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# Before the Subcommittee on Communications and Technology Committee on Energy and Commerce U.S. House of Representatives

## Liftoff: Unleashing Innovation in Satellite Communications Technologies February 8, 2023

# INTRODUCTION

Thank you for the opportunity to appear before you today. Since 2016, I have been Deputy Associate General Counsel at the FCC. Your consideration of these five bills today involves issues that have been addressed by a wide range of operating bureaus and offices within the Commission: the International, Wireless, and Public Safety Bureaus, and the Office of Engineering and Technology. I supervise lawyers in the Office of General Counsel that work closely with each of these different bureaus and offices within the Commission. I began work in OGC in 2012, following 30 years in private law practice representing clients before the Commission.

I appreciate the chance to participate with the Subcommittee and our partners at NTIA to address the Commission's role in the important topics addressed by these bills. The views expressed in my statement are my own, and not those of the Commission. Additionally, my appearance before the Subcommittee is limited to providing an overview of the current state of the law and Commission proceedings pertinent to your consideration of these bills, and technical drafting assistance, but not to opine on any possible or proposed policy or legislative changes.

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The Commission's role in the licensing and regulation of satellite communications systems began over 60 years ago, including the launch of the first communications satellite to orbit the earth.<sup>1</sup> As early as 1970, the Commission determined to exercise its authority over radio spectrum under the Communications Act of 1934 to begin authorizing domestic satellites operated by commercial entities.<sup>2</sup> As noted below, since that time the Commission has regularly explored ways of modernizing and streamlining such regulation to account for the changes in the satellite industry.

The Commission has provided the Subcommittee with technical assistance on a number of these bills, and we would be happy to follow up with you on any further questions you may have about them. Today I will concentrate on three of them: (1) H.R. 9464, preventing satellite service by those providing certain communications services or equipment who have already been determined by Congress or specified Executive Branch agencies to pose unacceptable national security risks; (2) H.R. 9463, streamlining satellite application processing in light of today's changing satellite marketplace; and (3) the draft Launch Communications Act, the focus of which is to complete FCC proceedings providing access to spectrum for space launches and reentries and expedite the processing of applications for use of such spectrum.

The other two draft bills you are considering today address important priorities as well: promoting precision agriculture through satellite delivery, in consultation with the existing Task Force established by the Commission and the Department of Agriculture, and facilitating service

<sup>&</sup>lt;sup>1</sup> See Remarks of Chairwoman Jessica Rosenworcel, The Global Aerospace Summit, 2022 WL 489107 (Sept. 14, 2022).

<sup>&</sup>lt;sup>2</sup> See Establishment of Domestic-Satellite Facilities by Nongovernmental Entities, Report and Order, 22 F.C.C.2d 86 app. C (1970) (memorandum on legal issues).

to areas that are unserved by terrestrial providers or temporarily unserved because of natural disasters or power outages.

### SECURE SPACE ACT OF 2022 (H.R. 9464)

This bill would amend the Secure and Trusted Communications Networks Act of 2019 to bar the Commission from granting licenses or market access petitions for non-geostationary orbit (NGSO) satellite systems held or controlled by any entity or affiliate that produces or provides certain "covered" communications equipment or service as defined in that Act.

This bill is similar in concept to the Secure Equipment Act of 2021, which barred the Commission from reviewing or approving any application for equipment authorization of "covered" equipment. The "covered" equipment or (in this case) service refers to certain communications equipment or service that has been determined to "pos[e] an unacceptable risk to the national security of the United States or the security and safety of United States persons." Examples include telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any of their subsidiaries or affiliates).

The Secure Equipment Act directed the Commission to adopt rules to implement that Act, which it did last November. Unlike that Act, the Secure Space Act does not include such a specific grant of rulemaking authority to the Commission, which could facilitate implementation of the Act.

### SAT STREAMLINING ACT of 2022 (H.R. 9463)

This bill is designed to inform the continuing efforts of the Commission to streamline the process for review and action on certain satellite license applications and modifications and renewals thereof.

As industry witnesses testified before the Subcommittee last week, there is widespread recognition that this process needs updating in light of the growing number and complexity of satellite applications, particularly for nongeostationary (NGSO) systems, and the increased importance of the satellite sector for broadband coverage, emergency services, and U.S. competitiveness in a global marketplace.<sup>3</sup> Acknowledging the work of the authors of H.R. 9463, FCC Chairwoman Rosenworcel has agreed that "the new space age needs new rules."<sup>4</sup>

As noted below, the Commission has already taken a number of steps in recent years in efforts to modernize this process. Many of these are similar to those reflected in this bill. To start, the Commission has increased by 38% the size of its Satellite Division staff to help speed up its work.<sup>5</sup> Another critical action the Commission has recently taken is an initiative to modernize the FCC by establishing a Space Bureau, which is designed to prioritize attention to the needs of the satellite industry in these respects, and to focus Commission resources on those needs. At the same time, this proposed reorganization will highlight (through creation of a separate Office of International Affairs) the equally critical nature of U.S. participation in the ITU and other

<sup>&</sup>lt;sup>3</sup> For a recent summary of the changes in the satellite industry, see *Communications Marketplace Report*, FCC 22-103, paras. 174-211 (released Dec. 30, 2022).

