Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	
Kuiper Systems LLC	Call Sign S3051
Application for Modification of Authorization for the Kuiper System	File No. SAT-MOD-_____

APPLICATION FOR MODIFICATION

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APPLICATION FOR MODIFICATION

Kuiper Systems LLC, a wholly owned subsidiary of Amazon.com Services LLC (collectively "Amazon"), pursuant to section 25.117 of the rules of the Federal Communications Commission ("FCC" or "Commission")[1] hereby requests modification of Condition 60 of its license to conform with the FCC's implementing rule and license conditions applied to similarly situated operators, such as the condition applied in the FCC's decision granting the third modification of Space Exploration Holdings, LLC's ("SpaceX") non-geostationary satellite orbit ("NGSO") system license.[2]

I. INTRODUCTION AND SUMMARY

The FCC has authorized Amazon to launch and operate the Kuiper System—an NGSO Fixed-Satellite Service ("FSS") constellation that will provide high-speed broadband services to

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[1] 47 C.F.R. § 25.117.

[2] *See Kuiper Systems LLC, Application for Authority to Deploy and Operate a Ka-band Non-Geostationary Satellite Orbit System*, Order and Authorization, 35 FCC Rcd 8324, ¶ 60 (2020) ("*Kuiper System Authorization*"); *Space Exploration Holdings, LLC, Request for Modification of the Authorization for the SpaceX NGSO Satellite System*, Order and Authorization and Order on Reconsideration, Call Signs S2983 and S3018, IBFS File No. SAT-MOD-20200417-00037 (rel. Apr. 27, 2021) ("*SpaceX MOD 3 Authorization*"). Amazon has filed this request for modification electronically as an attachment to FCC Form 312. *See* 47 C.F.R. § 25.117(c). All other information previously provided to the Commission, including technical information on Schedule S, is unchanged and incorporated by reference. *See Kuiper System Authorization*.

customers globally.[3] Fast and reliable broadband connectivity is increasingly essential for learning, employment, entrepreneurship, communication, and economic growth, and Amazon is dedicated to ensuring that businesses and consumers both in the U.S. and worldwide have access.[4] Amazon has committed to invest at least $10 billion to support the Kuiper System, and continues to progress toward its goal of providing affordable, reliable broadband to customers and communities around the world. Last December, Amazon revealed designs for a small, affordable, customer terminal antenna. In April, Amazon announced an agreement with United Launch Alliance to secure nine Atlas V launch vehicles to support its deployment schedule. Amazon is designing and testing the Kuiper System in an all-new, 219,000-square-foot facility in Redmond, Washington, and is adding another 20,000-square-foot lab to provide additional research and development space. There are now more than 500 employees working on the Kuiper System at Amazon, and the team is continuing to grow quickly.

Like other NGSO FSS operators, the FCC conditioned the grant of Amazon's license on compliance with the equivalent power-flux density ("EPFD") limits established by the International Telecommunication Union ("ITU") and codified in Article 22 of the ITU Radio Regulations.[5] Unlike other NGSO FSS operators, however, the FCC imposed on Amazon the additional requirement that it obtain an ITU finding that explicitly indicates that the joint effect of Amazon's ITU filings was considered.[6] Months later, the Commission reconsidered the

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[3] *See Kuiper System Authorization*, ¶ 1.

[4] In addition to offering various services to business and consumer end users, Amazon will provide services enabling mobile network operators to expand service to unserved and underserved mobile customers, as well as high-throughput broadband connectivity services for aircraft, maritime vessels, and land vehicles.

[5] International Telecommunication Union ("ITU") Radio Regulations ("RR"), Article 22; 47 C.F.R. § 25.146(c) (incorporating by reference EPFD power limits for NGSO FSS systems operating in the 10.7-30 GHz band).

[6] *Kuiper System Authorization*, ¶¶ 26, 60.

appropriateness of this "joint effect" requirement.[7] In granting SpaceX's third modification, the Commission stated that it did "not see the need" for such a requirement in light of the incentives in place already to ensure compliance with Article 22 and the fact that "the ITU is in the best position to determine whether SpaceX appropriately relied on multiple ITU filings in its analysis."[8]

The Commission should modify Condition 60 of the Kuiper System license to conform to this more recent analysis, which accurately reflects an NGSO operator's obligations under FCC and ITU rules. Specifically, Amazon respectfully requests that the Commission remove the requirement that Amazon's "favorable" or "qualified favorable" finding from the ITU explicitly indicate that the ITU considered the joint effect of Kuiper's ITU filings.[9] This modification would be consistent with both the ITU's rules and process governing EPFD limits, as well as the FCC's rules and practice implementing those requirements—neither of which call for this explicit finding. By contrast, for the reasons explained below, maintaining Condition 60 "as is" would violate principles of reasoned decision-making under the Administrative Procedure Act ("APA") and disserve the public interest.

