

ACMA, Expiring Spectrum Licences, Stage 4, updated preliminary views on pricing and proposed application and decision-making process

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Executive Summary

- nbn supports the ACMA's view that renewal of the expiring spectrum licences (**ESLs**)¹ used by nbn is in the **public interest** and that for those regional Australians relying on nbn's Fixed Wireless (**FW**) network '**no better use for this spectrum**' can be identified.²
- These licences are essential to the ongoing operation and upgrade of nbn's FW network in accordance with the Government's Statement of Expectations (**SoE**) and to meeting nbn's obligations as the default Statutory Infrastructure Provider (**SIP**), particularly in regional Australia.
- **nbn's loss-making FW network delivers substantial public benefits** in regional Australia. Fast and reliable broadband drives improved economic and social outcomes, including significant GDP benefits and a positive impact on individual wellbeing with improved opportunities for economic participation, access to education and health services, social inclusion and emissions reduction.
- We acknowledge that the ACMA does not intend for benchmark-derived market values to account for any public interest discounts, noting that these have historically been made available via ministerial direction.³ However, the application of benchmark-derived pricing to nbn's ESLs does not sufficiently account for the unique characteristics of nbn's FW use of spectrum, including the **absence of any higher-value alternative use and the delivery of substantial public benefits on a loss-making basis to meet mandated SIP obligations**. In these circumstances, we consider that a **public benefit discount** to the benchmark-derived market prices would be appropriate to ensure a **fair pricing outcome** for nbn's ESLs.

Notwithstanding the above, our concerns regarding the ACMA's revised pricing proposal are summarised below:

- **Increased asymmetric risk:** The revised pricing proposal heightens the risk of spectrum prices being set too high, with materially greater adverse consequences for Australians, industry and the economy than the risks associated with conservative pricing. The risks associated with incorrect spectrum pricing would be felt more acutely

¹ ESLs refers to those due to expire between 2028 and 2032 in the 700 MHz, 850 MHz 1800 MHz, 2 GHz, 2.3 GHz, 2.5 GHz, 2.5 GHz mid-band gap, and 3.4 GHz bands.

² Page 12 of 'Expiring spectrum licences, stage 4, Preferred views on ESL frequency bands and licensing arrangements, and response to submissions, December 2025' (**Preferred Licensing Arrangements Paper**)

³ 'Public interest discounts have been made available in certain circumstances previously via ministerial direction. These include a 50% discount for 2 x 10 MHz of spectrum for rail communication use of the 1800 MHz band as part of the previous ESL process, and for NBN Co's spectrum licence conversion in 2021.', 'Expiring spectrum licences, stage 3, Preliminary views paper 4: Pricing for ESLs' APRIL 2025, UPDATED 23 MAY 2025 (**Stage 3 Preliminary Pricing Paper**)



by Australians living in regional and remote areas which are already extremely costly areas to supply telecommunications services.

- **CPI indexation:** Indexing spectrum values using CPI risks overstating prices in an industry experiencing declining / flat profitability and Average Revenues Per User (ARPU) for most of the term of current licences, particularly since revenues are not increasing at the standard rate of inflation and are, in fact, decreasing in nominal terms.
- **Misalignment with market conditions:** Declining spectrum values, falling industry profitability with historically falling / flat ARPUs during most of the term of current licences and a higher cost of capital are not adequately reflected in the proposed pricing framework.
- **Subjective benchmarking methodology:** The selection of comparator countries and awards remains highly subjective, with the inclusion of outliers and non-comparable markets inflating benchmark outcomes. The non-comparable markets include the United States and Canada with their very high ARPU and more limited competition, and Hong Kong and Singapore which are very small in geography with high population density and a highly technically advanced population.
- **Treatment of the 2.3 GHz band:** There is insufficient evidence to support pricing parity with the 2.6 GHz band. In practice, the 2.3 GHz band is less desirable due to ecosystem immaturity and regulatory constraints that limit the practical benefits of TDD configuration.
- **PPP exchanges rates and spot (market) pricing:** The use of purchase parity pricing only as opposed to spot pricing or a hybrid of the two, which does not reflect the ways in which the Australian industry interacts with international markets and how inputs are obtained.

We have set out below proposed revisions below that would enable a more robust and defensible implementation of the benchmarking approach to take into account the trend of declining spectrum prices and the risks to consumers, industry and the economy of incorrect spectrum pricing.

