

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of	)	
	)	
Blue Origin, LLC	)	File No. SAT-LOA-20260310-00118
	)	Call Sign: S00830
for Authority to Launch and Operate	)	
the Project Sunrise Orbital Data	)	
Center System	)	
	)	

CONSOLIDATED OPPOSITION AND RESPONSE OF BLUE ORIGIN, LLC

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EXECUTIVE SUMMARY

Blue Origin, LLC respectfully submits this consolidated opposition and response to comments filed against its application for authority to launch and operate its Project Sunrise orbital data center system. The comments filed in opposition mischaracterize the applicable regulatory framework, raise issues outside the Commission's jurisdiction, or rely on speculative and unsupported assertions. For the reasons set forth herein, the Commission should grant Blue Origin's application and reject all requests to deny it.

Reliable, scalable access to computing infrastructure is integral to economic competitiveness, technological innovation, and broad societal benefit. Explosive growth in artificial intelligence workloads, machine learning, and cloud computing is driving unprecedented demand for data center capacity that terrestrial infrastructure alone cannot meet. Project Sunrise addresses this critical infrastructure gap by deploying orbital data centers that harness the unique physical advantages of the space environment — near-constant solar power in sun-synchronous orbits, passive radiative cooling in the vacuum of space, and independence from terrestrial electrical grids and water supplies. By adding compute capacity to orbit, Project Sunrise will expand total industry capacity while preserving terrestrial infrastructure for uses that cannot be replicated in space.

The Commission possesses clear and sufficient authority to grant this application. Project Sunrise seeks authorization for use of spectrum to effectuate safe operation of its constellation — a function squarely within the Commission's authority. Commenters' suggestions that additional regulatory authority is required, or that novel bright-line tests or heightened review standards should be imposed, are inconsistent with the Commission's existing rules and would be

procedurally improper absent a formal rulemaking. Blue Origin's application docket is not the appropriate venue for such proposals.

Blue Origin's requested waivers of certain of the Commission's rules are appropriate and consistent with established precedent. Project Sunrise's minimal use of Ka-band spectrum for telemetry, tracking, and command functions poses no risk of precluding other operators from accessing spectrum resources — the very concern these rules were designed to address. The Commission itself has questioned the continued utility of these rules in its ongoing Space Modernization rulemaking, further supporting grant of the requested waivers. Competition among orbital data center systems will drive innovation and enhance service quality, and encouraging diverse participation in this emerging market will catalyze advancements in technology and resource efficiency. Expeditious grant of this authorization will foster a competitive environment that benefits consumers and industry alike.

Multiple commenters requested additional environmental reviews prior to approval of this application. The Commission should reject demands for such reviews. First, as excludes extraterritorial activities, including in-space operations, are expressly excluded from National Environmental Policy Act reviews. Finally, Blue Origin is committed to maintaining safe space operations and mitigating impacts to optical astronomy and will continue to show compliance with existing Commission rules as its design matures.

The public interest strongly favors grant of this application. Project Sunrise will deliver sustainable, solar-powered compute infrastructure alleviating pressure on terrestrial energy and water resources, advances American leadership in both space and artificial intelligence, and ensures that the United States remains at the forefront of the next great wave of technological progress. For these reasons, the Commission should expeditiously grant Blue Origin's application

for authority to launch and operate the Project Sunrise Orbital Data Center System, with all requested waivers, and reject any petitions to deny.

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CONSOLIDATED OPPOSITION AND RESPONSE OF BLUE ORIGIN, LLC

Blue Origin, LLC ("Blue Origin") respectfully submits this consolidated opposition and response to comments¹ filed in association with its request for authority to launch and operate its Project Sunrise orbital data center system.² As set forth below, the comments filed in opposition to the Application either mischaracterize the regulatory framework, raise issues outside the Commission's jurisdiction, or rely on speculative, unsupported assertions. For the reasons set forth herein, the Commission should grant Blue Origin's application and reject all comments petitioning the Commission to deny the application.

