



nbn's submission on the Draft FYSO 2023-28

12 May 2023

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Thank you for the opportunity to comment on the 'Five-year spectrum outlook 2023–28 and 2023–24 work program, Draft for consultation' (**Draft FYSO 2023-28**), including the priorities outlined in the proposed annual work program.

nbn was established in 2009 as a Government Business Enterprise, to provide fast, reliable and affordable connectivity and to enable Australia to seize the economic opportunities before it and service the best interests of consumers. It remains the principal responsibility of **nbn** to operate and continue to build and upgrade the **nbn** network in accordance with the expectations of the Government.

nbn is required by legislation to operate as a wholesale only, open access, non-discriminatory operator. In doing so, **nbn** has developed wholesale products that Retail Service Providers (**RSPs**) use as inputs to their own retail products. This is intended to level the playing field in the Australian telecommunications industry, enhancing competition and innovation, and providing greater choice for customers across the country.

Under the *Telecommunications Act 1997 (Cth)*, **nbn** is the default Statutory Infrastructure Provider (**SIP**) across all of Australia. This means **nbn** has an obligation to connect all premises to broadband services that meet specified requirements (except in areas where another carrier is the nominated SIP). Under the SIP regime, where it is not reasonable for the SIP to connect premises to a fixed-line network, it must provide fixed-wireless or satellite technology at minimum prescribed upload and download speeds.

In addition to meeting its obligations under the SIP regime, **nbn**'s objectives are set by the Shareholder Ministers' Statement of Expectations (**SoE**). The Government issued **nbn** with a revised SoE on 19 December 2022.

nbn's spectrum requirements have been developed to enable **nbn** to meet its obligations as the default SIP and as set out in the SoE, taking into account the multi-technology mix model and anticipated future demand for services.

Comments on Draft FYSO and work program

We have provided our comments below on the Draft FYSO 2023-28 and work program.

Mid-Band Spectrum

nbn appreciates the work of the ACMA over the past financial year to continue the progress of arrangements for the allocations of 3.4 – 4.0 GHz spectrum across various parts of Australia.

[C-i-C] [C-i-C]

nbn is concerned by the proposal the ACMA has flagged that would exclude **nbn** from participating in the initial allocation window for area-wide apparatus licences (**AWLs**) in the 3.8 GHz band.

We understand the ACMA intends to consult on a draft Applicant Information Pack (AIP) for the 3.8 GHz AWLs within the coming months. Prior to this consultation we urge the ACMA to reconsider its proposed approach to apply zero allocation limits to existing licence holders for an initial period.

nbn also notes that the available spectrum for the 3.8 (metropolitan and regional) AWLs allocation (as set out in the Draft FYSO 2023-28) suggests that a 15 MHz guard band is being implemented for this allocation. We are keen to understand the rationale for this provision. **nbn** considers that alternative protection mechanisms could be more appropriate/efficient in some circumstances, such as the fall-back synchronization frame rate condition previously implemented in both 3.4 and 3.6 GHz spectrum licences.

[C-i-C] [C-i-C]

We look forward to further consideration of these matters as the consultation on the 3.8 GHz allocation progresses.

Adequate spectrum for Wi-Fi

Reliable and high performing Wi-Fi is an important aspect of the in-premise networks through which customers access the **nbn**'s network. We support the acknowledgement in the Draft FYSO 2023-28 that "RLAN technology, specifically wi-fi, has become an integral part of everyday modern life and wi-fi use continues to expand, with more diverse devices using these networks".

It is important for the ACMA to ensure adequate spectrum is available to accommodate next generation Wi-Fi devices and to allow for the increasing traffic being carried over Wi-Fi networks.

We appreciate the steps already taken by the ACMA to support uptake of Wi-Fi 6e by making changes to the low interference potential devices (**LIPD**) class licence to allow RLAN equipment in the lower part of the 6 GHz band (5925–6425 MHz).

nbn supports the further investigation of possible future arrangements in the upper 6 GHz band (6425–7125 MHz) for RLAN, following considerations at the International Telecommunication Union's (**ITU**) World Radiocommunication Conference 2023 (**WRC-23**). **nbn** would also see benefit in exploring whether there is an opportunity for co-existence in the upper 6 GHz band, between RLAN and other potential outdoor use cases.

Expiring Spectrum Licences and Use

nbn's 2.3 GHz and 3.4 GHz licences expire in 2030 and are critical to the supply of our FW network and **nbn**'s ongoing ability to meet the Government's SoE and our SIP obligations, and our objective of bridging the digital divide for regional Australians. This spectrum is used as a coverage layer for our FW network with the use of our 28 GHz mmWave holdings used as a capacity layer.

Our FW network investment decisions require long-term certainty. This is particularly the case given the equipment and available technology is influenced by our spectrum holdings and determines the products that we can offer to RSPs. We are therefore supportive of the ACMA's intention to commence consultation in Q2 2023 on a range of matters relating to expiring spectrum licence process and use, as the first step in developing a new licence renewal process. It is important for long term planning that those processes are developed well in advance of licence expiry timeframes.

Core satellite bands in 7-24 GHz

The draft FYSO indicates that the ACMA is aware of global discussions regarding interest by some parties in spectrum in the 7-24 GHz range for a possible IMT identification through a future WRC agenda item.

We recognise that these are only preliminary discussions. However, as ACMA is aware, **nbn** has 1500 MHz of nationwide VSAT downlink spectrum and 600 MHz of gateway downlink spectrum within the 7-24 GHz range, which must remain protected. Our ongoing access to this band must be prioritised, as it remains a critical component of **nbn**'s ability to continue to meet its obligations under the SIP regime and as set out in the SoE.

Additional satellite bands

We support the ACMA continuing to monitor the 40 GHz (37 – 43.5 GHz), 46 GHz (45.5 – 47 GHz) and 47 GHz (47.2 – 48.2 GHz) band.

With end-of-life for **nbn**'s existing satellites of 2030/2031, the option of deploying future satellites continues to be considered within **nbn**'s satellite strategy and we would like to reiterate the relevant spectrum requirements for

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this option. **nbn** will rely on unconstrained access to spectrum in the 40 and 50 GHz bands for future satellite gateways, which would require access to part of the 37.5 - 42.5 GHz band (that could overlap with that required for user links), and all the 47.2 - 50.2/50.4 - 51.4 GHz band being allocated to the Fixed Satellite Service and excluded from consideration for mobile use in Australia.

nbn would also like to reiterate that it is keen to ensure additional spectrum is made available for satellite services by amending the relevant Class Licence to enable the following additional space-to-earth bands:

- 20.2 - 21.2 GHz [C-i-C] [C-i-C]; and
- 2.5 GHz in the 37.5 - 42.5 GHz range [C-i-C] [C-i-C].