

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

In the Matter of)
)
WorldVu Satellites Limited)
)
Amendment to Petition for) File No. SAT-AMD-2018 _____
Declaratory Ruling Granting Access)
to the U.S. Market for the OneWeb)
V-Band System)

AMENDMENT

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AMENDMENT

WorldVu Satellites Limited (“OneWeb”), pursuant to Sections 25.116 and 25.137(e) of the Commission’s rules, hereby amends its pending Petition for Declaratory Ruling (the “Petition”) seeking access to the United States market for its non-geostationary satellite orbit (“NGSO”), fixed-satellite service (“FSS”) system.¹ OneWeb filed the Petition in response to the Commission’s initiation of a processing round for NGSO-like systems in the V-band.² The instant Amendment is being filed in order to: (i) increase the number of proposed medium-earth orbit satellites to 2,560 (the “MEO Constellation”) and (ii) add certain Ku-, Ka-, and E-band frequencies to the MEO Constellation.³

¹ See *In re WorldVu Satellites Limited, Petition for Declaratory Ruling Granting Access to the U.S. Market for the OneWeb V-Band System*, IB File No. SAT-LOI-20170301-00031 (filed Mar. 1, 2017). See also 47 C.F.R. §§ 25.116 and 25.137(e).

² 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*, 31 FCC Rcd 11957 (Int’l Bur. 2016) (“V-Band Processing Round PN”).

³ In the instant Amendment, OneWeb requests access to certain frequencies designated for mobile satellite service (“MSS”) feeder link operations. Although (footnote continued)

OneWeb has designed an NGSO system consisting of a low-earth orbit constellation (the “LEO Constellation”) and the MEO Constellation, which together will provide high-speed, high-quality broadband worldwide. OneWeb originally sought access to Ku-, Ka-, and V-band frequencies for a LEO Constellation consisting of 720 satellites and to V-band frequencies for a MEO Constellation consisting of 1,280 satellites. However, the Commission’s recent change to its milestone rules for NGSO FSS applicants has caused OneWeb to analyze what it might have designed and proposed for its LEO and MEO Constellations had it known the milestone regime would change so soon after it applied for market access for both.

This narrative identifies and replaces certain portions of the pending Petition. All other parts of the Petition that are not addressed below will be unaffected by this Amendment. Concurrently, OneWeb is submitting a revised Schedule S and accompanying Technical Annex to account for the requested changes to its MEO Constellation.

I. INTRODUCTION

OneWeb is a market access grantee for a U.K.-authorized NGSO FSS system that will operate in LEO utilizing the Ku- and Ka-bands.⁴ In the last year, OneWeb has made remarkable progress toward achieving its simple yet daring mission: providing low-latency, fiber-comparable broadband connectivity to unserved and underserved communities worldwide. In March 2017, OneWeb broke ground on its

OneWeb currently does not plan to offer MSS in the U.S., it plans to utilize MSS feeder links in the U.S. in support of mobile terminals operating outside the U.S.

⁴ See *In the Matter of WorldVu Satellites Limited; Petition for a Declaratory Ruling Granting Access to the U.S. Market for the OneWeb NGSO FSS System*, Order and Declaratory Ruling, 32 FCC Rcd 5366 (2017) (“*OneWeb Market Access Grant*”).

state-of-the-art satellite manufacturing facility in Exploration Park, Florida.⁵ In June 2017, OneWeb inaugurated its assembly line in Toulouse, France for the production of its first ten satellites.⁶ In November 2017, OneWeb announced a \$190 million contract with Hughes Network Systems for the production of its global ground network system. OneWeb remains on track to launch its first satellites in May 2018.⁷

OneWeb designed its market-leading LEO Constellation to strictly comply with the Commission's milestone rules in place at the time.⁸ These rules required NGSO satellite applicants to launch and operate their entire constellation within six years.⁹ Other companies took a different approach, designing vast satellite constellations with no apparent intention of satisfying the Commission's milestone requirements. OneWeb has strongly advocated to keep the Commission's milestone regime in place and reasonably expected the Commission would do so, considering the

⁵ See Press Release, *OneWeb Satellites Breaks Ground On The World's First State-Of-The-Art High-Volume Satellite Manufacturing Facility* (Mar. 16, 2017), <http://oneweb.world/press-releases/2017/oneweb-satellites-breaks-ground-on-the-worlds-first-state-of-the-art-high-volume-satellite-manufacturing-facility>.

⁶ See Press Release, *OneWeb Satellites inaugurates serial production line for the Assembly, Integration, and Test of OneWeb's first satellites* (June 27, 2017), <http://www.airbus.com/newsroom/press-releases/en/2017/06/one-web-satellites-serial-production-line-inauguration.html>.

⁷ See *OneWeb plans May 2018 launch*, ADVANCED TELEVISION (Oct. 31, 2017), available at <http://advanced-television.com/2017/10/31/inside-satellite-oneweb-plans-may-2018-launch/>.

⁸ See *OneWeb Market Access Grant* at ¶ 28. OneWeb also undertook great efforts to design the LEO Constellation to comply with the EPFD limits imposed by Commission rules in place at the time. See 47 C.F.R. § 25.146(a); see also Letter from Brian D. Weimer, Counsel to OneWeb to Marlene H. Dortch, Secretary, FCC, IB Docket No. 16-408, et al. (Sep. 10, 2017).

⁹ 47 C.F.R. § 25.164(b).

overriding public interest goals it serves.¹⁰ Nevertheless, the Commission substantially relaxed the milestone rules in its recent Report and Order updating the Part 25 rules.¹¹ The Commission's dramatic relaxation of the milestone rules mid-way through various Commission processing rounds has compelled OneWeb to reassess what it can achieve now in the newly expanded milestone timeframe. The instant Amendment reflects a constellation deployment timeframe consistent with the Commission's new milestone regime and represents one very important step in the redesign of OneWeb's ambitious plans brought about as a result of the changed milestone rules.

The proposed enhanced MEO Constellation will enable OneWeb to build upon and augment the capabilities of its LEO Constellation. While the backbone LEO Constellation will provide ubiquitous, low-latency coverage across the globe, the greater visibility of satellites in the MEO Constellation will allow OneWeb to efficiently and precisely target capacity to areas generating the most traffic in the OneWeb network. OneWeb's innovative system, based on a LEO/MEO architecture, will fulfill the long-elusive Commission goal of using NGSO constellations to deliver an array of transformative broadband services and applications that will close the

¹⁰ See Comments of OneWeb, IB Docket No. 16-408, at 2-7 (filed Feb. 27, 2017); Reply Comments of OneWeb, IB Docket No. 16-408 at 15-19 (filed Apr. 10, 2017).

