

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)
)
WorldVu Satellites Limited)
)
Petition for Declaratory Ruling) File No. _____
Granting Access to the U.S. Market)
for the OneWeb V-Band System)

PETITION FOR DECLARATORY RULING

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WorldVu Satellites Limited (“OneWeb”) files this Petition for Declaratory Ruling (the “Petition”) seeking access to the United States market from the United Kingdom for a nongeostationary satellite orbit (“NGSO”) system (the “OneWeb V-Band System”). This Petition is filed pursuant to Section 25.137 of the Commission’s rules,¹ the Commission’s *First Space Station Licensing Reform Order*,² and the recent public notice establishing a cut-off date for additional NGSO-like satellite applications and petitions for declaratory ruling in the 37.5-40.0 GHz, 40.0-42.0 GHz, 47.2-50.2 GHz, and 50.4-51.4 GHz frequency bands.³

¹ 47 C.F.R. § 25.137.

² See *Amendment of the Commission’s Space Station Licensing Rules and Policies*, 18 FCC Rcd 10760, at ¶¶ 291, 294 (2003) (“*First Space Station Licensing Reform Order*”).

³ See *Boeing Application Accepted for Filing in Part, Cut-Off Established for Additional NGSO-Like Satellite Applications for Operations in the 37.5-40.0 GHz, 40.0-42.0 GHz, 47.2-50.2 GHz and 50.4-51.4 GHz Bands*, Public Notice, DA 16-1244 (rel. Nov. 1, 2016) (“*V-Band Processing Round PN*”).

The OneWeb V-Band System will utilize spectrum in the 37.5-40.0 GHz, 40.0-42.0 GHz, 42.0-42.5 GHz, 42.5-43.5 GHz, 47.2-50.2 GHz, and 50.4-51.4 GHz frequency bands (collectively referred to here as the “V-Band”) in order to facilitate the provision of broadband connectivity. OneWeb has already completed preliminary design review (“PDR”) and begun construction of its first-generation Ku- and Ka-band NGSO constellation, which is described in OneWeb’s separately filed petition.⁴ This Petition does nothing to change in any respect the currently pending OneWeb Ku-/Ka-band Petition. The development and deployment of a complementary, second-generation OneWeb V-Band System represents the continuing evolution of OneWeb’s groundbreaking, high-throughput connectivity offerings. The OneWeb V-Band System will allow OneWeb to expand on its mission of using innovative NGSO constellations to deliver an array of transformative broadband services and applications. As demonstrated herein, grant of this Petition will result in substantial public interest benefits.

I. GRANT OF THE ONEWEB PETITION WOULD SERVE THE PUBLIC INTEREST BY USING SATELLITE-BASED CONNECTIVITY TO BRIDGE THE DIGITAL DIVIDE

In its application for market access in the Ku- and Ka-bands, OneWeb articulated an ambitious yet achievable vision of providing high-speed broadband connectivity to anyone, anywhere via a low-earth orbit (“LEO”) NGSO constellation.⁵ Almost one year later, OneWeb not only remains fully committed to this vision, but it has boldly

⁴ See *Worldvu Satellites Limited, Petition for a Declaratory Ruling Granting Access to the U.S. Market for the OneWeb System*, IB File No. SAT-LOI-20160428-00041 (filed Apr. 28, 2016) (“*OneWeb Ku-/Ka-band Petition*”).

⁵ *OneWeb Ku-/Ka-band Petition* at 1-4.

announced an even more ambitious goal: to fully bridge the “digital divide” by 2027, making Internet access available and affordable for everyone.⁶

The importance and timeliness of OneWeb’s mission cannot be overstated. In 2010, the *National Broadband Plan* concluded that “[b]roadband, too, is a modern necessity of life, not a luxury.”⁷ Seven years later, broadband unfortunately remains a necessity lacking in the lives of billions of people throughout the world, and millions here in the United States. Earlier this year, an International Telecommunication Union (“ITU”) study estimated that “53% of the world’s population is still not using the Internet.”⁸ With respect to those without broadband access, the ITU noted that “[t]he offline population is disproportionately female, rural, poor, illiterate and elderly.”⁹ The FCC’s own statistics paint a similar picture with respect to broadband connectivity. The most recent Broadband Progress Report concluded for the fifth year in a row that broadband is not being adequately deployed in the U.S.¹⁰ In particular, the FCC noted that “[t]here is also a

⁶ See “Note from Our Chairman,” ONEWEB (Dec. 19, 2016), <http://oneweb.world/>.

⁷ Federal Communications Commission, Omnibus Broadband Initiative, *CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN* (2010) (“National Broadband Plan”), at 338, available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296935A1.pdf.

⁸ Imme Philbeck, International Telecommunication Union, *Connecting the Unconnected: Working together to achieve Connect 2020 Agenda Targets* (2017) at 4, available at, http://broadbandcommission.org/Documents/ITU_discussion-paper_Davos2017.pdf (“ITU Discussion Paper”).

⁹ *Id.* at 5.

¹⁰ *In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act, 201 Broadband Progress Report and Notice of Inquiry on Immediate Action to Accelerate Deployment*, Broadband Progress Report, 31 FCC Rcd 699, at ¶ 4 (2016).

significant disparity between rural and urban areas, with more than 39 percent of Americans living in rural areas lacking access to 25 Mbps/3 Mbps advanced telecommunications capability, as compared to 4 percent of Americans living in urban areas.”¹¹ The Commission has emphasized the importance of addressing this disparity, recognizing that “[its] work is not done until *all* Americans can take part in the broadband revolution and until broadband access is no longer an indicator of social, educational, or economic inequity, but truly our most powerful tool for eradicating inequity wherever it should appear.”¹²

In particular, the Commission has recently highlighted the ability of private networks to help close the “digital divide.” On his first day as Chairman of the Commission, Chairman Pai observed that “[o]ne of the most significant things that I’ve seen during my time here is that there is a digital divide in this country I believe one of our core priorities going forward should be to close that divide—to do what’s necessary to help the private sector build networks, send signals, and distribute information to American consumers We must work to bring the benefits of the digital age to all Americans.”¹³ Commissioner O’Rielly expressed similar sentiments, stating that, “[f]undamentally, our broadband policy has been and should continue to be based on

¹¹ *Id.* at ¶ 79.

¹² Federal Communications Commission, Consumer & Gov’t Affairs Bur., *Strategies and Recommendations for Promoting Digital Inclusion*, at 29 (rel. Jan. 11, 2017), available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0126/DOC-342993A1.pdf.