¹ See Reply to Blue Origin's Project Sunrise ("Mr. Spieth Comments"); Comments of the Secure World Foundation on the Application for Orbital Data Centers by Blue Origin, LLC ("SWF Comments"); DarkSky International Comments ("DarkSky Comments"); National Aeronautics and Space Administration Comments ("NASA Comments"); Comments of Space Exploration Holdings, LLC ("SpaceX Comments"); Comments of the Center for Space Environmentalism ("CSE Comments"); Comments Of The American Astronomical Society ("AAS Comments"). Unless otherwise indicated, all comments and petitions cited herein were filed in ICFS File No. SAT-LOA-20260310-00118.

² See Blue Origin Project Sunrise Application, ICFS File No. SAT-LOA-20260310-00118 (filed Mar. 19, 2026) ("Blue Origin Project Sunrise Application").

I. THE COMMISSION HAS THE AUTHORITY TO GRANT THIS AUTHORIZATION AND THE EXISTING RULES ARE SUFFICIENT TO PERMIT GRANT OF THIS APPLICATION

Several commenters assert that the FCC should not have "sole authority" to approve large commercial satellite constellations.³ Blue Origin maintains that the FCC possesses clear and sufficient authority to grant the application as requested, which seeks authorization for the use of spectrum to effectuate the safe operation of its Project Sunrise system. Through the Communication Act of 1934, the Commission was tasked with, "regulating interstate and foreign commerce in communication by wire and radio,"⁴ and this mandate has expanded over time to encompass spectrum use for various space-based applications. Project Sunrise falls squarely within this established scope. Requiring additional regulatory authority to be applied to this application would be procedurally improper absent a formal rulemaking expanding the Commission's jurisdiction. The Commission's existing framework is sufficient to evaluate and grant the application before it.

Certain commenters contend that the Commission's rules should be updated to account for constellations of this scale.⁵ DarkSky International ("DarkSky") goes so far as to say a bright line test should be created for evaluating whether constellations are in the public interest,⁶ while Secure World Foundation ("SWF") asserts that a variety of new standards should apply and that additional review be considered for "precedent-setting, non-routine requests."⁷ Blue Origin disagrees. These

³ Mr. Spieth Comments at 1; SWF Comments at 1.

⁴ *Communications Act of 1934*, 47 U.S.C. § 151, § 1.

⁵ SWF Comments at 3-4; DarkSky Comments at 14-15.

⁶ DarkSky Comments at 14-15.

⁷ SWF Comments at 1.

proposals are inconsistent with the Commission's rules, exceed the Commission's authority, and cannot properly be imposed through an individual application proceeding.

Creating a bright-line test for evaluating public interest based on the effect that that constellation may have on the night sky, as DarkSky suggests,⁸ exceeds the Commission's regulatory authority and it would be inappropriate to assume such authority through an individual license proceeding. Moreover, because no such standard exists in the Commission's current rules, the Commission cannot deny or condition an application based on these standards. Therefore, Blue Origin should not be required to demonstrate compliance thereto. To the extent commenters seek to change the Commission's rules and regulations, the proper vehicle is a petition for rulemaking – not Blue Origin's application docket.

SWF's arguments are even more attenuated and, if adopted, would set a dangerous precedent for the entire United States space industry.⁹ SWF's proposal would see not only the orbital data center applications currently in front of the Commission halted unnecessarily, but *any* precedent setting application. SWF's request that additional review, with no clear definition of what that review should entail, be applied to all novel space-based applications would grind the entire space industry to a halt – introducing paralyzing regulatory uncertainty at precisely the moment when the United States must foster innovation to maintain its leadership in space. Critically, there is nothing precedent setting about the spectrum proposed here, as telemetry, tracking, and command (“TT&C”) is among the most common and well-understood space-based applications of spectrum. SWF's proposal would effectively conscript the Commission's spectrum-

⁸ DarkSky Comments at 14-15.