¹¹ See *In the Matter of 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, 2017 WL 4316351, FCC 17-122, ¶¶ 66-67 (2017) ("*NGSO R&O*"). Although the *NGSO R&O* was published in the federal register on December 18, 2017, and the rules adopted therein are not yet effective, OneWeb nonetheless assumes the effectiveness of the *NGSO R&O* throughout this Amendment given the timing of this submission.

digital divide.¹² The MEO Constellation will boost OneWeb’s consumer speeds beyond 2.5 Gbps to any rural household, enabling rural populations to benefit from a broadband service 1.5 times faster than the current highest speed consumer fiber systems.

As demonstrated herein, grant of this Amendment is in the public interest.

II. THE ONEWEB MEO CONSTELLATION WILL CONTINUE TO SATISFY THE COMMISSION’S CRITERIA FOR U.S. MARKET ACCESS

As demonstrated in the Petition, the OneWeb MEO Constellation satisfies the *DISCO II* criteria for U.S. market access, subject to certain waiver requests described therein.¹³ The additional spectrum and satellites proposed herein for the OneWeb MEO Constellation in no way alter the *DISCO II* analysis contained in the Petition.

A. Effect on Competition in the United States

Grant of the Amendment will facilitate OneWeb’s ability to offer next-generation, NGSO-based connectivity that will enhance broadband competition in the U.S. In fact, the Commission presumes that a non-U.S. satellite entrant will promote competition in the U.S. market when that entry is licensed by a World Trade Organization (“WTO”) member state seeking authority to provide satellite service

¹² See, e.g., *Statement of Chairman Ajit Pai regarding 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, 2017 WL 4277238 (rel. Sept. 26, 2017) (“*Statement of Chairman Pai*”) (“As we strive to close the digital divide, we must be open to any and every technology that could connect consumers across the country. That’s why we once again look to the skies for inspiration--and in particular, to new satellite constellations that offer potential for bridging this gap.”).

¹³ See Petition at 10-31.

under the WTO Basic Telecommunications Agreement (“WTO Agreement”).¹⁴ Since the United Kingdom’s telecommunications regulatory authority will issue OneWeb a satellite license and it is a WTO member state, the presumption in favor of entry applies to the Petition, as amended.¹⁵

B. Spectrum Availability

In the Petition, OneWeb sought market access in certain portions of the V-band.¹⁶ In addition to those frequencies, in this Amendment OneWeb seeks market access for the MEO Constellation in the Ku-, Ka-, and E-band frequencies identified in **bold** in the chart below:

<u>Type of Link and Transmission Direction</u>	<u>Frequency Ranges</u>	<u>Notes/NGSO FSS Status</u>
Gateway-to-Satellite User Terminal-to-Satellite	12.75 - 13.25 GHz	Primary FSS Allocation
Gateway-to-Satellite User Terminal-to-Satellite	13.75 - 14.5 GHz 14.0 - 14.5 GHz	Primary FSS Allocation
Gateway-to-Satellite	15.43 - 15.63 GHz	Primary FSS Allocation, but limited to MSS feeder links ¹⁷
Gateway-to-Satellite User Terminal-to-Satellite	17.8 - 18.1 GHz	Secondary FSS allocation pursuant to <i>NGSO R&O</i> ; ¹⁸ see waiver request below

¹⁴ *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 ¶ 39 (1997) (“*DISCO II Order*”).

¹⁵ The United States’ satellite commitments under the WTO Agreement cover FSS and MSS (the “WTO Covered Services”). OneWeb seeks authority to provide only WTO Covered Services in the U.S. using the MEO Constellation.

¹⁶ See Petition at 13-20.

¹⁷ See 47 C.F.R. § 2.106, US359.

¹⁸ See *NGSO R&O* at ¶ 7.

<u>Type of Link and Transmission Direction</u>	<u>Frequency Ranges</u>	<u>Notes/NGSO FSS Status</u>
Gateway-to-Satellite	27.5 - 28.35 GHz	<p>FSS secondary to Upper Microwave Flexible Use Service, except for earth station operations authorized pursuant to Section 25.136 of the Commission’s rules¹⁹</p> <p>NGSO FSS systems must also “operate on an unprotected, non-interference basis with respect to GSO FSS networks”²⁰</p>
Gateway-to-Satellite User Terminal-to-Satellite	28.35 - 28.6 GHz and 28.6 - 29.1 GHz	<p>In the 28.35-28.6 GHz band, NGSO FSS systems are secondary to GSO FSS systems pursuant to the <i>Ka-band Plan</i>²¹</p> <p>In the 28.6-29.1 GHz band, NGSO FSS operations are primary pursuant to the <i>Ka-band Plan</i>²²</p> <p>In the 28.5-29.1 GHz band, FSS stations must protect certain fixed stations²³</p>

¹⁹ 47 C.F.R. § 25.202(a)(1), n. 7.

²⁰ *NGSO R&O* at ¶ 23.

²¹ 47 C.F.R. § 25.202(a)(1), n. 2; *see also In re Rulemaking to Amend Parts 1, 2, 21, & 25 of the Commission’s Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services*, First Report and Order and Fourth Notice of Proposed Rulemaking, 11 FCC Rcd 19005 (1996) (“28 GHz Band Order”); *In re Rulemaking to Amend Parts 1, 2, 21, & 25 of the Commission’s Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules & Policies for Local Multipoint Distribution Service & for Fixed Satellite Services*, Third Report and Order, 12 FCC Rcd 22310 (1997); *In re Redesignation of the*
(footnote continued)

<u>Type of Link and Transmission Direction</u>	<u>Frequency Ranges</u>	<u>Notes/NGSO FSS Status</u>
Gateway-to-Satellite	29.1 - 29.25 GHz and 29.25 - 29.5 GHz	NGSO use limited to feeder links for MSS systems ²⁴ In the 29.25-29.5 GHz band, FSS stations must protect certain fixed stations ²⁵
Gateway-to-Satellite User Terminal-to-Satellite	29.5 - 30.0 GHz	Secondary allocation for NGSO FSS pursuant to <i>Ka-band Plan</i> ²⁶
Gateway-to-Satellite	42.5 - 43.5 GHz 47.2 - 50.2 GHz 50.4 - 51.4 GHz	Frequencies requested in the Petition ²⁷
User Terminal-to-Satellite	47.2 - 50.2 GHz 50.4 - 51.4 GHz	

17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use, Report and Order, 15 FCC Rcd 13430 (2000); NGSO R&O (together, the “Ka-band Plan”).