¹³ Remarks of Ajit Pai, Chairman, Federal Communications Commission, Washington, D.C. (Jan. 24, 2017), available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2017/db0124/DOC-343184A1.pdf.

private sector companies continuing to build out their networks to meet consumer needs.”¹⁴

This emphasis on the role of innovative private networks in addressing the digital divide is consistent with the ITU Discussion Paper, which noted that “new, more enhanced and more cost effective satellite systems which are being developed using high-throughput satellites (HTS) and non-geostationary satellite orbit (NGSO) systems in low-Earth or mid-Earth orbit . . . are particularly suitable to address the rural/urban [broadband] divide at a large scale.”¹⁵ This growing consensus among the Commission and international regulators appropriately recognizes the important role NGSO constellations will play in delivering next-generation broadband connectivity to all.

OneWeb looks forward to building upon its leading role in the ongoing evolution of satellite-delivered broadband and bringing affordable, high-speed broadband to the U.S. market. The OneWeb V-Band System will be an integral part of this evolution by allowing OneWeb to expand and refine its capability to provide the critical applications and services – including residential and enterprise broadband, cellular backhaul, mobility services, and healthcare-related and emergency communications¹⁶ – initially made possible by its planned state-of-the-art Ku-/Ka-band NGSO constellation. Specifically, the OneWeb V-Band System will complement the core Ku-/Ka-band constellation by narrowly focusing additional, high capacity spectrum – through the use of steerable beams and frequency re-use – in small, high traffic density locations such as large metropolitan

¹⁴ Commissioner Michael O’Rielly, “Federal Broadband Infrastructure Spending: Potential Pitfalls,” FCC Blog (Feb. 1, 2017), <https://www.fcc.gov/news-events/blog/2017/02/01/federal-broadband-infrastructure-spending-potential-pitfalls>.

¹⁵ *ITU Discussion Paper* at 11.

¹⁶ *See also OneWeb Ku-/Ka-band Petition* at 5-6.

areas or geographic concentrations of bandwidth-intensive customers. The OneWeb V-Band System will facilitate dynamic spectrum allocation and traffic off-loading between LEO and medium-earth orbit (“MEO”) satellites based on near-instantaneous service requirements. In addition, deploying Ku-/Ka- and V-Band payloads on the same second-generation LEO satellite bus ensures that OneWeb will be able to offer end users a dynamic, high-capacity broadband network with the capability to quickly reuse and reassign traffic in addition to the well-established capabilities of the bedrock, global Ku-/Ka-band constellation. The Ku-/Ka-band first generation constellation ensures that adequate capacity is spread to all corners of the United States and all regions of the world, while OneWeb will start deploying this second generation system as early as 2020 to offer additional capacity where there is the most demand.

This innovative architecture will allow OneWeb to offer unmatched connectivity options to end users: facilitating critical applications and services across a worldwide Ku/Ka-band platform while also enabling adaptable, targeted connectivity capable of providing high capacity where it is most needed via the OneWeb V-Band System. The OneWeb V-Band System would therefore not only offer transformative connectivity to those people who currently lack broadband access, it would also provide advanced, high-capacity broadband access capable of competing with traditional enterprise offerings, including the most advanced terrestrial infrastructure.

Moreover, the benefits of the OneWeb V-Band System described in this Petition are not merely aspirational. OneWeb’s Ku-/Ka-band constellation has passed the PDR stage and its first-generation LEO satellites are currently under construction. In addition, OneWeb continues to attract substantial amounts of investment capital from strategic

partners who share its vision of a connected, technologically-powered world.¹⁷ As a result, OneWeb is poised to begin launching its first pioneering NGSO constellation as early as March 2018. OneWeb respectfully submits that grant of this Petition will clearly serve the public interest by allowing it to take the next step in achieving its mission of facilitating high-speed, nationwide broadband access for all Americans, which as the Commission recognizes is “the 21st-century gateway to jobs, health care, education, information, and economic development everywhere, from the smallest town to the largest city.”¹⁸

II. NETWORK ARCHITECTURE

The proposed OneWeb V-Band System will utilize inexpensive, lightweight, easy-to-install user terminals, enabling coverage in remote areas and connectivity from any device. The system will be highly spectrum-efficient and will be well-equipped to share spectrum with other satellite and terrestrial users of the V-band. All capacity available on the OneWeb V-Band System will be offered on a non-common carrier basis.

The NGSO constellation, gateway earth stations, and user terminals comprising the OneWeb V-Band System are described below and in greater detail in the attached Technical Narrative (Attachment A) and Schedule S submitted with this Petition.

A. Space Segment

The OneWeb V-Band System will consist of a 720-satellite LEO constellation as well as a larger 1,280-satellite MEO constellation.

¹⁷ See, e.g., OneWeb Announces \$1.2 Billion in Funded Capital from Softbank Group and Other Investors (Dec. 19, 2016), *available at*: http://www.softbank.jp/en/corp/news/press/sb/2016/20161219_01/.

¹⁸ *Chairman Pai Forms Broadband Deployment Advisory Committee*, Press Release, 2017 WL 413716 (rel. Jan. 31, 2017).

The LEO constellation will constitute a separate payload on OneWeb's follow-on, second generation constellation of 720 satellites operating at an orbital altitude of 1,200 km. These satellites will contain separate V-band and Ku/Ka-band payloads operating on a common bus.

The MEO constellation will ultimately consist of 1,280 satellites in a circular MEO orbit of altitude 8,500 km, inclined at nominally 45° relative to the equator. The MEO constellation will initially consist of 20 satellites deployed in eight orbital planes, for a total of 160 satellites. In later phases of deployment, OneWeb plans to gradually increase the constellation to 16 orbital planes with 80 satellites per orbital plane.

B. Ground Segment

Two categories of ground stations will operate with the OneWeb V-Band System: gateway earth stations and user terminals.

The OneWeb gateway stations will utilize 1.2 m to 3.4 m antennas depending on geographic and service requirements. In support of the V-Band LEO constellation, the gateway earth stations will only transmit and receive communications traffic. Payload control and telemetry, tracking, and command ("TT&C") functions will be performed using Ka-band frequencies that will be part of the core OneWeb Ku/Ka-band second-generation LEO constellation. For the V-Band MEO constellation, certain gateway earth stations will also act as TT&C stations, with the V-band also used for TT&C. These TT&C earth stations are not currently planned to be located in the U.S. The V-band gateway earth stations, some of which will be located in the U.S., will be capable of serving both the LEO and MEO satellites for communications traffic.