II. BACKGROUND

The ITU's EPFD limits facilitate the sharing of spectrum between geostationary satellite orbit ("GSO") and NGSO systems operating in the 10.7-30 GHz band. ITU Resolution 85 (WRC-03) requires the Director of the ITU's Radiocommunication Bureau to verify NGSO FSS system compliance with EPFD limits specified in Article 22 of the ITU Radio Regulations to

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7 *See SpaceX MOD 3 Authorization*, ¶¶ 33-34.

8 *Id.*, ¶ 34.

9 Likewise, no new requirement should be imposed that would go beyond what the ITU would issue in the normal course following review and validation of Article 22 compliance and in accordance with ITU Resolution 85 (WRC-03).

facilitate shared use of spectrum between NGSO and GSO systems.[10] It "instructs" the Director "to review, once the [EPFD] validation software is available, its findings made in accordance with Nos. 9.35 and 11.31" for compliance with EPFD limits in Tables 22-1A, 22-1B, 22-1C, 22-1D, 22-1E, 22-2 and 22-3 in Article 22 of the Radio Regulations.[11] By operating its system in compliance with these limits, an NGSO system operator is deemed to have fulfilled its obligation under Article 22 to not cause unacceptable interference to GSO systems.[12]

Section 25.146(c) of the Commission's rules incorporates by reference Resolution 85 and the EPFD power limits identified in Article 22 for NGSO FSS systems operating in the 10.7-30 GHz band. To demonstrate compliance with Article 22, section 25.146(c) of the FCC's rules requires NGSO operators to receive a "favorable" or "qualified favorable" finding from the ITU's Radiocommunication Bureau:

> *(c) Prior to the initiation of service, an NGSO FSS operator licensed or holding a market access authorization to operate in the 10.7-30 GHz frequency range must receive a "favorable" or "qualified favorable" finding by the ITU Radiocommunication Bureau, in accordance with Resolution 85 of the ITU Radio Regulations (incorporated by reference, § 25.108), regarding its compliance with applicable ITU EPFD limits.*[13]

The Commission adopted section 25.146(c) not only to facilitate NGSO and GSO system

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[10] ITU Resolution 85 (WRC-03), Application of Article 22 of the Radio Regulations to the Protection of Geostationary Fixed-Satellite Service and Broadcasting-Satellite Service Networks from Non-Geostationary Fixed-Satellite Service Systems. *See also* ITU RR, Article 22 Tables 22-1A, 22-1B, 22-1C, 22-1D, 22-1E, 22-2 and 22-3.

[11] *Id. See generally* ITU RR 9.35 ("On receipt of the complete information sent under No. 9.30 or No. 9.32 the Bureau shall promptly examine that information with respect to its conformity with No. 11.31"), 11.31 ("Each notice shall be examined with respect to its conformity with the Table of Frequency Allocations and the other provisions of these Regulations, except those relating to conformity with the procedures for obtaining coordination or the probability of harmful interference, or those relating to conformity with a plan, as appropriate, which are the subject of the following sub-paragraphs") (internal references omitted). The final version of the EPFD validation software became available on December 6, 2016. *See* Radiocommunication Bureau Circular Letter CR/414 to the Administrations of ITU Member States, Examination under Resolution 85 (WRC-03) (Dec. 6, 2016) ("Circular Letter CR/414").

[12] *See Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters*, Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd 7809, ¶ 32 (2017) ("*2017 NGSO FSS Order*").