- Adopt a **conservative approach to ESL pricing** that reflects asymmetric risk, the trend of declining spectrum prices and current industry conditions. This would better support promotion of key objectives in the Ministerial Policy Statement (MPS), particularly *‘connectivity and investment in regional and remote areas to deliver improved services to end users’* and *‘capacity for sustained investment and innovation’*.⁴
- Use an **industry appropriate approach to indexation** to adjust prices to 2025 and to the point that final prices are determined (such as the MSR index or band specific time

⁴ Radiocommunications (Ministerial Policy Statement – Expiring Spectrum Licences) Instrument 2024



trends) rather than CPI, with the final spectrum value to be determined following consultation on a revised benchmarking dataset.

- **Exclude outliers and non-comparable countries** from the benchmarking dataset and clearly articulate the rationale for including (and excluding) awards.
- Recognise that the **2.3 GHz band is less desirable than the 2.6 GHz band** and reflect this in proposed pricing.
- A **combined use of PPP exchange rates and spot (market) pricing** to determine the relevant figure at which to convert award prices to Australian dollars would more accurately reflect the cost base of operators used to determine the value of spectrum.
- Provide **instalment options**, to mitigate the risks associated with incorrect pricing while maintaining certainty. The factors raised in the Spectrum Pricing Review to support upfront lump sum payments – the risk of payment default, the need to reduce complexity and increase certainty of outcomes are not relevant in these circumstances.
- **Timing of payment** - full payment or the first payment in the case of instalments, should be set for the same time period for all renewed licences in the same spectrum band to provide certainty regarding the dates for payment.

1 Introduction

nbn welcomes the opportunity to provide feedback in response to the following ACMA consultation papers:

- ‘Expiring Spectrum Licences, Stage 4, Updated preliminary views on pricing, December 2025’ (**Pricing Paper**).
- ‘Expiring Spectrum Licences, Stage 4, Proposed application and decision-making process, December 2025’ (**Application Process Paper**)

This submission is to be read in conjunction with nbn’s submissions to:

- the ACMA’s ‘Expiring Spectrum Licences: Stage 4’ consultation paper, issued December 2025 and supporting documents (**Stage 4 Consultation Papers**);
- the ACMA’s ‘Expiring Spectrum Licences: Stage 3’ consultation paper, issued April 2025 and supporting documents (**Stage 3 Consultation Papers**);
- the ACMA’s ‘Expiring Spectrum Licences: Stage 2’ consultation paper, issued March 2024 (**Stage 2 Consultation Paper**), including nbn’s ‘reply to comment’ submission; and



- the ACMA's 'Expiring Spectrum Licences: Stage 1' consultation paper, issued May 2023 (Stage 1 Consultation Paper).

The role of nbn's FW network in elevating Australia and meeting our SIP obligations

nbn was established in 2009 as a Government Business Enterprise and is a wholly-owned Commonwealth company. The principal responsibility of nbn is to operate and continue to expand, and upgrade, the nbn network in accordance with the Government's SoE. nbn's purpose is to elevate Australia by connecting people and powering progress. nbn aims to achieve its purpose by providing fast, reliable and affordable connectivity via wholesale broadband services which meet the current and future needs of Australian households, communities and businesses.

nbn currently holds spectrum licences in the 2.3 GHz and 3.4 GHz bands, which it uses to operate and continue to build and upgrade nbn's FW network. These are due to expire in 2030. nbn's FW network plays a fundamental role in enabling nbn to meet its obligations as the default SIP across all of Australia under the *Telecommunications Act 1997 (Cth)*, and as set out in its Shareholder Ministers' SoE, taking into account the multi-technology mix model and anticipated future demand for services.

Specifically, as the default SIP, nbn has an obligation to connect all premises to broadband services that meet specified requirements (except in areas where another carrier is the nominated or designated SIP). Where it is not reasonable for the SIP to connect premises to a fixed-line network, it must provide FW or satellite technology at minimum prescribed upload and download speeds.

As of December 2025, 8.65 million homes and businesses are connected to the nbn network, with 12.63 million premises able to connect. As at 30 June 2025, almost 800,000 homes and businesses can access nbn's FW network, with ~400,000 active fixed wireless services.

nbn continues to upgrade and improve nbn's network with the aim of enhancing service quality and consumer experience, improving network reliability and meeting both current and future consumer demand. The regional benefits that nbn's FW network provides are a key focus, with nbn recently delivering on its commitment to expand the coverage and increase the speed and capacity of its FW network. This was enabled through a \$750 million FW and satellite upgrade program, which was supported by \$480 million in funding from the Australian Government and an additional \$270 million from nbn. As at 30 June 2025, almost 800,000 homes and businesses can access faster speeds on the FW network, benefitting customers across regional Australia. Having upgraded ~2,300 towers, the FW network now offers increased network capacity of 6.5 Tbps compared to 1.4 Tbps pre-upgrade and peak download speeds up to five times faster than previously available.



