



July 17, 2017

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Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: Applications and U.S. Market Access Petitions for Q/V-band NGSO Systems
IBFS File Nos. SAT-LOA-20160622-00058, SAT-AMD-20170301-00030, SAT-LOI-20170301-
00031, SAT-PDR-20161115-00120, SAT-LOA-20161115-00117, SAT-LOA-20161115-00121
& SAT-AMD-20170301-00029

Dear Ms. Dortch:

Hughes Network Systems, LLC (“Hughes”) submits these comments on the above-referenced applications and U.S. market access petitions (collectively, “Applications”), filed by Boeing, OneWeb, ViaSat, Theia, and Audacy (collectively, the “Applicants”),¹ for non-geostationary satellite orbit (“NGSO”) operations in the 37.5-42.0 GHz (downlink) and the 47.2-50.2 GHz and 50.4-51.4 GHz (uplink) bands (collectively, “Q/V-band”).

As the Commission has noted, 34 million people across the United States live in areas that lack sufficient access to terrestrial fixed, high-speed Internet.² As the nation’s leading provider of satellite broadband, Hughes is meeting this demand by deploying a fleet of geostationary satellite orbit (“GSO”) satellites to provide ubiquitous, cost-efficient, and resilient broadband services to customers in areas of the country that are unserved or underserved by traditional terrestrial broadband networks. To support future broadband needs, Hughes seeks to expand its broadband satellite fleet and has a pending application for Commission authority to launch and operate a next-generation satellite, HNS 95W, using Q/V-band and other spectrum.³ The HNS 95W satellite will greatly increase Hughes’ satellite broadband capacity and bring additional

¹ See The Boeing Company (“Boeing”), Application, IBFS File Nos. SAT-LOA-20160622-00058 & SAT-AMD-20170301-00030 (June 22, 2016); WorldVu Satellites Limited (“OneWeb”), Petition for Declaratory Ruling, IBFS File No. SAT-LOI-20170301-00031 (Mar. 1, 2017); ViaSat, Inc. (“ViaSat”), Petition for Declaratory Ruling, IBFS File No. SAT-PDR-20161115-00120 (Nov. 15, 2016); Theia Holdings A, Inc. (“Theia”), Petition for Declaratory Ruling, IBFS File Nos. SAT-LOA-20161115-00121 & SAT-AMD-20170301-00029 (Mar. 1, 2017); Audacy Corporation (“Audacy”), Application, IBFS File No. SAT-LOA-20161115-00117 (Nov. 15, 2016); see also *Policy Branch Information*, Public Notice, Report No. SAT-01245 (June 16, 2017); *Satellite Policy Branch Information*, Public Notice, 31 FCC Rcd 11957 (2016).

² See *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, 2016 Broadband Progress Report, 31 FCC Rcd 699, ¶ 79 (2016).

³ See Hughes, Application, IBFS File No. SAT-LOA-20170621-00092 (June 21, 2017).

competition to the marketplace for broadband connectivity in the United States and throughout the Americas.⁴

Compliance with EPFD and Other Technical Limits to Protect GSO Operations

Because the HNS 95W satellite will rely critically upon use of the same Q/V-band spectrum proposed in the Applications, Hughes urges the Commission to take action to ensure meaningful spectrum sharing between future GSO and NGSO operations. Specifically, given the lack of GSO/NGSO sharing criteria and band-specific service rules for the Q/V-band, the Commission should promptly initiate a rulemaking to adopt such rules, including single-entry and aggregate equivalent power flux density (“EPFD”) limits to protect GSO systems. Although technical studies are under review at the International Telecommunication Union (“ITU”) to develop EPFD limits for the Q/V-band, the Commission should conduct its own independent assessment of such limits.

Notably, the Commission should condition any grant of the Applications upon compliance with any applicable EPFD or technical limits that may be adopted by the Commission or ITU in the future. Until such limits are adopted, the Commission should consider applying interim or default EPFD limits comparable to the EPFD limits specified in Article 22 of the ITU Radio Regulations.⁵ The Commission already has adopted the Article 22 EPFD limits (both single-entry and aggregate) as requirements for NGSO operations in the Ku-band,⁶ and also has authorized NGSO operations in the Ka-band based upon compliance with these limits.⁷ Similarly, the Commission reasonably should base any grant of the Applications upon a demonstration of compliance with interim/default EPFD limits comparable to the Article 22 EPFD limits, and require all of the Applicants to provide such showing prior to any grant. The Commission further should adopt a realistic and practicable mechanism to ensure that aggregate EPFD limits are met by all licensed Q/V-band NGSO systems.