[13] 47 C.F.R. § 25.146(c). *See generally id.* § 25.108(c)(8).

spectrum sharing, but also to "harmonize [its] rules with international regulations and provide greater certainty for NGSO FSS operators."[14]

The FCC's grant of Amazon's license included a condition—Condition 60—which largely reflects the requirements of section 25.146 of the Commission's rules.[15] Condition 60 departed from these rules, however, by including an additional requirement:

> *[P]rior to initiation of service, Kuiper must receive a favorable or 'qualified favorable' finding in accordance with Resolution 85 with respect to its compliance with applicable EPFD limits in Article 22 of the ITU Radio Regulations* as per paragraph 26 above. *Kuiper must communicate the ITU finding to the Commission and, in case of an unfavorable finding, adjust its operation to satisfy the ITU requirements.*[16]

Paragraph 26, referenced in this condition, provides that "the ITU finding to be submitted to the Commission [must] explicitly indicate that the joint effect of Kuiper's ITU filings associated with its constellation was taken into account when verifying compliance with the applicable EPFD limits."[17] This "joint effect" requirement departed from conditions applied to similarly situated NGSO system operators.[18]

Months later, in granting SpaceX's third modification of its own license, the Commission considered and rejected the recommendation of Hughes Network Systems, LLC ("Hughes") that the Commission impose the same condition on SpaceX.[19] Like Amazon, SpaceX has multiple

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14 *2017 NGSO FSS Order*, ¶ 35.

15 *Compare Kuiper System Authorization*, ¶ 60 *with* 47 CFR 25.146(c).

16 *Kuiper System Authorization*, ¶ 60 (emphasis added). *See also* 47 CFR 25.146(c).

17 *Id.*, ¶ 26.

18 *See WorldVu Satellites Limited, Petition for Declaratory Ruing Granting Access to the U.S. Market for the OneWeb NGSO FSS System*, Order and Declaratory Ruling, 32 FCC Rcd 5366, ¶ 24(d) (2017) ("*OneWeb Authorization*"); *O3b Limited, Request for Modification of U.S. Market Access for O3b Limited's Non-Geostationary Satellite Orbit System in the Fixed-Satellite Service and in the Mobile-Satellite Service*, Order and Declaratory Ruling, 33 FCC Rcd 5508, ¶ 48 (2018) ("*O3b Authorization*").

19 *SpaceX MOD 3 Authorization*, ¶ 33. *See generally* Letter from Jennifer A. Manner, Senior Vice President, Regulatory Affairs, Hughes Network Systems, LLC, to Marlene H. Dortch, Secretary, Federal Communications Commission, IBFS File No. SAT-MOD-20200417-00037, at 2 (Apr. 12, 2021) (recommending the FCC adopt a

ITU filings supporting its NGSO constellation. The Commission nevertheless reasoned that SpaceX is incentivized to perform its EPFD analysis properly because, "in the case of an unfavorable finding," SpaceX must "adjust its operations to satisfy the ITU requirements."[20] The Commission also concluded "that the ITU is in the best position to determine whether SpaceX appropriately relied on multiple ITU filings in its analysis."[21] It therefore did "not see the need" to require that SpaceX's ITU confirmation of EPFD limit compliance state that such finding considered the joint effect of every ITU filing related to SpaceX's constellation.[22] Based on this reasoning, the Commission imposed a condition on SpaceX that did not require an explicit indication that the ITU considered the joint effect of multiple ITU filings:

> *Under 47 CFR § 25.146(a) [sic], SpaceX must receive a favorable or "qualified favorable" finding in accordance with Resolution 85 (WRC-03) with respect to its compliance with applicable equivalent power flux-density limits in Article 22 of the ITU Radio Regulations. In case of an unfavorable finding, SpaceX must adjust its operation to satisfy the ITU requirements.*[23]

The Commission did not identify any differences between SpaceX and Amazon that would justify the difference in treatment, nor did any commenter argue that such differences existed.[24]

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condition specifying that "the ITU finding must explicitly indicate that the joint effect of multiple ITU filings associated with its constellation was taken into account when verifying compliance with applicable EPFD limits").

20 *SpaceX MOD 3 Authorization*, ¶ 34.

21 *Id.*

22 *Id.*

23 *SpaceX MOD 3 Authorization*, ¶ 97(p).

24 To the contrary, Hughes emphasized that the concerns raised by GSO operators are identical to those raised regarding the Kuiper System. *See* Petition for Reconsideration of Hughes Network Systems, LLC, IBFS File No. SAT-MOD-20200417-00037, at 4 (filed May 27, 2021) ("Notably, the concerns on the record regarding the potential misuse of multiple ITU filings are the same concerns that the Commission addressed just last year when it imposed specific license conditions on Kuiper Systems LLC's ("Kuiper") NGSO satellite system.").