The proposed use of benchmark-derived ‘market prices’ for nbn’s ESLs does not account for the fact that nbn’s FW spectrum has no higher-value alternative use and delivers substantial public benefits on a loss-making basis in order to meet mandated SIP obligations. A public benefit discount to the ‘market price’ should be provided to set a fair price for nbn’s ESLs.

We appreciate the ACMA’s ongoing engagement with industry on its approach to ESLs and support the ACMA’s in its preferred view that renewal of the ESLs used by nbn is in the public interest. In particular, we note the ACMA’s recognition that for regional Australians using nbn’s FW network, no better use of this spectrum can be identified.⁵ Renewal of our ESLs will ensure continued connectivity for Australian homes and businesses and provide the investment certainty required for nbn’s long-term network planning.

We acknowledge that the ACMA’s preferred view is that renewal of mobile and nbn licences using prices derived from benchmarking is the best option to promote the long-term public interest, including competition and choice, investment, and service continuity.⁶ We also note that the ACMA does not intend for benchmark-derived market values to incorporate public interest discounts, which have historically been made available via ministerial direction

However, the proposal to apply benchmark-derived market pricing does not adequately reflect nbn’s loss-making and mandated use case and results in a price for our ESLs that is not a fair price. No economically rational operator would pay market prices to renew ESLs only to lose money using that spectrum to supply a service on the terms that we are required to supply our FW product.

As the ACMA itself identifies, ‘[f]or regional Australians using nbn’s FW network, we [the ACMA] can identify no better use of this spectrum’. On the other hand, the Pricing Paper states that ‘[m]arket pricing encourages the efficient use of a public resource, supports competition, investment and innovation and ensures licensees pay a fair price that reflects the value of the spectrum licences the hold’. These two principles do not hold together in proposing to use market pricing for nbn’s ESLs which are required as a result of our mandated SIP obligations.

Given that our FW network is loss-making and required to meet the mandated SIP obligations with no better alternate use of our ESLs, the benchmark-derived market price does not reflect the genuine opportunity cost to nbn owning the spectrum nor does it incentivise nbn to be efficient in its use of a public resource. To arrive at a fair price for 2.3 GHz and 3.4 GHz ESLs, we therefore consider that a public benefit discount to the benchmark-derived market price is appropriate. This would recognise the following considerations:

⁵ Page 12 of ‘Expiring spectrum licences, stage 4, Preferred views on ESL frequency bands and licensing arrangements, and response to submissions, December 2025’ (**Preferred Licensing Arrangements Paper**)

⁶ Page 9 of Preferred Licensing Arrangements Paper



- As ACMA has identified, by international benchmarking standards, spectrum value has become extremely divergent across various spectrum bands.
- As the ACMA has also identified, no other better use of the spectrum can be identified for those regional Australians using nbn's FW network.
- Our FW network provides significant public benefits to Australians for whom fast and regional broadband connectivity drives improved economic and social outcomes.
- nbn's FW network is loss-making. The ACCC has estimated that the value of losses from NBN Co's fixed wireless and satellite services between 1 July 2009 and 30 June 2025 is \$8.470 billion (2025 dollars) with forecast future losses for fixed wireless and satellite services over 2025-26 to 2039-40 period is \$2.925 billion (2025 dollars). as of 30 June 2025.⁷
- We are unable to simply pass on the full cost of the FW network due to price controls in our Special Access Undertaking (**SAU**) with the ACCC, Government expectations as set out in its SoE regarding affordability, and the nature and extent of competition from other networks.
- nbn, just like other operators, have many competing demands on capital expenditure as we continue to incur new costs to continue to upgrade, maintain and invest in nbn's network. This includes investing in network resilience, fibre upgrades, the transition to LEO satellite services and modernising the HFC network.
- There is increasing consumer demand for data which has driven higher traffic on the nbn network and the need to continue to invest in the capacity of the FW network to maintain speed and user experience. Across all the nbn networks, average monthly data download per customer across all technologies increased to 557 GB, a 13 per cent year-on-year increase to 31 December 2025.
- The Government's decision to reduce the RBS levy to remove historic losses from the levy has implications for nbn's cash flow with less funding from non-nbn fixed line broadband operators towards the cost of nbn's FW and satellite networks, which are non-commercial.⁸
- We do not have the ability to access the same commercial opportunities that can be derived from the use of spectrum by the mobile networks. This is because our SIP obligation requires us to provide connectivity on a premises basis at minimum prescribed upload and download speeds which is not compatible from a technical

