies is consistent with Commission rules. The Iridium MSS network does not use the 29.3-29.5 GHz band,⁵ and SES has internally coordinated with its affiliate O3b Limited, which is

¹ *SES-17 S.à r.l.*, Call Sign S3043, File No. SAT-PDR-20190305-00014, granted May 8, 2020, and File No. SAT-MPL-20200609-00070, granted July 30, 2020 (“SES-17 Market Access Grant”).

² 47 C.F.R. § 25.103 (defining the “Permitted Space Station List” and identifying the frequencies available for communications with satellites on that list).

³ See *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order, 32 FCC Rcd 7809 (2017) (“NGSO Order”) at 7850, Appendix B (“Ka-band Plan”).

⁴ See *id.*

⁵ NGSO Order at 7815, ¶ 17.

authorized to use this band segment for NGSO MSS. SES's planned use of the 29.3-29.5 GHz band segment does not require coordination with any other satellite operator.

Downlink/Receive/Space-to-Earth Frequencies

18.3-18.8 GHz & 19.7-20.2 GHz

The 18.3-18.8 GHz and 19.7-20.2 GHz bands are allocated in the United States on a primary basis to GSO FSS systems⁶ and are available for use with Approved Satellites. SES requests authority for the 90cm Antennas to receive in these bands.

17.8-18.3 GHz

The 17.8-18.3 GHz band is allocated on a primary basis to terrestrial Fixed Service ("FS") operations and to FSS on a secondary basis⁷ and is available for blanket licensing.⁸ SES requests authority for the 90cm Antennas to receive from SES-17 in this band on a secondary basis and will accept any interference from primary FS networks.

The Commission authorized SES-17 to transmit in these frequencies subject to compliance with the power flux density ("pfd") limits set forth in Section 25.208(c) of the Commission's rules.⁹ The Commission also specified that the pfd at the earth's surface produced by emissions from SES-17 must not exceed a level of -118 dBW/m²/MHz at any angle of arrival.¹⁰ SES will comply with these operational parameters.

19.3-19.4 & 19.6-19.7 GHz

The 19.3-19.4 GHz and 19.6-19.7 GHz band segments are allocated on a co-primary basis to GSO FSS and NGSO MSS feeder links,¹¹ are not used by Iridium,¹² and are available for

⁶ See Ka-band Plan.

⁷ See *id.*

⁸ NGSO Order at 7812, ¶ 8 ("to promote greater use of the spectrum without constraining the primary fixed service, we will allow blanket licensing of earth stations on a secondary basis in [the 17.8-18.3 GHz] band").

⁹ See SES-17 Market Access Grant, Attachment to Grant at 2-3, ¶ 7(b), *citing* 47 C.F.R. § 25.208(c).

¹⁰ See SES-17 Market Access Grant, Attachment to Grant at 3, ¶ 7(c).

¹¹ See Ka-band Plan.

¹² NGSO Order at 7815, ¶ 17.

blanket licensing.¹³ SES requests authority for the 90cm Antennas to receive from SES-17 in these bands. As discussed above, SES will comply with Section 25.208(c), and the pfd produced by emissions from SES-17 will not exceed -118 dBW/m²/MHz at any angle of arrival.

24/7 Point of Contact for Remote Control

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Conclusion

For the foregoing reasons, SES respectfully requests that the Commission grant SES's request to operate 10,000 90cm Antennas in the U.S.

¹³ *Id.* at 7816, ¶ 21 (“we are persuaded by commenters that FSS earth stations can receive in the 19.3-19.4 GHz and 19.6-19.7 GHz bands under blanket licenses and on a secondary basis to the fixed service, without imposing constraints on terrestrial stations”).