Typically, up to ten or more gateway earth station antennas will be collocated at a gateway site in order to access a number of visible satellites in the OneWeb V-Band System simultaneously from that location. Currently, four gateway earth station sites are

expected to be deployed in the U.S., including gateway earth stations in Hawaii and Alaska, and likely additional sites in some U.S. territories.

The user terminals will be small, low-cost antennas (typically in the 30 cm to 75 cm range) that will be deployed in large numbers. The user terminals may utilize mechanically steered parabolic reflectors and/or low-cost phased array designs or other beam steering technology currently being developed by OneWeb. An optional built-in solar array panel can also be added to battery-powered terminals. As a result, the user terminals are fully transportable and can be easily and quickly deployed to any location, including those that otherwise lack traditional electrical and telecommunications infrastructure.

III. THE PETITION SATISFIES THE COMMISSION’S CRITERIA FOR U.S. MARKET ACCESS

In the *DISCO II Order*, the Commission established two procedures by which a non-U.S. licensed satellite operator can seek authorization to provide service in the United States.¹⁹ In the procedure relevant for OneWeb, a non-U.S. space station operator may file a Letter of Intent seeking a ruling as to whether the Commission will permit U.S.

¹⁹ See *Amendment of the Commission’s Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, 12 FCC Rcd 24094, at ¶ 188 (1997) (“*DISCO II Order*”). See also *Amendment of the Commission’s Regulatory Policies to Allow Non-U.S. Licensed Space Stations to Provide Domestic and International Satellite Service in the United States*, 15 FCC Rcd 7207, at ¶ 5 (1999); 47 C.F.R. § 25.137. Pursuant to the Commission’s 2015 Report and Order, this submission is presented as a Petition for Declaratory Ruling. See *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Second Report and Order, 30 FCC Rcd 14713 at ¶ 250 (2015) (“*Second Report and Order*”) (mandating that “all requests for market access by the space station operator must be submitted through a petition for declaratory ruling”). OneWeb also notes that IBFS has not yet been updated to reflect this change so it has selected “Letter of Intent to Use Non-U.S. Licensed Satellite to Provide Service in the United States” in its response to Question 17.b on the FCC Form 312.

market access pursuant to a processing round, and demonstrating that the system meets all applicable Commission requirements.²⁰ The OneWeb V-Band System is pursuing a launch and space operations license from the United Kingdom and currently has ITU filings with the Republic of France. Therefore, the Petition qualifies for consideration in the current processing round with other V-band NGSO applicants.²¹

As the OneWeb V-Band System will be a UK-licensed satellite system, the *DISCO II* framework applies to the Petition. The *DISCO II* framework requires that a request for U.S. market access by a non-U.S. satellite system must be in the public interest.²² In reviewing such requests for market access, the Commission considers the effect on competition in the United States, spectrum availability, eligibility and operational requirements, and concerns related to national security, law enforcement, foreign policy, and trade issues.²³

As discussed in detail below, OneWeb satisfies the criteria for obtaining U.S. market access for the OneWeb V-Band System, subject to certain waiver requests described herein.

A. Effect on Competition in the United States

Where a non-U.S. satellite licensed by a World Trade Organization (“WTO”) member country seeks authority to provide a satellite service covered by the WTO Basic Telecommunications Agreement (“WTO Agreement”), the Commission presumes that

²⁰ 47 C.F.R. § 25.137(a).

²¹ See 47 C.F.R. § 25.137(c)(2)-(3); see also *DISCO II Order* at ¶ 196 (“[W]e will not require a license as a prerequisite to participating in a U.S. space station processing round.”).

²² *DISCO II Order* at ¶ 26.

²³ *Id.* at ¶ 29.

foreign entry will promote competition in the United States.²⁴ As noted above, the United Kingdom’s telecommunications regulatory authority will issue OneWeb a satellite license. The United Kingdom is a WTO member, and the Commission has previously granted U.S. market access to satellites operating pursuant to an authorization from the U.K.²⁵

The United States’ satellite commitments under the WTO Agreement cover fixed satellite services (“FSS”) and mobile satellite services.²⁶ In addition, certain services are explicitly not covered: Direct-To-Home, Digital Audio Radio Service, and Direct Broadcast Satellite Service (the “WTO Noncovered Services”).²⁷ OneWeb seeks authority to provide only FSS in the U.S. using the OneWeb V-Band System.²⁸ Therefore, the presumption in favor of entry applies to this Petition.

Grant of the Petition would enhance competition for satellite and broadband services in the U.S. In the *DISCO II Order*, the Commission acknowledged that “entry of new competitors and services into the U.S. satellite services market. . .will provide U.S. consumers with additional choices among providers, reduce prices, and increase the quality and variety of services.”²⁹ Permitting the OneWeb V-Band System to serve the U.S. market will expedite precisely these same benefits that the Commission expected to accrue from a presumption in favor of entry for WTO Covered Services. Granting market access for the OneWeb V-Band System will facilitate the next generation of satellite-

²⁴ *Id.*

²⁵ *See, e.g.*, Call Sign S2902, IBFS File No. SAT-LOI-20130319-00040 (granted Dec. 12, 2013) (permitting Viasat-2 to access the U.S. market from the United Kingdom).

²⁶ *See DISCO II Order* at ¶ 30.

²⁷ *Id.* at ¶ 13.

²⁸ OneWeb does not seek to provide any WTO Noncovered Services in the U.S.

²⁹ *DISCO II Order* at ¶ 40.

enabled services, delivering an innovative broadband service that vastly improves connectivity options for U.S. consumers.

B. Spectrum Availability

The Commission also considers spectrum availability as a factor in determining whether to allow a foreign-licensed satellite to serve the U.S. market.³⁰ In doing so, the Commission evaluates whether grant of access would create the potential for harmful interference with U.S.-licensed satellite and terrestrial systems. OneWeb seeks U.S. market access in the portions of the V-band identified below (and listed on the corresponding Schedule S) based on Sections 2.106 and 25.202(a)(1) of the Commission’s rules, applicable ITU Radio Regulations, and the Commission’s *V-Band Plan*.³¹

<u>Type of Link and Transmission Direction</u>	<u>Frequency Ranges</u>
Gateway-to-Satellite	42.5 – 43.5 GHz 47.2 – 50.2 GHz 50.4 – 51.4 GHz
Satellite-to-Gateway	37.5 – 42.5 GHz
User Terminal-to-Satellite	48.2 – 50.2 GHz
Satellite-to-User Terminal	40.0 – 42.0 GHz

OneWeb will access this spectrum on either a primary, secondary, or non-conforming basis in accordance with the particular frequency band and the applicable Commission allocation.