²² See 47 C.F.R. § 2.106, NG165; *Ka-band Plan*; *NGSO R&O* at ¶ 14.

²³ 47 C.F.R. § 2.106, NG62.

²⁴ See *id.* at NG166, NG535A.

²⁵ *Id.* at NG62.

²⁶ See 47 C.F.R. § 25.202(a)(1), n. 2; *Ka-band Plan*.

²⁷ In this Amendment, OneWeb requests slightly expanded access for its user terminal uplinks and downlinks. The Petition originally requested access to the 48.2-50.2 GHz band for user terminal uplinks and the 40.0-42.0 GHz band for user terminal downlinks. Now, OneWeb requests access to the 47.2-50.2 and 50.4-51.4 GHz bands for user terminal uplinks and the 37.5-42.5 GHz band for user terminal downlinks.

<u>Type of Link and Transmission Direction</u>	<u>Frequency Ranges</u>	<u>Notes/NGSO FSS Status</u>
Satellite-to-Gateway Satellite-to-User Terminal	37.5 - 42.5 GHz	
Gateway-to-Satellite Satellite-to-Gateway	71.0 - 76.0 GHz	Primary FSS Allocation; ²⁸ <i>see</i> waiver request below
Gateway-to-Satellite	81.0 - 86.0 GHz	Primary FSS Allocation ²⁹
Satellite-to-Gateway Satellite-to-User Terminal	19.3 - 19.4 GHz	NGSO FSS systems permitted to operate subject to PFD limits ³⁰
Satellite-to-Gateway	19.4 - 19.6 GHz	Primary allocation for NGSO MSS feeder links ³¹
Satellite-to-Gateway Satellite-to-User Terminal	19.6 - 19.7 GHz	NGSO FSS systems permitted to operate subject to PFD limits ³²
Satellite-to-User Terminal	10.7 - 12.7 GHz	Primary FSS Allocation ³³

²⁸ 47 C.F.R. § 2.106.

²⁹ *Id.*

³⁰ *NGSO R&O* at ¶ 19.

³¹ 47 C.F.R. § 2.106, NG166.

³² *NGSO R&O* at ¶ 19.

³³ 47 C.F.R. § 2.106 & n. 5.487A.

<u>Type of Link and Transmission Direction</u>	<u>Frequency Ranges</u>	<u>Notes/NGSO FSS Status</u>
	18.1 - 18.6 GHz	Secondary allocation, subject to PFD limits, in the 17.8-18.3 GHz band ³⁴ Secondary allocation, subject to EPFD limits, in the 18.3-18.6 GHz band ³⁵
	18.8 - 19.4 GHz	Primary Allocation in the 18.8-19.3 GHz band ³⁶ <i>See above</i> for 19.3-19.4 GHz band
	19.6 - 20.2 GHz	<i>See above</i> for 19.6-19.7 GHz band Secondary allocation in the 19.7-20.2 GHz band ³⁷

The Commission considers spectrum availability as a factor in determining whether to allow a foreign-licensed satellite to serve the U.S. market.³⁸ In doing so, the Commission evaluates whether grant of U.S. market access would create the potential for harmful interference with U.S.-licensed satellites and terrestrial systems. OneWeb seeks U.S. market access in these frequencies (also listed on the corresponding, revised Schedule S and accompanying Technical Annex) based on the U.S. Table of Frequency Allocations (codified in Section 2.106 of the Commission's

³⁴ *NGSO R&O* at ¶ 7.

³⁵ *Id.* at ¶ 10.

³⁶ 47 C.F.R. § 2.106; *NGSO R&O* at ¶ 14.

³⁷ *NGSO R&O* at ¶ 10.

³⁸ *See DISCO II Order* at ¶¶ 149-50.

rules) and the Commission's applicable band plans.³⁹ 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.

To the extent OneWeb seeks to access spectrum on a non-conforming, non-interference basis, it requests a waiver of the U.S. Table of Frequency Allocations and the Commission's band plans in order to operate. 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.⁴⁰ As demonstrated for each spectrum allocation below, allowing OneWeb to operate on a non-conforming basis will not undermine the policy objectives of the Commission's current spectrum allocations. The addition of these new frequencies to the Petition will not increase the potential for interference to satellite or terrestrial operations and does not alter the *DISCO II* analysis set forth in the Petition. In each case, the public interest will be best served by granting OneWeb waivers of the Table of Frequency Allocations to allow it to provide low-latency, high-speed broadband connectivity to unserved and underserved areas via its innovative LEO/MEO NGSO system.

17.8-18.1 GHz; 18.1-18.3 GHz.

The 17.8-18.3 GHz band is currently not allocated for FSS use in the U.S. Table of Frequency Allocations, but the recent *NGSO R&O* adopted a secondary

³⁹ See 47 C.F.R. § 2.106. See also *In re Amendment of Parts 2 and 25 of the Commission's Rules to Permit Operation of NGSO FSS Systems Co-Frequency with GSO and Terrestrial Systems in the Ku-band Frequency Range*, First Report and Order and Further Notice of Proposed Rulemaking, 16 FCC Rcd 4096 (2000) ("Ku-band Plan"); *Ka-band Plan*.

⁴⁰ *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164, 1166 (D.C. Cir. 1990).

allocation for FSS in this band and explicitly permitted the blanket licensing of FSS earth stations.⁴¹ Accordingly, OneWeb will operate downlinks to its user terminals in the 18.1-18.3 GHz band on a secondary basis with respect to GSO operations.

In addition, OneWeb hereby requests a waiver of Section 2.106 and, to the extent necessary, Section 25.112(a)(3) of the Commission's rules to operate uplinks from both its user terminals and gateway earth stations in the 17.8-18.1 GHz band.⁴² Internationally, this band is allocated for both downlinks and uplinks in the FSS.⁴³ OneWeb believes the proposed uplinks in this band can occur without causing harmful interference to incumbent, fixed-service operations for reasons similar to the rationale cited by the Commission when it adopted the downlink allocation and permitted blanket earth station licensing. For example, the Commission specifically noted that "while terrestrial use of this band is significant, there are areas, particularly rural areas, where terrestrial deployment is less dense and by using mitigating techniques like siting considerations, off-axis rejection, and shielding, we expect FSS earth stations will be able to operate successfully without receiving harmful interference."⁴⁴ Similarly, OneWeb is confident it can utilize adequate mitigation techniques to enable its user terminals to operate without causing harmful interference to the fixed service.⁴⁵ Therefore, grant of this waiver request is in the public interest.

⁴¹ *NGSO R&O* at ¶¶ 7-8.

⁴² 47 C.F.R. §§ 2.106, 25.112(a)(3).

