

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
	)	IBFS File No. SAT-MOD-
Space Norway AS	)	Call Sign S2978
	)	
Request to Extend or Waive Milestone	)	
Date for the Arctic Satellite Broadband	)	
Mission	)	

**REQUEST TO EXTEND OR WAIVE MILESTONE DATE FOR THE ARCTIC
SATELLITE BROADBAND MISSION**

Space Norway AS (“Space Norway”), pursuant to section 25.117 of the Commission’s rules (the “Rules”),¹ respectfully submits this application requesting another modification to its authorization (the “Authorization”) for U.S. market access to operate its Arctic Satellite Broadband Mission satellite constellation (the “ASBM System”).² Specifically, Space Norway requests an extension of the 50 percent milestone deadline in its Authorization from November 3, 2023 (the “Milestone Deadline”) to November 3, 2024 (the “Extension Request”). As discussed below, the Commission should grant the Extension Request because: (i) Space Norway faced extenuating and unforeseeable circumstances that impacted its ability to meet the Milestone Deadline,³ including production-related delays with the manufacturer of the ASBM System and the COVID-19 pandemic; and (ii) there are unique and overriding public

¹ 47 CFR § 25.117.

² *Space Norway AS, Petition for a Declaratory Ruling Granting Access to the U.S. Market for the Arctic Satellite Broadband Mission*, IBFS File No. SAT-PDR-20161115-00111, Order and Declaratory Ruling, 32 FCC Rcd 9649 (2017) (“*Space Norway Order*”) (granting Space Norway U.S. market access to operate the ASBM System in the Ku- and Ka-bands to provide broadband Internet connectivity services to unserved and underserved communities in the Arctic region of the United States).

³ 47 CFR § 25.164 requires Space Norway to launch and operate 50 percent of its authorized space stations by November 3, 2023.

interest concerns that warrant such an extension. If the Commission does not grant the Extension Request, then Space Norway requests that the Commission grant a waiver of sections 25.164(b)(1) and 25.165(c) of the Rules.

I. BACKGROUND

On November 2, 2017, the Commission granted Space Norway U.S. market access to operate the ASBM System to provide broadband Internet connectivity to unserved and underserved communities in the Arctic region of the United States.⁴ In June 2019, Space Norway entered into a satellite purchase agreement with Northrop Grumman for the construction of the two satellites for the ASBM System (the “Northrop Grumman SPA”). That same year, Space Norway entered into a launch services agreement with SpaceX for launch of the ASBM System into orbit (the “SpaceX LSA”). The launch period under the SpaceX LSA was set for December 1, 2022 to March 31, 2023.

In June 2020, SES S.A. and Intelsat S.A. entered into separate contracts with Northrop Grumman for the construction of satellites to support the Commission’s C-band spectrum clearing effort (the “C-band Satellites”). This resulted in an overload at Northrop Grumman’s factory at Dulles, VA. Since the C-band Satellites had an earlier launch date, technical and human resources were diverted to these programs and delayed construction of the ASBM System.

Technical difficulties and supply chain issues also impacted Northrop Grumman’s ability to timely deliver the ASBM System. Specifically, Northrop Grumman suffered delays of more than a year due to an industry alert on reaction wheels, which is a critical payload and

⁴ See *Space Norway Order*. The Arctic region has historically been underserved in respect to broadband connectivity. Terrestrial infrastructure is limited, geostationary satellites are at low elevation angles or beyond the horizon and the bandwidth offered by existing systems is limited. This is largely because the Arctic region has a low population density and limited user base, which makes it difficult to provide broadband services under commercial terms. In light of these challenges, Space Norway has sought to design the ASBM System to be as cost effective as possible, including designing the satellites for the ASBM System with an architecture that supports a dual-satellite launch.

spacecraft component. This was detrimental to the construction timeline for the ASBM System satellites due to the design-driven requirement to assemble all parts and components in a specific sequence. Northrop Grumman did its best to minimize the delay by searching for work-arounds while waiting to receive these critical components from its suppliers.