⁷ 'ACCC, Regional Broadband Scheme levy – Base and administrative components, Advice to the Minister for Communications, May 2025'

⁸ Telecommunications (Regional Broadband Scheme) (Base and Administrative Cost Components) Determination 2025



perspective with the ubiquitous coverage and dynamic demand supplied by mobile networks.

The asymmetric risk of incorrect spectrum pricing has increased even more under the revised pricing proposal and the ACMA should take a conservative approach to pricing of ESLs to avoid negative consequences for consumers, industry and the economy

We appreciate the ACMA's ongoing engagement with industry on its approach to ESLs and support the ACMA in its preferred view that renewal of the ESLs used by nbn is in the public interest and that for regional Australians using nbn's FW network, no better use of this spectrum can be identified.⁹ The renewal of our ESLs will ensure that Australian homes and businesses continue to receive connectivity over our FW network and provide the investment certainty required for nbn's long-term network planning.

However, the asymmetric risk of incorrect spectrum pricing has increased under the ACMA's revised pricing proposal. Specifically, the potential for negative consequences for consumers, industry and the economy has increased. We consider that a more conservative approach to spectrum pricing is warranted given the potential negative impacts and we submit that the implementation of our feedback on the revised benchmarking methodology is appropriate noting the trend for declining spectrum prices, the declining profitability of the industry and the significant public benefits in providing regional and remote Australians with broadband connectivity.

The risk of incorrect spectrum pricing is summarised by the ACMA in 'Expiring Spectrum Licences, Stage 3 – Preliminary views paper 4: Pricing for ESLs':¹⁰

"[asymmetric risk] means that the consequences of setting prices too high are worse than if they are set too low. Notable potential risks of setting prices too high include unsold spectrum, reduced network investment, and higher retail prices for end-users. Mobile network operators (MNOs) also highlighted the declining profitability of the industry, citing a conservative pricing approach is crucial to support the sustainability of the telecommunications sector."

The ACMA should take a conservative approach to pricing spectrum for a range of reasons:

- Due to Australia's unique expanse, geography and terrain, and significant areas of relatively sparse population density, regional and remote areas are already extremely costly areas to supply telecommunications services. A conservative approach to prices for spectrum being used to supply services to end users in these areas would better

⁹ Page 12 of 'Expiring spectrum licences, stage 4, Preferred views on ESL frequency bands and licensing arrangements, and response to submissions, December 2025' (**Preferred Licensing Arrangements Paper**)

¹⁰ Page 5 of Stage 3 Preliminary Pricing Paper



support ongoing prudent and efficient network investment to respond to evolving demand and market conditions, and to ensure service quality continues to meet the needs and expectations of end users. This is critical for the promotion of key objectives in the MPS, particularly *'connectivity and investment in regional and remote areas to deliver improved services to end users'* and *'capacity for sustained investment and innovation'*.

- As observed by the GSMA, there is strong evidence that high spectrum prices have a negative impact on critical factors that increase digital inclusion, such as the speed of network deployments, the quality of services and affordability.¹¹
- The trend of declining industry profitability and the subsequent increased level of investment risk, noting that the cost of capital has also risen, will likely continue. In 2023, Venture Insights reported that '[o]ne of the key megatrends in the global telco industry has been the decline of return on invested capital (ROIC) over the last decade, putting telcos under pressure to improve capital efficiency. The battle to increase profitability is expected to continue over the coming years.'¹² This analysis echoes that reported by Habibniya et al which notes that the high capital intensity needed for infrastructure investment means that firms must take on greater debt, again directly impacting on the ROIC.¹³
- We note that there has been a recent change in trend in ARPUs in Australia but they have been historically falling / flat during most of the term of current licences. Further, this recent uptick needs to be considered in the context of a steady downward trend internationally in ARPU and an expected future drop in revenues:
 - In 'Perspectives from the Global Telecom Outlook, 2025–2029',¹⁴ PWC note: 'Although regional growth rates vary widely, monthly average revenue per user (ARPU) globally for mobile is expected to tick down marginally to \$6.20 in 2029 from \$6.32 in 2024'.
 - In 'Europe telecoms market update 1Q 2024',¹⁵ Analysys Mason noted that 'ARPU declined for over 70% of MNOs in 1Q 2024, and in some cases, these declines were particularly large'.
 - The UK Government has just recently reported that ARPU has declined significantly over the past decade from around £19 in 2015 to around £10 in

¹¹ GSMA, 'Spectrum Policy Trends 2024', February 2024.

