Ericsson Submission to the Australian Communications and Media Authority's Draft Five Year Spectrum Outlook (FYSO) 2026-31

April 2026

Introduction

- Ericsson welcomes the opportunity respond to the Australian Communications and Media Authority's (**ACMA's**) draft Five Year Spectrum Outlook 2026-31 (**FYSO**).
- While Ericsson remains supportive of the **FYSO** format, we also endorse the Australian Mobile Telecommunications Association's (**AMTA's**)[1] proposal to complement **FYSO** with a new national strategic spectrum strategy.
- Provided below is a market update, recommendations for an Australian spectrum strategy for 6G, responses to band planning proposals and other issues.
- Ericsson also supports the submission made in response to the **Draft FYSO** by **AMTA**.

Executive Summary

- Acceleration of mobile technology adoption continues with increases in mobile network data traffic, 5G subscriptions and 5G standalone network deployments.
- 6G, to be launched in 2030, will redefine service standards with higher bit rates and lower latency, with standard development progressing.
- Australia has an opportunity demonstrate leadership as an early adopter of 6G by:
  - considering options to allocate up to 1.5-2.2 GHz of additional new mid-band spectrum no later than 2028 to support 2030 commercial launches.
  - tracking 3GPP developments that currently propose 200 MHz as the baseline 6G channel bandwidth, with up to 400 MHz under certain conditions.
  - committing to continued monitoring of international developments in the upper 6GHz band, specifically how Radio Local Area Network (**RLAN)** and International Mobile Telecommunications **(IMT)** will coexist in adjacent spectrum.
  - committing to use of n104 3GPP radio equipment within the upper 6 GHz band.
  - progressing with a digital dividend allocation in the 600MHz band to mitigate capacity constraints in currently congested low-band allocations, and support 6G as a coverage layer.
  - ensuring alignment with 3GPP, including harmonised emission standards, for spectrum licences reissued as an outcome of the expiring spectrum licence process.
- Also, Ericsson continues to support:
  - in-market 2.3 GHz allocations transitioning to spectrum licences to improve spectrally efficiency and create 5G channel bandwidths.
  - spurious emissions in the 3400 - 4000 MHz aligning with area wide licence conditions by changing the upper edge to 4040 MHz.
  - no spectrum sharing with Wide Area (**WA**) Wireless Broadband (**WBB**) technologies.

[1] Future of Mobile: Modernising Australia's telecommunications framework - AMTA | The Voice of the Australian Mobile Telecommunications Industry

- review of emission level licence requirements in the 700MHz, 3400-4000 MHz and 1800MHz bands to align with the ACMA's commitment to support the government's net zero emission targets.

Market Update

The latest *Ericsson Mobility Report*[2] ***(Report)****:*

- found that 5G population coverage expected to reach 45 per cent globally outside mainland China during 2025.
- observed that by the end of 2025, 5G subscriptions reached 2.9 billion or about one-third of all mobile subscriptions globally, with an additional 400 million people gaining access to 5G coverage.
- noted mobile network data traffic grew 20 per cent between Q3 2024 and Q3 2025.
- explained that at the end of 2025 around 360 service providers have now launched commercial 5G services, and more than 90 of those have launched or soft-launched 5G standalone (**SA**).
- noted that 5G is anticipated to overtake 4G as the dominant mobile access technology by subscription by the end of 2027, nine years after launch.
- forecast that by 2031:
  - global 5G subscriptions would reach 6.4 billion and make up two-thirds of all mobile subscriptions
  - 1.2 billion people globally will be served by 5G Fixed Wireless Access-based broadband.
  - Western Europe, North America and the GCC countries will have 5G subscription penetration of above 90 per cent.
  - most networks in leading countries will have been upgraded to 6G.
- The **Report** also reflects that 6G, AI and cloud will redefine service possibilities, and that:
  - 6G is expected to have only a standalone architecture with a core network built on the architectural principles of 5G SA, extended with new capabilities such as AI and integrated sensing and communication (**ISAC**).
  - standardization discussions for 6G (3GPP Release 21, based on ITU IMT-2030) have begun.
  - a new Radio Access Network (**RAN**) architecture will be defined, including a new radio interface. For traditional use cases like enhanced mobile broadband (**eMBB**), Fixed Wireless Access (**FWA**) and the Internet of Things (**IoT**), 6G will advance the performance, service differentiation and guarantees.
  - global 6G subscriptions[3] are forecast to reach 180 million by the end of 2031, not including early uptake of AI-enabled IoT devices such as autonomous vehicles, smart glasses and drones.

