

Sateliot Response to ACMA's consultation "Five-year spectrum outlook 2024–29 and 2024–25 work program"

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Introduction

Founded in 2018, Sateliot is a Spanish company and the first satellite operator to deliver IoT (Internet of Things) connectivity through the 5G NB-IoT NTN standard, approved by 3GPP in June 2022 as an extension of the 5G terrestrial standard.

Our constellation acts as space-based cell towers, extending coverage for mobile network operators (MNOs) and offering global connectivity for devices compatible with 3GPP Release 17. Sateliot operates as an infrastructure provider, building and managing a satellite network for NB-IoT NTN coverage based on the 3GPP 5G NB-IoT NTN protocol, developed in collaboration with major players in telecommunications and IoT.

Sateliot's services will play a pivotal role in addressing connectivity challenges in rural, regional, and remote areas in Australia. Our innovative technologies not only enhance productivity but also hold the potential to contribute significantly to global emissions reduction efforts, aligning with sustainability goals and addressing environmental concerns.

In January 2023, Sateliot was granted an Apparatus License, allowing operations within the frequencies 2005.3-2006.3 UL and 2195.3-2196.3 DL to provide satellite narrowband IoT services in Australia.

After this brief introduction and before proposing our ideas and suggestions, we would like to welcome the opportunity to provide input into the consultation on the Five-year Spectrum Outlook 2024–29 and 2024–25 Work Program. As a stakeholder in the satellite communications sector, we are deeply committed to advancing connectivity solutions tailored to the evolving needs of rural, regional, and remote areas of Australia.

We would like to have our say in the following matters:

2GHZ Band

2 × 25 MHz (1980–2005 MHz paired with 2170–2195 MHz)

We would like to congratulate the progress made by ACMA in advancing the allocation of mobile satellite service (MSS), notably in the 1980–2005 MHz and 2170–2195 MHz bands, this reflects the commitment to fostering innovation within the satellite sector and contributes to regional development and connectivity.

However, we believe that while auctions can facilitate effective spectrum allocation and transparency, we have concerns regarding their applicability for startups and newcomers in the satellite communications sector. The substantial initial costs associated with auction participation can present entry barriers, especially for smaller companies such as startups with limited financial resources. This could disproportionately disadvantage newcomers and impede fair competition, given the financial advantage larger, well-established players may possess in terms of bidding capabilities.

Moreover, auctions often favour companies with significant spectrum holdings and market presence, providing them with a competitive edge to outbid others and acquire additional spectrum resources. This dynamic may reinforce the market dominance of established players and inhibit innovation and competition from emerging entrants.

Given these concerns, we suggest allocating an additional 5 MHz specifically for IoT services within the 1980–2005 MHz and 2170–2195 MHz bands. This allocation should not be on a shared basis with other operators but should be exclusively allocated to each player that asks for 1 MHz. This approach aligns with the 3GPP requirements for providing standard NB-IoT from space.

2 × 5 MHz (2005–2010 MHz paired with 2195–2200 MHz):

Now focusing on the 2005–2010 MHz and 2195–2200 MHz bands, ACMA's work to enable licenses in the 2 × 5 MHz narrowband segment for Internet of Things (IoT) and narrowband uses is commendable. This initiative demonstrates ACMA's recognition of the importance of IoT technologies in driving innovation and addressing connectivity needs in various sectors. By facilitating spectrum access for narrowband applications, ACMA contributes to the expansion of IoT services, thereby supporting technological development and economic growth.

Supporting Narrowband Internet of Things (NB-IoT) aligns well with the Ministerial Statement of Expectations as it promotes long-term public interest and supports policies related to regional development. Sateliot is fully committed to contributing to Australia's socioeconomic progress by embracing technologies that drive innovation, investment, and

the adoption of emerging technologies which will unleash a more sustainable and profitable future for multiple industries and use cases.

Optimising established planning frameworks

We are pleased to see the inclusion of both "Applications for test and demonstration purposes in the 2 GHz band" and "Direct-to-Device (D2D)" services in the work program as priorities for 2024. This demonstrates ACMA's dedication to advancing technological progress in satellite communications. Such initiatives are pivotal in enhancing connectivity and expanding access to innovative services across Australia.

As part of the applications and purposes in the 2 GHz band, we recommend closely monitoring 3GPP outcomes and technical requirements for standard protocols operating within the bands. This proactive approach will help ensure that Australian policy seamlessly aligns with international standards for emerging satellite technologies. Such alignment is crucial for promoting interoperability, facilitating global connectivity, and positioning Australia as a leader in satellite communications innovation.

Conclusion

Sateliot emphasizes the importance of considering the economic and social impact of price-based allocation mechanisms. While these mechanisms may offer benefits, it's crucial to avoid disadvantaging SMEs and startups unintentionally. Thus, a comprehensive evaluation of their implications is essential to ensure fair access and promote a dynamic and inclusive environment for innovation and development.

In conclusion, Sateliot remains deeply committed to collaborating with ACMA and other stakeholders to drive innovation, expand connectivity, and promote sustainable development in Australia. We appreciate the opportunity to contribute to shaping the future of satellite communications in Australia and look forward to continued collaboration in the years ahead.