I. INTRODUCTION

1. In this Second Report and Order, we eliminate the domestic coverage requirement for non-geostationary-satellite orbit, fixed-satellite service (NGSO FSS) systems. This requirement is no longer needed to ensure all Americans have access to the benefits of NGSO FSS systems. With advances in NGSO technology and spectrum sharing, the domestic coverage requirement can actually discourage or hinder the development of new innovative NGSO FSS systems like the Arctic Broadband Satellite Mission and Kepler, that propose to provide valuable connectivity to Alaska and the arctic areas, as well as the Audacy Network’s space-based relay platforms, or Kuiper’s and ViaSat’s proposed broadband systems.\(^1\) These systems would not meet the Commission’s current coverage requirement, yet propose to provide valuable satellite-based services in the United States and around the world. This action will provide greater regulatory certainty, and design and operational flexibility to innovative NGSO FSS systems while still meeting the Commission’s goal of promoting widespread NGSO service offerings.

II. BACKGROUND

2. The Commission’s goal is to license satellites in a manner that promotes open entry, competition, maximum flexibility, technical innovation, and seamless networks. To this end, when possible, we seek to afford all applicants an opportunity to compete in the marketplace.\(^2\) The Commission’s rules currently require NGSO FSS systems to be capable of providing continuous service.

---


\(^2\) 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 Serv. & for Fixed Satellite Servs., Third Report and Order, 12 FCC Rcd. 22310, 22316, para. 14 (1997) (Ka-Band Third Report and Order).
within the fifty states, Puerto Rico, and the U.S. Virgin Islands. This domestic coverage requirement was originally adopted for mobile-satellite service (MSS) systems to promote efficient and ubiquitous service by satellite systems that are, as a general matter, unable to share spectrum. It was subsequently expanded to NGSO FSS systems to “maximize use of a global spectrum resource allocated to this service,” based on the assumption that NGSO FSS systems were “inherently global in nature.”

3. In 2017, as part of a Report and Order that updated rules to facilitate deployment of NGSO FSS systems, the Commission adopted a Further Notice of Proposed Rulemaking that focused solely on this coverage requirement. In the Further Notice, the Commission expressed its expectation that the most efficient way to encourage widespread service offerings by NGSO FSS systems, including in remote and underserved areas of the United States, would be to allow both general and specialized coverage systems. The Commission therefore proposed to remove the domestic coverage requirement for NGSO FSS systems.

III. DISCUSSION

4. After review of the record in this proceeding, we conclude that it will serve the public interest to adopt the proposal of the Further Notice and remove the domestic coverage requirement for NGSO FSS systems.

5. Since the Commission adopted its NGSO FSS domestic coverage requirements in 1997 and 2002, a number of NGSO FSS systems have been proposed that were not “inherently global in nature.” These systems have been designed to meet the requirements of certain underserved areas, where satellite services in general are especially valuable, such as in Alaska or on islands and ships in the Pacific Ocean. In addition, not all NGSO FSS systems may provide general consumer or enterprise broadband services. Instead, they may focus on a narrower set of services for which there is no significant nationwide demand or rationale for imposing nationwide coverage for these services. Furthermore, the Commission has developed new, more efficient sharing criteria among NGSO FSS systems to encourage multiple systems to operate in different areas of the United States simultaneously. These spectrum sharing possibilities among NGSO FSS systems also allow both broad coverage and specialized coverage systems to coexist. Accordingly, one NGSO FSS system with only partial coverage of the United States does not preclude another NGSO FSS system from covering the remainder of the United States or from providing full U.S. coverage. Indeed, allowing targeted or regional coverage may promote more intense and efficient use of this spectrum by enabling geographic sharing in addition to other forms of sharing already in use.