⁹ SWF Comments at 2.

licensing function into a broader programmatic review role that exceeds its statutory charter, and the Commission should reject this invitation to expand its authority beyond what Congress has authorized. Further, if the United States is to remain a leader in space, SWF's comments *must* be disregarded.

II. BLUE ORIGIN'S APPLICATION COMPLIES WITH THE COMMISSION'S RULES AND THE REQUESTED WAIVERS ARE APPROPRIATE

In its application, Blue Origin requested waivers of certain of the Commission's rules. The Commission may waive any of its rules if there is "good cause" to do so.¹⁰ In general, waiver is appropriate if (1) special circumstances warrant a deviation from the general rule; and (2) such deviation would better serve the public interest than would strict adherence to the rule.¹¹ The Commission may grant a waiver of its rules if the relief requested would not undermine the policy objective of the rule in question and would otherwise serve the public interest.¹² The commenters have not raised sufficient legal basis to prevent the Commission from granting the requested waivers and Blue Origin maintains that they are necessary and appropriate.

The Center for Space Environmentalism ("CSE"), DarkSky, and SWF each urge the Commission to deny Blue Origin's waiver requests, but their arguments fail to address the actual purpose of the rules at issue and are therefore insufficient to support denial. In its application, Blue Origin seeks waivers of the Commission's processing round rules, surety bond requirements, and required milestones.¹³ These rules were created to establish a sharing environment for NGSO

¹⁰ See 47 C.F.R. § 1.3; *Northeast Cellular Tel. Co. v. FCC*, 897 F.2d 1164 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

¹¹ See *Northeast Cellular*, 897 F.2d at 1166.

¹² See *WAIT Radio*, 418 F.2d at 1157.

¹³ Blue Origin Project Sunrise Application at 8-13.

systems, prevent preclusion of future entrants in the same frequency band, and to prevent spectrum warehousing.¹⁴ This is in contrast to, among others, CSE’s misguided assertion that “[m]aintaining these requirements is the only way to ensure financial and environmental accountability for commercial actors using the shared orbital commons.”¹⁵ This assertion is not the purpose of the rules, and is not an appropriate basis for rejecting the waiver requests.

Blue Origin’s proposed use of the requested spectrum does not frustrate the purpose of these rules, and waiver is therefore appropriate. Project Sunrise is an orbital data center system that relies primarily on optical inter-satellite links, with only minimal use of Ka-band spectrum for TT&C functions – an inherently low bandwidth application – and as a result the system will be equipped with transmitters capable of dynamically selecting low-bandwidth operating frequencies as needed, further ensuring that no interference to other operators will occur.¹⁶ This architecture poses minimal risk of precluding other operators from accessing spectrum resources – precisely the concern these rules were designed to address — and the Commission has previously found such minimal risk sufficient to justify grant of similar waivers.¹⁷ Even setting aside Project Sunrise’s own operational characteristics, the Commission’s ongoing reconsideration of these very

¹⁴ See Amendment of the Commission’s Space Station Licensing Rules and Policies, 18 FCC Rcd. 10760, ¶ 25 (2003); see also Update to Parts 2 and 25 Concerning Non-Geostationary, Fixed-Satellite Service Systems and Related Matters, 32 FCC Rcd. 7829, ¶ 61 (2017).

¹⁵ CSE Comments at 6.

¹⁶ Blue Origin Project Sunrise Application at 8-13.

¹⁷ See, e.g., *Iridium Constellation LLC*, 31 FCC Rcd. 8675, ¶ 41 (IB & OET 2016) (waiving processing round requirements for an NGSO system because access will not preclude additional entry); *Northrop Grumman Space & Mission Systems Corporation*, 24 FCC Rcd. 2330, ¶¶ 23-34 (IB 2009) (same); *Space Imaging, LLC*, 20 FCC Rcd. 11964, ¶ 10 (IB 2005) (same); *Lockheed Martin Corporation*, 20 FCC Rcd. 11023, ¶ 15 (IB 2005) (same).

rules independently supports and grant of these waivers.¹⁸ In its recent Space Modernization rulemaking, the Commission has questioned the application and continued value of all of processing rounds, milestones, and bond payments.¹⁹ Accordingly, while the Commission considers the value of its own rules, continued application of them to U.S. providers is inherently counter to the Commission's aims in seeking to modernize these rules and better enable innovation, ensuring U.S. leadership in space.