³⁰ See *id.* at ¶¶ 149-50.

³¹ See 47 C.F.R. §§ 2.106 and 25.202(a)(1); see also *Allocation and Designation of Spectrum for Fixed-Satellite Services in the 37.5- 38.5 GHz, 40.5-41.5 GHz and 48.2-50.2 GHz Frequency Bands*, First Report and Order, 13 FCC Rcd 24649 (1998) (“*First V-Band Order*”); *Allocation and Designation of Spectrum for Fixed-Satellite Services in the 37.5-38.5 GHz, 40.5-41.5 GHz and 48.2-50.2 GHz Frequency Bands*, Second Report and Order, 18 FCC Rcd 25428 (2003) (“*V-Band Plan*”).

1. Service Link Frequency Bands (40.0-42.0 GHz; 48.2-50.2 GHz)

The band segments that OneWeb will utilize for the service links in the OneWeb V-Band System – 40.0-42.0 GHz (downlink) and 48.2-50.2 GHz (uplink) – are allocated on a primary basis to FSS systems.³² Furthermore, NGSO use of these bands is consistent with the *V-Band Plan*.³³ Therefore, OneWeb ground stations can be operated in these frequencies in the U.S. without the need for associated waiver requests or material operating restrictions.

OneWeb acknowledges that while the Commission “recognize[s] that [the 47.2-50.2 GHz] band is authorized for FSS use,” it has also proposed to authorize certain terrestrial operations in the 47.2-50.2 GHz band under the Part 30 Upper Microwave Flexible Use Service rules as part of the ongoing *Spectrum Frontiers* proceeding.³⁴ Of course, OneWeb will comply with any applicable regulations adopted in that proceeding.

2. Gateway Frequency Bands (37.5-40.0 GHz; 40.0-42.5 GHz; 42.5-43.5 GHz; 47.2-50.2 MHz; 50.4-51.4 GHz)

OneWeb intends to utilize the following frequency bands for critical gateway operations: 37.5-40.0 GHz, 40.0-42.5 GHz, 42.5-43.5 GHz, 47.2-50.2 GHz and 50.4-51.4 GHz. Some of these frequency bands are subject to rules, allocations, the *V-Band Plan*, or pending proceedings that otherwise place limitations on the ability of an NGSO FSS constellation to utilize this spectrum.³⁵ Consistent with these restrictions, OneWeb is requesting appropriate waivers of Sections 2.106 and 25.202(a)(1) of the Commission’s

³² See 47 C.F.R. § 2.106; see also 25.202(a)(1).

³³ *V-Band Plan* at 25457, ¶ 66.

³⁴ See *Use of Spectrum Bands above 24 GHz for Mobile Radio Services*, 31 FCC Rcd 8014, at ¶¶ 410-11 (2016) (“*Spectrum Frontiers Order and FNPRM*”).

³⁵ See, e.g., *Spectrum Frontiers Order and FNPRM*.

rules and the *V-Band Plan*, as necessary, to permit OneWeb to serve the U.S. market in these bands. Specifically, OneWeb seeks a waiver of Commission rules or Orders that do not permit or restrict FSS operations in the 42.0-42.5 GHz, 42.5-43.5 GHz, and 50.4-51.4 GHz bands, to the extent necessary.

Pursuant to Section 1.3 of the Commission's rules, the Commission can waive its rules for good cause shown. In particular, the Commission may waive a rule "if special circumstances warrant a deviation from the general rule" and such deviation will "better serve[] the public interest" than strict application of the rule.³⁶ The waiver should not undermine the policy objective of the rule, and should otherwise serve the public interest.³⁷ Deviations from the below rules are warranted by the unique nature of the OneWeb V-Band System. The proposed waivers would not undermine the policy objectives of any of the rules, and, as explained above, the public interest would be served by granting OneWeb market access because it will facilitate the rapid deployment of new and advanced broadband services to U.S. consumers.

(i) 37.5-40.0 GHz band

The 37.5-40.0 GHz band is allocated on a co-primary basis to FSS downlinks and use of this band for NGSO gateway stations is consistent with the *V-Band Plan* and Part 25 of the FCC's rules.³⁸ Although the Commission adopted rules to permit fixed and mobile use of the 37.0-38.6 GHz band, it explicitly stated that the *Spectrum Frontiers Order and FNPRM* "provides satellite operators the certainty they need to be able to

³⁶ *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

³⁷ *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

³⁸ See 47 CFR §§ 2.106, 25.202(a)(1), n.1; see also *V Band Plan* at 25442, ¶ 33.

expand their operations into the 37 GHz band in the future.”³⁹ The Commission also allowed gateway earth station operations on a first-come, first-served basis in the 38.6-40.0 GHz band, subject to certain conditions.⁴⁰ OneWeb submits that given the spectrum sharing capabilities of the OneWeb V-Band System demonstrated in the Technical Narrative, granting this Petition for market access in the 37.5-40.0 GHz band will not foreclose potential terrestrial and federal use of this band consistent with the *Spectrum Frontiers Order and FNPRM*.

(ii) 40.0-42.0 GHz band

As noted above, the 40.0-42.0 GHz band is allocated to the FSS on a primary basis.⁴¹ Therefore, OneWeb can deploy its gateway earth stations in this band without the need for associated waiver requests or material operating restrictions.

(iii) 42.0-42.5 GHz band

The 42.0-42.5 GHz band is currently allocated for FSS use by the ITU,⁴² but it is not identified as available for FSS use in the Commission’s rules.⁴³ The Commission has proposed allocating this spectrum for FSS use in conformance with the ITU Radio

³⁹ *Spectrum Frontiers Order and FNPRM*, ¶ 112.

⁴⁰ *Id.* at ¶ 93. OneWeb notes that the limitations on earth station deployment in the 37.5-40.0 GHz band are currently the subject of pending petitions for reconsideration in the *Spectrum Frontiers* proceeding. *See, e.g.*, Petition for Reconsideration of The Boeing Company, GN Docket 14-177, *et al.*, at 23-25 (filed Dec. 14, 2016) (“*Boeing Petition for Reconsideration*”).

