



January 16, 2018

***By Electronic Filing***

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, SW  
Washington, DC 20554

**Re:** HNS License Sub, LLC  
Applications to Operate Gateway Earth Stations to Facilitate Operation of a Ka-band and Q/V-band Geostationary Fixed-Satellite Service Satellite at the Nominal 95° W.L. Orbital Location, File Nos. SES-LIC-20170807-00876 *et seq.*

Dear Ms. Dortch:

HNS License Sub, LLC (“Hughes”) hereby supplements its above-referenced uncontested gateway applications<sup>1</sup> to address informal Commission staff questions regarding its request for waiver of the 12-month construction requirement under Section 25.113(a)(1) of the Commission’s rules.

The Commission may waive its rules if there is “good cause” to do so.<sup>2</sup> In general, a waiver is appropriate if: (1) special circumstances warrant a deviation from the general rule; and (2) such deviation will better service the public interest than will strict adherence to the general rule.<sup>3</sup> Generally, the Commission will grant a waiver of its rules if the relief requested will not undermine the policy objective of the rule in question and will otherwise serve the public interest.<sup>4</sup> As demonstrated in the Applications<sup>5</sup> and further demonstrated herein, grant of the requested waiver of Section 25.133(a)(1) is warranted and will serve the public interest.

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<sup>1</sup> See HNS License Sub, LLC, *Applications to Operate Gateway Earth Stations to Facilitate Operation of a Ka-band and Q/V-band Geostationary Fixed-Satellite Service Satellite at the Nominal 95° W.L. Orbital Location*, IBFS File Nos. SES-LIC-20170807-00876 – 00895, Exhibit C (filed Aug. 7, 2017) (“Hughes Gateway Applications” or the “Applications”). The Applications were placed on public notice on October 18, 2017, and no comments or petitions to deny were filed on or prior to the 30-day public notice period. See *Satellite Communications Services re: Satellite Radio Applications Accepted for Filing*, Public Notice, Report No. SES-02000 (Oct. 18, 2017).

<sup>2</sup> See 47 C.F.R. § 1.3; *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1164 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

<sup>3</sup> See *Northeast Cellular*, 897 F.2d at 1166.

<sup>4</sup> See *WAIT Radio*, 418 F.2d at 1157.

<sup>5</sup> Hughes Gateway Applications, Exhibit C.

Special circumstances merit a waiver of Section 25.133(a)(1) here.<sup>6</sup> The Commission originally adopted this rule in 1991, when earth stations were designed to communicate with traditional satellites.<sup>7</sup> Today, Hughes operates complex High Throughput Satellites (HTS), which are more complex than traditional satellites and deliver advanced broadband services to users across the United States. Traditional satellites that have CONUS footprints can accept communications from gateways from anywhere within the footprint. In contrast, Hughes' HTS are spot beam satellites that employ high reuse of spectrum in order to gain high throughputs. Each gateway is illuminated by a dedicated beam. As such, gateway locations are determined early in the design cycle. Typically, gateway locations are locked down at the System Requirements Review ("SRR") within six months of signing a satellite contract. The later that the locations are determined in the design process, the more expensive it becomes to move them. It is not long after SRR that feed horn designs, along with the mounting plates and supporting infrastructure, are fixed. After the Preliminary Design Review ("PDR"), which is scheduled for February 2018 for Hughes 95W,<sup>8</sup> the cost to move gateway locations can become quite high and can also cause delays in the schedule.

HTS optimize bandwidth, power, C/I and C/N to achieve lower costs to consumers and higher throughputs for individual consumers. To this end, the gateway feed horns and reflector(s) are optimized for high gain and wide bandwidth, and there are potentially dozens of horns serving dozens of gateways. Specifically, the Hughes 95W satellite system requires 20 gateways. The feeds and reflector(s) on each gateway are fixed and not steerable. To make them steerable is not practical; there are too many horns, and each horn would suffer additional losses due to the need to have, for example, 2-axis rotary joints with flexible waveguide in the Q-, V-, and Ka-bands. Making them steerable would lower the throughput and increase the cost-per-bit sent through the satellite and would not be in the public interest.

Moreover, granting the requested waiver will not undermine the policy objective of Section 25.133(a)(1). When the Commission proposed setting a construction timeframe for earth stations, it sought to "ensure that earth station facilities are being timely constructed and that the entity has not abandoned or is unable to proceed with its plans."<sup>9</sup> The *1991 Order* adopted the 12-month earth station construction period "[i]n order to streamline the authorization process for most transmitting earth stations,"<sup>10</sup> and found that prompt construction and implementation of services will be ensured by requiring "construction to be completed and operations commenced

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<sup>6</sup> 47 C.F.R. § 25.133(a)(1).