In addition to the specific unavailability of certain critical components, the COVID-19 pandemic also caused unexpected construction delays for the ASBM System. From 2020 to 2022, nineteen of Northrop Grumman's subcontractors terminated their contracts with Northrop Grumman because the COVID-19 pandemic impacted their ability to timely fulfill their obligations to provide components related to the ASBM System. In addition, Northrop Grumman's Assembly, Integration, and Test teams experienced several COVID-19 outbreaks, further delaying the ASBM System's construction schedule.

In response to the delays discussed above, Space Norway and SpaceX (the "Parties") agreed to adjust the launch period under the SpaceX LSA twice in the last two years. In 2021, the Parties changed the launch period to May 1, 2023 to August 31, 2023 (still within the Milestone Deadline) to accommodate satellite construction and COVID-19 related delays. The Parties more recently were compelled to further delay the launch period to October 1, 2023 to January 31, 2024 in order to accommodate further satellite construction delays. A launch at the beginning of this launch window would still have made it possible to meet the Milestone Deadline. As a result of recent delays, however, Space Norway is no longer able to launch before the Milestone Deadline, requiring Space Norway to seek this Extension Request, which is in addition to and separate from the modification request filed by Space Norway in March

2022 (the “2022 Modification Application”),⁵ which request the Satellite Division (the “Division”) granted in part and deferred in part in February 2023.⁶

II. THE COMMISSION SHOULD GRANT SPACE NORWAY’S EXTENSION REQUEST PURSUANT TO SECTION 25.117(e) OF THE RULES.

Pursuant to section 25.117(e) of the Rules, the Commission may grant a milestone extension: (i) when a delay is due to unforeseen circumstances beyond a licensee’s control;⁷ or (ii) when there are unique and overriding public interest concerns.⁸ The Commission has also granted milestone extensions for delays caused by the COVID-19 pandemic.⁹ According to the Commission, the COVID-19 pandemic “is a unique and unusual circumstance that has resulted in widespread delays in the receipt of communications equipment and has caused

⁵ Space Norway AS, *Application for Modification of Authorization for U.S. Market Access for the Arctic Satellite Broadband Mission*, IBFS File No. SAT-MPL-20220311-00029 (filed Mar. 11, 2022) (“2022 Modification Application”). In that application, Space Norway requested a removal of the Ku-band frequencies bands from the scope of the Authorization, sought a waiver of sections 25.164(b)(1) and 25.165(c) of the Rules (the “2022 Waiver Requests”), and provided updated orbital parameters and orbital debris mitigation information and a plan for operating in the remaining 19.7-20.2 GHz (space-to-Earth) and 29.5-30.0 GHz (Earth-to-space) approved frequency bands.

⁶ See Satellite Policy Branch Information re: Actions Taken, Rep. No. SAT-01704, DA 23-145 (Feb. 24, 2023) (granting in part Space Norway’s request for modification of its U.S. market access grant); see also Space Norway AS, *Application for Modification of Authorization for U.S. Market Access for the Arctic Satellite Broadband Mission*, IBFS File No. SAT-MPL-20220311-00029 (filed Mar. 11, 2022) (“2022 Modification Application”). Specifically, the Division removed the Ku-band frequencies from the scope of the Authorization but deferred action on the 2022 Waiver Requests.

⁷ 47 CFR § 25.117(e)(1). The Commission has granted milestone extensions where complex technical problems (e.g., construction challenges with subsystems or specific components) or unanticipated construction delays prohibited a licensee from completing and launching meeting its milestone deadlines.

⁸ *Id.* at § 25.117(e)(2).

⁹ See, e.g., Satellite Communications Services Information re: Actions Taken, Public Notice, Rep. No. SES-02492, at 8-9 (Aug. 17, 2022) (referencing grant of HNS License Sub, LLC’s application for extension of construction milestone); *1.946 Order* at para. 2 (extending wireless construction deadlines based on disruptions caused by Covid-19); *Viasat, Inc., Application for Extension or Waiver of Milestone Date*, Order, 36 FCC Rcd 18160, 18160, para. 1 (2021) (“2021 Viasat Order”) (granting Viasat a ten-month extension of its launch and operation milestone for the VIASAT-3 satellite based on a finding that the additional time was needed as a result of “delays due to the COVID-19 pandemic”); see also *Viasat, Inc., Request to Extend or Waive Milestone Date*, Order, DA 22-1141, para. 1 (2022) (“2022 Viasat Order”) (granting Viasat an additional six-month milestone extension “due to continued COVID-19-related delays beyond Viasat’s control”).