⁴¹ *See* 47 C.F.R. § 2.106; *see also* 25.202(a)(1).

⁴² *See* Int’l Telecomm. Union, *Radio Regulations, Vol. 1, Ch. II, Article 5.551 (RR5-132) (2016)*.

⁴³ *See* 47 C.F.R. §§ 2.106, 25.202(a)(1).

Regulations,⁴⁴ but declined to adopt an FSS downlink allocation in this band in the *V-Band Plan* and in the recent *Spectrum Frontiers Order and FNPRM*.⁴⁵ A petition for reconsideration requesting that the Commission grant FSS systems access to this band remains pending.⁴⁶

OneWeb plans to only operate gateway downlinks in this spectrum and requests waiver of the U.S. Table of Frequency Allocations, in line with ITU allocations, to permit NGSO FSS operations in this band. Grant of such a waiver would allow for more efficient use of the spectrum by allowing OneWeb to expand its downlink services in the adjacent 40.0-42.0 GHz band up to 42.5 GHz.

As demonstrated in the Technical Narrative, the OneWeb V-Band System is capable of sharing spectrum with existing terrestrial users, including in the 42.0-42.5 GHz band. Consistent with Footnote 211 to the U.S. Table of Frequency Allocations, OneWeb will take all steps necessary to protect radio astronomy observations in the adjacent 42.5-43.5 GHz band.⁴⁷ OneWeb's proposed operations in this band would not cause harmful interference to other services, nor would there be any deployment restrictions on future terrestrial stations. Given the fact that OneWeb will be operating a limited number of gateway earth stations in the U.S., grant of the waiver would serve the public interest.

⁴⁴ See *In re Allocation and Designation of Spectrum for Fixed-Satellite Services in the 37.5-38.5 GHz, 40.5-41.5 GHz and 48.2-50.2 GHz Frequency Bands*, Third Notice of Proposed Rulemaking, FCC 10-186 at ¶¶ 17-19 (rel. Nov. 1, 2010); *Spectrum Frontiers Order and FNPRM* at ¶ 365.

⁴⁵ *V-Band Plan* at 25457, ¶¶ 66-67; *Spectrum Frontiers Order and FNPRM* at ¶ 368.

⁴⁶ *Boeing Petition for Reconsideration* at ¶ 21-22.

⁴⁷ 47 C.F.R. § 2.106, n.US211.

(iv) 42.5-43.5 GHz band

The 42.5-43.5 GHz band is currently allocated for FSS uplink use only by the federal government, while non-federal access is limited to radio astronomy uses.⁴⁸

OneWeb requests a waiver of the U.S. Table of Frequency Allocations in order to operate gateway earth station uplink channels on this spectrum, consistent with ITU frequency allocations.⁴⁹ Similar to its request for a waiver in order to operate gateway downlinks in the 42.0-42.5 GHz band, pursuant to footnote US211, OneWeb will take all steps necessary to protect radio astronomy observations.⁵⁰

Grant of the instant waiver request to allow OneWeb to access the 42.5-43.5 GHz band for limited gateway uplink operations is in the public interest. Access to this frequency band would provide OneWeb with critical gateway connectivity, allowing OneWeb to deploy a more robust broadband network capable of providing broadband access to all U.S. consumers.

OneWeb is confident that its limited number of U.S. gateway facilities, which will be individually site-licensed, can be deployed in a manner that avoids any possibility of harmful interference to radio astronomy observation sites in the U.S. by maintaining a safe distance between the few gateway sites and the U.S. radio astronomy stations. This will be achieved in consultation with the radio astronomy community. OneWeb looks forward to working cooperatively with both the radio astronomy community and any future terrestrial users in this band in order to ensure interference-free use of this band.

⁴⁸ 47 C.F.R. § 2.106.

⁴⁹ See Int'l Telecomm. Union, *Radio Regulations, Vol. 1, Ch. II, Article 5.551 (RR5-132) (2016)*.

⁵⁰ 47 C.F.R. § 2.106, n.US211.

(v) **47.2-48.2 GHz band**

The 47.2-48.2 GHz band is allocated for FSS uplinks on a co-primary basis.⁵¹ The FSS allocation in this band is limited to gateway operations.⁵² Based on Sections 2.106 and 25.202(a)(1) of the Commission's rules and the Commission's *V-Band Plan*,⁵³ this band appears to be fully available on a co-primary basis for FSS Earth-to-space use. To the extent the Commission does not agree with this interpretation, OneWeb requests a waiver to allow it to operate gateway earth station uplink channels using this spectrum. Grant of this waiver would serve the public interest by facilitating access to critical gateway connectivity for the OneWeb V-Band System.

(vi) **48.2-50.2 GHz band**

As noted above, the 48.2-50.2 GHz band is allocated to the FSS on a primary basis.⁵⁴ Therefore, OneWeb can deploy its gateway earth stations in this band without the need for associated waiver requests or material operating restrictions.

(vii) **50.4-51.4 GHz band**

The 50.4-51.4 GHz band is identified by Section 2.106 as being allocated for FSS use on a co-primary basis with fixed and mobile terrestrial use.⁵⁵ However, it is not

⁵¹ 47 C.F.R. §§ 2.106, 25.202(a)(1). In 1998, terrestrial wireless services were also given a primary allocation in this band. *See First V-Band Order*, 13 FCC Rcd at 24651, 24668 ¶¶ 2, 35.

⁵² *See V-Band Plan* at ¶ 17; *see also In re Northrop Grumman Space & Mission Systems Corporation*, Order & Authorization, 24 FCC Rcd 2330, 2343-44 ¶ 38 (2009) (“*Northrop Order*”).

⁵³ *V-Band Plan* at ¶ 17.

⁵⁴ *See* 47 C.F.R. § 2.106; *see also* 25.202(a)(1).

⁵⁵ *See* 47 C.F.R. § 2.106.

identified as being available for FSS use by Section 25.202(a)(1) or the *V-Band Plan*.⁵⁶ Therefore, to the extent necessary, OneWeb seeks a waiver of Section 25.202(a)(1) and the *V-Band Plan* in order for its gateway earth stations to use this band. Currently, this spectrum is not widely used by wireless licensees, and OneWeb's proposed use of this spectrum only for gateway earth station uplink operations creates very little risk of interference with any existing or future terrestrial uses of the spectrum. Non-federal satellite use of this band is under consideration, with the Commission seeking public comment on the matter in the July 2016 *Spectrum Frontiers Order and FNPRM*.⁵⁷

Grant of this waiver request would serve the public interest. This frequency band is ideal for OneWeb's gateway operations because it would provide additional uplink capacity in a relatively greenfield spectrum. OneWeb would operate only a small number of individually licensed gateway earth stations in this spectrum band and commits to coordinating with existing licensees and federal users of this spectrum to avoid causing harmful interference. Therefore, grant of a waiver to allow OneWeb to access this frequency band is in the public interest.

