ARA Submission

Ministerial Policy Statement – Expiring Spectrum Licences

Consultation Paper

12 April 2024

The ARA

The Australasian Railway Association (ARA) is the peak body for the rail sector in Australia and New Zealand and advocates for more than 220 member organisations across the industry.

Our membership covers every aspect of the rail industry, including the:

- passenger and freight operators that keep essential rail services moving,
- track owners, managers, and contractors that deliver a safe and efficient rail infrastructure network; and
- suppliers, manufacturers, and consultants that drive innovation, productivity, and efficiency in the rail industry.

Our members are driven to support vibrant, sustainable, and connected communities through greater rail use across Australia and New Zealand. We bring together industry and government to help achieve this ambition.

Our advocacy is informed by an extensive research program, which ensures we offer solutions grounded in evidence and focused on delivering tangible value in our daily lives.

The rail industry is crucial to the region's sustainable development and growth and offers meaningful and rewarding careers for tens of thousands of people.

Our significant work program is focused on supporting a strong advocacy agenda and creating opportunities for the rail industry to network, collaborate, share information, and maximise the benefits we offer the wider community.

ARA thanks the Department of Infrastructure, Transport, Regional Development, Communications, and the Arts for the opportunity to make this submission, which was developed in consultation with ARA member organisations.

Any questions regarding this submission should be directed to Jesse Baker, General Manager Passenger Rail and Safety, via jbaker@ara.net.au

Australia's Rail Industry

Rail is a significant industry in Australia, creating economic activity through its operations and capital investments. It is an industry with activities across every major metropolitan and regional area and is supported by the full spectrum of skills in the Australian workforce.

In 2019, the rail industry contributed around $30 billion to the Australian economy and employed more than 165,000 workers (directly and indirectly in full-time equivalent terms, FTE). The industry is made up of around 900 businesses that are located in approximately 20 major hubs.

ARA View on Draft Ministerial Policy Statement (MPS)

ARA welcomes the invitation to make a submission on the draft Ministerial Policy Statement—Expiring Spectrum Licences.

ARA provides the following information to respond to the Department of Infrastructure, Transport, Regional Development, Communications and the Arts consultation with stakeholders on the draft Ministerial Policy Statement. The MPS specifies the policies of the Government that the Australian Media and Communication Authority (ACMA) must have regard to in performing its spectrum management functions, and exercising its spectrum management powers concerning certain licences that are due to expire between 2028 and 2032.

1. Application of MPS to spectrum licences currently held by metropolitan rail operators

ARA recognises that the MPS is not intended to apply to the expiring spectrum licences currently used for metropolitan rail safety and communications services in the 1800 MHz band.

Most metropolitan rail operators use two 1800 MHz spectrum licences, which have a key distinction:

- **Licence 1** includes a condition that it is only used for "rail safety and control communications" and
- **Licence 2** has no "rail safety and control communications" condition. However, most state rail operators use it to augment capacity and guard bands to mitigate interference to rail safety and control communications from mobile phone carriers as they deploy high-power sites near rail corridors.

ARA recommends that Licence 2 is also explicitly excluded from the MPS for consistency, considering the increasing importance of this licence to protect rail safety and control communications.

To make this clear in the MPS, ARA recommends that Row 3 in Table 1 be amended to the following:

	Band	Frequency Range	Expiry Date
3	1800 MHz	1710–1785 MHz / 1805–1880 MHz excluding licences held by metropolitan rail operators, typically in the 1770-1785 MHz / 1865-1880 MHz range	17 June 2028

2. Future additional targeted Ministerial guidance to the ACMA

ARA supports the Minister's consideration of additional or more targeted guidance to the ACMA through the expiring spectrum licence process. For future Ministerial guidance to the ACMA, ARA requests that the Minister consider the following needs of the rail industry:

- Renewal of all licences used by metropolitan rail operators;
- Amendment of Licence 2 (refer above) to include the condition that the spectrum is only used for "rail safety and control communications" or combine both licences into one rail safety and control system licence;

- A permanent spectrum allocation for "rail safety and control communications", as seen in the European Union, or alternatively, application of a 20-year licence term. This will support the State governments to invest in the latest globally supported technology for rail, the Future Rail Mobile Communications System (FRMCS), which incorporates the latest innovations from 3GPP standards and application of communications-based train control systems, and
- Public interest price for spectrum access charges for non-commercial use of spectrum for rail services

ARA supports the Minister's consideration of additional or more targeted guidance to the ACMA through the expiring spectrum licence process.

ARA would welcome an invitation to discuss these rail industry concerns:

- The consequences of not renewing all licences used by metropolitan rail operators;
- The impact of short-term renewal periods for state government public transport services, and
- Spectrum access charges for services in the public interest.

3. Context on current and future spectrum needs for the rail industry

In rail, licenced radio spectrum is currently used to support the following safety-critical functions reliably:

- **Railway Emergency Calls**. That is, how to communicate to all drivers to apply the brakes when there is an obstacle (e.g., a derailed train) on the tracks. A railway emergency call is a high-priority call for informing drivers, controllers, and workers of a situation requiring all trains in an area to stop.
- **In-Cab Signalling Systems.** Australian railways are adopting standards-based systems such as the ETCS (European Train Control System) and CBTC (Communications-Based Train Control) systems to ensure that trains are kept safely apart, and to increase the rail network's capacity. This technology allows trains to be operated with greater safely and efficiently, reducing the likelihood of accidents or delays.
- **Automated Train Operation.** This system enables train operation without driver intervention.

Jurisdictionally, the rail industry is either using, or plans to use, their 1800 MHz licences as follows:

- **Perth**: An LTE 4G network is being delivered. The network's identified use cases include Mission-Critical Voice, CBTC, platform-to-cab Video Streaming, and Rail Car and Transit Officer CCTV, and they are calculated to use the full allocation of the licenced spectrum.
- **Melbourne:** A Digital Train Radio System (DTRS) is in operation, with sustainment projects underway to keep the system supportable until funding is secured to upgrade to FRMCS. The uncertainty of renewal of the 1800 MHz licence has constrained and complicated requests for funding to complete this upgrade. The DTRS is used for Railway Emergency Calls, train location information, and transmitting signalling indications to operators in specific locations.
- **Sydney:** A DTRS is in operation, and sustainment projects are underway to keep the system supportable until the network can be upgraded to FRMCS. It is used for driver-to-controller communications and railway Emergency Calls, and a project is deploying ETCS Level 2.
- **Brisbane:** A Digital Radio System (DRS) is in deployment to support the implementation of ETCS Level 2 associated with the Cross River Rail (CRR) tunnel and associated projects on the Southeast Queensland passenger rail network. These projects will play a vital role during the Brisbane 2032 Olympic and Paralympic Games while delivering improvements for everyday Queenslanders by providing more frequent and reliable services around Southeast Queensland.

The Australasian Railway Association (ARA) is the peak body for the rail industry throughout Australia and New Zealand
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In the future, the rail industry will need radio spectrum *in addition to* our current licences for the following:

- **Transition to FRMCS:** To keep trains operating while transitioning between an old and new radio system, additional radio spectrum will be required to run the old and new radio systems in parallel for a prolonged period.
- **Optimising rail investment with the full suite of FRMCS use cases:** FRMCS use cases include remote train condition monitoring, remote infrastructure monitoring, and high-bandwidth applications such as critical video for passenger and staff safety.

ARA understands that the rail industry will have future access to the 1900 MHz spectrum in harmony with European Union, UK, and New Zealand allocations.

ARA highlights that the need for 1900 MHz spectrum is *in addition to* current rail licences in 1800 MHz to follow the EU lead in having access to two spectrum bands for redundancy, capacity, and network upgrades.