¹² Venture Insights 'REPORT: Five-year Outlook for Telco Market in Australia and New Zealand 2023' 21 September 2023. See figure 8 'Telecommunications industry return on invested capital (ROIC,%)' for further detail.

¹³ Habibniya, H., Dsouza, S., Rabbani, M. R., Nawaz, N., & Demiraj, R. (2022). Impact of capital structure on profitability: Panel data evidence of the telecom industry in the United States. *Risks*, 10(8), 157. <https://doi.org/10.3390/risks10080157>

¹⁴ See <https://www.pwc.com/gx/en/industries/tmt/telecom-outlook-perspectives.htm>

¹⁵ See <https://www.analysysmason.com/research/content/articles/europe-telecoms-newsletter-rd008/>



2025 with European operators having similarly experienced decreases in ARPU and revenues over the same period.¹⁶

- IBISWorld reports that for the Australian wireless telecommunications industry, revenue is expected to drop by 0.1% to \$22.7 billion over the five years through 2025-26. This includes a 0.8% drop in 2025-26, as consumer spending remains stymied by moderate inflation, labour market uncertainty and high interest rates.¹⁷
- GlobalData reports that higher ARPU-yielding 5G subscriptions have been a factor in recent growth which we note is finite in its ability to continue to generate growth until there is another upgrade path such as 6G which is some years away.¹⁸
- For the telecommunications industry generally, the ability to increase pricing to counteract declining returns on invested capital is difficult, with end user willingness to pay also a constraint over the long term. This is particularly challenging amid cost-of-living pressures. A conservative approach to spectrum prices would help to balance the risk to licence holders that their expected return does not eventuate, such that they can continue to invest, where it is prudent and efficient to do so, in anticipation of a reasonable rate of return being achieved.¹⁹
- The fall in profitability is also tied to changes in the way that telecommunications services are used. Historically, voice services provided high margins with low traffic. The shift to data-driven markets has reversed this; while data traffic is exploding, the price per megabyte is falling faster than the volume is growing, leading to a decoupling of revenue from traffic.²⁰
- The short-term income boost for Government associated with higher spectrum prices may have less value in the long term when compared to the GDP growth and overall social benefits that could be realised through relatively lower pricing.²¹

The asymmetric risks are even more pronounced under the ACMA's revised pricing proposal during a period in which spectrum prices are trending downwards. This was shown by the analysis contained in our Stage 3 Consultation Papers submission which we will not repeat in full here and the ACMA's own analysis in the Stage 3 Consultation Papers. However, in summary, this analysis showed that:

¹⁶ <https://www.gov.uk/government/calls-for-evidence/mobile-market-review/mobile-market-review-call-for-evidence>

¹⁷ <https://www.ibisworld.com/australia/industry/wireless-telecommunications-carriers/1830/>

¹⁸ <https://www.globaldata.com/store/report/australia-telecom-operators-market-analysis/>

¹⁹ GSMA, 'Best practice in spectrum licence renewals, A toolkit for licensing authorities', 2014.

²⁰ Samaké, S-N. (2025). Telcos and Big Tech: Value Creation or Destruction? ITS 33rd European Conference 2025: "Digital innovation and transformation in uncertain times", Edinburgh, UK. Available via EconStor: <https://www.econstor.eu/handle/10419/331303>

²¹ GSMA, 'Spectrum Policy Trends 2024', February 2024.



- Spectrum values are considerably lower than those reported by the ACMA as part of the Stage 3 consultation. Plum's dataset, which contains the awards in the ACMA's Stage 3 dataset, includes additional awards, with many countries not included in the ACMA dataset. In addition to auction results, there are values from independent trades and other awards, which we consider are relevant to a licence renewal process.
- There is a significant fall in values for 3.4 GHz spectrum over the past five years, particularly when the outliers of the US and Canada are removed from the start of this time period. Both ACMA and Plum datasets demonstrate a trend of decreasing spectrum value in this band.
- While trends derived from the MSR index were not consistent over time, they did show a tendency for a downward trend which supported the overall trend in falling spectrum value. It is clear from both these pieces of evidence that future spectrum values should be estimated at a lower quantum than that currently proposed.