[2] Ericsson Mobility Report, November 2025

- the US, China, Japan, the GCC countries and South Korea are expected to be among the first to roll out 6G commercial services.
- India has been vocal in its ambition to lead in 6G technology, and it is expected that the timing of the commercial 6G launch compared to other countries will happen earlier than it did for 5G.
- Europe is anticipated to launch 6G about one year later, relative to other countries, than was the case for 5G, due to the later roll out of 5G SA.

Spectrum strategy for 6G

- 6G will be available by 2030, offering higher bit rates and lower latency.
- 6G will need:
  - approximately 1.5-2.2 GHz of additional wide-area spectrum, to enable mobility for many capacity-demanding 6G use cases at scale.[3]
  - 200 MHz as the baseline channel bandwidth, with up to 400 MHz supported on the network side under certain conditions[4], as per the current 3GPP working assumptions for IMT-2030 (6G).
- Australia has an opportunity to demonstrate leadership as an early adopter of 6G by:
  - ensuring additional wide-area spectrum is allocated for 6G, with new allocations no later than 2028 to support 2030 commercial launches.
  - ensuring n104 3GPP radio equipment within the upper 6 GHz band is supported.
- Ericsson also recommends that the **ACMA**:
  - holistically considers the following three frequency ranges as part of decision-making processes for IMT allocations in upper mid bands:
    - 6585 – 7100 MHz (set aside for IMT in Australia)
    - 7100 – 7125 MHz (currently used for TOB in Australia)
    - 7125 – 7250 MHz (most likely IMT identification segment of the 7125 - 8400 MHz band WRC-27 AI 1.7)
  - ensures that planning decisions for 6585 – 7100 MHz range do not jeopardise future expansion up to 7250 MHz. This includes technical conditions, locations and spectrum licence expiry dates.
  - acknowledges the potential for IMT-2030 (6G) in 7125 MHz- 8400 MHz range, by progressing the band to the initial investigation stage in 2026-27, to ensure timely availability for 6G launch in 2030.
- While Ericsson welcomes all efforts to explore new opportunities for spectrum for **IMT**, at this time, we do not believe 14.8-15.35 GHz has the same level of urgency as 4 GHz and 7125-8400 MHz.

[3] Please see 6G Spectrum -Enabling the Future Mobile Life Beyond 2030, and Ericsson Co-creating a Cyber-Physical World
[4] 3GPP TSG-RAN-WG4-2602139

- Also, Ericsson supports **AMTA's** proposal in the *Future of Mobile: Reforms to modernise Australia's telecommunications*[5] that recommends the development of a spectrum strategy, in addition to **FYSO**, to:

  > *"establish clear allocation, licensing, and reassignment plans to ensure this finite resource is used efficiently to support Australian leadership in advanced and emerging technologies."*

- As AMTA notes, such an approach:
  - would inform Australia's position in international fora such as the ITU World Radio Conferences to support AI-enabled networks and 6G readiness and prepare the way for the future of TV and satellite to mobile services.
  - is aligned with what has been adopted in other jurisdictions. For example, the United States' National Spectrum Strategy[6], the UK's Wireless Infrastructure Strategy[7] and the EU's 6G strategic work through the Radio Spectrum Policy Group[8].