III. THE COMMISSION SHOULD MODIFY CONDITION 60 IN LIGHT OF ITS CONCLUSIONS IN OTHER NGSO SYSTEM LICENSE ORDERS.

The FCC should modify Condition 60 of the *Kuiper System Authorization* to remove the reference to paragraph 26, and therefore the requirement that the "joint effect" of multiple ITU filings be "taken into account." Specifically, Amazon recommends revising Condition 60 as follows:

> *Under 47 C.F.R. § 25.146(c), Kuiper must receive a favorable or "qualified favorable" finding in accordance with Resolution 85 (WRC-03) with respect to its compliance with applicable equivalent power flux-density limits in Article 22 of the ITU Radio Regulations. In case of an unfavorable finding, Kuiper must adjust its operation to satisfy the ITU requirements.*

This revised condition would mirror the condition applied in the FCC's recent decision granting the third modification of SpaceX's NGSO system license.[25] It would also align Kuiper's condition with those of other similarly situated grantees—WorldVu Satellites Limited ("OneWeb") and O3b Limited ("O3b")—on whom the Commission has not imposed this requirement.[26]

Maintaining Condition 60 in its current form, by contrast, would be contrary to both APA principles of reasoned decision-making and the public interest.[27] *First*, continued application of a license condition that is not consistent with, and more burdensome than, the condition applied to SpaceX and other similarly situated NGSO system grantees would be arbitrary and

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[25] *See SpaceX MOD 3 Authorization*, ¶ 97(p).

[26] *See OneWeb Authorization*, ¶ 24(d) ("Prior to initiation of service, OneWeb must receive a favorable or 'qualified favorable' finding in accordance with Recommendation 85 (WRC-03) with respect to its compliance with applicable EPFD limits in Article 22 of the ITU Radio Regulations."); *O3b Authorization*, ¶ 48 ("IT IS FURTHER ORDERED that prior to initiation of service, O3b must receive a favorable or 'qualified favorable' finding in accordance with Resolution 85 with respect to its compliance with applicable EPFD limits in Article 22 of the ITU Radio Regulations. O3b must communicate the ITU finding to the Commission and submit the files containing the data used as input to the ITU validation software. See also 47 CFR 25.146(c) upon its effective date.").

[27] 5 U.S.C. § 706(2)(A).

capricious.[28] The APA requires that an agency decision be both reasonable and reasonably explained.[29] An agency's "reasoned analysis" must "justify the disparate treatment of regulated parties that seem similarly situated, and its reasoning cannot be internally inconsistent."[30] Like SpaceX, OneWeb, and O3b, Amazon has been authorized by the Commission to provide service to customers in the United States with an NGSO FSS system that will rely on more than one ITU filing. Unlike SpaceX, OneWeb, and O3b, the Commission has placed a more burdensome condition on Amazon without justification.[31] Granting the requested modification would therefore be consistent with the fundamental principle of administrative law that the Commission treat these similarly situated parties in the same manner.[32]

Second, it is well-settled that federal agencies are "require[d] . . . to follow their own

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[28] *See, e.g.*, *ANR Storage Co. v. Fed. Energy Regul. Comm'n*, 904 F.3d 1020, 1024 (D.C. Cir. 2018) (requiring the FEC to "provide some reasonable justification for any adverse treatment relative to similarly situated competitors"). *See also Motor Vehicle Mfrs. Ass'n of United States, Inc. v. State Farm Mut. Automobile Ins. Co.*, 463 U.S. 29, 43 (1983); *Shaw's Supermarkets, Inc. v. NLRB*, 884 F.2d 34 (1st Cir. 1989).

[29] *See* 5 U.S.C. 706(2)(A) (providing that a reviewing court shall "hold unlawful and set aside agency action, findings, and conclusions found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law").

[30] *ANR Storage Co. v. Fed. Energy Regul. Comm'n*, 904 F.3d 1020, 1024 (D.C. Cir. 2018) (internal citations and quotations omitted).

[31] The disparate treatment between Amazon and SpaceX has not gone unnoticed by other operators. *See* Petition for Reconsideration of Hughes Network Systems, LLC, IBFS File No. SAT-MOD-20200417-00037, at 5 (filed May 27, 2021) ("Although the Commission may change course and modify its policies, such changes must fall 'within the limits of reasoned interpretation' and must be 'adequately justif[ied].' This did not happen here as the departure from Commission precedent was not explained despite filings on the record noting the applicability of the *Kuiper* decision. Thus, the Commission's failure to explain its departure from precedent is contrary to its APA obligations to provide reasoned decision making." (quoting *Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 1001 (2005))).