delays in network construction”¹⁰ and regulatory restrictions and other public health and safety measures have created “gaps in all phases of the supply and deployment chain.”¹¹

Space Norway could neither have foreseen nor controlled the events causing its inability to meet the Milestone Deadline. Northrop Grumman unexpectedly shifted its priorities and diverted resources away from constructing the satellites for the ASBM System to constructing the C-band Satellites, which, as noted, resulted in significant delays to the satellite construction schedule, and was a key factor in impeding Space Norway’s ability to meet the Milestone Deadline. In addition, technical issues and supply chain parts and component alerts independently delayed construction of the ASBM System satellites due to the design-driven requirement to assemble all parts and components of the ASBM System in a specific sequence. Lastly, the COVID-19 pandemic and associated government shutdowns devastated global supply chains and impacted both Northrop Grumman’s and its subcontractors’ and suppliers’ ability to timely perform their contractual obligations related to the ASBM System, including the timely delivery of satellite parts, components, and subsystems.

Even if the Commission determines that Space Norway’s delays were neither unforeseen nor beyond its control, there are unique and overriding public interest considerations that warrant grant of the Extension Request.¹² Specifically, by allowing Space Norway to promptly complete implementation of the ASBM System, Space Norway will be able to provide important high-speed broadband connectivity services to the U.S. military and consumers in

¹⁰ See, e.g., *Waiver of FCC Rule Sections 1.946 (c) and (d) for Wireless Site-Based and Mobile-Only System*, Order, 35 FCC Rcd 3536, 3536-3539, paras. 2-5 (2020) (“1.946 Order”); *Request for Waiver by the Schools, Health & Libraries Broadband Coalition*, Order, 36 FCC Rcd 9956, 9958-59, paras. 4-7 (2021).

¹¹ 1.946 Order at paras. 4-5.

¹² See *TerreStar Order* at paras. 7, 10 (where the Commission determined it was not necessary to decide whether construction difficulties were foreseeable because TerreStar had demonstrated a substantial and continuing commitment to the construction and implementation of its satellite, and unique and overriding public interest considerations warranted an extension of time); see also *2020 Viasat Order* at paras. 7-8 (concluding that there were unique and overriding public interest considerations that warranted grant of Viasat’s request, because Viasat had made substantial expenditures and progress toward completion of the satellite, did not present warehousing concerns, and would use the extension to provide broadband connectivity to rural and urban areas, aircraft and ships, and enhanced services for military and government customers).

unserved and underserved areas in the Arctic region of the United States. In addition to the Ka-band payload subject to the Authorization, the ASBM satellites will also host the Enhanced Polar System Recapitalization (“EPS-R”) payloads for the U.S. Department of Defense. The EPS-R program will expand U.S. military access to secure communication networks in the Arctic region, which has become increasingly vital territory for U.S. military operations. The existing Enhanced Polar System (“EPS”) became operational in 2019 and has a ten-year lifespan; the EPS-R program is crucial to bridging the gap in U.S. military satellite communication in the Arctic between the end of the EPS system’s lifespan and the introduction of its eventual replacement, which is not expected to be operational until at least the mid-2030s.¹³ In providing this service, the EPS-R payloads have the potential to save the U.S. military \$900,000,000¹⁴ and deliver satellite communication capabilities to the Arctic region at least three years faster than would be possible with a standard satellite acquisition process.

Notwithstanding the foregoing, the Commission also grants milestone extensions where a licensee demonstrates its intent and ability to construct, launch, and operate the satellites that are authorized.¹⁵ A licensee may demonstrate such intent and ability by showing that it has completed a significant amount of construction on the satellites and has made substantial payments to contractors and suppliers corresponding to this advanced stage of construction.¹⁶

Space Norway has the ability and the commitment to launch the two-satellite ASBM System, place it in the assigned orbits, and operate the ASBM System in advance of the bring-

¹³ National Defense Magazine, *Space Force Partners with Norway to Launch Arctic Comms Satellites*, <https://www.nationaldefensemagazine.org/articles/2022/8/31/space-force-partners-with-norway-to-launch-arctic-comms-satellites> (August 31, 2022).