Blue Origin also acknowledges that the Project Sunrise satellite design is currently being matured, and accordingly, Blue Origin intends to update or amend its application as the system and satellite design continues to mature.²⁰ The Commission's Rules permit waiver of the sufficient completion rules with an accompanying waiver request.²¹ Blue Origin maintains that it has provided sufficient information as required by the Commission's rules, not the speculative or desired rules by certain commenters, to overcome this burden and that grant of this waiver is appropriate. Where the Commission believes there are additional requirements Blue Origin must provide, Blue Origin requests that those items be addressed via conditions or requests for supplemental information, as it has done previously, rather than denial of this application.

Finally, grant of these waivers serves the public interest. The Project Sunrise system will ease mounting pressure on U.S. communities and natural resources by providing a less energy- and water-intensive compute alternative to terrestrial data centers, reducing demand on land, water

¹⁸ See *Space Modernization for the 21st Century*, Notice of Proposed Rulemaking, SB Docket No. 25-306, FCC 25-69, para. 133 (rel. Oct. 29, 2025) (*Space Modernization NPRM*); see also 90 Fed. Reg. 56338 (Dec. 5, 2025).

¹⁹ *Space Modernization NPRM* at para. 133.

²⁰ Blue Origin Project Sunrise Application at 12.

²¹ 47 C.F.R. § 25.112(b)(1).

supplies, and electrical grids. Expeditious grant of this authorization, will accelerate the deployment of a system designed to harness abundant, near-continuous solar power in space, delivering reliable, low-carbon compute, capacity that will help to make AI more accessible and advance innovation. The Commission's existing rules, combined with appropriate license conditions, provide adequate safeguards for responsible constellation deployment and therefore Blue Origin requests expeditious approval of this application with all requested waivers.

III. BLUE ORIGIN IS COMMITTED TO ENGAGING WITH NASA

The National Aeronautics and Space Administration's ("NASA") comments reflect a thoughtful and constructive approach to ensuring coordination between Project Sunrise and NASA's missions in LEO. Blue Origin is committed to early and sustained technical engagement with NASA and welcomes the opportunity to coordinate on the specific items NASA has identified, including ISS coordination for orbital insertion and disposal maneuvers, ephemeris sharing and conjunction assessment protocols, and mitigation strategies for potential impacts to NASA science missions.

Blue Origin notes that many of NASA's specific requests—such as details concerning concept of operations, deployment timelines, and spacecraft physical size—will be addressed as the system design matures. Blue Origin commits to working with NASA's designated coordination points, including the ISS Trajectory Operations and Planning group, at the appropriate stage of program development.

IV. THE COMMISSION SHOULD REJECT COMMENTERS' DEMANDS FOR NEPA REVIEW OF THE PROJECT SUNRISE APPLICATION

The Commission should reject commenters' assertions that the National Environmental Policy Act ("NEPA") requires the Commission to conduct an environmental review before

granting the Project Sunrise application. These arguments are legally unfounded, factually unsupported, and have been repeatedly rejected.²² The Commission should continue to reach the same conclusion here.