<sup>7</sup> *Amendment of Part 25 of the Commission's Rules and Regulations to Reduce Alien Carrier Interference Between Fixed-Satellites at Reduced Orbital Spacings and to Revise Application Processing Procedures for Satellite Communications Services*, First Report and Order, 6 FCC Rcd 2806 (1991) ("*1991 Order*").

<sup>8</sup> Letter from Jennifer A. Manner, Senior Vice President, Hughes Networks Systems LLC, to Marlene H. Dortch, Secretary, Federal Communications Commission, IBFS File Nos. SES-LIC-20170807-00876 – 00895, at 2 & Dave Roos Declaration (attached to letter) (filed Jan. 8, 2018).

<sup>9</sup> *Amendment of Part 25 of the Commission's Rules and Regulations to Reduce Alien Carrier Interference Between Fixed-Satellites at Reduced Orbital Spacings and to Revise Application Processing Procedures for Satellite Communications Services*, Notice of Proposed Rulemaking, 2 FCC Rcd 762, 767 ¶ 46 (1987).

<sup>10</sup> *1991 Order*, 6 FCC Rcd at 2808 ¶ 12.

within a specified period of time.”<sup>11</sup> As discussed above, the Commission set this timeframe when earth stations were simpler and communicated with traditional satellites instead of complex HTS. A waiver of Section 25.133(a)(1) for the proposed gateways is appropriate to accommodate the change in earth station design and will not undermine the underlying policy objective. Rather, construction of the 20 gateway earth stations would be tied to the construction of the Hughes 95W space station, which will be conditioned on Section 25.164’s milestone standard requiring satellites to be constructed, launched and positioned at the authorized orbital location within five years of grant.<sup>12</sup>

Further, allowing the gateways to be constructed consistent with the Hughes 95W milestone schedule will serve the public interest by allowing Hughes to quickly, efficiently, and cost-effectively construct its satellite and gateway earth stations.<sup>13</sup> Grant of the requested waiver will allow Hughes to manage its construction costs, thus keeping the costs of service low, and avoid any delay to making higher speed broadband satellite capacity available to consumers. The requested waiver grant also will allow Hughes to provide “notice to terrestrial licensees of the station locations to permit compatible deployment of terrestrial UMFUS systems.”<sup>14</sup>

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<sup>11</sup> 1991 Order, 6 FCC Rcd at 2810, ¶ 23 (also eliminating the requirement that applicants demonstrate financial qualifications).

<sup>12</sup> Hughes has asked the Commission to issue a Rulemaking to revise the Part 25 satellite rules to permit streamlined application filing and comprehensive FCC authorization for space and earth station operations. “By requiring separate space and earth station applications and authorization, Sections 25.114 and 25.115 thus impose undue restrictions on a satellite service provider’s operational flexibility to configure and deploy its network of satellites, gateway earth stations, and user terminals. Accordingly ... [these rules] should be revised to add a new subsection allowing applications for space or earth station authorizations to request authority for any or all space and earth stations operating in the same network, and further specifying streamlined application requirements for a comprehensive network license.” See Comments of EchoStar Satellite Operating Corporation and Hughes Network Systems, LLC, IB Docket. 16-131, at 5-6 (filed Dec. 5, 2016); EchoStar Satellite Operating Corporation and Hughes Network Systems, LLC, CB Docket No. BO 16-251, at 5-7 (filed May 4, 2017). Additionally, in the *Spectrum Frontiers* proceeding, the Satellite Broadband Providers, which includes Hughes, and the Satellite Industry Association filed separate letters with the Commission requesting the Commission to modify Section 25.133(a)(1) to allow more than one year for the deployment of FSS earth stations seeking to operate in the 28 GHz band. Both parties underscored the need for certainty as to the locations of these satellites throughout the several years it takes to construct the corresponding satellite and bring it into operation. See Letter from EchoStar Satellite Operating Corporation, Hughes Network Systems, LLC, Inmarsat, Inc., O3b Limited, SES Americom, Inc., ViaSat, Inc., and WorldVu Satellites Ltd./OneWeb, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 14-177, IB Docket Nos. 15-256 and 97-95; RM-11664; and WT Docket No. 10-112 at 6-7 (filed May 26, 2016); Letter from Tom Stroup, President, The Satellite Industry Association to Marlene Dortch, Secretary, FCC, GN Docket No. 14-177 at 5-6 (filed June 22, 2016).

<sup>13</sup> Hughes Gateway Applications, Exhibit C at 5.

<sup>14</sup> *Id.* Indeed, Hughes has completed coordination reports, including providing coordination notice to terrestrial licensees, for all but one of its proposed gateway locations. For the remaining proposed gateway location in Santa Clara, California, Hughes has provided coordination notice to terrestrial licensees and expects to submit a status update upon completion of coordination. See IBFS File No. SES-LIC-20170807-00877.

Please direct any questions regarding this matter to the undersigned.

Respectfully Submitted,

/s/ Jennifer A. Manner

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