

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

*In the Matter of*

Use of Spectrum Bands Above 24 GHz For Mobile Radio Services

GN Docket No. 14-177

Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 to Establish Uniform License Renewal, Discontinuance of Operation, and Geographic Partitioning and Spectrum Disaggregation Rules and Policies for Certain Wireless Radio Services

WT Docket No. 10-112

**COMMENTS OF ECHOSTAR SATELLITE OPERATING CORPORATION  
AND HUGHES NETWORK SYSTEMS, LLC**

EchoStar Satellite Operating Corporation and Hughes Network Systems, LLC

(collectively, “EchoStar”) submit these comments in response to the Commission’s Third Further Notice of Proposed Rulemaking (the “*Third Notice*”) in the above referenced dockets.<sup>1</sup> These comments focus on a single issue: licensing of Fixed-Satellite Service (“FSS”) systems in the 50.4-51.4 GHz band. The Commission proposes rules for licensing individual FSS earth stations in this band, but has indefinitely deferred action on pending earth station and space station applications despite the absence of any opposition. Such a deferral creates debilitating uncertainty for a satellite industry that must make design and investment decisions several years in advance of launching a new system. Given that satellite use of this band is imminent, the Commission should move expeditiously to adopt the proposed rules for earth station deployment in this band, but should also proceed to grant pending applications subject to the outcome of this

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<sup>1</sup> See *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services, et al.*, Third Report and Order, Memorandum Opinion and Order, and Third Notice of Proposed Rulemaking, FCC 18-73 (rel. June 8, 2018) (“*Third Notice*”).

proceeding.<sup>2</sup> Providing such regulatory certainty will enable satellite operators to build satellites more efficiently, deploy services more rapidly, and deliver high-speed broadband and other services to consumers throughout the United States, including remote and underserved areas, all while ensuring consistency with the rules ultimately adopted in this proceeding.

## INTRODUCTION

EchoStar, a U.S. company, is a leader in the technology sector. With a fleet of three high-capacity broadband satellites, it is the largest provider of satellite broadband services in the United States and globally, serving over 1.2 million residential and business customers in the Americas. This fleet includes JUPITER 2, EchoStar's most recent satellite to commence operation, providing broadband services that meet or exceed the Commission-defined broadband speeds of 25 Mbps down and 3 Mbps up. This broadband service supports consumer use, as well as important government, public safety, educational, and health-related activities.<sup>3</sup> EchoStar also provides vital Internet and voice services to communities during natural disasters and emergencies, when terrestrial and wireless networks have failed or are unreliable as demonstrated recently with the hurricanes in Puerto Rico and the Virgin Islands.<sup>4</sup>

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<sup>2</sup> See IBFS File Nos. SAT-LOA-20170621-00092; SAT-AMD-20170908-00128; and SES-LIC-20170807-00876 through -00895.

<sup>3</sup> For example, Hughes has been named an awardee on the General Services Administration's Complex Commercial SATCOM Solutions contract, designed to simplify government procurement of complex global SATCOM solutions, such as disaster recovery communications and broadband delivery to underserved regions. See Press Release, Hughes Selected for Complex Commercial SATCOM Solutions (CS3) Contract Vehicle from GSA (Nov. 14, 2017), available at <https://www.hughes.com/who-we-are/resources/press-releases/hughes-selected-complex-commercial-satcom-solutions-cs3>.

<sup>4</sup> See, e.g., Press Release, Hughes Releases White Paper Outlining Communications Network Preparedness Recommendations Ahead of 2018 Hurricane Season (Apr. 12, 2018), available at <https://www.echostar.com/Press/Newsandmedia/Communications%20Network%20Preparedness.aspx>.

EchoStar has also begun construction of its next-generation high-throughput satellite, JUPITER 3, with a planned launch date in early 2021.<sup>5</sup> This satellite will deliver even higher estimated speeds of up to 100 Mbps down, while increasing EchoStar’s capacity in the United States and the Americas by two to three times to support expanded services to consumers throughout the region. In order to deliver this level of service, however, EchoStar requires access to the full complement of spectrum the satellite has been designed to use. This includes the one gigahertz of uplink spectrum at 50.4-51.4 GHz, spectrum with co-primary allocations for FSS as well as fixed and mobile services.<sup>6</sup> The satellite has been designed to take full advantage of this band, long-lead components have already been ordered and are beginning to be delivered, and it is too late to change the satellite’s design without incurring significant cost and delay. EchoStar has also concluded contracts for the ground segment supporting JUPITER 3, which includes sophisticated electronics required to uplink V-band signals. All of these business decisions are consistent with the domestic and international allocation of the 50.4-51.4 GHz band for FSS use on a co-primary basis. If this band were to become unavailable for use, EchoStar would (in addition to undertaking a major reconfiguration of its satellite) have to deploy more gateways, resulting in significantly higher ground segment costs, construction and commencement delays, and reduced system capabilities and spectrum efficiencies.<sup>7</sup>

In order to lock down the spectrum assets critical to this project, EchoStar proceeded expeditiously with the JUPITER 3 licensing process. It filed applications for space station

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<sup>5</sup> See, e.g., Jeff Baumgartner, “Speedy Hughes/EchoStar Broadband Satellite Hits Early Design Stage,” MULTICHANNEL NEWS, Feb. 23, 2018, <https://www.multichannel.com/news/speedy-hughesechostar-broadband-satellite-hits-early-design-stage-418331>.

