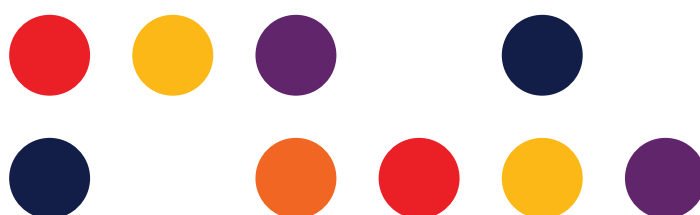


ACMA Draft five-year spectrum outlook 2024-29 and 2024-25 work program TPG Telecom response

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Public version



Submission

TPG Telecom welcomes the ACMA's consultation on its draft five-year spectrum outlook 2024-29 and 2024-25 work program (**Draft FYSO**).

TPG Telecom supports the submission of the Australian Mobile Telecommunications Association (**AMTA**) to the Draft FYSO. The purpose of this submission is to highlight certain matters of particular interest to TPG Telecom, in addition to the positions raised in the AMTA submission.

TPG Telecom appreciates the ACMA's efforts to allocate additional mid-band spectrum, and particularly the auction of 3.4/3.7 GHz spectrum in November 2023. The full value of the spectrum would be maximised if the right conditions are in place to support industry defragmentation of the 3.4-3.7 GHz band. However, this is difficult to achieve given the ACMA has imposed interim and permanent conditions on deployments above 3.7 GHz. This was announced in June 2023 as a precautionary approach to protect against a theoretical risk of 5G interference with aircraft radio altimeters. This means spectrum in the 3.7-3.8 GHz range is different to spectrum in the 3.4-3.7 GHz range.

In effect, the conditions imposed by the ACMA immobilise the industry from performing a restack and maximising the efficient use of spectrum. TPG Telecom supports the ACMA expediting a review of these conditions. This would provide an opportunity for the ACMA to revisit the most recent evidence, including international trends, which do not support the imposition of such onerous conditions (e.g. European Union and United States).

At a bare minimum, the permanent mitigations in respect of the equivalent isotropically radiated power (**EIRP**) should be amended to be interim mitigations, which would expire along with the other interim mitigations in March 2026. This approach would provide a backstop date for review of the measures and be consistent with good regulatory practice.

Further, TPG Telecom believes the trajectory should continue with the allocation of additional Time Division Duplex (**TDD**) mid-band spectrum. This includes allocation of spectrum in the 6 GHz band in the medium term and, on a longer timeframe, the 4 GHz band. This is especially needed in densely populated metropolitan areas given the rate of demand growth.

The allocation of more TDD spectrum for mobile services is important to realise the economic and social benefits of telecommunications and meet growing demand for mobile data. TDD spectrum is needed given the use of Massive MIMO technology.¹ TDD Massive MIMO technology roughly triples spectral efficiency and, therefore, capacity per MHz.

In this respect, TPG Telecom welcomes the ACMA's plans to release an options paper in Q2 2024 in relation to the future of the 6 GHz band, following the spectrum tune-up and

¹ Given the lack of channel reciprocity, FDD spectrum is not as efficient as TDD spectrum for beamforming purposes, i.e. massive MIMO.

consultation in Q1 2024.

In addition, TPG Telecom welcomes the ACMA continuing to engage with industry and government and monitoring international developments in the 600 MHz band. As noted in previous submissions, we consider the 600 MHz band offers a compelling opportunity for additional low-band spectrum to be made available for mobile use. This spectrum would be ideal for mobile use in regional Australia and TPG Telecom anticipates additional low-band spectrum would be needed in metropolitan areas for deep indoor coverage to meet increases in consumer demand over time.

More holistically, the second half of this decade coincides with the need for significant investment from MNOs in respect of expiring spectrum licenses, along with consideration of investment into 6G upgrades. We encourage the ACMA to take these factors into consideration when considering timing and ensuring the allocation of additional spectrum would best serve the long-term public interest and efficiency goals.