It has been found time and time again that NEPA is not applicable to space operations and therefore has no place in the review of this application.²³ The statute expressly excludes "extraterritorial activities or decisions, which means agency activities or decisions with effects located entirely outside of the jurisdiction of the United States" from the definition of "major federal action" subject to NEPA review.²⁴ The operations of satellites in orbit—including deorbit—are inarguably extraterritorial activities. The Commission itself has concluded that outer space activities should be excluded from NEPA review given that the effects are located outside of the jurisdiction of the U.S.²⁵ In fact, the Commission has previously stated, and the position was affirmed by the D.C. Circuit, that there is no need for separate environmental processing, even in contemplating the largest constellations.²⁶

²² *Space Exploration Holdings, LLC, Request for Orbital Deployment and Operating Authority for the SpaceX Gen2 NGSO Satellite System*, Order and Authorization, 37 FCC Rcd 14882 (2022) (“*SpaceX Gen2 Order*”) at para. 104; *aff’d Int’l Dark-Sky Ass’n v. FCC*, 106 F.4th 1206 (D.C. Cir. 2024).

²³ *Space Exploration Holdings, LLC*, 36 FCC Rcd 7995, at paras. 72–92 (2021) (“*SpaceX Gen1 Order*”); *SpaceX Gen2 Order* at paras. 113–125 (2022); *Space Exploration Holdings, LLC, Request for Deployment and Operating Authority for the SpaceX Gen2 NGSO Satellite System*, DA-26-36A1 (2026). at paras. 26-27.

²⁴ 42 U.S.C. § 4336e(10)(b)(vi).

²⁵ *Modernizing the Commission's National Environmental Policy Act Rules*, 40 FCC Rcd. 6377, para. 31.

²⁶ *SpaceX Gen2 Order* at para. 104; *Int’l Dark-Sky Ass’n v. FCC*, 106 F.4th at 1220.

Instead, the Commission has sought to provide alternative means for environmental protections within its own rules²⁷ or through conditions,²⁸ which Blue Origin is committed to demonstrating compliance with as its design matures. The Commission has also shown a commitment to enhancing its own rules regarding orbital debris and environmental impacts as technology advances.²⁹ Indeed the technologies contemplated here, and across many in-space operations, are at the cutting edge and rapidly evolving. The Commission's approach is measured, reasonable, and allows for calculated risk while permitting advancement. This is in stark contrast to the requests by commenters whose recommendations would instead see stagnation of progress through years of unnecessary and legally inapplicable environmental reviews, stalling progress without corresponding environmental benefit.³⁰ NEPA has no place in reviews of this applications and the Commission should continue to reject such requests, as adequate protections are already in place.

V. BLUE ORIGIN'S ORBITAL DEBRIS MITIGATION PLAN MEETS COMMISSION REQUIREMENTS FOR PROCESSING THE APPLICATION AT THIS STAGE.

Multiple commenters raised concerns about the quantity of potential orbital debris that could be generated by a constellation of this size and that this application does not include

²⁷ 47 C.F.R. § 25.114(d)(14) (requiring the mitigation of orbital debris); 47 C.F.R. § 25.283 (requiring appropriate disposal of satellites at end of life); and 47 C.F.R. § 2.106, n. US131 (requiring protections for radio astronomy).

²⁸ See, e.g., *Kuiper Systems LLC, Request for Modification of the Authorization for the Kuiper NGSO Satellite System*, Order and Authorization, 39 FCC Rcd 3987, 4000 (2024) (“*Amazon Order*”) (Kuiper must coordinate with NSF to mitigate impact on optical ground-based astronomy.); *SpaceX Gen2 Order*, at para. 98.

²⁹ See, e.g., *Orbital Debris in the New Space Age, Report and Order and Further Notice of Proposed Rulemaking*, 35 FCC Rcd 4156 (2020); *Space Innovation, Mitigation of Orbital Debris in the New Space Age* IB Docket Nos. 22-271 and 18-313, Second Report and Order, 37 FCC Rcd 11818 (2022).