We note that recent renewals of comparable spectrum overseas also highlight not only that spectrum prices are trending downwards but that the higher pricing under the ACMA's revised pricing methodology are not appropriate.

- In the UK, Ofcom published a decision in July 2025 setting annual licence fees for 900 MHz, 1800 MHz and 2100 MHz bands. The fees for 900 MHz and 1800 MHz spectrum were reduced by 26%, with Ofcom citing research showing that the values for these bands had significantly decreased since the previous fees review. While the fees for 2100 MHz were marginally increased (by 6%), this still led to values lower than for 1800 MHz since previous fees were set low reflecting the high prices paid for the 3G spectrum at auction back in 2000.²²
- In Türkiye, alongside new spectrum awards in 2025 the regulator renewed all existing spectrum holdings in the 800 MHz, 900 MHz, 1800 MHz and 2100 MHz bands. Reflecting uncertainty in spectrum value, rather than charging large upfront fees, the Government has decided to charge operators a fee equivalent to 5% of the mobile service revenue, derisking the investments and encouraging growth.²³
- In Germany, BNetzA has acknowledged uncertainty in the market in terms of 5G deployment and business plans, and has extended all spectrum rights in 800 MHz, 1800 MHz and 2600 MHz by five years, with only administrative fees to cover the licences.

²² <https://www.ofcom.org.uk/spectrum/innovative-use-of-spectrum/consultation-review-of-annual-licence-fees>

²³ <https://insights.opensignal.com/2025/11/turkiye-5g-auction/dt>



However, in return for these extensions operators have committed to geographic coverage obligations, as well as national roaming markets for a new entrant.²⁴

It is crucial that ACMA recognise the importance of these renewals processes. In each case, regulators have acknowledged changes in spectrum value and uncertainty, and have reduced the fees on spectrum to reflect this.

There are significant public benefits in providing regional and remote Australians with broadband connectivity

The risks associated with incorrect spectrum pricing would be even more acute for Australians that live in regional and remote areas for whom fast and reliable broadband connectivity delivers substantial public benefits. nbn recently commissioned a research report which found that nbn-enabled internet continues to have a positive impact on user wellbeing across Australia. For regional and remote nbn users, survey results include the following²⁵

- 73% of regional and remote nbn users say having the nbn network at home has had a positive impact on their satisfaction with life.
- 77% of regional and remote nbn users who worked from home or used job search platforms reported the nbn network positively impacted their employment outcomes in FY25.
- 84% of regional and remote nbn users who engaged in formal or informal education from home via the nbn network reported the nbn network positively impacted their education outcomes in FY25.
- 74% of regional and remote nbn users accessed telehealth or online medical information, resources or records via the nbn network reported the nbn network positively impacted their health outcomes in FY25.
- 74% of regional and remote nbn users who connect with family, friends and others or access news or community information online via the nbn network reported the nbn network positively impacted their social and community connectedness in FY25.
- 64% of regional and remote nbn users who work, study, access health or other services online reported having internet via the nbn network helped them, in their view, reduce their carbon emissions in FY25.

²⁴

https://www.bundesnetzagentur.de/SharedDocs/Pressemitteilungen/EN/2025/20250324_frequenzen.html

²⁵ <https://www.nbnco.com.au/corporate-information/media-centre/media-statements/social-impacts-of-nbn-report-fy25>



The spectrum pricing should recognise the public benefits provided in regional and remote Australia and mitigate the risks of incorrect spectrum pricing

We have provided detailed feedback on proposed revisions to the benchmarking approach below that would enable a more robust and defensible implementation of the benchmarking approach to take into account the trend of declining spectrum prices and the risks to consumers, industry and the economy of incorrect spectrum pricing.

We also note that the ability to make instalment payments as opposed to paying for the entirety of the licence upfront would assist in mitigating the risk of incorrect spectrum pricing. A pricing framework linking spectrum prices to a percentage of revenue such as that adopted by Türkiye for the renewal of spectrum licences derisks the investment and encourages growth and could also be implemented.

We consider that the ability for the spectrum licences to be renewed with payment on an instalment basis would also be appropriate given pressure on industry returns of investment.

We note that the ACMA flagged that it generally required upfront payment of the spectrum access charge for spectrum licences issued by way of auction, consistent with the Spectrum Pricing Review which noted that upfront lump-sum payments protects against the risk of payment default, reduces complexity and increases certainty of outcomes.