---

3 47 CFR §§ 25.146(b), 25.217(b)(1).
7 Id. at 7833-34, paras. 75-76.
9 See id.
10 See Report and Order, 32 FCC Rcd at 7825-26, paras. 48-50; 47 CFR § 25.261.
11 See SpaceX Comments at 2-3; Boeing Comments at n.2 (“The ability to share spectrum among FSS systems is a significant difference that supports a different regulatory regime [than MSS systems].”)
6. Retaining the domestic coverage rule requires design tradeoffs that may hamper or preclude innovative satellite system designs, which could otherwise better address market needs. Eliminating this rule serves the public interest by removing this unnecessary limit on design and operational flexibility, which “imposes an artificial constraint on such technological evolution and innovation.”

7. Cumulatively, NGSO FSS systems that have already been approved by the Commission will provide complete coverage of the United States, and the long reach of satellite technology, with the particular advantages of lower-latency associated with NGSO FSS systems, provide inherent incentives for future NGSO FSS systems to likewise provide coverage across the United States, especially the underserved areas. For example, the domestic coverage requirements were waived for the first, currently operating NGSO FSS system, but this system was later expanded to provide full coverage of the United States not because of a regulatory imposition but growing business rationales. We are therefore not persuaded by parties claiming that elimination of the domestic coverage requirement would weaken incentives for NGSO FSS operators to provide service in rural and remote areas, notably in Alaska.

8. For similar reasons, we disagree with commenters who argue that, absent the domestic coverage requirement, NGSO FSS operators will concentrate on high-population areas to the exclusion of rural and remote areas. NGSO FSS satellite technology is relatively efficient at serving rural and remote areas when compared with alternative, terrestrial services. NGSO FSS operators have more of an incentive to serve areas which terrestrial providers find it more costly to serve, and less of an incentive to serve high-population areas which already have multiple terrestrial suppliers that would be more challenging to compete against. So while some NGSO FSS operators might not provide coverage throughout the United States, they have the incentive to concentrate their efforts in those areas where they have a cost advantage, typically in areas where there might be fewer terrestrial providers, and where those terrestrial providers might have higher costs per subscriber than in more highly populated areas.

9. Given these incentives and the coverage provided by already-approved NGSO FSS systems, we also do not agree that, in eliminating this requirement, we should require NGSO FSS system

---

12 See Comments of the Boeing Company at 2; SpaceX Comments at 2; Space Norway Comments at 3; SES/O36b Comments at 2.
13 SpaceX Comments at 4. See also Boeing Comments at 3; SES/O36b Comments at 2-3; Space Norway at 3.
14 See, e.g., SpaceX Comments at 4 (“Such a constraint is unnecessary given the number of existing and proposed satellite systems available to serve customers throughout the United States and their ability to do so using shared spectrum. These diverse platforms will provide connectivity to consumers and businesses throughout the country, rendering a coverage requirement imposed on all systems no longer appropriate.”); Boeing Comments at 3 (“significant technical justifications and business reasons” will result in systems providing coverage in all regions); SES/O36b Reply Comments at 3-4 (“deployment of multiple ‘regional’ NGSO systems will result in total or near-total coverage of the U.S”); Boeing Reply at 3-4 (“OneWeb (polar orbit), Telesat Canada (polar orbit), Leosat (polar orbit), Kepler Communications (polar orbit), Theia Satellite Network (near polar orbit) and Space Norway (highly elliptical orbit) would each provide tremendous coverage of Alaska and the rest of the Artic regardless of whether the domestic geographic coverage requirements are retained.”). Commenters are defined in Appendix A.
16 OneWeb, Hughes, and Intelsat Comments at 2-5; Letter from Bill Walker, Governor of Alaska, to Marlene H. Dortch, Secretary, FCC (Dec. 20, 2017) (Letter from Governor Walker).
17 OneWeb/Intelsat/Hughes Comments at 2-3.
18 See, e.g., Boeing Reply at 2 (“One of the primary business cases for NGSO satellite systems is the provision of broadband services to very rural and remote locations where terrestrial services are unavailable.”)
applicants that will not serve the entire United States to demonstrate in their application that they will provide substantial service to the rural areas within their coverage area.\textsuperscript{19} Like with the domestic coverage requirement itself, without this requirement, we believe that systems already in operation or proposed will continue to provide coverage of all of the United States because of the technical and financial advantages that NGSO FSS satellite systems have in providing services to sparsely populated areas when compared with terrestrial alternatives that are relatively more costly to deploy in these areas, as discussed above. And providing greater flexibility to NGSO FSS system designers will allow greater deployment and more cost-effective solutions for consumers, including in rural areas.\textsuperscript{20}