Compliance with Existing Milestone Requirements

Additionally, the Commission should impose Section 25.164(b)’s six-year milestone requirement on any grant of the Applications,⁸ and reject Boeing’s request for a longer, two-phase milestone schedule.⁹ Boeing has offered no good cause for waiving the existing milestone requirement, particularly when all other Applicants have committed to launching their systems in compliance with the rule. Grant of Boeing’s request would effectively remove its incentive to deploy its entire constellation in a timely manner and could result in an inefficient use of spectrum. Further, it would complicate coordination between NGSO and GSO operators when an unknown number of additional NGSO satellites could be launched. For these reasons, Boeing’s milestone waiver request is not in the public interest and should be denied.

Conclusion

Based upon the foregoing, Hughes urges the Commission to take the following actions: (i) require all Applicants to demonstrate compliance with interim/default EPFD limits comparable to the Article 22 EPFD limits (both single-entry and aggregate); (ii) condition any grant of the Applications upon compliance with any applicable EPFD or other technical limits adopted by the Commission or ITU in

⁴ See *id.*, Narrative at 1, 4.

⁵ See ITU Radio Regulations, Article 22, Section II.

⁶ See 47 C.F.R. § 25.208(g)-(m).

⁷ See *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Notice of Proposed Rulemaking, FCC 16-170, ¶ 19 n.51 (2016) (citing FCC authorizations).

⁸ See 47 C.F.R. § 25.164(b).

⁹ See Boeing, Application, Narrative at 37-40.

the future; (iii) promptly commence a rulemaking to adopt Q/V-band service rules, including EPFD limits to protect GSO operations; and (iv) deny Boeing's milestone waiver request. Such actions will ensure that both GSO and NGSO systems can operate successfully in the Q/V-band and protect against spectrum speculation.

Please direct any questions regarding this matter to the undersigned.

Respectfully,

/s/ Jennifer A. Manner

Jennifer A. Manner
Senior Vice President, Regulatory Affairs
Hughes Network Systems, LLC
11717 Exploration Lane
Germantown, MD 20876
(301) 428-5893

/s/ Brennan Price

Brennan Price
Senior Principal Engineer, Regulatory Affairs
Hughes Network Systems, LLC
11717 Exploration Lane
Germantown, MD 20876
(301) 428-1654

cc: Parties listed on attached Certificate of Service
Jose Albuquerque (International Bureau)
Kerry Murray (International Bureau)
Bob Nelson (International Bureau)
Stephen Duall (International Bureau)

CERTIFICATE OF SERVICE

I, Karla E. Huffstickler, hereby certify under penalty of perjury that the foregoing Comments was served this 17th day of July, 2017, by depositing a true copy thereof with the United States Postal Service, first class postage pre-paid, addressed to:

Ralph Ewig
Audacy Corporation
340 S. Lemon Ave.
Suite 8787
Walnut, CA 91789

Ronald Center
The Boeing Company
PO Box 3707
Seattle, WA 98124-2207

Bruce A. Olcott
Jones Day
51 Louisiana Ave., NW
Washington, DC 20001
Counsel to The Boeing Company

Tony Azzarelli
WorldVu Satellites Limited
1400 Key Blvd.
Arlington, VA 22209

Brian Weimer
Douglas Svor
Sheppard Mullin Richter & Hampton LLP
2099 Pennsylvania Ave., NW
Suite 100
Washington, DC 20006
Counsel to OneWeb

Jennifer Hindin
Wiley Rein LLP
1776 K Street, NW
Washington, DC 20006
Counsel to OneWeb

James Hickey
Theia Holdings A, Inc.
1600 Market St.
Suite 1320
Philadelphia, PA 19103

Jennifer L. Richter
Akin Gump Stauss Hauer & Feld LLP
1333 New Hampshire Ave., NW
Washington, DC 20036
Counsel to Theia Holdings A, Inc.

Christopher J. Murphy
Daryl T. Hunter
ViaSat, Inc.
6155 El Camino Real
Carlsbad, CA 92009

John Janka
Elizabeth Park
Jarrett Taubman
Latham & Watkins LLP
555 Eleventh Street, NW
Suite 1000
Washington, DC 20004
Counsel to ViaSat, Inc.

/s/ Karla E. Huffstickler
Karla E. Huffstickler