3. The OneWeb V-Band System is Capable of Sharing Gateway Spectrum with Other Terrestrial and Satellite Users

Overall, the OneWeb V-Band System is well-designed to share its proposed gateway spectrum with other users of these bands for four reasons. *First*, OneWeb's deployment of gateway earth station sites will be numerically limited; currently, OneWeb does not anticipate operating more than four gateway earth stations in the U.S. for the

⁵⁶ OneWeb notes that a recent petition for rulemaking that requests adding the 50.4-51.4 GHz band to the list of frequencies authorized for FSS in Section 25.202 of the Commission's rules. *See* Petition for Rulemaking of The Boeing Company, RM-11773 at 1 (filed June 22, 2016).

⁵⁷ *Spectrum Frontiers Order and FNPRM* at ¶ 421.

OneWeb V-Band System. *Second*, the gateway earth stations to be deployed in the U.S. will be individually site-licensed and thus will use traditional coordination methods to ensure there are no interference issues with respect to other services. *Third*, the OneWeb V-Band satellite downlink transmissions will comply with all applicable ITU and FCC Power Flux Density (PFD) limits that are designed to ensure no harmful interference occurs to terrestrial systems from satellite transmissions. *Fourth*, the use of very narrow and high gain satellite receive beams, operational elevation angles, and relatively large gateway earth station antennas means that the OneWeb V-band gateway earth station transmit power levels are very low, which further minimizes potential interference to other co-frequency terrestrial systems.

OneWeb's ability to share V-band spectrum resources with, and not cause harmful interference to, other Commission licensees and incumbent users is further demonstrated in Section A.8 of the attached Technical Narrative. Thus, grant of this Petition is fully consistent with the Commission's spectrum availability policies for non-U.S. licensed satellites. Similarly, the design of the OneWeb V-band System allows sharing with GSO FSS networks and other NGSO FSS systems.

C. National Security, Law Enforcement, Foreign Policy, and Trade Issues

The Commission noted in its *DISCO II Order* that issues of national security, law enforcement, foreign policy, and trade are likely to arise only in very rare circumstances.⁵⁸

The Commission further noted that it would accord deference to the expertise of the Executive Branch in identifying and interpreting issues of this nature.⁵⁹ This Petition

⁵⁸ *DISCO II Order* at ¶ 180.

⁵⁹ *Id.*

raises no such issues on its face. Thus, this element of the Commission's *DISCO II Order* market access analysis is also satisfied.

D. Eligibility and Operational Requirements

Pursuant to Section 25.137 of the Commission's rules, applicants seeking market access for non-U.S. licensed space stations must provide the legal and technical information for the non-U.S. space station required by Part 25 of the Commission's rules, including Section 25.114.⁶⁰

1. Legal and Technical Qualifications

The information set forth in this legal narrative, associated attachments, Schedule S, and the accompanying FCC Form 312 demonstrates compliance with the requirements of Section 25.137 and the other applicable Sections of Part 25 of the Commission's rules.

OneWeb highlights here certain Part 25 rules that warrant special attention:

(i) Section 25.114(d)(14) – End of Life Disposal

The Commission recognizes that non-U.S. licensed space stations can satisfy the Commission's orbital debris rules "by demonstrating that debris mitigation plans for the space station(s) for which U.S. market access is requested are subject to direct and effective regulatory oversight by the national licensing authority."⁶¹ As noted in Section III.A above, OneWeb's orbital debris mitigation plan is subject to direct and effective regulatory oversight by the United Kingdom's regulatory authorities, including particularly the U.K. Space Agency. Of course, however, OneWeb will provide orbital debris mitigation information to the extent requested by the FCC.

⁶⁰ See 47 C.F.R. § 25.137(b). See also *DISCO II Order* at ¶ 189.

⁶¹ 47 C.F.R. § 25.114(d)(14)(v).

(ii) Sections 25.137(d)(1) & 25.164(b) – Satellite Construction Milestones

Section 25.137(d)(1) of the Commission’s rules requires applicants requesting authority to operate with non-U.S. licensed space stations to demonstrate compliance with satellite construction milestones.⁶² The milestone for NGSO-like systems is set forth in Section 25.164(b) of the Commission’s rules, which specifies that NSGO operators “must launch the space stations, place them in the assigned orbits, and operate them in accordance with the station authorization no later than six years after the grant of the license.”⁶³

OneWeb currently anticipates that it will launch and operate the complete OneWeb V-Band System within six years of grant of this Petition. OneWeb notes the Commission recently initiated a proceeding in which it proposed to modify the existing milestone requirement.⁶⁴ OneWeb will comply with the milestone requirement currently in place or any applicable rule regarding NGSO milestones adopted as a result of the *NGSO Rulemaking Proceeding*.

(iii) Sections 25.137(d)(4) & 25.165 – Posting of Bond

U.S. market access grantees for non-U.S. licensed satellites that are not in-orbit and operating are subject to the Commission’s modified, escalating post-grant bond

⁶² 47 C.F.R. § 25.137(d)(1).

⁶³ 47 C.F.R. § 25.164(b).

⁶⁴ *In the Matter of Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Notice of Proposed Rulemaking, IB Docket No. 16-408, FCC 16-170, ¶ 32 (rel. Dec. 15, 2016) (“*NGSO Rulemaking Proceeding*”).

requirement.⁶⁵ For NGSO-like systems, the initial bond amount is \$1 million to provide for payment in the event that such NGSO system licensee fails to meet the launch-and-operation milestone.⁶⁶ The payment amount will “increase, *pro rata*, in proportion to the time that has elapsed since the license was granted to the time of the launch and operate milestone,” with potential liability up to \$5 million in the event of default.⁶⁷ OneWeb intends to post the required bond within 30 days of grant of this Petition and will comply with the escalating bond requirements going forward.