Band Planning

600MHz

- We note the former Minister's commitment to investigate the potential for a digital dividend in the 600MHz band[9], and urge the ACMA to advocate for such an investigation to progress.
- We also support the proposed free-to-air TV **DVB-T** to **DVB-T2** change that would create spectrum efficiency with a goal of a future digital dividend allocation in the 600MHz band.
- Additional IMT spectrum in the 600MHz band:
  - would assist mitigate capacity constraints in low-bands, where end users at the edge of coverage cannot access mid-bands.
  - could also support 6G as a coverage layer without impacting already congested 4G and 5G low band channels.

1800 MHz and 2 GHz Outside Spectrum Licenced Areas

- We note the outcome the 2024 consultation and recent consultation on the *technical framework for renewed 850 MHz and 1800 MHz band spectrum licences*[10] are yet to be published.
- We reiterate support, as detailed in our submissions to these consultations, for:
  - alignment with 3GPP standards, rather than following existing licence requirements in the current spectrum licences for these bands.

[5] Future of Mobile: Modernising Australia's telecommunications framework - AMTA | The Voice of the Australian Mobile Telecommunications Industry

[6] US National Spectrum Strategy

[7] UK Wireless Infrastructure Strategy

[8] EU RSPG25-006 - 6G Strategic Vision

[9] Rowland, M. 2024, Speech to THE ACMA RadComms Conference 2024

[10] Technical framework for renewed 850 MHz and 1800 MHz band spectrum licences | ACMA

- harmonised emission requirements, both inside and outside spectrum licenced areas, for renewed spectrum licences expected in June 2028.

2300 MHz – 2302MHz

- We support 2300 MHz to 2302 MHz frequency range becoming part of the 2.3 GHz spectrum licensed band to improve the spectrally efficiency of the band and create new 5G channel bandwidths.
- Whilst it is difficult to compare Amateur Radio and **IMT** against the long-term public interest criteria, we note that the 2300 MHz to 2302 MHz frequency range is a secondary service which is underutilised by the amateur fraternity. We also note that Earth-Moon-Earth communications is undertaken in many other amateur bands from 50 MHz to 10 GHz and not solely a requirement of this frequency range.
- According to ACMA Embargo 65:

  "*The ACMA has previously indicated it would review options to expand the 2.3 GHz spectrum licence band from 98 MHz to 100 MHz Australia-wide, most recently in the Five-year spectrum outlook 2012-2016.*"
- In the ACMA's FYSO for 2019-23 this frequency range was moved to the initial investigation stage, however, there has been no progress to date.
- Currently there are technical limitations applied to the 2.3 GHz spectrum licence band resulting in sub-optimal spectrum efficiency due to this bespoke frequency range not being allocated for IMT.
- Ericsson recommends the 2300 to 2302 MHz frequency range is transitioned to the preliminary replanning stage for 2026-27, with an objective of also aligning licence emissions requirements with 3GPP 36/38 series wide area base station standards below 2300 MHz and above 2400 MHz. Achieving this goal would also support reducing power consumption and carbon emissions by all spectrum licence holders in the band.

3.4 – 4.0 GHz band

- The 2022 3.4 GHz Ministerial Policy Statement[11] states as an objective:

  "*supporting the deployment of new and innovative technology including 5G*".
- Globally, radios built for 5G often extend above 3800 MHz but cannot be offered in Australia to spectrum licence holders.
- Ericsson strongly recommends the spurious emissions domain in spectrum licences align with area wide licence conditions by changing the upper edge to 4040 MHz.
- This proposal has broad industry support, including **AMTA**, and has remained a key recommendation of Ericsson's response to the Draft FYSO in 2024 and 2025.
- We note the issue remains unresolved and recommend resolution be considered as a high priority.

[11] Ministerial policy statement for the 3.4-4.0 GHz spectrum band | Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts

4 GHz

- We believe this band has great potential to support **IMT** due to its mid-band characteristics.
- Further a product ecosystem already exists for the frequency range 4400-5000 MHz (3GPP n79). However, associated technical conditions on the band, should not constrain wide-area macro deployments, which could naturally limit the advantages available from its release.
- We consider this band a lower priority however, than 600 MHz and Upper 6 GHz.

