



Submitted online

May 6, 2024

Australian Communications and Media Authority (“ACMA”)
Canberra Level 3
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PO Box
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Re: Comments on Five-Year Spectrum Outlook 2024-29 and 2024-25 Work Program

Amazon Kuiper Australia Pty Ltd, an affiliate of Kuiper Systems LLC (together, “Amazon”), respectfully submits these comments in response to the Public Consultation on the draft of the Five-Year Spectrum Outlook 2024-29 and 2024-25 Work Program (“Draft FYSO”). As explained herein, Amazon applauds the ACMA’s ongoing efforts to monitor the demand for spectrum for non-geostationary satellite orbit (“NGSO”) systems and ensure Australian regulatory arrangements allow use of new satellite developments to their full potential.

I. Background

Amazon’s mission is to be Earth’s most customer-centric company, and Project Kuiper is one of our ambitious projects to fulfill this mission. Project Kuiper is an initiative to increase global broadband access through a constellation of over 3,000 NGSO fixed-satellite service (“FSS”) satellites in low Earth orbit (“LEO”) that will provide high capacity, high-speed, low-latency broadband services to unserved and underserved communities around the world, including in Australia.

There are billions of people around the world who lack access to reliable broadband. Project Kuiper will help bridge this gap by delivering fast, affordable broadband to places beyond the reach of traditional fiber or wireless networks. It is inspired by customers in every corner of the world: by families working and learning together from home; by scientists and researchers operating in remote locations; by first responders providing disaster relief; and by companies of all sizes moving their business online. Project Kuiper will serve individual households, as well as schools, hospitals, businesses and other organizations operating in places without reliable broadband, including in rural and hard-to-reach places.

II. Comments on the Draft FYSO

As the ACMA observed in the Draft FYSO,¹ satellite communications play a critical role in enabling connectivity, providing services to rural and remote populations, helping terrestrial mobile operators to extend the reach of their networks, and rapidly establishing or restoring communications in cases of

¹ See Draft FYSO at 21-23.

emergency and disaster relief. NGSO FSS systems provide coverage and capacity that accelerates the ability of satellite operators and service providers to offer broadband connectivity in areas not served by fiber optic cable or terrestrial networks, expanding the availability of broadband services throughout.

Project Kuiper plans to use the 17.3-20.2 GHz frequencies for space-to-Earth (downlink) transmissions for communications between its satellites and gateway stations, as well as for communications with its telemetry, tracking, and command (“TT&C”) stations and its customer terminals. In ITU Region 1, the 17.3-17.7 GHz frequencies have been allocated to the FSS (space-to-Earth) for many years. At the 2023 World Radiocommunication Conference (“WRC-23”), these frequencies were allocated to the FSS (space-to-Earth) in ITU Region 2.² Also, WRC-23 agreed to study an allocation to the FSS (space-to-Earth) in ITU Region 3 such that, if agreed at WRC-27, there will be a globally harmonized allocation to the FSS (space-to-Earth) in this 400 MHz of spectrum.³

Amazon invites the ACMA to begin preparing for an allocation to the FSS in the 17.3-17.7 GHz frequencies in ITU Region 3 by amending its activities planned for 2024-25. Specifically, Amazon respectfully requests the ACMA to amend the *Satellite Planning* section of the Draft FYSO⁴ to include an initial investigation⁵ of the 17.3-17.7 GHz frequencies for an allocation to the FSS (space-to-Earth). Doing so will allow for the initial investigation, preliminary replanning, and implementation before, or at the time of, WRC-27. In turn, making the 17.3-17.7 GHz frequencies available for use by satellite services would demonstrate regional leadership to advance satellite broadband capabilities in the region and support more rapid and diverse deployment of satellite services in Australia.

III. Summary

Amazon is grateful to the ACMA for the opportunity to contribute to the development of the Draft FYSO. We look forward to working alongside with the ACMA to expand broadband access and increase customer choice for households and businesses in Australia. We would welcome the opportunity to meet with the ACMA to discuss these comments or any other issues of interest in this submission.

Respectfully submitted,



Gonzalo de Dios
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Project Kuiper

² See World Radiocommunication Conference 2023 Final Acts, Article 5, MOD 15.4-18.4 GHz.

³ Resolution 726 (WRC-23), *Possible new primary allocation to the fixed-satellite service (space-to-Earth) in the frequency band 17.3-17.7 GHz and possible new primary allocation to the broadcasting-satellite service (space-to-Earth) in the frequency band 17.3-17.8 GHz in Region 3, and consideration of equivalent power flux-density limits to be applied in Regions 1 and 3 to non-geostationary-satellite systems in the fixed-satellite service (space-to-Earth) in the frequency band 17.3-17.7 GHz*, available at <https://www.itu.int/hub/publication/r-act-wrc-16-2024/#:~:text=The%20Final%20Acts%20WRC%2D23,Recommendations%20approved%20by%20the%20Conference.>

⁴ Draft FYSO at 57-59.

⁵ See *Id.* at 29-31 (band-planning activities).