³⁰ CSE Comments at 6; DarkSky Comments at 19.

sufficient end-of-life information.³¹ Blue Origin takes very seriously its obligations to operate safely in space and has included information on demise and end-of-life criteria in its application. Blue Origin is committed to providing additional information regarding its orbital debris mitigation strategy as its design matures. Blue Origin fully expects and finds appropriate that the Commission provide conditions for maturation of Blue Origin's orbital debris mitigation plan prior to operationalizing the Project Sunrise system, as it has done with previous constellation applications.³² Accordingly, the information provided at this stage is sufficient to continue to allow the Commission to process the application. Nonetheless, Blue Origin provides specific responses to orbital debris mitigation and space sustainability-related comments below.

With respect to in-space operations and conjunction avoidance, Blue Origin's satellites are designed to maintain collision-avoidance maneuverability throughout their operational lifetime, and down to the lowest altitude where attitude control can be sustained. This design ensures a minimum time from loss of maneuverability to disposal. Furthermore, the loss of maneuverability will occur only at an altitude below any manned space stations, where disposal will occur rapidly. Blue Origin always endeavors to comply with not only the letter of the law, but the spirit of the law, especially when it comes to matters of safety. To that end, Blue Origin endeavors to achieve a greater than 0.9 probability of successful disposal for any individual space station as currently contemplated by the Commission's rules and will prioritize this objective throughout design

³¹ Mr. Spieth Comments at 4-8; CSE Comments at 4; DarkSky Comments at 8; AAS Comments at 6-7.

³² See, e.g., *SpaceX Gen1 Order* at paras. 15, 40.p.; *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, (2020) at para. 32.

maturation of the Project Sunrise system. Accordingly, comments raising concerns that Project Sunrise will lead to increased orbital debris are unfounded and should be rejected.

Concerning end-of-life operations, Blue Origin recognizes that the Commission has previously found elegant solutions to manage orbital debris concerns raised by large constellation deployments.³³ The same approach should be applied here. The Commission has previously found that existing studies were insufficient to conclude that the formation of alumina from satellite re-entry were significant enough to warrant an environmental assessment under NEPA.³⁴ The Commission further required that the applicant continue to work with the scientific community to explore methods to collect data on this topic and report findings to help determine industry best practices going forward.³⁵ Blue Origin agrees with the Commission's finding and highlights that there is still a dearth of evidence-backed information on this topic. Blue Origin's appreciates the Commission's desire to not forestall progress for lack of information and instead encouraged the applicant to work with the scientific community to develop better standards. Blue Origin commits to working with the scientific community, as has been required by other constellation operators.³⁶ Such a requirement should satisfy any concerns related to end-of-life operations, and any requests by commenters to deny the application or that the requested waivers therein should be denied.

A. Blue Origin is Committed to Mitigation of Impacts to Optical Astronomy

Blue Origin takes seriously its responsibility as a steward of both the space environment and of Earth's environment, including impacts to the night sky. Contrary to the characterizations

³³ *SpaceX Gen2 Order* at paras. 116-118.

³⁴ *Id.*

³⁵ *Id.* at ¶ 118.

³⁶ *Id.*

of certain commenters,³⁷ Blue Origin's application includes multiple commitments to reduce impacts to the astronomy community, and by extension, observance of the night sky. In fact, Blue Origin is exploring a multi-faceted approach to reducing the visibility of satellites. There are many factors that influence satellite brightness such as altitude, surface orientation, surface texture, advanced coatings, and operational controls.³⁸ These commitments will be further developed as the satellite design matures and as the technology advances, which will largely be enabled through the development of these and other constellations.

Furthermore, Blue Origin seeks to better understand and mitigate the real impacts of satellite visibility for stargazers, amateur astronomers, astrophotographers, and professional astronomers. Blue Origin also understands the nuances of the impacts based on the time of day and intends to work with partners in the astronomy and Dark Sky communities to understand these needs quantitatively and address them. Accordingly, such concerns raised by commenters will be sufficiently mitigated, and Blue Origin welcomes continued dialogue with all stakeholders as it continues to develop mitigation techniques.