10. We also disagree with one comment that the domestic coverage requirement is mandated by section 1 of the Communications Act of 1934, as amended (the “Act”).\textsuperscript{21} The Commission has authorized a large variety of GSO satellite networks and terrestrial wireless systems without ever interpreting the Act to require that a single wireless applicant cover the entire United States. Nor did the Commission so interpret the Act when adopting the particular NGSO FSS coverage requirements at issue here.\textsuperscript{22} Indeed, the deregulatory and procompetitive purposes of the Telecommunications Act of 1996 suggest we should welcome competition in all its forms.\textsuperscript{23} The Commission fulfills its mission to “to make available, so far as possible, to all the people of the United States . . . a rapid, efficient, Nation-wide, and world-wide wire and radio communication service” by adopting rules and licensing policies that facilitate the authorization of multiple, innovative NGSO FSS systems capable of serving a variety of needs throughout the nation.

11. We also reject the approach of considering waivers on a case-by-case basis, as suggested by some commenters,\textsuperscript{24} as this would create regulatory uncertainty for NGSO FSS system proponents while they design systems that will ultimately seek a waiver.\textsuperscript{25} Even greater regulatory uncertainty, and higher costs of deployment, would result from Commission efforts to force the re-engineering of a satellite constellation until it complied with the domestic coverage requirement.

12. Instead, in light of NGSO FSS systems which have been licensed or granted U.S. market access to address underserved communities, including in Alaska, we conclude that affording satellite operators regulatory certainty and design flexibility will best serve the interests of connectivity across American communities. We therefore eliminate the domestic coverage requirement for NGSO FSS systems.

\textsuperscript{19} Letter from Jennifer A. Manner, Senior Vice President, Regulatory Affairs, Hughes Network Systems, to Marlene H. Dortch, Secretary, FCC, at 2 (Apr. 4, 2018)

\textsuperscript{20} See, e.g., Space Norway Comments at 2 (stating their proposed NGSO FSS system “will provide innovative broadband communications solutions with pan-Arctic regional coverage through a cost-effective and technologically proven satellite constellation comprised of two satellites in [Highly Elliptical Earth Orbit], whose service area will be exclusively in the Arctic region” and whose “less complex design and regional focus – as compared to proposed global NGSO constellations of hundreds or thousands of satellites – make the [it] the perfect candidate to help bridge the gap in broadband technology and accessibility that currently exists in the Arctic region, including Alaska”).

\textsuperscript{21} OneWeb, Hughes, and Intelsat Comments at 5-6.

\textsuperscript{22} Ku-band Order, 17 FCC Rcd at 7860, paras. 63-64; Ka-band Order, 12 FCC Rcd at 22323, para. 34.

\textsuperscript{23} Preamble to Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996) (“An Act to promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.”).

\textsuperscript{24} OneWeb, Hughes, and Intelsat Comments at 2-3.

13. We will apply the rules and procedures we adopt in this Report and Order to pending space station applications and petitions for U.S. market access. The Commission may apply new procedures to pending applications if doing so does not impair the rights an applicant possessed when it filed its application, increase an applicant’s liability for past conduct, or impose new duties on applicants with respect to transactions already completed. Applicants do not gain any vested right merely by filing an application, and the simple act of filing an application is not considered a “transaction already completed” for purposes of this analysis. Accordingly, applying our new rules and procedures to pending space station applications will not impair the rights any applicant had at the time it filed its application. Nor will doing so increase an applicant’s liability for past conduct.