¹⁴ See Heather Wilson, *Address at the 35th Annual Space Symposium*, American Rhetoric, <https://www.americanrhetoric.com/speeches/heatherwilsonspacesymposium35.htm> (April 9, 2019); Kimberly Underwood, *The Air Force Restructures its Space and Missile Systems Center*, Signal (AFCEA International), <https://www.afcea.org/content/air-force-restructures-its-space-and-missile-systems-center> (January 1, 2019).

¹⁵ See *Amendment of the Commission’s Space Station Licensing Rules and Policies, First Report and Order*, 18 FCC Rcd 10760, 10827, para. 173 (2003).

¹⁶ See, e.g., *TerreStar Networks, Inc.*, 22 FCC Rcd 17698, 17699, para. 7 (2007) (“*TerreStar Order*”); *AT&T Co.*, 5 FCC Rcd 5590, 5591, para. 17 (1990).

into-use date of the ASBM System's ITU filing—and well before the Authorization's 100 percent deployment milestone of November 3, 2026. Space Norway has paid all obligated costs to its satellite and ground station suppliers and has paid 95 percent of the total launch costs owed to SpaceX. Space Norway anticipates that the satellites will reach 100 percent completion by mid-November 2023.

Space Norway also believes that its request for a 12-month extension of its Milestone Deadline is justified. Specifically, Space Norway believes 12 months will not only ensure adequate time for completing the two satellites, performance of the launch services, and conducting in-orbit testing of the satellites, but also provide additional time to account for any unforeseen serious delay that may occur during the remaining testing. The ASBM System satellites are presently undergoing initial integrated system testing in preparation for thermal vacuum testing. Recent testing delays have further impacted the ASBM System's schedule—based on current projections, Space Norway will not be able to launch the satellites until, at the earliest, November 2023, and a launch in early 2024 is more likely. The two satellites will be launched together on one Falcon 9 launch vehicle and SpaceX has confirmed assignment of the October 1, 2023 to January 31, 2024 launch period for deployment of the ASBM System satellites. Northrop Grumman estimates that from launch, it will take approximately 64 days to place the satellites in the correct orbits and achieve operational status.

Space Norway is confident that a 12-month extension will be sufficient to ensure that Space Norway fulfills its commitments under the Authorization, including certain prudent time margin to account for uncertainties surrounding the current assembly, integration, and testing phase, and possible delays resulting from any potential issues identified during the remaining test program.

III. WAIVER OF MILESTONE AND SURETY BOND REQUIREMENTS

If the Commission does not grant the Extension Request, then Space Norway respectfully requests a waiver of section 25.164(b)(1) and, to the extent necessary, section 25.165(c) of the Rules (collectively, the “2023 Waivers Requests”). Space Norway notes that the 2023 Waiver Requests are materially different from the 2022 Waiver Requests—each based on different issues and different sets of facts. Accordingly, the Commission should adjudicate the 2023 Waiver Requests separately from the 2022 Waiver Requests and should ultimately grant both of these sets of waiver requests.

Pursuant to section 1.3 of the Rules, the Commission may waive application of its rules for good cause shown.¹⁷ A waiver of the Rules is appropriate if: (i) “special circumstances warrant a deviation from the general rule;” and (ii) “such deviation would better serve the public interest than would strict adherence to the rule.”¹⁸ In determining whether a waiver is appropriate, the Commission may “take into account considerations of hardship, equity, or more effective implementation of overall policy.”¹⁹

A. WAIVER OF SECTION 25.164(b)(1) OF THE COMMISSION’S RULES

Section 25.164(b)(1) of the Rules requires Space Norway to deploy 50 percent of its authorized satellites by the Milestone Deadline. The Commission established its milestone requirements to “offset the incentives for warehousing behavior ... and to encourage the rapid deployment of new spacecraft and the optimal utilization of scarce orbital and spectrum resources.”²⁰ In the past, the Commission has waived milestone requirements under section

¹⁷ See 47 CFR § 1.3; see also *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969), *cert. denied*, 409 U.S. 1027 (1972); *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1164 (D.C. Cir. 1990).

