

## REQUEST FOR SPECIAL TEMPORARY AUTHORITY

SES Government Solutions, Inc. (“SES-GS”) respectfully requests special temporary authority (“STA”) for a period of 180 days to use its earth station in Bristow, VA for communications with the O3b Ka-band non-geostationary orbit fixed-satellite service (“NGSO FSS”) satellite fleet. SES-GS currently holds authority to communicate with O3b from the Bristow earth station site using the frequencies in O3b’s beam 3<sup>1</sup> and was previously issued STAs to use the frequencies in O3b’s beam 5 at this location.<sup>2</sup> In order to maximize its flexibility given constraints on the availability of O3b capacity, SES-GS now seeks authority to use any band segment within the frequencies authorized for O3b’s operations: 17.8-18.6 GHz, 18.8-19.3 GHz, 27.6-28.4 GHz, and 28.6-29.1 GHz. As with the prior STA grants, SES-GS seeks authority to communicate with O3b’s constellation for demonstration purposes only and does not seek to provide commercial services to end users. Grant of the requested authority is in the public interest as it will allow SES-GS to conduct demonstrations of the O3b system’s capabilities to potential government customers.

Complete technical information regarding the Bristow earth station was submitted to the Commission in support of the earlier SES-GS STA request for Bristow, File No. SES-STA-20131022-00887, and is incorporated by reference herein. In particular, that application included a Schedule B describing the applicable technical parameters, a complete set of antenna patterns, link budgets, and a radiation hazard analysis. Apart from seeking authority to use additional O3b frequencies, no changes from the specifications set forth in those materials are proposed here.

The Commission also has full details regarding the O3b space stations and recently granted U.S. market access for the O3b constellation to allow U.S.-

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<sup>1</sup> See SES Government Solutions, Inc., File Nos. SES-STA-20131022-00888 (grant-stamped Jan. 6, 2014); SES-STA-20131022-00887 (grant-stamped Jan. 31, 2014); & SES-STA-20140612-00517 (grant-stamped July 29, 2014).

<sup>2</sup> See SES Government Solutions, Inc., File Nos. SES-STA-20140903-00694 (grant-stamped Sept. 5, 2014) & SES-STA-20141106-00843 (grant-stamped Nov. 25, 2014).

licensed earth stations to communicate with the O3b system.<sup>3</sup> SES-GS has reviewed the O3b Market Access Grant and confirms that the operations proposed by SES-GS pursuant to the requested STA will fully comply with the terms and conditions set forth therein.

Granting STA is consistent with Commission precedent and will serve the public interest. As discussed above, the Commission has already reviewed the technical parameters of the SES-GS Bristow earth station in granting prior STAs for this location. Furthermore, the SES-GS Bristow earth station is located in close proximity to antennas operated by O3b that have been authorized to use all the O3b frequency segments.<sup>4</sup>

Consistent with the O3b Market Access Grant, the proposed SES-GS operations will provide the required protection to terrestrial operations and geostationary orbit (“GSO”) satellites operating in the O3b spectrum. Specifically, SES-GS will not cause harmful interference to, or seek interference protection from, local multipoint distribution service (“LMDS”) stations in the 27.6-28.35 GHz band,<sup>5</sup> GSO FSS networks

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<sup>3</sup> See O3b Limited, File Nos. SAT-LOI-20141029-00118 & SAT-AMD-20150115-00004, Call Sign S2935, grant-stamped Jan. 22, 2015 (“O3b Market Access Grant”).

<sup>4</sup> O3b has submitted a request for a permanent license at this site, File Nos. SES-LIC-20130618-00516, SES-AMD-20131122-01187, & SES-AMD-20140814-00653. Pending action on this application, the Commission has granted O3b temporary authority for operations at the Bristow location. See File Nos. SES-STA-20130617-00497 (grant-stamped Aug. 27, 2013) & SES-STA-20140514-00357 (grant-stamped June 30, 2014).

<sup>5</sup> The Commission has previously indicated that secondary FSS operations in the 27.6-28.35 GHz band are “for the purpose of providing limited gateway-type service.” *Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission’s Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, First Report and Order and Fourth Notice of Proposed Rulemaking, 11 FCC Rcd 19005, 19025, ¶ 45 (1996). SES-GS believes that the focus of these Commission’s statements has been on ensuring that FSS operations are compatible with LMDS by limiting the number and ubiquity of FSS terminals permitted to use the spectrum. The proposal by SES-GS to operate at a single site in Bristow, virtually co-located with an O3b facility, is clearly consistent with this underlying rationale. Furthermore, as noted above, LMDS systems in the vicinity of the site have been notified of the proposed SES-GS operations and have not objected. Accordingly, grant

in the 18.3-18.6 GHz and 28.35-28.4 GHz bands, or terrestrial Fixed Service operations in the 17.8-18.3 GHz band. SES-GS and O3b have submitted evidence of the compatibility of their networks with terrestrial systems and GSO satellites, and SES-GS incorporates that information by reference herein.<sup>6</sup> As noted above, the proposed SES-GS operations will also comply with the O3b Market Access Grant, which includes explicit conditions to ensure that primary services are not disrupted by communications with the O3b constellation. Furthermore, as noted above, O3b has been authorized to use its Bristow site to communicate with the O3b constellation using two segments of the O3b spectrum, and O3b has been operating a Bristow station in close proximity to the SES-GS terminals throughout the O3b spectrum. To SES-GS' knowledge no complaints of harmful interference have been raised in connection with those operations. SES-GS requests any necessary waiver of the Table of Allocations to permit its proposed use of spectrum in these bands on a non-harmful interference basis.

The requested STA will allow SES-GS to evaluate and demonstrate the O3b network's operational capabilities and will not result in harmful interference to other authorized spectrum users. Thus, grant of the STA will serve the public interest.

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of the requested SES-GS STA will not undermine the primary spectrum rights of LMDS systems.

<sup>6</sup> See SES Government Solutions, Inc., File No. SES-STA-20131022-00888, Narrative at 1-3 (showing regarding compatibility of proposed operations with LMDS systems and GSO operations) & Annex 2 (Comsearch reports regarding notification to 28 GHz common carrier, LTTS, and LMDS operators and with 18 GHz common carrier microwave networks). See also O3b Limited, File No. SES-LIC-20130618-00516, Exhibit 1 at 4-7 (demonstration of O3b's ability to share with primary terrestrial facilities and GSO satellites); & attached Comsearch reports on compatibility with 18 GHz and 28 GHz terrestrial systems.