IV. PROCEDURAL MATTERS


15. Paperwork Reduction Act. This document eliminates, and thus does not contain new or revised, information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13, 44 U.S.C. § 3501-3520. In addition, therefore, it does not contain any new or modified “information burden for small business concerns with fewer than 25 employees” pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, 44 U.S.C. § 3506(c)(4).


V. ORDERING CLAUSES

17. IT IS ORDERED, pursuant to sections 4(i), 7(a), 10, 303, 308(b), and 316 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 157(a), 160, 303, 308(b), 316, that this Second Report and Order IS ADOPTED and part 25 of the Commission’s rules ARE AMENDED as set forth in Appendix B.

---

26 In addition, we will allow current licensees and market access recipients to submit a simple letter request to modify particular conditions in their grants consistent with the rule changes adopted in this Order.


28 Chadmoore Communications, Inc. v. FCC, 113 F.3d 235, 240-41 (D.C. Cir. 1997) (“In this case the Commission’s action did not increase [the applicant’s] liability for past conduct or impose new duties with respect to completed transactions. Nor could it have impaired a right possessed by [the applicant] because none vested on the filing of its application.”); Hispanic Info. & Telecomms. Network v. FCC, 865 F.2d 1289, 1294-95 (D.C.Cir.1989) (“The filing of an application creates no vested right to a hearing; if the substantive standards change so that the applicant is no longer qualified, the application may be dismissed.”); Schraier v. Hickel, 419 F.2d 663, 667 (D.C.Cir.1969) (filing of application that has not been accepted does not create a legal interest that restricts discretion vested in agency); see also United States v. Storer Broadcasting Co., 351 U.S. 192 (1952) (pending application for new station dismissed due to rule change limiting the number of licenses that could be held by one owner); Bachow Communications, Inc. v. FCC, 237 F.3d 683, 686-88 (D.C. Cir. 2001) (upholding freeze on new applications and dismissal of pending applications in light of adoption of new licensing scheme); PLMRS Narrowband Corp. v. FCC, 182 F. 3d 995, 1000-01 (D.C. Cir. 1999) (applicant did not, by virtue of filing application, obtain the right to have it considered under the rules then applicable).
18. IT IS FURTHER ORDERED that this Second Report and Order and the rules as amended herein WILL BECOME EFFECTIVE as of the date of publication of a summary in the Federal Register.29

19. IT IS FURTHER ORDERED that the Commission’s Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Second Report and Order, including the Final Regulatory Flexibility Analyses, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A
List of Commenters

Comments

The Boeing Company (Boeing)
Governor Bill Walker of Alaska
SES S.A. and O3b Limited (SES/O3b)
Space Exploration Technologies Corp. (SpaceX)
Space Norway AS (Space Norway)
WorldVu Satellites Limited (OneWeb), Hughes Network Systems, LLC. (Hughes) and Intelsat Corporation (Intelsat)

Reply Comments

Boeing
OneWeb, Hughes, and Intelsat
SES/O3b
SpaceX
APPENDIX B

Final Rule

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR part 25 as follows:

PART 25 – SATELLITE COMMUNICATIONS

1. The authority citation for part 25 continues to read as follows:
Authority: 47 U.S.C. 154, 301, 302, 303, 307, 309, 310, 319, 332, 605, and 721, unless otherwise noted.

§25.146 [Amended]

2. In §25.146, remove and reserve paragraph (b).

3. Revise §25.217(b)(1) to read as follows:

§25.217 Default service rules.

*****

(b)(1) For all NGSO-like satellite licenses for which the application was filed pursuant to the procedures set forth in §25.157 after August 27, 2003, authorizing operations in a frequency band for which the Commission has not adopted frequency band-specific service rules at the time the license is granted, the licensee will be required to comply with the following technical requirements, notwithstanding the frequency bands specified in these rule provisions: §§25.143(b)(2)(ii) (except NGSO FSS systems), (iii) (except NGSO FSS systems), 25.204(e), 25.210(f), (i).

