

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)		
)		
AST&Science LLC)	File Nos.	SAT-PDR-20200413-00034
)		SAT-APL-20200727-00088
Petition for Declaratory Ruling on Access to the)		SAT-APL-20201028-00126
U.S. Market for a Non-U.S.-licensed)		
Non-geostationary Satellite Orbit System)	Call Sign	S3065

PETITION TO DISMISS OR DENY

Pursuant to 47 C.F.R. § 25.154(a), Hughes Network Systems, LLC, EchoStar Mobile Limited, and EchoStar Global Australia Pty Ltd (collectively, “EchoStar”) submit this petition to dismiss or deny above-captioned amended petition of AST&Science LLC (“PDR”)¹ seeking U.S. market access for a non-U.S.-licensed non-geostationary orbit (“NGSO”) constellation of 243 low Earth orbit (“LEO”) satellites to provide mobile satellite service (“MSS”) in the 617-960 MHz/1805-2360 MHz (downlink) and 663-915 MHz/1710-2320 MHz (uplink) frequency bands as well as fixed satellite service (“FSS”) using V-band spectrum in the 37.5-42.5 GHz (downlink) and 45.5-51.4 GHz (uplink) frequency bands.² As a licensed operator of

¹ See AST, Petition for Declaratory Ruling, File No. SAT-PDR-20200413-00034 (Apr. 13, 2020) (“Initial PDR”); AST, Amendment, File No. SAT-APL-20200727-00088 (July 27, 2020) (“July Amendment”); see also *Satellite Policy Branch Information: Space Station Applications Accepted for Filing*, Public Notice, Report No. SAT-01501, at 1 (Oct. 2, 2020) (“*October PN*”) (finding Petition acceptable for filing); *Satellite Policy Branch Information: Actions Taken*, Public Notice, Report No. SAT-01497, at 1 (Sept. 11, 2020) (designating Petition as permit-but-disclose for *ex parte* purposes).

² Although the *October PN* suggests that AST’s proposed spectrum use is limited to the 617-960 MHz, 1710-1780 MHz, 1850-1910 MHz, 1930-1990 MHz, 2110-2180 MHz, 2305-2320 MHz, 2350-2360 MHz, 37.5-42.5 GHz, 45.5-47.0 GHz, 47.2-50.2 GHz, and 50.4-51.4 GHz frequency bands, the amended PDR itself seeks use of much larger swaths of spectrum throughout the 617-960 MHz, 1710-2360 MHz, 37.5-42.5 GHz, and 45.5-51.4 GHz frequency bands. See July Amendment, Sched. S Technical Report at 3 (July 27, 2020); cf. *October PN* at 1.

geostationary orbit satellites using V-band and other spectrum,³ EchoStar will be directly impacted by AST's proposed V-band FSS operations. Additionally, EchoStar holds non-U.S. licenses and rights to use S-band spectrum in the 1980-2010 MHz and 2170-2200 MHz bands globally to provide MSS and terrestrial services abroad, including Mexico. Thus, EchoStar's international S-band operations, including cross-border MSS and terrestrial services to Mexico, also will be directly impacted by AST's proposed S-band MSS operations.

The Commission should reject AST's market access request for MSS use of the 617-960 MHz and 1710-2200 MHz frequency bands, as none of the spectrum is allocated domestically or internationally for such use or otherwise available for licensing. The Commission also should require AST to clarify that it will not provide MSS or other satellite services using terrestrial spectrum leased under the Commission's secondary markets rules. Additionally, the Commission should dismiss or defer consideration of AST's proposed V-band FSS operations until commencement of a new processing round. At a minimum, the Commission should condition any market access grant on AST's submission of an updated debris mitigation plan that addresses material deficiencies in its current filing. Finally, to the extent that AST should be required to demonstrate how it will meet international coordination rules with satellite operators in the same bands.

I. THE COMMISSION SHOULD REJECT AST'S PROPOSED MSS USE OF SPECTRUM NOT ALLOCATED OR AVAILABLE FOR SUCH USE

The Commission should reject AST's proposed MSS use of spectrum at 617-960 MHz and 1710-2360 MHz, as none of these bands are allocated domestically or internationally for

³ See, e.g., Hughes Network Systems, LLC, *Stamp Grant*, File Nos. SAT-MOD-20190212-00011 (June 13, 2019).

MSS use or otherwise available for licensing.⁴ AST vaguely suggests that it “will only seek to ... operate on frequencies already licensed by its partners for mobile use on a nationwide basis,”⁵ but fails to specify whether its proposed MSS use will be limited to certain portions of the 617-960 MHz and 1710-2360 MHz bands. AST’s amended Schedule S, in fact, specifies MSS use of the entire 617-960 MHz and 1710-2360 MHz bands.⁶

Although its amended Schedule S information remains unchanged, AST’s latest amendment indicates that it is no longer seeking MSS use of spectrum allocated to terrestrial services, and thus withdraws its request for waiver of the Commission’s allocation rules to permit non-conforming MSS use of the spectrum.⁷ Hughes does not oppose a withdrawal of AST’s request for MSS use of spectrum allocated to terrestrial services. Contrary to AST’s suggestion,⁸ however, the Commission’s spectrum leasing rules and policies adopted in the *Secondary Markets* proceeding do not apply to satellite services.⁹ Accordingly, the Commission should require AST to clarify that it will not provide MSS or other satellite services using terrestrial spectrum leased under the *Secondary Markets* rules and policies.