⁴³ *See* 47 C.F.R. §§ 2.106.

⁴⁴ *NGSO R&O* at ¶ 7.

⁴⁵ Further discussion of the spectrum sharing techniques OneWeb will employ in the 17.8-18.1 GHz band is included in Section A.8.3 of the Technical Annex.

71-76 GHz band.

The 70/80 GHz bands are both allocated to the FSS on a primary basis.⁴⁶

Currently, the bands are primarily occupied by nationwide licensees who operate individual, point-to-point links.⁴⁷ A search of IBFS does not reveal any licensed or authorized satellite systems in these bands. The Commission has explicitly declined to allocate the 70/80 GHz band for mobile use or indoor-only unlicensed use under Part 15.⁴⁸ The Commission observed that its actions did not “foreclos[e] future innovations

⁴⁶ 47 C.F.R. § 2.106.

⁴⁷ *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services; Establishing a More Flexible Framework to Facilitate Satellite Operations in the 27.5-28.35 GHz and 37.5-40 GHz Bands; Petition for Rulemaking of the Fixed Wireless Communications Coalition to Create Service Rules for the 42-43.5 GHz Band; 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; 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; Allocation of Spectrum to Upgrade Fixed and Mobile Allocations in the 40.5-42.5 GHz Frequency Band; Allocation of Spectrum in the 46.9-47.0 GHz Frequency Band for Wireless Services; and Allocation of Spectrum in the 37.0-38.0 GHz and 40.0-40.5 GHz for Government Operations*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8014, 8158 ¶ 424 (2016) (“*Spectrum Frontiers R&O*”).

⁴⁸ *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services; Establishing a More Flexible Framework to Facilitate Satellite Operations in the 27.5-28.35 GHz and 37.5-40 GHz Bands; Petition for Rulemaking of the Fixed Wireless Communications Coalition to Create Service Rules for the 42-43.5 GHz Band; 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; 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; Allocation of Spectrum to Upgrade Fixed and Mobile Allocations in the 40.5-42.5 GHz Frequency Band; Allocation of Spectrum in the 46.9-47.0 GHz Frequency Band for Wireless Services; and Allocation of Spectrum in the 37.0-38.0 GHz and 40.0-40.5 GHz for Government Operations*, Second Report and Order, Second Further Notice of Proposed Rulemaking, Order on Reconsideration, and Memorandum Order and (footnote continued)

in these bands.”⁴⁹ OneWeb respectfully submits that its MEO Constellation constitutes precisely the kind of future innovation that aligns with the Commission’s goals for the 70/80 GHz band. Therefore, OneWeb seeks U.S. market access to utilize E-band frequencies to serve as critical gateway spectrum for its MEO Constellation.

In particular, OneWeb requests a waiver of the U.S. Table of Frequency Allocations, and, to the extent necessary, 47 C.F.R. § 25.112(a)(3) of the Commission’s rules, to operate gateway links in a unique architecture: utilizing a “reverse-band” basis, in which OneWeb will operate gateway uplinks, as well as gateway downlinks, in the 71-76 GHz band.⁵⁰ Currently, this band is allocated on a primary basis internationally and in the U.S. to FSS in the space-to-Earth direction. However, until 2003, this band was allocated on a primary basis for FSS uplinks.⁵¹ The directional indicators in this band were changed to “account for a better understanding of how spectrum in [the 71-275 GHz range] might be used” and to protect RAS operations in the 81-86 GHz band, which have difficulty co-existing with FSS downlinks.⁵² OneWeb believes that it can utilize the 71-76 GHz band for both gateway downlink and uplink operations for two reasons.

Opinion, 2017 WL 5654766, FCC 17-152 ¶¶ 200, 206 (rel. Nov. 22, 2017) (“*Spectrum Frontiers Second R&O*”).

⁴⁹ *Id.* at ¶ 207.

⁵⁰ *See* 47 C.F.R. §§ 2.106, 25.112(a)(3).

⁵¹ *See In the Matter of Allocations and Service Rules for the 71-76 GHz, 81-86 GHz and 92-95 GHz Bands; Loea Communications Corporation Petition for Rulemaking*, Report and Order, 18 FCC Rcd 23318, 23324 ¶ 10 (2003).

⁵² *See In the Matter of Allocations and Service Rules for the 71-76 GHz, 81-86 GHz and 92-95 GHz Bands; Loea Communications Corporation Petition for Rulemaking*, Notice of Proposed Rulemaking, 17 FCC Rcd 12182, 12190 ¶ 13 (2002).

First, OneWeb’s proposed use of this innovative network configuration will facilitate critical gateway connectivity for OneWeb’s MEO Constellation without causing harmful interference to or jeopardizing the viability of existing and future terrestrial uses of the band. Due to the propagation characteristics of this spectrum, the current point-to-point links are typically “highly directional, ‘pencil-beam’” signals.⁵³ Therefore, the adoption of any allocation for terrestrial mobile in this band would likely lead to the deployment of networks with very similar operational characteristics. Considering these likely operational characteristics, OneWeb believes this band—covering a large amount of greenfield spectrum—can be effectively shared between terrestrial operators and NGSO FSS systems. *Second*, there is no current RAS allocation in the 71-76 GHz band that could experience harmful interference as a result of OneWeb’s planned downlink operations.

Moreover, the Commission has some experience with proposals by NGSO FSS systems to utilize a reverse-band configuration. The Commission noted in the *28 GHz Band Order* that it would “examine any requests for such operations on a case-by-case basis in the future.”⁵⁴ The Commission has also adopted technical rules to facilitate reverse-band operations between DBS and BSS licensees in the 17.3-17.8 GHz band.⁵⁵

⁵³ *Spectrum Frontiers R&O* at ¶ 424.

⁵⁴ *28 GHz Band Order*, 11 FCC Rcd at 19031-32 ¶ 63.

⁵⁵ *See In re Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the 17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25 GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service and for the Satellite Services Operating Bi-directionally in the 17.3-17.8 GHz Frequency Band*, Second Report & Order, 26 FCC Rcd 8927 (2011) (codified at 47 C.F.R. § 25.264); *In re Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band and at the* (footnote continued)

Most recently, the Commission determined how to deal with pre-existing “grandfathered” uses of the 17.3-17.8 GHz spectrum, how to establish coordination zones between earth stations operating in forward-band and reverse-band modes, and how to facilitate coordination via information-sharing.⁵⁶ The Commission ultimately concluded it should allow operators in this spectrum band the flexibility to coordinate their operations rather than dictating specific e.i.r.p. limits and antenna shielding requirements.⁵⁷ Similarly, OneWeb is optimistic that any sharing issues involved in its proposed reverse-band use of E-band spectrum can be resolved through appropriate coordination measures between itself and the other current and future operators in this band.