VI. SPACEX'S TECHNICAL COMMENTS CAN BE ADDRESSED THROUGH CLARIFICATION

SpaceX raises three categories of concerns: (1) alleged inconsistencies in Blue Origin's description of its Ka-band TT&C operations; (2) the efficiency of Blue Origin's proposed horn antenna design; and (3) discrepancies in technical parameters between the narrative, Technical Annex, and Schedule S. None of these concerns identifies a substantive technical or regulatory

³⁷ Spieth at 4; CSE at 4; DarkSky at 2-3; AAS at 2-3.

³⁸ Blue Origin Project Sunrise Application at A-9.

deficiency in the Project Sunrise application. Each is readily addressed through clarification or, where appropriate, a minor corrective amendment.

SpaceX states that Blue Origin's application contains conflicting statements about its use of Ka-band. Project Sunrise will rely primarily on optical inter-satellite links and will use Ka-band links to support TT&C functions across all mission phases. Blue Origin is prepared to provide additional clarification to the Commission if needed to harmonize the application to correctly reflect that Ka-band spectrum will be used for TT&C across all phases of mission operations, including nominal operations.

A. Blue Origin's Horn Antenna Design is Appropriate for its Minimal TT&C Architecture

With regards to SpaceX's concern regarding use of the horn antenna, as provided in the application, Blue Origin is specifically designing its system to minimize interference, and has only requested to utilize the Ka-band on a non-interference, unprotected basis. Accordingly, Blue Origin's use of the Ka-band poses no risk of interference to other operators.

Blue Origin's system complies with Section 25.202(g) of the Commission's rules, which requires that TT&C frequencies be selected "to minimize interference into other satellite networks"—a standard that accounts for the totality of a system's design, not merely antenna peak gain in isolation. Project Sunrise satisfies the rule by designing to operate with a nominal minimum earth-station elevation of 25° across most orbital planes, and Blue Origin commits to operate in full compliance with the PFD limits set forth in RR Article 21, Table 21-4. The specific transmit-power, EIRP, and PFD parameters governing those operations are addressed in response to SpaceX's third concern below.

Blue Origin appreciates SpaceX's interest in efficient spectrum use and shares the underlying objective of minimizing interference to co-frequency operators. The use of horn antennas is intrinsic to this design. Horn antennas preserve command and telemetry connectivity across all mission phases, including those in which precise pointing cannot be assumed — LEOP, attitude anomalies, and safe-mode recovery. Use of another antenna type would not permit the same level of assured command and telemetry connectivity, which would be contrary to the public interest as TT&C is critical to maintaining safe operations of each satellite. The peak-gain values SpaceX flags are not a defect; they are the deliberate, conservative output of a design optimized for all-attitude command and telemetry availability, consistent with well-established satellite-industry practice. The horn-based architecture proposed here reflects established industry practice for safety-critical TT&C links and, as described above, is consistent with the interference-minimization standard of Section 25.202(g).

Lastly, Blue Origin acknowledges that certain technical parameters reported in the Technical Annex differ from the corresponding values in Schedule S and notes the observations identified by SpaceX, specifically:

- Maximum EIRP values for the three antenna variants reported as 13.4 / 18.0 / 20.9 dBW in Table 3 of the Technical Annex, versus 19.6 / 26.4 / 32.5 dBW in Schedule S;
- PFD values at 0–2° elevation shown in Figure 1 of the Technical Annex as below –160 dBW/m²/MHz, versus Schedule S values as high as –157.2 dBW/m²/MHz; and
- PFD values at up to 25° elevation shown in Figure 1 as below –145 dBW/m²/MHz, versus Schedule S values as high as –143.4 dBW/m²/MHz.