<sup>&</sup>lt;sup>4</sup> *Expediting Initial Processing of Satellite and Earth Station Applications*, Notice of Proposed Rulemaking, FCC 22-95 (released Dec. 22, 2022)("*Expediting Initial Processing*") (separate statement).

<sup>&</sup>lt;sup>5</sup> Space Innovation, Notice of Inquiry, FCC 22-66 (released Aug. 8, 2022) (statement of Chairwoman Rosenworcel).

international fora in that global marketplace, which make decisions about spectrum allocation and management affecting U.S. satellite competitors.<sup>6</sup>

H.R. 9463 would amend Title III of the Communications Act of 1934. That title confers the Commission with authority to manage use of radio spectrum by non-federal entities. As the Supreme Court noted 80 years ago, Title III affords the Commission a "dynamic" and "comprehensive mandate to 'encourage the larger and more effective use of radio in the public interest," given "a field of enterprise the dominant characteristic of which was the rapid pace of its unfolding."<sup>7</sup> As this Subcommittee recognized at last week's hearing, nowhere is that characteristic more true today than in the satellite industry.

At the same time, we share jurisdiction with NTIA, which Congress delegated with authority over federal use of spectrum.<sup>8</sup> We also continue to work closely with NASA, the FAA, and other federal agencies as they develop policies affecting commercial deployments in space.

In considering H.R. 9463, last week industry witnesses recognized the need to balance concerns that incumbent satellite and terrestrial licensees may have about potential interference from new entrants, with the need to support growth of and competition in this rapidly changing industry through streamlined processes, adequate availability of spectrum, and effective processes for sharing spectrum where (as is increasingly the case) exclusive spectrum is no longer available. The Communications Act itself reflects this balance in many ways.

<sup>&</sup>lt;sup>6</sup> Establishment of the Space Bureau and the Office of International Affairs, FCC 23-1 (released Jan. 9, 2023). This order will become effective upon appropriate clearance under the Consolidated Appropriations Act, 2022.

<sup>&</sup>lt;sup>7</sup> National Broadcasting Co. v. United States, 319 U.S. 190, 219 (1943), quoting 47 U.S.C. § 303(g).

<sup>&</sup>lt;sup>8</sup> See 47 U.S.C. § 305.

It states, for example, that it "shall be the policy of the United States to encourage the provision of new technologies and services to the public." It also provides the Commission with a mandate to "make available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex, a rapid efficient Nation-wide, and world-wide wire and radio communications service with adequate facilities at reasonable charges," for the purposes of "national defense" as well as "promoting safety of life and property through the use of wire and radio communication."<sup>9</sup>

Equally important in considering application processing is the role of public participation in that process, embodied in Section 309 of the Communications Act. Section 309(b) requires that, for classes of stations that the Commission may prescribe, applications may not be granted until 30 days following "issuance of public notice by the Commission of the acceptance for filing of such application or of any substantial amendment thereof." This public notice then triggers a deadline for the filing of petitions to deny the application by any party in interest.<sup>10</sup> Part 25 of the Commission's rules (referred to in H.R. 9463) incorporates this process.<sup>11</sup> This statutory and regulatory regime, which is common to many other services subject to Commission regulation, is designed to ensure that parties file complete applications that can form the basis of informed review by the Commission and interested parties.

This regime is particularly critical to one of the fundamental missions of the Commission under Section 303(f) of the Communications Act: to make (and enforce) regulations "as it may deem

<sup>&</sup>lt;sup>9</sup> 47 U.S.C. §§ 151, 157(a).

<sup>&</sup>lt;sup>10</sup> 47 U.S.C. §§ 309(b), 309(d).

<sup>&</sup>lt;sup>11</sup> 47 C.F.R. §§ 25.150 et seq.

necessary to prevent interference between stations."<sup>12</sup> Industry witnesses at last week's hearing recognized the need to balance the value of expedited satellite application processing against this spectrum management obligation. Particularly given the complexity of satellite designs and the growing numbers of satellites, and the increasing need for Commission licensees to share spectrum given the growing numbers of competing uses for it, this task often requires the Commission to devote considerable effort – and time -- to resolving interference disputes between incumbent satellite (or terrestrial) licensees and new satellite applicants.