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 it would accord deference to the expertise of the Executive Branch in identifying and interpreting issues of this

17.7-17.8 GHz Frequency Band Internationally, and at the 24.75-25.25 GHz Frequency Band for Fixed Satellite Services Providing Feeder Links to the Broadcasting-Satellite Service & for the Satellite Services Operating Bi-Directionally in the 17.3-17.8 GHz Frequency Band, Third Report & Order, 32 FCC Rcd 3705 (2017) (“*Third Report & Order*”).

⁵⁶ *Third Report & Order* at 3707-3713, ¶¶ 5-24.

⁵⁷ *Id.* at 3713, ¶ 22-24.

⁵⁸ *DISCO II Order* at ¶ 180.

nature.⁵⁹ This Amendment raises no such issues on its face and this element of the *DISCO II Order* analysis in the Petition remains unchanged.

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 stations required by Part 25 of the Commission’s rules, including Section 25.114.⁶⁰

1. Legal and Technical Qualifications

To the extent necessary, OneWeb incorporates by reference all of the technical information set forth in the legal narrative and Technical Annex attached to the Petition.⁶¹ That information, its associated attachments, Schedule S, and the accompanying FCC Form 312 demonstrate compliance with the requirements of Section 25.137 and the other applicable Sections of Part 25 of the Commission’s rules. In particular, OneWeb highlights for the Commission that its orbital debris mitigation plan will continue to be “subject to direct and effective regulatory oversight by the United Kingdom’s regulatory authorities, including particularly the U.K. Space Agency.”⁶²

2. Additional Waiver Requests

In addition to the requests for waiver of Section 2.106 of the Commission’s rules stated above, OneWeb, pursuant to Sections 1.3 and 25.112(b)(1) of the

⁵⁹ *Id.*

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

⁶¹ *See* Petition.

⁶² *Id.* at 22.

Commission’s rules, requests waivers of the same rules for which it sought waiver in the Petition,⁶³ with the exception of its requests for waivers of 47 C.F.R. §§ 25.157(e) and 25.156(d)(5), to the extent these requests are rendered moot by the recent *NGSO R&O*.⁶⁴ In addition, OneWeb: (i) requests a waiver of Section 25.116(c) of the Commission’s rules, to the extent necessary; (ii) revises its request for a waiver of Section 25.157(c) of the Commission’s rules; and (iii) requests a waiver of Section 25.137(d)(5) of the Commission’s rules, to the extent necessary.

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.⁶⁵ The Commission should waive these rules because “special circumstances”—namely, the Commission’s decision to change the *NGSO* milestone rules mid-way through ongoing processing rounds—warrant a deviation from the Commission’s general rules to allow OneWeb to file an Amendment that will help it to “serve[] the public interest” by providing low-latency, high-speed broadband.⁶⁶ Furthermore, as demonstrated below, the requested waivers will not undermine the policy objectives of any of these rules.⁶⁷ In each case, the public interest will be best served by granting OneWeb waivers of certain Commission

⁶³ *Id.* at 25.

⁶⁴ *See NGSO R&O* at ¶¶ 39, 51-53 (the Commission opting to delete Section 25.156(d)(5), and choosing to apply a spectrum-sharing mechanism to *NGSO* FSS systems in multiple frequency bands, including the V-band, instead of resorting to band segmentation under Section 25.157(e)).

⁶⁵ *Northeast Cellular*, 897 F.2d at 1166.

⁶⁶ *Id.*

⁶⁷ *See WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

rules to allow it to provide low-latency, high-speed broadband connectivity to unserved and underserved areas via its innovative LEO/MEO NGSO system.

A. Section 25.116(c)

Section 25.116(c) of the Commission’s rules states that an NGSO-like application “will be considered to be a newly-filed application if it is amended by a major amendment . . . after a ‘cut-off’ date applicable to the application.”⁶⁸ However, Section 25.116(c) also contains explicit exceptions for amendments that “resolve[] frequency conflicts with authorized stations or other pending applications but do[] not create new or increased frequency conflicts”⁶⁹ and amendments that “do[] not create new or increased frequency conflicts, and [are] demonstrably necessitated by events which the applicant could not have reasonably foreseen at the time of filing.”⁷⁰ Similarly, Section 25.116(b) defines a major amendment as one that “increases the potential for interference, or changes the proposed frequencies . . .” or will result in a “significant environmental effect.”⁷¹ Although OneWeb proposes to increase the number of satellites and add frequencies to the MEO Constellation, these changes will neither increase the potential for interference nor result in a significant environmental effect, and in fact will reduce the potential for interference. Furthermore, they are necessitated by the Commission’s recent decision to substantially relax the NGSO milestone rules.

⁶⁸ 47 C.F.R. § 25.116(c).

⁶⁹ *Id.* at § 25.116(c)(1).

⁷⁰ *Id.* at § 25.116(c)(4).

⁷¹ *Id.* at 25.116(b)(1)-(2).

The Amendment Will Reduce the Potential for Interference

The expansion of the MEO Constellation and addition of certain frequencies proposed by OneWeb in the instant Amendment would not create any additional risk of interference. In fact, the addition of 1,280 satellites to the MEO Constellation will ensure OneWeb is more adequately equipped to utilize satellite diversity as a mechanism to avoid causing interference to other constellations, as described in the Technical Annex, making interference events *less* likely.⁷² As the Commission has recognized in the specific context of a MEO constellation, satellite diversity has the potential to enable operators to share spectrum with other systems;⁷³ the same rationale supports OneWeb's waiver request here. As explained in the Technical Annex, OneWeb expects the additional MEO satellites requested herein to enhance its ability to resolve frequency conflicts and reduce interference by enabling satellite diversity.

The Amendment Will Not Negatively Impact the Ku-/Ka-Band Sharing Environment

OneWeb also anticipates being able to coordinate with all other NGSO operators in its requested frequency bands. The Commission has already granted OneWeb access to portions of the Ku- and Ka-band spectrum for its LEO Constellation,⁷⁴ and OneWeb and other NGSO operators are already expending

⁷² See Technical Annex at 32-33.

⁷³ See Letter from Jose P. Albuquerque, Chief, Satellite Division, FCC, to Jocelyn Read, Vice President, Regulatory Affairs, O3b Limited, *Re Earth Stations on Non-U.S. Registered Maritime Vessels Using the 28.6-29.1 GHz and the 18.8-19.3 GHz Frequency Bands*, 29 FCC Rcd 5057, 5066 (May 13, 2014).