[32] *See, e.g., W. Deptford Energy, LLC v. FERC*, 766 F.3d 10, 20 (D.C. Cir. 2014) ("It is textbook administrative law that an agency must provide[ ] a reasoned explanation for departing from precedent or treating similar situations differently, and Commission cases are no exception.") (citations and quotation marks omitted); *LeMoyne-Owen College v. NLRB*, 357 F.3d 55, 60–61 (D.C. Cir. 2004) (Roberts, J.) ("An agency is by no means required to distinguish every precedent cited to it by an aggrieved party. But where, as here, a party makes a significant showing that analogous cases have been decided differently, the agency must do more than simply ignore that argument.") (citations omitted).

rules, even gratuitous procedural rules that limit otherwise discretionary actions."[33] While "the decision whether to proceed by adjudication or rule-making 'lies in the first instance within the [FCC's] discretion,'"[34] the FCC chose to adopt section 25.146(c) to establish a generally applicable requirement for NGSO FSS operators to obtain a "favorable" or "qualified favorable" finding by the ITU prior to initiating service.[35] "Having chosen to promulgate" the ITU policy, the FCC "must follow that policy."[36]

Here, the Commission departed from the policy established in section 25.146(c) in imposing Condition 60. Section 25.146(c) does not adopt additional requirements regarding the nature of the required ITU finding beyond that it be made "in accordance with Resolution 85." Indeed, Resolution 85 does not specify how the ITU must convey its "favorable," "qualified favorable," or "unfavorable" determination. The Commission's imposition of the joint effects condition in the *Kuiper System Authorization* thus cannot stand under the APA because "the standards applied in the adjudication vary from the plain language of the rule."[37]

Nor can the Commission argue that it is merely interpreting section 25.146(c) in imposing the condition, and thus should receive deference for that interpretation. The rule unambiguously requires only a "favorable" or "qualified favorable" finding. There is no colorable argument that the regulation is "genuinely ambiguous" and thus subject to interpretation[38]; even if it were, an interpretation of the rule that requires a new ITU finding with

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33 *Steenholdt v. FAA*, 314 F.3d 633, 639 (D.C. Cir. 2003) (citing *United States ex rel. Accardi v. Shaughnessy*, 347 U.S. 260 (1954)).

34 *Montgomery Ward & Co. v. FTC*, 691 F.2d 1322, 1328 (9th Cir. 1982) (quoting *NLRB v. Bell Aerospace Co.*, 416 U.S. 267, 294 (1974).

35 47 C.F.R. § 25.146(c).

36 *Nat'l Ass'n of Home Builders v. Norton*, 340 F.3d 835, 852 (9th Cir. 2003)

37 *Montgomery Ward & Co. v. FTC*, 691 F.2d 1322, 1329 (9th Cir. 1982).

38 *Kisor v. Wilkie*, 139 S. Ct. 2400, 2414 (2019).

no basis in ITU regulations is not "reasonable," and the imposition of that interpretation in a one-off license proceeding cannot "reflect 'fair and considered judgment'" of the agency.[39] Underscoring this point is that the Commission seems to have consistently interpreted the rule *not* to require this condition—with the exception of Amazon.[40]

Third and finally, modifying the proposed condition as requested by Amazon would be consistent with the Commission's sound reasoning for not imposing a similar condition in the *SpaceX MOD 3 Authorization*.[41] It is incongruent with international regulations to require Amazon to obtain a finding from the ITU above and beyond what the ITU is required to issue pursuant to Resolution 85 and in accordance with Article 22 of the Radio Regulations. This incongruency is at odds with the Commission's goal of harmonizing its rules with international regulations and providing certainty for NGSO FSS operators[42]: the one-off condition places Amazon out of step with NGSO FSS operators both domestically and abroad, and the Commission's inconsistent application of the rule undermines the certainty it was intended to provide.

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39 *Id*. at 2415, 2417 (quoting *Christopher v. SmithKline Beecham Corp*., 567 U.S. 142, 155 (2012)).

40 *Id.* at 2418 (noting that courts will not defer to an interpretation that creates "unfair surprise," and that such surprise may occur where "an agency substitutes one view of a rule for another").

41 *SpaceX MOD 3 Authorization*, ¶ 34.

42 *2017 NGSO FSS Order*, ¶ 35.

V. CONCLUSION

For the foregoing reasons, Amazon respectfully requests modification of Condition 60 of the *Kuiper System Authorization* to conform with the FCC's implementing rule and license conditions applied to similarly situated operators.

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