In doing so, the Commission sometimes needs to rely on its well established statutory authority to follow up to obtain additional information specific to a particular situation.<sup>13</sup> This is no different than how the Commission proceeds with broadcast, wireless, wireline, or other applications, and is a useful tool when used carefully so as not to unduly burden the applicant. Commission staff are mindful of those burdens, and carefully weigh them in determining whether such additional information will enable them to process the application more quickly. Satellite applications are among the most complex the Commission works on, and flexibility to seek additional information when needed is a valuable tool.

The Commission's goal, like that of this bill, is to design the administration of this process as efficiently as possible while protecting the interference and other concerns of interested parties. As noted above, the Commission has for some time been exploring improvements in its

<sup>&</sup>lt;sup>12</sup> 47 U.S.C. § 303(f).
<sup>13</sup> See 47 C.F.R. § 25.111(a).

application process that would reflect these competing goals. These began as early as 1991.<sup>14</sup> They later included efforts at standardizing application forms.<sup>15</sup>

However, the rapidly changing nature and importance of satellite technology, coupled with the enormous increase in the number of satellites and earth-based facilities for which applicants are seeking Commission approval, have led the Commission to redouble its efforts. I want to focus on two such actions, both referred to by witnesses at last week's hearing.

First, in December 2021, the Commission sought comment on how to promote sharing among NGSO fixed-satellite service (FSS) licensees in order better to facilitate deployment and promote competition, while addressing the complex question of how best to ensure against harmful interference. This proceeding is examining both licensees within the same processing round, and those in different processing rounds. It has specifically invited comment on two issues you heard about at last week's hearing, and that are addressed in H.R. 9463. One is about how to measure harmful interference. The Commission has sought comment on various alternative, specific criteria for this. Another is to explore the contours of good faith negotiation among those sharing spectrum, including a proposal for confidential sharing of data such as beam locations. These issues are complex. I am by no means an engineer, but since I began practicing communications law I have found myself on different sides of the elusive question of what constitutes harmful interference in any particular situation.

<sup>&</sup>lt;sup>14</sup> See, e.g., Amendment of Part 25 of the Commission's Rules and Regulations to Reduce Alien Carrier Interference Between Fixed-Satellites at Reduced Orbital Spacing and to Revise Application Processing Procedures for Satellite Communications Services, First Report and Order, 6 FCC Rcd 2806 (1991); Streamlining the Commission's Rules and Regulations for Satellite Application and Licensing Procedures, Report and Order, 11 FCC Rcd 21581 (1996).

<sup>&</sup>lt;sup>15</sup> See Amendment of the Commission's Space Station Licensing Rules and Policies, Third Report and Order, 18 FCC Rcd 15306 (2003).

Second, in December 2022 the Commission sought comment on ways that it could avoid delays in getting applications accepted for filing. Among these proposals are to simplify application forms to avoid inadvertent errors or inconsistencies in applications, and adding specificity on the criteria necessary for applications to be deemed acceptable for filing. The Commission also raised again the question of using "shot clocks" for action on applications once the comment period on them has closed.<sup>16</sup> For the reasons stated above, the Commission has proposed that such "shot clocks" run from the date that applications have been determined to be complete, rather than from the date they have been filed. The Commission also sought comment on relaxing the application of the limits on multiple applications for NGSO licenses.

Comments from industry and other interested members of the public on these most recent application processing proposals are due by March 3; reply comments, by April 3. We look forward to reviewing these recommendations, while working in tandem with your Subcommittee with the goal of further improving and streamlining the satellite application licensing process.

#### LAUNCH COMMUNICATIONS ACT

The Launch Communications Act would focus not on satellite service, but on the spectrum needed for launch and reentry of satellites. In 2021, recognizing that need in the face of an expanding commercial space launch industry, the Commission completed action to allocate the 2200-2290 MHz band for this purpose on a secondary basis. At that time, it also proposed licensing and service rules for use of this band, and also sought comment on use of additional

<sup>&</sup>lt;sup>16</sup> Expediting Initial Processing, FCC 22-95, para. 19.

bands for these purposes, including some of those referred to in this bill.<sup>17</sup> We welcome the Launch Communications Act's support for this proceeding. We very much appreciate the Subcommittee's recognition of the need for adequate spectrum given the increased frequency of these critical launches.

### CONCLUSION

Thank you for inviting me to participate in today's hearing. I look forward to assisting the Subcommittee in considering these five bills, and would be happy to answer your questions.

<sup>&</sup>lt;sup>17</sup> Allocation of Spectrum for Non-Federal Space Launch Operations, Report and Order and Further Notice of Proposed Rulemaking, 36 FCC Rcd 7764 (2021) (FCC 21-44).