⁷⁴ See *OneWeb Market Access Grant*.

substantial effort coordinating their respective operations and constellations in these spectrum bands. OneWeb will continue to engage in good faith coordination with other NGSO operators with respect to its expanded MEO operations in the Ku- and Ka-bands. Taking into account the potential to leverage satellite diversity techniques afforded by the additional MEO satellites, which will enhance the likelihood of successful, good-faith inter-operator coordination, OneWeb expects the operations proposed in the instant Amendment to help resolve, not create, potential frequency conflicts in the Ku- and Ka-bands.

The E-Band is a Greenfield Sharing Environment

In addition, OneWeb’s request for U.S. market access in the E-band spectrum for its MEO Constellation presents virtually no sharing concerns. The Commission has previously waived the processing round requirement for other NGSO constellations where the applicant’s use of the proposed spectrum would not create a risk of interference to other present or future users of the spectrum.⁷⁵ OneWeb respectfully submits that its use of the requested E-band spectrum—an operating environment that the Commission has acknowledged is “the functional equivalent of a green field” over most of the U.S.—will not preclude additional entrants in the band.⁷⁶

⁷⁵ See *In the Matter of Northrop Grumman Space & Mission Systems Corporation; Applications for Authority to Operate a Global Satellite System Employing Geostationary Satellite Orbit and Non-Geostationary Satellite Orbit Satellites in the Fixed-Satellite Service in the Ka-band and V-band*, Order and Authorization, 24 FCC Rcd 2330, 2343, ¶ 34 (Int’l Bur. 2009) (“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 6, Condition 90043 (granted Sept. 25, 2012).

⁷⁶ See *Spectrum Frontiers R&O* at ¶ 432.

As demonstrated in Section A.8 of the attached Technical Annex, OneWeb is confident that it can share this spectrum with existing and future users through the use of its innovative, sharing-enhancing technologies as well as traditional coordination methods. Thus, the addition of satellites and frequencies to the proposed MEO Constellation will not increase the potential for interference to other operators.

The Instant Amendment is Necessitated by the Commission's Recent Rule Changes

Furthermore, these proposed changes to OneWeb's MEO Constellation are necessitated by the Commission's decision to extend the NGSO FSS milestone, which permits OneWeb to propose a more expansive NGSO system that is better suited to provide high-speed, low-latency broadband with worldwide coverage. The *NGSO R&O* acknowledges that licensees may seek to modify their constellations in light of the rules adopted in that proceeding, including by requesting to add satellites.⁷⁷ This is precisely the catalyst behind the instant Amendment. OneWeb is amending its Petition in order to expand its MEO Constellation in light of the new, more relaxed milestone rule, which now permits operators to propose more expansive constellations that meet the longer milestone timeline.⁷⁸ Accordingly, the instant Amendment was necessitated by the Commission's unforeseen change to its milestone rules, and does not constitute a "major amendment" under the Commission's rules.

⁷⁷ *NGSO R&O* at ¶ 67, n.150.

⁷⁸ *Id.* at ¶¶ 66-67 (adopting a milestone regime requiring 50% of an authorized constellation to be launched within six years).

The Petition Should Remain in the V-Band Processing Round

In addition to the facts above, which demonstrate that the Amendment does not represent a “major” amendment to the Petition within the meaning of Sections 25.116(b) and 25.116(c) of the Commission’s rules, allowing the Petition to remain in the current V-band processing round is in the public interest because it will enable OneWeb to access spectrum for its user terminals and gateway earth stations without causing harmful interference to or precluding use by other potential users of these bands. To the extent the Commission finds that Sections 25.116(b) and 25.116(c) are applicable to the instant Amendment, a waiver of Section 25.116(c) is in the public interest. To remove the Petition from the ongoing processing round would significantly impair OneWeb’s ability to timely deploy innovative, satellite-based broadband services to otherwise unserved or underserved consumers.

Grant of a waiver of Section 25.116(c) of the Commission’s rules, to the extent necessary, is warranted by the Commission’s dramatic relaxation of its milestone rules,⁷⁹ is consistent with the recent *NGSO R&O*, and is in the public interest.⁸⁰

B. 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.⁸¹ The Public Notice will establish a cut-off date for competing NGSO applications and will initiate a new processing

⁷⁹ See *Northeast Cellular*, 897 F.2d at 1166.

⁸⁰ See *WAIT Radio*, 418 F.2d at 1157.

⁸¹ See 47 C.F.R. § 25.157(c).

round. The Commission traditionally waives the requirement for a processing round when an applicant demonstrates that its authorization would not “preclude additional entry.”⁸² Although OneWeb is requesting access to all of the frequency bands that are subject to the *V-Band Processing Round PN*, this Amendment also requests access to additional frequency bands not included in the current V-band processing round—including the E-band and further access to the Ka- and Ku-bands—for its MEO Constellation. Thus, OneWeb requests a waiver of the processing round requirement in Section 25.157(c) for the frequency bands requested in this Amendment not already contained in the *V-Band Processing Round PN*.⁸³

In addition to the pending V-band processing round of which the Petition is a part, there are other, ongoing processing rounds for several of the additional Ku- and Ka- frequency bands requested in the instant Amendment.⁸⁴ Good cause exists to consider OneWeb’s Ku- and Ka-band frequency requests in the instant Amendment as part of the pending processing rounds for those bands. As an initial matter, OneWeb’s

⁸² See Northrop Order at ¶¶ 29, 34.

⁸³ Similarly, and to the extent necessary, for the same reasons OneWeb requests a waiver of 25.155(b) of the Commission’s rules, 47 C.F.R. § 25.155(b), such that the instant Amendment can be considered in the ongoing NGSO processing rounds, even though it is being filed subsequent to applicable cut-off dates.

⁸⁴ See *Satellite Policy Branch Information; OneWeb Petition Accepted for Filing; Cut-Off Established for Additional NGSO-Like Satellite Applications or Petitions for Operations in the 10.7-12.7 GHz, 14.0-14.5 GHz, 17.8-18.6 GHz, 18.8-19.3 GHz, 27.5-28.35 GHz, 28.35-29.1 GHz, and 29.5-30.0 GHz Bands*, Public Notice, 31 FCC Rcd 7666 (IB 2016) (“Initial Ku/Ka-band Processing Round PN”); see also *Applications Accepted for Filing; Cut-off Established for Additional NGSO-like Satellite Applications or Petitions for Operations in the 12.75-13.25 GHz, 13.85-14.0 GHz, 18.6-18.8 GHz, 19.3-20.2 GHz, and 29.1-29.5 GHz Bands*, Public Notice, DA 17-524 (May 26, 2017) (“Additional Ku/Ka-band Processing Round PN”).

application for its LEO Constellation initiated the first Ku- and Ka-band processing round.⁸⁵ OneWeb’s grant of U.S. market access was conditioned on its ability to share spectrum with other NGSO FSS systems.⁸⁶ Therefore, other applicants in the initial Ku-/Ka-band processing round will not be prejudiced by OneWeb utilizing these frequencies to operate its MEO Constellation.