With respect to the EIRP figures recited above, Table 3 of the Technical Annex reports Maximum EIRP on a per-1 MHz reference-bandwidth basis, consistent with the table caption "18.8–19.3 GHz, 1 MHz BW." The Schedule S Maximum EIRP entries cited above (19.6 / 26.4 / 32.5 dBW) report total EIRP across the maximum signal bandwidth associated with each antenna

variant, reflecting a combination of per-variant design objectives, link-budget closure across the altitude shell served by the variant, and PFD compliance. Each variant covers a range of altitudes (T1: 500–800 km; T2: 810–1,250 km; T3: 1,260–1,800 km), and the EIRP density for each variant is sized to close the TT&C link at the worst-case (highest) altitude in its range using a single antenna design per altitude shell i.e. T1, T2, and T3. The Technical Annex Table 3 entries reflect an earlier iteration in the design process and are superseded by the Schedule S values as filed; Schedule S sets forth the values that constitute Blue Origin's commitment as filed. The variant-to-beam mapping — Variant 1 (T1) corresponding to TX_ALL_1 and TX_ALL_2; Variant 2 (T2) to TX_ALL_3 and TX_ALL_4; and Variant 3 (T3) to TX_ALL_5 and TX_ALL_6 — also remains consistent.

Because Schedule S is the accurate as submitted and remains unchanged, the inconsistencies identified by SpaceX are confined to a supporting narrative exhibit, do not affect the bounding parameters that govern Project Sunrise's operations, and do not increase the disclosed interference potential of the system as filed. To the extent the Commission considers it appropriate, Blue Origin is prepared to file a conforming amendment to Table 3 and Figure 1 to align those exhibits with the Schedule S values, so that the two documents are directly comparable.

Blue Origin notes that it has separately requested a waiver with respect to certain Schedule S parameters; the matters discussed here are independent of, and do not depend on, that pending request.

VII. THE PUBLIC INTEREST STRONGLY FAVORS GRANT OF THE APPLICATION

Project Sunrise will deliver transformative public benefits by providing sustainable, solar-powered compute infrastructure. The exponential growth in demand for AI computing capacity is

straining terrestrial energy infrastructure and water resources. Project Sunrise offers a complementary path to meet this demand using clean, abundant solar energy available in orbit and advancing American leadership in both space and artificial intelligence. Accordingly, any requests that the Commission deny the application as contrary to the public interest are without merit and should be rejected.

CSE's assertion that "space activities should prioritize the benefit of the greatest number of people rather than serving narrow, energy-intensive industrial sectors" ignores the reality that AI computing underpins an enormous and growing range of applications that benefit society broadly—from healthcare and scientific research to education, agriculture, and national security. Increasing access to AI compute capacity is itself a profound public benefit, and Project Sunrise is designed to make such capacity accessible to all, sustainably.

Mr. Spieth's assertion that Blue Origin's proposed altitudes are inappropriate because they conflict with "far more important missions" reflects a view that commercial use of LEO should be subordinated to government missions. This view is contrary to decades of U.S. space policy, which has consistently promoted commercial use of space alongside government activities. LEO is not reserved exclusively for government missions, and the Commission has repeatedly authorized commercial constellations to operate in these altitude ranges. The future of space includes both government and commercial activities coexisting through coordination and responsible operations—not through the exclusion of commercial operators.

SWF and Mr. Spieth assert that Blue Origin should not be permitted to deploy a constellation because it has "no experience with orbiting satellites" is fundamentally anti-competitive and contrary to the Commission's longstanding policy of promoting new entrants and

innovation. The Commission has never imposed prior satellite operational experience as a prerequisite of licensing. To do so would foreclose *any* future new entrant from the market and stifle the very innovation that has made the United States a global leader in space.

VIII. CONCLUSION

For the foregoing reasons, the Commission should grant Blue Origin's application for authority to launch and operate the Project Sunrise Orbital Data Center System and reject any requests to deny the application.

Respectfully submitted,

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Dated: May 28, 2026

CERTIFICATE OF SERVICE

I, Kaitlyn Mahoney, hereby certify that on May 28, 2026, a true and correct copy of the above was served via U.S. mail (or by email where noted with an asterisk (*)) and where no mailing address was provided) upon the following:

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