6GHz - Wireless (mobile and fixed) broadband

- Ericsson supports the ACMA's continued monitoring of developments in the upper 6 GHz band internationally, and the focus on how Radio Local Area Network (**RLAN)** and International Mobile Telecommunications **(IMT)** will coexist in adjacent spectrum.
- In our view, the **ACMA's** process for deciding future use of the broader 6585-7250 MHz range should be aligned with international practices where the 7125-7250 MHz range is being studied for IMT identification in preparation for WRC-27, and noting the RSPG opinion[12] released in November 2025.
- To support competitive 6G services in Australia, the **ACMA** should prioritise replanning 7100–7125 MHz to enable at least three contiguous, harmonised 200 MHz IMT blocks within 6585–7250 MHz.
- Ericsson strongly supports Australia staying aligned to global developments in relation to the Upper 6 GHz band to avoid time, cost and complexity of a bespoke solution evolving for the Australian market.
- For that reason, Ericsson is requesting that with respect to the ACMA's decision on the use of the upper 6 GHz band, the use of n104 3GPP radio equipment within the band is supported.

Other issues

Spectrum Bands supporting Wireless Broadband

- We acknowledge the ACMA's support:
  - to permit use of newer technologies such as wideband power amplifiers, noting recent updates to the 700MHz spectrum licences. However, we see a future opportunity to further reform these licences if spectrum currently earmarked for PSMB, in 3GPP band 27, is no longer required.
  - to update technical conditions for the 2.5 GHz band. While we await the update to the 2.5 GHz band licences, we urge the ACMA not to dismiss further changes requested but not approved in the Technical Liaison Group (**TLG**). Specifically, Ericsson's request is to achieve further alignments with European standards when the 2.5GHz band is reviewed as part of the expiring spectrum licence process in 2027.

[12] https://radio-spectrum-policy-group.ec.europa.eu/document/download/3301c2fd-7bff-4ecf-bfcd-cfb572a5972f_en?filename=RSPG25-031final-RSPG-Opinion-Upper_6GHz_band.pdf

Spectrum sharing

- Ericsson does not support and advises against spectrum sharing in IMT bands.
- This includes IMT sharing in a co-channel scenario, in the same area because:
  - IMT technologies are deterministic, not opportunistic.
  - as the IMT network controls all its devices, it is very effective at providing a service to an end user.
  - if IMT spectrum is shared with non-licenced, opportunistic spectrum users, interference can occur resulting in a poor quality of service and reduced coverage.

Net Zero Emissions

- Ericsson recognises the ACMA's role to "*consider and contribute to, where possible, the government's policy priorities regarding… Net Zero by 2050 and the role that digital infrastructure and services can contribute to this objective.*"[13]
- This aligns with Ericsson's own commitments[14] to:
  - Achieve Net Zero across our value chain by 2040.
  - cut emissions by 50% in our supply chain and to become Net Zero in our own activities by 2030.[15]
  - a supplier climate target for 350 of our high emitting and strategic suppliers to halve their absolute greenhouse gas emissions by 2030, with a requirement to make their commitment public.
- Ericsson supports the government and **ACMA**'s commitment to meet net zero targets through the manufacture of more energy efficient radio equipment.
- However, Ericsson notes that the ACMA's adoption of non-3GPP bespoke emissions level licence requirements typically result in increased power usage, with adverse consequences for carbon dioxide emissions. For example:
  - 700 MHz band spectrum out of band emissions, as detailed in **AMTA's** submission to **ACMA** consultation.[16]
  - Ericsson's newest and most efficient radios, that can operate in 3400 – 4000 MHz, cannot be used by spectrum licence holders due to spurious emission requirements needing to be met above 3840 MHz.
  - in-band emission requirements in the 1800 MHz band require radios to operate at reduced energy efficiency.
- Ericsson recommends the ACMA reconsider emission level licence requirements in the 700MHz, 3400 - 4000 MHz and 1800MHz bands.

[13] Draft FYSO 2026-31, p. 9
[14] How 5G & connectivity can support climate action - Ericsson
[15] Off a 2020 baseline.
[16] ACMA Review of the 700 MHz spectrum licence technical framework