¹⁸ *Northeast Cellular*, 897 F.2d at 1166.

¹⁹ *WAIT Radio*, 418 F.2d at 1159.

²⁰ See *Comprehensive Review of Licensing and Operating Rules for Satellite Services*, Second Report and Order, 30 FCC Rcd 14713, 14735, para. 53 (2015) (“*Part 25 Second R&O*”); see also *2022 Modification Application* at para. 6.

25.164 when technical changes or construction issues prevented licensees from meeting their original milestone schedule.²¹

The Commission's grant of a waiver is warranted because the circumstances causing Space Norway to miss its Milestone Deadline justify a deviation from the general rule. As discussed above, Space Norway will not be able to meet the Milestone Deadline because it has faced unforeseen ASBM System construction delays caused by Northrop Grumman's workload with the C-band Satellites, industry parts and components alerts impacting their availability, and global supply chain problems, as well as delays caused by the COVID-19 pandemic. Accordingly, Space Norway requests that the Commission waive its Milestone Deadline under section 25.164(b)(1) should its Extension Request not be granted.

B. WAIVER OF SECTION 25.165(c) OF THE COMMISSION'S RULES

To the extent necessary, Space Norway also requests a waiver of section 25.165(c) of the Rules. Section 25.165(c) states that a licensee will be considered to have defaulted on its bond if it fails to satisfy an applicable milestone requirement.²²

The bond requirements in section 25.165 of the Rules were created to "help ensure that the applicant has the financial wherewithal and commitment to build and operate the satellite and associated service" and to ensure that the applicant has "the capability or bona fide intention to secure the requested license and carry the endeavor through to the provision of service."²³ Granting Space Norway's requested waiver will not implicate either of these two concerns underlying the bond requirement.

²¹ See *Loral SpaceCom Corp. and Loral Space and Communications Corp., Memorandum Opinion, Order and Authorization*, 18 FCC Rcd 6301, 6313, para. 23 (2003); see also *Loral SpaceCom Corporation, Debtor-in-Possession, Application for Modification of Fixed Satellite Service Space Station Authorization Telstar 8, Request for Extension of Milestones and Waiver or Petition for Reconsideration*, Memorandum Opinion and Order, 18 FCC Rcd 16374, 16375, para. 3 (2003).

²² 47 CFR § 25.165(c).

²³ *Part 25 Second R&O* at para. 28.

First, as noted in the 2022 Modification Application and in Section II above, Space Norway has both the financial resources and the commitment necessary to build, launch, and operate the ASBM System. As a state-owned company, Space Norway has the support and resources of the Norwegian government, and the ASBM System is fully funded not only for both construction and launch, but also for the duration of the ASBM System’s planned operation.

Second, Space Norway has not used the application process as a way to “speculate or warehouse spectrum,”²⁴ nor is it “unable or unwilling to proceed.”²⁵ Throughout the process of planning, designing, and constructing the ASBM System, as well as applying for market access, Space Norway has diligently worked to ensure that the ASBM System is completed on time, or as close to its original schedule as possible. Space Norway has made substantial progress and financial expenditures toward that goal, and the ASBM System satellites are almost ready to be launched.

Accordingly, Space Norway requests that the Commission waive, to the extent necessary, section 25.165(c) of the Rules, to permit Space Norway to maintain its existing bond should its milestone obligations under section 25.164(b)(1) be waived.

IV. CONCLUSION

For the reasons set forth herein, Space Norway respectfully requests that the Commission grant a one-year milestone extension, until November 3, 2024, to launch and operate the ASBM System, thus allowing the deployment of new and additional services to U.S. consumers and the U.S. Department of Defense in the Arctic region. In the alternative, Space Norway requests that the Commission waive section 25.164(b)(1) of the Rules. Space

²⁴ *Id.*

²⁵ *NetSat 28 Company, LLC*, Memorandum Opinion and Order, 19 FCC Rcd 17722, 17732, para. 27 (2004).

Norway also respectfully requests that the Commission grant, to the extent necessary, a waiver of section 25.165(c) of the Rules.

Respectfully submitted,

/s/

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