<sup>6</sup> See 47 C.F.R. § 2.106.

<sup>7</sup> See, e.g., Letter from Jennifer A. Manner to Marlene H. Dortch, IBFS File No. SES-LIC-20170807-00876 (Jan. 8, 2018) (describing potential impact of delaying gateway authorizations).

launch and operational authority and for 20 gateway earth station licenses over a year ago.<sup>8</sup> Although accepted for filing, the earth station applications remain pending – despite eliciting no comments whatsoever. In March, the International Bureau granted the JUPITER 3 space station application in part, but indefinitely deferred consideration of the request for uplink operations in the 50.4-51.4 GHz band.<sup>9</sup> It did so notwithstanding the fact that, “[a]s with any license, [EchoStar] will be required to comply with any relevant rule changes that [the Commission] may adopt in the future.”<sup>10</sup> The Commission similarly deferred consideration of the request to operate in the 50.4-51.4 GHz band by two applicants for non-geostationary orbit (“NGSO”) satellite systems (Audacy and O3b).<sup>11</sup>

## DISCUSSION

Commercial satellite systems, including new satellites operating on V-band and previously unused frequencies, are critical to U.S. domestic and global communications policies. As stated in the National Space Policy, “[a] robust and competitive commercial space sector is vital to continued progress in space. The United States is committed to encouraging and facilitating the growth of a U.S. commercial space sector that supports U.S. needs, is globally competitive, and advances U.S. leadership in the generation of new markets and innovation-driven entrepreneurship.”<sup>12</sup> In addition, President Trump recently confirmed the national interest

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<sup>8</sup> See IBFS File Nos. SAT-LOA-20170621-00092 (filed June 21, 2017); SAT-AMD-20170908-00128 (filed Sep. 8, 2017); SES-LIC-20170807-00876 through -00895 (filed Aug. 7, 2017).

<sup>9</sup> See Grant Stamp, IBFS File Nos. SAT-LOA-20170621-00092 and SAT-AMD-20170908-00128 (Mar. 20, 2018) (“JUPITER 3 Grant Stamp”).

<sup>10</sup> *Id.* at n.1.

<sup>11</sup> See *O3b Limited*, FCC 18-70, ¶ 32 (rel. June 6, 2018) (“we defer action until sharing between terrestrial and satellite operations in the band, as well as other uses of the band, are addressed in the context of the *Spectrum Frontiers Proceeding*”); *Audacy Corp.*, FCC 18-72, ¶ 19 (rel. June 6, 2018) (same).

<sup>12</sup> National Space Policy of the United States of America at 3 (June 28, 2010), [https://www.nasa.gov/sites/default/files/national\\_space\\_policy\\_6-28-10.pdf](https://www.nasa.gov/sites/default/files/national_space_policy_6-28-10.pdf).

in adopting satellite regulations that “promote economic growth,” “minimize uncertainty for . . . private industry,” and “encourage American leadership in space commerce.”<sup>13</sup> Further, as shown by the recent events in Puerto Rico and the Virgin Islands, satellite systems are often the only broadband communications technologies available to people in devastated areas, whether they needed connectivity to file claims for federal assistance, were seeking news and emergency information, or relied upon technology to run a business.

Accordingly, the Commission should promote deployment of these advanced satellite systems by providing regulatory certainty through consistent and reliable licensing policies and practices. In this regard, spectrum assignments are a critical aspect of satellite system design, providing one of the foundational elements upon which other decisions are based. The high cost and long lead time involved in building a next-generation broadband satellite demand regulatory processes that provide certainty as to spectrum access years in advance of launch and operation. Thus, implementing the national space policy goal of minimizing uncertainty for private industry is a necessary building block for achieving the other national goals of promoting economic growth, encouraging American leadership in space commerce, bridging the digital divide, and providing services in times of emergency.