Further, as demonstrated in the attached Technical Annex, OneWeb will be capable of sharing the proposed Ku- and Ka-band spectrum with existing and future users through its innovative, sharing-enhancing technologies as well as traditional coordination methods. Therefore, the addition of these frequencies to OneWeb’s request for market access for its MEO Constellation will not increase the potential for interference to NGSO applicants in either ongoing processing round. As the Commission noted in connection with the recent NGSO processing rounds, the extent to which later applicants are permitted to share spectrum on an equal basis with earlier applicants “must necessarily be case-by-case based on the situation at the time, and considering both the need to protect existing expectations and investments and provide for additional entry.”⁸⁷ In this instance, no applicant would be prejudiced by consideration of the instant Amendment in the pending processing rounds for Ku- and Ka-band frequencies. OneWeb therefore respectfully requests the Commission to act on its request for U.S. market access for its MEO Constellation in the Ku- and Ka-band frequency bands within these two ongoing NGSO processing rounds.

⁸⁵ See Initial Ku/Ka-band Processing Round PN.

⁸⁶ See OneWeb Market Access Grant at ¶ 23(k).

⁸⁷ See *NGSO R&O* at ¶ 61.

OneWeb further submits the Commission should recognize the significant impact of its decision to revise the NGSO milestone rules to require the launch and operation of only 50 percent—instead of 100 percent—of an NGSO constellation within six years of authorization.⁸⁸ As noted above, OneWeb responsibly designed its MEO Constellation and proposed NGSO FSS system on the basis of a milestone regime that required launch and operation of the *entire* constellation within a six-year time frame. Neither OneWeb’s Petition nor its market access application for the LEO Constellation requested a waiver of the Commission’s milestone requirement, which clearly demonstrates that OneWeb designed its constellations to achieve milestone compliance.

If the current milestone regime had been in effect when OneWeb began planning its constellation and network architecture, it would have proposed a much more expansive NGSO FSS system to the Commission (including both LEO and MEO components). Multiple applicants planned and proposed large constellations which obviously could not be launched and operated within the required six-year time frame *while that rule was still in effect*.⁸⁹ OneWeb took a different approach and designed its NGSO system for full milestone compliance at the outset. Were the Commission not to grant OneWeb’s waiver request, it would result in a situation in which the Commission processes the applications of other NGSO proponents who plainly did

⁸⁸ *Id.* at ¶ 67.

⁸⁹ *See, e.g.,* The Boeing Company, *Application for Authority to Launch and Operate a Non-Geostationary Low Earth Orbit Satellite System in the Fixed Satellite Service*, IBFS File No. SAT-LOA-20160622-00058 (filed Jun. 22, 2016); Space Exploration Holdings, LLC, *Application For Approval for Orbital Deployment and Operating Authority for the SpaceX NGSO Satellite System*, IBFS File No. SAT-LOA-20161115-00118 (Call Sign S2983) (filed Nov. 15, 2016).

not intend to satisfy milestone requirements while declining to process OneWeb's Amendment concurrently. Such an outcome would be deeply inequitable, would reward regulatory non-compliance, and would penalize OneWeb for having designed its NGSO system, including the MEO Constellation proposed in the original Petition, in conformance with the rules then in effect. This approach would also be inconsistent with the Commission's own precedent.⁹⁰ Therefore, OneWeb respectfully requests a waiver of Section 25.157(c) of the Commission's rules, such that this Amendment does not initiate one or more new NGSO processing rounds, and requests the Commission to instead consider this Amendment within the context of the existing processing rounds discussed above.

C. Section 25.137(d)(5)⁹¹

Section 25.137(d)(5) of the Commission's rules provides that applicants for U.S. market access for NGSO-like satellite system operations who already have a

⁹⁰ When the Commission amends service rules that directly impact how licensees can use the subject spectrum, it generally affords applicants an opportunity to amend their applications "to bring them into conformity with the requirements and policies adopted." *In re Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band*, Report & Order, 15 FCC Rcd 16127, 16149 ¶ 45 (Int'l Bur. 2000); *see also* Northrop Order, 24 FCC Rcd at 2336-37 ¶ 14 (applicants permitted to amend pending applications in V-band and Ka-band processing rounds to comply with updated service rules involving orbital debris and casualty risk assessment showings); *In re Establishment of Policies and Service Rules for the Broadcasting-Satellite Service at the 17.3-17.7 GHz Frequency Band...*, Order on Reconsideration, 22 FCC Rcd 17951, 17962-63, ¶ 33 (Int'l Bur. 2007) (applicants were given two opportunities to amend, in response to each set of changes to the relevant service rules).

⁹¹ OneWeb requests a waiver of Section 25.137(d)(5) – the unbuilt systems rule for market access applicants – rather than a waiver of Section 25.159(b) – the unbuilt systems rule for applicants and licensees for U.S.-based NGSO systems. Nevertheless, to the extent the Commission determines that Section 25.159(b) is applicable to this Amendment, OneWeb respectfully requests a waiver of that rule.

market access request for an NGSO-like satellite system on file in a particular frequency band, or have a granted market access request for an unbuilt NGSO-like satellite system in a particular frequency band, “will not be permitted to request access to the U.S. market through another NGSO-like system in that frequency band.”⁹² OneWeb believes this rule is not implicated by this Amendment at all. However, out of an abundance of caution, OneWeb respectfully requests a waiver of this rule to the extent the Commission believes it necessary. This Amendment requests modifications to OneWeb’s Petition to add additional MEO components to the NGSO system already proposed. It does not request market access for an additional NGSO-like system.

The MEO Constellation is Not a Separate NGSO-Like System

The Commission has already granted OneWeb’s Petition for market access in the Ku- and Ka-bands for its first-generation LEO Constellation,⁹³ and OneWeb also seeks to use some of the same Ku- and Ka-band spectrum for its MEO Constellation, as described in the instant Amendment. This MEO Constellation is part of the same “NGSO-like system” as OneWeb’s LEO Constellation. It expands on the capabilities of the first-generation LEO Constellation to create a unified NGSO system that provides high-capacity, high-speed broadband access through the U.S. and the world.