*****
APPENDIX C

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated in the Notice of Proposed Rulemaking in this proceeding. The Commission sought written public comment on the proposals in the Notice, including comment on the IRFA. No comments were received on the IRFA. This present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.

A. Need for, and Objectives of, the Rules

2. The Order repeals a domestic coverage requirement for NGSO FSS satellite systems in order to provide additional regulatory certainty and flexibility, while encouraging the development of innovative satellite systems.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

3. There were no comments filed that specifically addressed the IRFA.

C. Response to Comments by the Chief Counsel for Advocacy of the Small Business Administration

4. Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments. The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

D. Description and Estimate of the Number of Small Entities to Which Rules Will Apply

5. The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities that may be affected by the rules adopted herein. The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.” In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act. A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration

---


7 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”
(SBA). Below, we describe and estimate the number of small entity licensees that may be affected by adoption of the final rules.

E. **Satellite Telecommunications**

6. This category comprises firms “primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.”\(^9\) The category has a small business size standard of $32.5 million or less in average annual receipts, under SBA rules.\(^10\) For this category, Census Bureau data for 2012 show that there were a total of 333 firms that operated for the entire year.\(^11\) Of this total, 299 firms had annual receipts of less than $25 million.\(^12\) Consequently, we estimate that the majority of satellite telecommunications providers are small entities.

The rule changes adopted in this Order will affect space station applicants and licensees. Generally, space stations cost hundreds of millions of dollars to construct, launch, and operate. Consequently, we do not anticipate that any space station operators are small entities that would be affected by our actions.

F. **Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities**

7. The Order adopts rule changes that would affect compliance requirements for space station operators. As noted above, these parties rarely qualify as small entities.

8. The Order eliminates a geographic service requirement that restricts the design possibilities of certain NGSO FSS satellite systems. This action is designed to achieve the Commission’s mandate to regulate in the public interest while minimizing burdens on all affected parties, including small entities.

G. **Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

9. The RFA requires an agency to describe any significant alternatives that it has considered in developing its approach, which may include the following four alternatives (among others): “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”\(^13\)

10. In this Order, the Commission removes the domestic coverage requirement for NGSO FSS satellite systems. This action will reduce burdens on the affected licensees, including any small entities.

---


10 13 CFR § 121.201, NAICS code 517410.


12 Id.

13 5 U.S.C. § 603(c)(1)-(4).
H. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

11. None.

12. **Report to Congress:** The Commission will send a copy of the Report and Order, including this FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act.\(^{14}\) In addition, the Commission will send a copy of the Second Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the Second Report and Order and FRFA (or summaries thereof) will also be published in the Federal Register.\(^{15}\)

---


\(^{15}\) See 5 U.S.C. § 604(b).
STATEMENT OF
COMMISSIONER JESSICA ROSENWORCEL

Re: Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters, Second Report and Order, IB Docket No. 16-408

Today’s order eliminates the domestic coverage requirement for non-geostationary-satellite-orbit, fixed-satellite service systems. For years this rule has required satellite systems to be capable of providing service to all parts of the United States. That’s important because no matter who you are or where you live in this country you need access to modern communications to have a fair shot at 21st century success. But satellite systems have evolved and improved in many ways, and the evidence now suggests that this rule may be doing more harm than good. By eliminating the nationwide coverage requirement, the Federal Communications Commission creates possibilities for new NGSO systems that are designed specifically to serve the underserved areas that our rule was intended to protect—even if there is not nationwide demand for that service. That means more competition, more service, and more innovation for more Americans.

So while we are disposing of our nationwide coverage requirement today, it is not because we no longer think ubiquitous, nationwide coverage is important. Just the opposite. Our action is intended to promote more service, not less. And it is intended to promote service in rural and remote areas, including Alaska and Hawaii. If for any reason we find that parts of the country are being left behind, I expect the agency to take action to fulfill its core statutory mandate: to make available advanced communications service to all Americans.