We submit that all of these factors are not relevant in these circumstances and therefore are not reasons to require upfront payment in this circumstance. The parties concerned have made long-term investment network decisions and have an interest in having their spectrum licences renewed and on-foot to support operations. This effectively reduces the risk of payment default and means that the outcome is certain (i.e. the licence will be paid for at the relevant time). The act of making a payment is also largely an administrative task which both the ACMA and relevant parties have experience in and is not such a significant issue that means that instalment payments are not an option.

2 Revised preliminary views on pricing

The spectrum pricing framework and valuation methodology is critical for ensuring spectrum is allocated and used in a manner that promotes the long-term public interest. Spectrum pricing also has downstream impacts on network investment and, as a result, service quality, and retail prices for consumers.

This section provides feedback in response to the ACMA's updated preliminary views on pricing. Specifically:

- The transparency regarding the rationale for including (and excluding) awards and the highly subjective nature of the criteria regarding the countries to be included which supports the exclusion of outliers and countries not representative of Australia and the need to be conservative to avoid incorrect pricing.



- The very small number of 2.3 GHz and 2.6 GHz band awards which means that there are not enough observations to draw any conclusions over whether they should be valued the same. Instead, the substantial costs incurred by nbn to develop a viable ecosystem and the material constraints placed by mandatory framerate synchronisation requirements which limit the purported flexibility benefits of TDD indicate that the 2.3 GHz band is less desirable than the 2.6 GHz band and this should be reflected in the proposed pricing.
- The use of purchase parity pricing only as opposed to spot pricing or a hybrid of the two, which does not reflect the ways in which the Australian industry interacts with international markets and how inputs are obtained.
- The use of CPI to trend values as opposed to mobile services revenue (MSR) which significantly overstates the value of spectrum in future years, particularly since mobile revenues are not increasing at the standard rate of inflation and are, in fact, decreasing in nominal terms.

We also note the ACMA's comments that it sought advice on the capacity of licensees to pay for spectrum licence renewals to gain a greater sense of the broader implications of ESL pricing outcomes and whether they align with its policy objectives.

We are unable to simply pass on the full cost of the FW network due to price controls in our Special Access Undertaking (**SAU**) with the ACCC, and Government expectations as set out in its SoE regarding affordability, and the nature and extent of competition from other networks.

- As the ACMA is aware, nbn's pricing is regulated by its SAU with the ACCC which places constraints on our ability to change pricing which is relevant to nbn's capacity to pay. The pricing of nbn's regulated broadband services, including services supplied over the FW network, is governed by the SAU pricing framework. Broadly, this framework allows nbn to increase prices, on average, in line with CPI until nbn achieves cost recovery. After this point, (currently estimated to be the early 2030s), nbn's prices will be set by reference to its regulated costs and an annual drawdown on historical unrecovered costs defined in the SAU (the Initial Cost Recovery Account) that the ACCC will determine in accordance with the SAU framework.²⁶
- The SAU contains a package of requirements designed to promote transparency and forward-looking price certainty for retail service providers. These measures include, but are not limited to, a commitment to annually publish a Tariff List and Three-year Pricing Roadmap, and to publish a Statement of Pricing Intent ahead of each three-to-five-year Regulatory Cycle.

²⁶ See page 16 of [overview-of-nbn-regulatory-proposal-for-fy2027-29.pdf.coredownload.pdf](#) for more details regarding how nbn's prices are regulated.



The selection of awards and countries is highly subjective and the ACMA should consider adopting a lower price, and excluding outliers and countries which are not comparable to Australia

The ACMA's stated approach '*...is to take a default position of including awards, to ensure we have a robust and representative benchmarking sample. However, we will continue applying the criteria for inclusion from our preliminary views on pricing where necessary. This means only including market-based award prices, as they are considered to more accurately reflect the value of spectrum. In addition, it also means applying criteria such as not including awards that were for small amounts of residual spectrum, or not including awards where there was a large amount of unsold lots. Furthermore, where a spectrum award has included multiple bands with the same licence durations of closely substitutable spectrum in the same band grouping, such as 1800 MHz and 2 GHz being auctioned together, we have typically consolidated the bands into a single benchmark observation to avoid overstating the effect of a single spectrum award*'.²⁷

nbn submits that there is a high degree of subjectivity regarding which countries and awards are included in the benchmarking dataset which makes the exercise inherently fragile. Separately, we consider that the transparency of the application of the selection criteria could be improved.