(iv) Section 25.142(d) – Prohibition of Exclusive Arrangements

Section 25.142(d) of the Commission’s rules precludes the Commission from granting an FSS space station license to any applicant if that applicant, or any affiliate of that applicant, shall acquire or enjoy any right to construct or operate space segment or earth stations, or to interchange traffic, for the purpose of handling traffic to or from the United States, its territories, or possessions, if such a right is denied to a U.S. company by way of any concession, contract, understanding, or working arrangement to which the applicant or any affiliate of the applicant are parties. OneWeb hereby confirms that it has no such exclusive right, and that it will not acquire any such exclusive right in the future.

⁶⁵ 47 C.F.R. § 25.137(d)(4); *see also Second Report and Order*, 30 FCC Rcd 14713, 14745 at ¶ 81, n.220 (“We also make consequential changes to the bond requirements for proposed non-U.S. licensed space stations that have been granted access to the U.S. market but are not in orbit and operating.”).

⁶⁶ *Second Report and Order*, 30 FCC Rcd 14713, 14744 at ¶ 70.

⁶⁷ *Id.* at ¶¶ 80, 81.

2. Waiver Requests

In addition to the waivers of the U.S. Table of Frequency Allocations requested in Section III.B *infra*, OneWeb, pursuant to Sections 1.3 and 25.112(b)(1) of the Commission's rules, additionally requests waivers of the following rules:

- Section 25.112
- Section 25.156(d)(5)
- Section 25.157(c)
- Section 25.157(e)
- Sections 25.210(i) and 25.217(b)(1)

(i) *Section 25.112*

The Commission's rules surrounding processing of space station applications indicate that an application may be considered "unacceptable for filing" for a variety of reasons, including incomplete answers, responses to Commission requests for information that do not comply with Commission rules, and "other matters of a formal character."⁶⁸ Although OneWeb is making every effort to submit an application that is complete and that complies with Commission rules in all aspects, space station processing round applications are complex and require the compilation of dozens if not hundreds of pages of technical and legal analysis.

Should the Commission determine that any part of OneWeb's application does not satisfy the requirements of Section 25.112, OneWeb requests that the Commission limit its action under this part to the particular frequency band and proposed use at issue and waive Section 25.112, to the extent necessary, as to the rest of the Petition, allowing it to continue to be considered in the V-band processing round. This would avoid imposing any unnecessarily harsh consequences upon OneWeb and facilitate the prompt processing of this Petition.

⁶⁸ 47 C.F.R. § 25.112(a).

(ii) *Section 25.156(d)(5)*

Section 25.156(d)(5) provides that, where the Commission has not adopted frequency-band-specific service rules (and therefore sharing criteria for NGSO and GSO systems), it will not consider NGSO applications after it has granted a GSO application; will not consider GSO applications after it has granted an NGSO application; and will divide the spectrum proportionally in the event that it receives NGSO and GSO applications at the same time.⁶⁹ The Commission does not appear to have adopted frequency-band specific services rules or NGSO/GSO sharing criteria for the V-band. OneWeb is also confident that the ITU will develop reasonable sharing criteria as a result of WRC-19 agenda item 1.6, and that such solutions could be a model for the Commission to adopt. Therefore, OneWeb requests a waiver of Section 25.156(d)(5) to the extent the Commission intends to block consideration of NGSO systems or divide spectrum between NGSO and GSO systems under the auspices of this rule.

Although the Commission has granted other applications in the V-band, these applications included both NGSO and GSO satellites.⁷⁰ OneWeb does not believe that these prior applications, without any actual build-out or operations, require the Commission to segment the V-band between NGSO and GSO constellations at this time. OneWeb notes that there are no satellite systems currently operating in the V-band and therefore no incumbent satellite system to be harmed by grant of a waiver. Furthermore, segmentation under this rule would be inconsistent with the Commission's previous

⁶⁹ 47 C.F.R. § 25.156(d)(5).

⁷⁰ See *Northrop Grumman Order* at 2332 ¶ 1 (NGSO and GSO constellations); Hughes Network Systems, LLC, IBFS File No. SAT-LOA-20111223-00248 (application for a Ka-band/V-band GSO FSS satellite; authorization surrendered Aug. 1, 2014); *In re Echostar Satellite Operating Corp.*, 31 FCC Rcd 2020 (rel. Mar. 15, 2016).

waivers of band segmentation requirements in the V-band.⁷¹ To the extent the Commission believes this rule applies in the instant case, a waiver for the OneWeb V-Band System would serve the public interest.

(iii) *Section 25.157(c)*

Section 25.157(c) of the Commission’s rules provides that NGSO system “lead applications” – that is, applications not filed in response to a Public Notice initiating a processing round – will be placed on Public Notice.⁷² The Public Notice will establish a cut-off date for competing NGSO applications and will initiate a new processing round. The Commission traditionally waives the requirement for a processing round when an applicant demonstrates that its authorization would not “preclude additional entry.”⁷³

Although OneWeb is requesting access to all of the frequency bands that are subject to the *V-Band Processing Round PN*, it is also requesting access to additional frequency bands that are not included in the processing round.⁷⁴ Thus, OneWeb requests a waiver of the processing round requirement in Section 25.157(c) for the frequency bands requested in this Petition that are not contained in the *V-Band Processing Round PN*.

The Commission has previously waived the processing round requirement for other NGSO constellations.⁷⁵ OneWeb respectfully submits that its ability to share the requested frequency bands not included in the current V-Band processing round will not

⁷¹ See Section D.2.(iii), *infra*.

⁷² See 47 C.F.R. § 25.157(c), (e).

⁷³ See *Northrop Order*, 24 FCC Rcd at 2342, ¶¶ 29, 34.

⁷⁴ Specifically, the gateway frequencies in the 42.0-42.5 GHz and 42.5-43.5 GHz bands.

⁷⁵ See *Northrop Order*; see also *Application of O3b Limited to Operate a Gateway Earth Station with a Non-U.S. Licensed, Non- Geostationary Orbit Ka-band Space Station System*, FCC File No. SES-LIC-20100723-00952, Radio Station Authorization, at 4, Condition 90043 (granted Sept. 25, 2012).

preclude additional entrants in these bands. As demonstrated in Section III.B and the attached Technical Narrative, OneWeb is confident that it can share this spectrum with existing and future users through the use of its innovative, sharing-enabling technologies as well as traditional coordination methods.