These factors render Section 25.137(d)(5) inapplicable on its face. The Commission has previously emphasized that the limits on pending applications or unbuilt systems “apply only to applications . . . for new GSO-like and NGSO-like

⁹² 47 C.F.R. § 25.137(d)(5).

⁹³ See *OneWeb Market Access Grant*.

satellite systems” and not to applications related to an existing satellite system.⁹⁴ The instant Amendment is not an application for a “new . . . NGSO-like satellite system[.]”⁹⁵ and does not constitute a request for market access “through another NGSO-like system”⁹⁶ in the Ku- and Ka-bands. It therefore should not be treated as a separate request for a second, distinct system operating on the same frequencies where OneWeb has already been granted U.S. market access.

Nonetheless, if the Commission were to disagree with this straightforward understanding of the OneWeb NGSO system, OneWeb respectfully submits that a waiver of Section 25.137(d)(5) as to OneWeb’s use of certain Ku- and Ka-band frequencies throughout its planned NGSO system is in the public interest and should be granted.

Waiver of Section 25.137(d)(5) Clearly Serves the Public Interest

Allowing OneWeb to apply for use of Ku- and Ka-band spectrum in this Petition would not undermine the purpose of Section 25.137(d)(5) and would serve the public interest.⁹⁷ The policy underlying the rule—to deter applicants from speculative applications—is fully served in this case, and granting a waiver will allow OneWeb to offer a more robust broadband service to a greater number of consumers across the United States, helping to fulfill the Commission’s goal of closing the digital divide.⁹⁸

⁹⁴ *In re Amendment of the Commission’s Space Station Licensing Rules & Policies*, 18 FCC Rcd 10760, 10848-49 ¶ 233 (2003) (“*First Space Station Licensing Reform Order*”).

⁹⁵ *Id.*

⁹⁶ 47 C.F.R. § 25.137(d)(5).

⁹⁷ *See Northeast Cellular*, 897 F.2d at 1166; *WAIT Radio*, 418 F.2d at 1157.

⁹⁸ *See Statement of Chairman Pai.*

The purpose behind rules limiting an NGSO applicant’s outstanding applications or market access petitions, or its unbuilt systems in a given frequency range, is to “provide[] additional protection against speculation, without substantially restricting licensees’ flexibility”⁹⁹ and to “discourage non-U.S. satellite operators from speculating in the U.S. market.”¹⁰⁰

OneWeb has already demonstrated its commitment to deploying both components of its NGSO system—its LEO and MEO Constellations—in a timely manner. As noted above, OneWeb is already constructing its satellite manufacturing facility in Exploration Park, Florida and operating its assembly line in Toulouse, France for production of its first ten satellites. It remains on track to launch these first satellites in May 2018. It has already filed its surety bond for the LEO Constellation and has similarly committed to meeting the Commission’s milestone and surety bond requirements for the operations proposed in the Petition.¹⁰¹

As the Commission determined when it deleted the comparable rule for GSO applicants, a “general limit on pending license applications . . . is unnecessary to deter warehousing of spectrum and orbital resources, in light of the bond and milestone requirements and other safeguards.”¹⁰² OneWeb submits that the limit on unbuilt systems is unnecessary in this case as well, since OneWeb is already building the LEO

⁹⁹ *First Space Station Licensing Reform Order* at ¶ 231.

¹⁰⁰ *Id.* at ¶ 313.

¹⁰¹ See IBFS File No. SAT-LOI-20160428-00041 (surety bond submitted July 18, 2017); see also Petition at 23-24.

¹⁰² *In re Comprehensive Review of Licensing & Operating Rules for Satellite Servs.*, 30 FCC Rcd 14713, 14818 ¶ 337 (2015).

Constellation and has committed to meeting all other safeguards against speculative applications set forth in the Commission's rules.

Furthermore, deeming Section 25.137(d)(5) applicable in this instance would restrict OneWeb's flexibility to plan the most efficient and effective system possible and would therefore harm the public interest. When deleting the comparable rule for GSO applicants, the Commission concluded that "the restriction on additional license applications could inhibit opportunities for expansion of large satellite fleets."¹⁰³ Indeed, the restriction on further Ku- and Ka-band applications before OneWeb's LEO Constellation is fully built restricts OneWeb's ability to expand its network to increase overall broadband coverage. Through this Amendment, OneWeb seeks to expand its MEO Constellation and the spectrum used by that constellation, creating a system composed of the MEO Constellation and the already-licensed LEO Constellation to effectively provide high-capacity, low-latency broadband coverage across the globe. While the LEO Constellation will provide low-latency coverage worldwide, the MEO Constellation will help efficiently and precisely allocate capacity to areas generating the most traffic in OneWeb's network. Creation of such a high-capacity system offering high-speed broadband to previously unserved and underserved areas is in the public interest and will materially contribute to closing the digital divide in the United States and abroad.

Finally, as described above, this Amendment is being filed as a direct result of the Commission's significant relaxation of the NGSO milestone rule in the midst of

¹⁰³ *Id.*

three pending NGSO processing rounds.¹⁰⁴ OneWeb was compelled by the Commission's action in the *NGSO R&O* to initiate a top-to-bottom re-evaluation of its proposed NGSO system, as well as future architectures which were outside of the milestone timeline, including both LEO and MEO components. OneWeb is now proposing this more expansive MEO Constellation, including the addition of Ku- and Ka-band frequencies on these satellites. As OneWeb's proposal to add Ku- and Ka-band frequencies to its MEO Constellation is simply a direct result of the Commission's dramatic changes to the NGSO milestone regime, it would be fundamentally unjust to penalize OneWeb for adjusting the parameters of its MEO Constellation, and of its overarching NGSO system, in response to the new regulatory timeline. Therefore, to the extent the Commission believes the rule is applicable at all, OneWeb respectfully requests a waiver of Section 25.137(d)(5) of the Commission's rules, 47 C.F.R. § 25.137(d)(5), to permit this Amendment to include market access requests for Ku- and Ka-band spectrum.

III. CONCLUSION

As demonstrated in this Amendment and in the accompanying materials referenced herein, OneWeb fully satisfies the Commission's requirements under the *DISCO II Order* for U.S. market access for the amended Petition. Moreover, subject to a limited number of waiver requests, OneWeb fully complies with the Commission's Part 25 rules. Thus, grant of the amended Petition will serve the public interest, convenience, and necessity. OneWeb respectfully requests the Commission to expeditiously grant the amended Petition in its entirety to facilitate OneWeb's

¹⁰⁴ *NGSO R&O* at ¶¶ 66-67.

deployment of the next generation of broadband connectivity and thereby close the “digital divide” in the U.S. in a timely manner.

Respectfully submitted,

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