⁴ See 47 C.F.R. § 2.106 (Table of Frequency Allocations).

⁵ Initial PDR, Narrative at 8 n.24.

⁶ See July Amendment, Sched. S Technical Report at 3. Despite additional filings stating an intent to operate in the U.S. in the PCS, AWS-1, and AWS-3 frequency bands, AST has not amended its Schedule S information to limit MSS use to only those frequencies. See AST, Amendment, File No. SAT-APL-20201028-00126, Narrative at 1 (Oct.28, 2020) (“October Amendment”); Letter from Sallye Clark *et al.*, Attorneys for AST, to Jose P. Albuquerque, FCC, File No. SAT-PDR-20200413-00034, at 2 (July 6, 2020).

⁷ See October Amendment at 1.

⁸ See *id.*

⁹ See *Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets*, Second Report and Order, Order on Reconsideration, and Second Further Notice of Proposed Rulemaking, 19 FCC Rcd 17503, ¶ 66 (2004).

To the extent that AST seeks use of S-band spectrum allocated for MSS use (*i.e.*, 2000-2020 MHz and 2180-2200 MHz), these frequency bands are already authorized for other MSS operations,¹⁰ and AST provides no basis for authorizing additional MSS use of the spectrum. Indeed, the Commission previously declined to open a new processing round to consider additional MSS use of the 2000-2020 MHz and 2180-2200 MHz bands.¹¹ AST also has not requested, or offered any basis for, a waiver to allow consideration of its proposed MSS use outside of a processing round.¹² Thus, absent Commission action to allow additional MSS use of the spectrum or open a new processing round, the 2000-2020 MHz and 2180-2200 MHz bands are unavailable for new MSS licensing.

II. THE COMMISSION SHOULD REJECT CONSIDERATION OF AST’S PROPOSED FSS OPERATIONS OUTSIDE OF A PROCESSING ROUND

The Commission should reject AST’s request for waiver of Sections 25.155(b) and 25.157(c) to allow consideration of its proposed FSS use of V-band spectrum outside of a processing round.¹³ Contrary to AST’s claim,¹⁴ the Commission has not granted waivers under similar circumstances. Indeed, just three months ago, the Commission denied a similar waiver request to allow consideration of Kuiper Systems LLC’s (“Kuiper”) proposed Ka-band NGSO FSS operations outside of a processing round.¹⁵ In doing so, the Commission rejected the same

¹⁰ See DBSD Corporation, AWS-4 Authorizations, Call Sign T070272001 *et al.*; Gamma Acquisition L.L.C., AWS-4 Authorizations, Call Sign T060430001 *et al.*

¹¹ See *Use of Returned Spectrum in the 2 GHz Mobile Satellite Service Frequency Bands*, Order, 20 FCC Rcd 19696, ¶¶ 54-60 (2005).

¹² AST’s request for a waiver of Section 25.157’s processing round requirements appears to be limited to its proposed FSS use of V-band spectrum. See Initial PDR, Narrative at 11 (arguing that the Commission “provides for consideration ... of new NGSO FSS applicants outside of its processing rounds”).

¹³ See Initial PDR, Narrative at 11-14.

¹⁴ See *id.* at 13.

¹⁵ See *Kuiper Systems, LLC*, Order and Authorization, 35 FCC Rcd 8324, ¶ 34 (2020) (“*Kuiper*”).

argument that AST raises here¹⁶ — *i.e.*, a waiver would not undermine the purpose of Sections 25.155(b) and 25.157(c) because the Commission’s adoption of Section 25.261’s NGSO FSS spectrum sharing rule preempts any need to conduct a comparative review of applications to ensure competitive entry by additional operators.¹⁷ The Commission explained that, in adopting Section 25.261’s spectrum sharing rule, it consistently reiterated the importance of processing rounds “to provide a measure of certainty in lieu of adopting an open-ended requirement to accommodate all future applicants.”¹⁸ The Commission thus found that a waiver of processing round procedures effectively would “create an open-ended processing round in which new entrants would be placed on par with previously authorized systems and therefore fail to provide certainty to these systems as intended when establishing a processing round.”¹⁹

Contrary to AST’s claim,²⁰ the circumstances here are distinguishable from those warranting prior waiver grants. In those cases, the Commission found that a waiver of processing round procedures would not preclude additional entrants due to certain technical characteristics of the applicant’s proposed operations, such as limiting operations to a fraction of the spectrum allocated for the proposed service,²¹ operating a small constellation of three

¹⁶ See Initial PDR, Narrative at 12.

¹⁷ See *Kuiper* ¶¶ 34, 42.

