

**Submission in response to ACMA Draft Five-year  
spectrum outlook 2025-30 and 2025-26 work  
program**

**NBN Co**

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## Introduction

Thank you for the opportunity to comment on the 'Five-year spectrum outlook 2025–30 and 2025–26 work program, Draft for consultation' (**Draft FYSO 2025-30**), 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, as set out in the Shareholder Ministers' Statement of Expectations (SoE).

As of February 2025, 8.63 million homes and businesses are connected to the nbn network, with 12.53 million premises able to connect.

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). 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.

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 2025-30 and work program.

### 2300-2302 MHz

As noted in the Draft FYSO 2025-30 the current 98 MHz of spectrum available in the 2.3 GHz band is not optimised for 5G technologies. Therefore, there is interest in making the 2300-2302 MHz band available for WBB use. While this spectrum remains listed for initial investigation, we note that no activities are proposed for this spectrum in the work plan, with the ACMA noting it will reassess timing and priority in FYSO 2026-31.

nbn has an interest in this band for WBB and requests that the ACMA commence consideration of this band as a priority. It becomes increasingly relevant and valuable as the frequency is re-used with wider channel bandwidths available in 5G up to and including 100 MHz. It is desirable to have certainty on this activity in advance of the renewal process for the band.

### 3.4-3.8 GHz spectrum licence spurious emissions

In addition to nbn's existing 3.4 GHz spectrum licences, nbn has recently acquired access to spectrum in the 3.8-3.95 GHz band under the AWL allocation process. However, there appears to be a conflict between the AWL and 3.4 GHz spectrum licence technical framework that may preclude nbn (and other holders of both AWL and spectrum licences) from being able to operate common radio equipment across both holdings.

In particular, due to the existing spurious emission frequency boundary at 3840 MHz for existing 3.4 GHz spectrum licences, the AWLs cannot currently be utilised with the deployment of systems that are tuneable to use both the AWL and spectrum licensed spectrum. It would be valuable to address this conflict to facilitate such a deployment concept, since this equipment is available in the market.

nbn requests that the ACMA add consideration and resolution of this issue with existing licence holders as part of its forward work plan for 2025-26.

For completeness we note that the 3.4-4 GHz band has not been included in Table 1: band-planning activities, although it is subsequently included as being at the implementation stage within the text of the Draft FYSO 2025-30.

### Expiring Spectrum Licences (ESL)

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.

nbn will respond in detail to the ACMA's recently released Stage 3 Consultation Paper on Expiring Spectrum Licences. We appreciate the acknowledgement in the Consultation Paper that renewal of mid-band spectrum licences is generally likely to promote the long-term public interest derived from the spectrum, where they are used for either WA WBB or fixed wireless. We look forward to ongoing engagement with the ACMA on this significant work stream.

We note that the Minister has asked the ACMA to work with the Department to explore the merits of a secondary licensing framework, and how it could be established in the context of the current ESL process. We would like to better understand the secondary licensing proposal in more detail and the relevant circumstances in which the ACMA perceives that such a framework could be utilised, given it would be a significant departure from existing arrangements.

### Upper 6 GHz (6425-7125 MHz)

nbn has a strong interest in the planning arrangements for the upper 6 GHz band as an existing holder of a large number of licences for point-to-point links within this band. All of these links are in existing use as an essential component of the FW network, delivering the backhaul to sites as dimensioned to meet the needs of the Fixed Wireless and Satellite Upgrade Program. In the future nbn is likely to need further licences in this band for additional point-to-point links. As the demands of customers data consumption continue to grow, we also anticipate expansion required on some links.

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In December 2024 the ACMA announced its planning decision for the band, which includes:

- The inclusion of the frequency range 6425–6585 MHz into the LIPD class licence, to support RLAN use. These new arrangements will come into effect when the ACMA remake the LIPD class licence before it sunsets in October 2025.
- That the frequency range for 6585 –7100 MHz:
  - be reserved for WA WBB in yet to be defined metro areas/regional centres, subject to the ACMA being satisfied that the market for the manufacturing of equipment in this frequency range to support WA WBB will be established.
  - outside defined population areas, the ACMA will consult on the introduction apparatus-licensed WBB services on a coordinated basis with incumbent services.

As noted in nbn’s submission in response to the Options Paper: Future Use of the Upper 6 GHz band, nbn supports the allocation of spectrum to RLAN, but the allocation of any part of the upper 6 GHz band for WA WBB in areas where point-to-point is in use will cause considerable expense and disruption to industry.

In particular, we note that:

- There is currently no easily substitutable alternative spectrum to move nbn’s existing point-to-point links to, due to nbn’s already deployed radio equipment and the performance requirements of the link designs in use.
- The ACMA Outcomes Paper estimates the cost of relocation for incumbent point-to-point services to be in excess of \$114 million – nbn’s estimates suggest this number is in an appropriate range and indicate a very significant CAPEX implication that would not deliver any intrinsic capability uplift.
- The ACMA has placed a spectrum embargo on the band that prohibits the issuing of new apparatus licences in the upper 6 GHz band and this includes assignments for existing licensees seeking to expand their radiocommunications systems in this frequency range.

Neither the Outcomes Paper nor the Draft FYSO 2025-30 provide any guidance on the timing or process for resolving the impacts for existing licensees of any future band clearing required for the introduction of WA WBB. nbn proposes that the 6585 –7100 MHz section of the Upper 6 GHz should be flagged as monitoring rather than implementation and no further progress should be made towards a WA WBB allocation until a solution is identified and agreed with existing license holders.

We note that the Draft FYSO 2025-30 proposes to consult on apparatus licensed WBB arrangements in 6585-7100 MHz outside defined population areas in Q3 2025, and that this process will also seek feedback on the scope and coverage of the defined population areas for WA WBB. Given that reservation for WA WBB is subject to the establishment of international equipment markets, we believe that the proposed Q3 consultation is premature.

nbn maintains its view that more evidence is needed to determine the quantum of spectrum needed for WIFI/RLANs. There is a long-term requirement to support ever faster in home experiences and hasty segmentation of Upper 6 GHz for WBB risks precluding future needs.

## **Consideration of higher-power 6 GHz band RLAN**

nbn supports the proposed ongoing consideration of the potential to permit higher power/EIRP RLAN use, as flagged in the Draft FYSO 2025-30. Any power increases proposed for RLAN co-existence in Australia would need to be supported by robust and suitable modelling to ensure it doesn't introduce interference to our widely deployed point-to-point links. However, in principle, if the relevant studies are completed to demonstrate no increase to aggregate interference, nbn welcome the assessment of AFC for standard power and exploration of the outdoor/indoor split as perhaps a less burdensome approach to enabling 'standard power' for RLANs indoors.

## **Satellite**

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. 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.

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.

nbn supports the ACMA's focus on ensuring that regulatory arrangements and spectrum access will enable Australia to fully benefit from new developments in emerging low earth orbit (LEO) satellite, including through the Universal Outdoor Mobile Obligation, which the government announced on 25 February 2025.