The Commission is currently considering whether to license fixed and mobile services in the 50.4-51.4 GHz band in accordance with the rules for the Upper Microwave Flexible Service (“UMFUS”). In the *Third Notice*, the Commission concluded that a limited number of individually licensed FSS earth stations can share the band with minimal impact on terrestrial UMFUS operations, thus ensuring continued access to the spectrum. It therefore proposed to

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<sup>13</sup> Presidential Memoranda, SPACE POLICY DIRECTIVE – 2, STREAMLINING REGULATIONS ON COMMERCIAL USE OF SPACE, SECTION 1 (May 24, 2018), <https://www.whitehouse.gov/presidential-actions/space-policy-directive-2-streamlining-regulations-commercial-use-space/>.

adopt rules permitting licensing of such earth stations subject to certain limitations designed to reduce their potential impact in areas of interest to terrestrial operators.<sup>14</sup>

EchoStar supports the Commission's proposal. As previously discussed, the 50.4-51.4 GHz band is allocated, both domestically and internationally, for FSS use on a co-primary basis. If the band is made available for UMFUS operations, the proposed earth station licensing regime would promote spectrum efficiency by permitting spectrum to be shared by UMFUS and other allocated services, in a manner that the Commission has found workable in other millimeter wave frequency bands.<sup>15</sup> As Chairman Pai stated recently, the Commission is "committed to working together toward international radio spectrum allocation and harmonization for next-generation terrestrial mobile and satellite services," as this "will help ensure that emerging technologies are promptly introduced into the marketplace, to the benefit of all citizens in our region."<sup>16</sup> Therefore, the Commission should move expeditiously to adopt its proposal so that FSS system designers, builders, and operators will have the certainty they need to invest the enormous capital and other resources required to support a modern satellite system capable of maximizing intensive spectrum use in order to provide high-quality broadband services to U.S. customers, including those in rural and underserved areas.

Indeed, the record developed in EchoStar's applications for the JUPITER 3 space station and related gateway earth stations indicate no objections to or issues with the use of the 50.4-51.4 GHz band for FSS uplink operations. The same is true with respect to the NGSO system

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<sup>14</sup> See *Third Notice*, ¶ 94. In particular, the Commission proposed to adopt criteria identical to those applicable in the 24.75-28.35 GHz band under Section 25.136(a)(4)(ii) of the Commission's rules, as well as the per-county and per-Partial Economic Area limitations on the number of such earth stations applicable in the 47.2-48.2 GHz band under Section 25.136(d)(4)(i). *Id.*

<sup>15</sup> See *id.*

<sup>16</sup> See Remarks of FCC Chairman Ajit Pai at Canto 2018 Fireside Chat, Panama City, Panama (July 23, 2018), available at <https://docs.fcc.gov/public/attachments/DOC-352845A1.pdf>.

applications filed by Audacy and O3b. Yet in each case, the Commission has chosen to defer action with respect to this spectrum, leaving the applicants in limbo on a critical system input and significantly undermining their ability to proceed with system construction and deployment. Rather than allow this debilitating uncertainty to linger, the Commission should promptly grant access to this spectrum for FSS applicants. Authorizations could be appropriately conditioned upon compliance with any rules adopted in this proceeding. Such conditions are common for satellite authorizations<sup>17</sup> – and, as the Commission has recognized, are effectively applied even in the absence of such a condition.<sup>18</sup> By taking this step, the Commission would provide greater certainty to FSS operators and enable them to unlock the potential for this spectrum to support services that will benefit the American public. Accordingly, the Commission should no longer defer action on requests for FSS authorizations in the 50.4-51.4 GHz band, but instead should grant them conditioned on the outcome of this proceeding. This approach provides the licensing structure that is essential for ongoing investment in next-generation satellite networks while simultaneously ensuring future compliance with the rules ultimately adopted by the Commission in this proceeding.

## CONCLUSION

The Commission has proposed a licensing regime for FSS earth stations operating in the 50.4-51.4 GHz band that will facilitate efficient spectrum sharing among services. EchoStar supports that proposal. Moreover, EchoStar urges the Commission to adopt it expeditiously in

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<sup>17</sup> See, e.g., *WorldVu Satellites Limited*, 32 FCC Rcd. 5366, ¶ 26 (2017) (“This grant of U.S. market access and any earth station licenses granted in the future are subject to modification to bring them into conformance with any rules or policies adopted by the Commission in the future.”); JUPITER 3 Grant Stamp, ¶ 10 (operations in the 27.5-28.35 GHz band “will comply with any determinations set forth in the *Spectrum Frontiers Proceeding* (GN Docket 14-177)”).

<sup>18</sup> See, e.g., JUPITER 3 Grant Stamp at n.1 (“As with any license, [EchoStar] will be required to comply with any relevant rule changes that we may adopt in the future.”). The Commission could also include a condition related to existing Federal operations in the band, to the extent appropriate.

order to provide satellite operators the regulatory certainty they need at a very early stage of planning. Doing so will enable FSS operators to embark with confidence along the years-long process of designing, constructing, and deploying advanced satellite systems capable of delivering the high-speed broadband and other services that consumers throughout the United States, including in areas underserved and unserved by terrestrial alternatives, need in order to help close the digital divide.

Respectfully submitted,

*/s/ Jennifer Manner*

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