Moreover, as these bands enable only gateway connectivity, the number of ground stations that will require coordination is small. Grant of this waiver request is in the public interest because it will enable OneWeb to access crucial spectrum for its gateway earth stations without causing harmful interference to or precluding use by other potential users of these bands.⁷⁶

(iv) Section 25.157(e)

To the extent necessary under the Commission's rules, OneWeb requests a waiver of the band segmentation requirements in Section 25.157(e) for the operation of the OneWeb V-Band System. Section 25.157(e) of the Commission's rules provides that, in the event there is insufficient spectrum in the frequency band available to accommodate all qualified applicants in a given processing round, the spectrum will be divided equally

⁷⁶ Section 25.156(d)(4) provides that the Commission will treat applications for feeder-link authority separately from applications in the associated service band. This rule is premised on the practice of operating feeder links and service links in separate frequency bands to avoid intra-system interference. OneWeb's gateway frequencies are not "feeder links" as defined by the Commission because they are used to transmit information as part of an FSS network. Thus, OneWeb respectfully submits that 47 C.F.R. § 25.156(d)(4) is inapplicable to this Petition. However, to the extent the Commission disagrees with this interpretation, OneWeb requests a waiver of Section 25.156(d)(4) of the Commission's rules in order to treat the Petition as a single request for market access in the V-band. The OneWeb V-Band System is capable of re-using spectrum, allowing feeder links and service links to operate on the same spectrum. This practice is more spectrally efficient and still provides effective protection from intra-system interference. Because OneWeb's technical design fulfills the underlying purpose of this rule, a waiver of Section 25.156(d)(4), to the extent required, is in the public interest.

among all applicants. The language of Section 25.157(e) is inconsistent with the approach endorsed by the Commission over a decade ago, which adopted an “avoidance of in-line interference mechanism” in which licensees and market entrants may operate throughout its authorized band except during “in-line” events.⁷⁷ More recently, the Commission proposed to clarify that the avoidance of in-line interference mechanism applies across the Ku-band and Ka-band and sought comment on its applicability to other frequency bands.⁷⁸

The Commission has previously waived band segmentation requirements and granted NGSO applicants access to all requested V-band frequencies on a first-come, first-served basis, when doing so would not preclude entry by later applicants.⁷⁹ Furthermore, it has waived Section 25.157(e) where a proposed NGSO system employs technical solutions that can minimize in-line interference events.⁸⁰

OneWeb’s entry in the V-Band processing round will not preclude later applicants from using the V-band as well. Its system design is capable of accommodating other V-band satellite systems in the future and limiting interference events between NGSO systems. As the Commission has acknowledged, allowing NGSO systems to employ spectrum-sharing mechanisms and coordinate with other systems to avoid in-line interference events can eliminate the need for inefficient spectrum segmentation

⁷⁷ *Establishment of Policies and Service Rules for the Non-Geostationary Satellite Orbit, Fixed Satellite Service in the Ku-Band, Report and Order and Further Notice of Proposed Rulemaking*, 17 FCC Rcd 7841, 7850 ¶ 27 (2002).

⁷⁸ *NGSO Rulemaking Proceeding* at ¶ 23.

⁷⁹ *Northrop Order* at 2341-42, ¶ 29 & n.62 (granting a waiver to Northrop Grumman and noting additional instances of granted waivers).

⁸⁰ *Id.* at 2343, ¶ 33.

practices.⁸¹ OneWeb requests that the Commission allow it to engage in spectrum-sharing and coordination with other satellite applicants rather than implementing band segmentation in the V-band.

Dividing the V-band spectrum between multiple applicants could also hinder any applicant's ability to provide the type of worldwide, high-throughput broadband service OneWeb proposes. OneWeb's proposal requires a large subscriber base and sufficient spectrum to support high data speeds for those subscribers. Permitting multiple systems to operate on the same V-band spectrum, with appropriate coordination, would promote efficient use of spectrum and effective competition and would help close the digital divide by making high-speed broadband available at competitive prices in remote areas. Therefore, a waiver of Section 25.157(e) is in the public interest.

(v) Sections 25.210(i) and 25.217(b)(1)

Out of an abundance of caution, OneWeb seeks a waiver of Section 25.210(i) to the extent that rule is applicable to FSS space stations. Section 25.217(b)(1) provides default service rules for NGSO applicants where frequency-band-specific service rules are not yet in place. Among other requirements, Section 25.217(b)(1) provides that NGSO satellite operators must comply with Section 25.210(i), "notwithstanding the frequency bands specified in these rule provisions."⁸² Section 25.210(i) requires that space station antennas must be designed to provide a cross-polarization isolation such that the ratio of the on axis co-polar gain to the cross-polar gain of the antenna in the assigned frequency

⁸¹ *See In re Establishment of Policies & Service Rules for the Non-Geostationary Satellite Orbit, Fixed Satellite Service in the Ku-Band*, Report & Order, FCC 02-123, 17 FCC Rcd 7841, 7850 ¶¶ 27-30 (rel. Apr. 26, 2002) (adopting an "Avoidance of In-Line Interference Events" spectrum-sharing option in the Ku-band over band segmentation options).

⁸² 47 C.F.R. § 25.217(b).

band is at least 25 dB within its primary coverage area. The polarization requirements in Section 25.210 were expressly removed as to FSS space stations in 2015.⁸³ The Commission determined that the existing limits on FSS space stations were “unnecessary to protect analog signals” because “[a]nalog transmissions not for purposes of TT&C are increasingly rare and frequently coordinated.”⁸⁴ OneWeb believes that Section 25.210 polarization requirements are not applicable to its proposed system, but requests a waiver of Section 25.210(i) to the extent that the Commission disagrees with OneWeb’s interpretation.⁸⁵

IV. CONCLUSION

As demonstrated herein and in all the materials with which this legal narrative is associated, OneWeb fully satisfies the Commission’s requirements under the *DISCO II Order* for U.S. market access. Moreover, subject to a limited number of waiver requests, OneWeb fully complies with the Commission’s Part 25 rules. Thus, grant of this market access application will serve the public interest, convenience, and necessity. OneWeb respectfully requests the Commission to expeditiously grant this Petition to facilitate OneWeb’s deployment of the next generation of broadband connectivity and thereby close the “digital divide” in the U.S. in a timely manner.

⁸³ *Second Report & Order*, 30 FCC Rcd 14713, 14816-17 ¶¶ 331-33 (2015).

⁸⁴ *Id.* at ¶ 333.

⁸⁵ Consistent with this waiver request, the information pursuant to 47 C.F.R. § 25.114(d)(7) is not being provided herein.

Respectfully submitted,

ONEWEB

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