¹⁸ *Id.* ¶ 42 (quoting *Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd 7809, ¶ 61 (2017)).

¹⁹ Initial PDR, Narrative at 11.

²⁰ See *id.* 13 & n.42.

²¹ See *Swarm Technologies, Inc.*, Memorandum Opinion, Order and Authorization, 34 FCC Rcd 9469, ¶¶ 16-17 (IB 2019).

satellites in highly elliptical orbit,²² and implementing unique remote-sensing features.²³ In contrast, AST argues that the “relatively small size” of its proposed constellation of 243 satellites, the proposed FSS use solely for gateways, and the reduced number of authorized V-band NGSO FSS systems qualify as special circumstances that will allow spectrum sharing with additional future entrants.²⁴ The Commission, however, has not found that any of these circumstances are sufficient to warrant a waiver of processing round procedures.²⁵ Accordingly, consistent with precedent, the FCC should dismiss or defer consideration of AST’s proposed V-band FSS operations until commencement of a new processing round.

III. THE COMMISSION SHOULD CONDITION ANY GRANT ON SUBMISSION OF AN UPDATED DEBRIS MITIGATION PLAN AND SUCCESSFUL COMPLETION OF INTERNATIONAL COORDINATION

Contrary to its claim,²⁶ AST has not provided a sufficient showing that its debris mitigation plan is subject to direct and effective regulatory oversight by its licensing administration, Papua New Guinea (“PNG”), as required under Section 25.114(d)(14)(v) of the Commission’s rules.²⁷ Rather, AST merely states, without supporting documentation or additional details, that PNG “follows all ITU [debris mitigation] rules ... and will specifically

²² See *Northrop Grumman Space & Mission Systems Corporation*, Order and Authorization, 24 FCC Rcd 2330, ¶ 28 (IB 2009).

²³ See *Space Imaging, LLC*, Declaratory Order and Order and Authorization, 20 FCC Rcd 11964, ¶¶ 10-11 (IB 2005).

²⁴ See Initial PDR, Narrative at 13.

²⁵ AST cites a few waiver grants as Commission precedent, but none of those waivers were based upon special circumstances similar to those alleged here. See Initial PDR, Narrative at 13 n.42; see also *supra* nn.22-24 & accompanying text.

²⁶ See Initial PDR, Narrative at 11.

²⁷ See 47 C.F.R. § 25.114(d)(14)(v); see also *Mitigation of Orbital Debris*, Second Report and Order, 19 FCC Rcd 11567, ¶ 95 (2004) (“One method of making this showing [of direct and effective regulatory oversight] is to submit an English language version of the debris mitigation rules or regulations of the national licensing authority and to indicate the current status of the national licensing authority’s review of its debris mitigation plans.”).

require AST to dispose of the satellite in accordance with all relevant ITU recommendations.”²⁸

Accordingly, absent a sufficient showing of PNG’s direct and effective regulatory oversight, AST must submit a debris mitigation plan providing detailed information required under Section 25.114(d)(14).²⁹

At a minimum, the Commission should condition any market access grant on AST’s submission, and Commission approval, of an updated debris mitigation plan that addresses material deficiencies in its current filing. Notably, AST should update its debris mitigation plan to provide an estimate of the amount of fuel reserved for post-mission disposal maneuvers,³⁰ as required under Section 25.114(d)(14)(iv).³¹ AST also should provide additional information required under the Commission’s recently adopted debris mitigation rule revisions, which is expected to take effect shortly.³² Finally, consistent with precedent,³³ the Commission should condition any market access grant on successful completion of international coordination with other NGSO operations.

IV. CONCLUSION

Based upon the foregoing, the Commission should reject AST’s proposed MSS use of spectrum not allocated for such use or otherwise available for licensing. The Commission further should require AST to clarify that it will not lease terrestrial spectrum to provide MSS or

²⁸ See Initial PDR, Narrative at 11.

²⁹ See 47 C.F.R. § 25.114(d)(14).

³⁰ See Initial PDR, Attachment C (End-of-Life Disposal and Orbital Debris Mitigation Response) at 3-4; Amendment, Attachment (Further Orbital Debris Analysis) at 1-2.

³¹ See 47 C.F.R. § 25.114(d)(14)(iv).

³² See *Mitigation of Orbital Debris in the New Space Age*, Report and Order and Further Notice of Proposed Rulemaking, 35 FCC Rcd 4156 (2020).

³³ See, e.g., *Kuiper* ¶ 59(i); *Leosat MA, Inc.*, Order and Declaratory Ruling, 33 FCC Rcd 11486, ¶ 22(b) (2018).

other satellite services. The Commission also should not consider AST's proposed FSS operations outside a processing round, as AST has provided no basis for waiving processing round procedures. Additionally, if the Commission does process this PDR, the Commission should condition any market access grant on: (i) submission of an updated debris mitigation plan; and (ii) successful completion of international coordination with other NGSO operations.

Respectfully submitted,

**HUGHES NETWORK SYSTEMS, LLC
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