Several awards have been removed from the previous analysis and some have been added but it is unclear from the material published as part of the Stage 4 Consultation Papers including the spreadsheets why some awards have been chosen and not others. Countries which are not representative of Australia have been included such as the US, Canada, Hong Kong and Singapore. Due to the significance of including (or excluding) particular awards, we suggest that the ACMA consider identifying the factor/s that informed the inclusion (or exclusion - where they have been previously included or are a recent award in the case of those that occur post this consultation process for example) of each award. This would improve the transparency regarding the proposed benchmarking process.

However, given the asymmetric risks of incorrect spectrum pricing remain even in circumstances where transparency regarding the selection criteria are improved given the subjectivity of the decision criteria, we submit that appropriate mitigations would be the ACMA adopting a lower price within the relevant range, excluding outliers and excluding countries which are not comparable.

We have set out examples below relating to the 2300 MHz band below to illustrate the need for greater transparency regarding the inclusion (and exclusion) of awards, given their significance to the benchmarking process. While subsequent discussions with the ACMA have provided additional clarity regarding the application of the selection criteria for the examples cited below, which we appreciate, we consider it important to demonstrate that this lack of clarity

²⁷ Page 20 of Pricing Paper.



was not apparent from the Stage 4 Consultation Papers themselves. Accordingly, we recommend that consideration be given to improving this for the ACMA's subsequent consultations on any amended dataset.

- The following observations have been removed with no rationale provided for this. Canada 2023, Bulgaria 2021, Estonia 2017, Sweden 2020.
- For Canada, the auction in May 2015 has been included (2500 MHz) but the dataset does not include June 2017 (2500 MHz & 700 MHz), May 2018 (2500 MHz & 2300 MHz), June 2018 (2500 MHz), or January 2023 (600 MHz, 2500 MHz, 3500 MHz).
- For Nigeria, February 2014 (2300 MHz) is included but not May 2016 (2500 MHz).
- For Singapore, June 2013 has been added. For South Korea May 2016 has been added but not Sep 2013. There is therefore a general inconsistency in how similar awards are treated between countries which would appear to be equivalent.
- Thailand and Türkiye have been added to the analysis, but it is unclear how comparable these are to Australia. This is particularly important given the removal of the multivariate analysis from ACMA's previous paper, which would have gone some way to adjusting for geographic or demographic differences.
- Saudi Arabia, which could be considered comparable to Australia given population distribution and geography has not been included.

In relation to comparable countries, the Stage 4 Consultation Papers states that the US and Canada are included because they have similar geography and demographics. Our concern is that the markets in those countries – with very high ARPU, and more limited competition – would mean they are incomparable and should therefore be excluded.

Country	Approx. Monthly ARPU (2024/25, in USD)
United States	\$45 – \$52
Canada	\$35 – \$42
Australia	\$25 – \$30
United Kingdom	\$18 – \$22

Sources: PwC Global Telecom Outlook, FCC, CRTC Communications Market Report, ACCC, Telstra & Optus Financials



Similarly, Hong Kong and Singapore are not comparable to Australia and should not be included. These countries are very small in geography with high population density which results in comparatively higher demand for spectrum for capacity, which would have a result of increasing spectrum prices in these higher frequency bands. Further, these countries are highly technologically advanced and use mobiles in a very different way. Consumers in Singapore²⁸ and Hong Kong²⁹ use approximately 50% more data than Australian consumers (around 26 GB per month per user, compared to 18 GB in Australia),³⁰ and tend to utilise mobile services to watch video or communicate during commuting time while on public transport. The location of usage and the need for high bandwidths mean that spectrum at higher frequencies is significantly more valuable than the underlying coverage layer spectrum.

There are insufficient observations to draw conclusions regarding the substitutability of 2.3 GHz band and 2.6 GHz band. Significant costs were incurred to develop a viable ecosystem and the mandatory frame configuration synchronisation conditions materially limits the purported benefits of TDD configured spectrum. As such, the 2.3 GHz band is less desirable than the 2.6 GHz band and should be reflected in proposed pricing.

DotEcon made the following comments regarding the 2.3 GHz and 2.6 GHz band:

- ‘There is an insufficient number of 2.3 GHz observations to run similar tests in relation to grouping the 2.3 GHz and 2.5 GHz bands with any degree of confidence. The median price for 2.3 GHz observations is above the median in the 2.5 GHz band, but all 2.3 GHz observations fall within the range of 2.5 GHz prices in the data and are well below median prices in the Lower 1-3 GHz bands. The 2.3 GHz band is configured for TDD, which is more flexible and therefore potentially more valuable than FDD spectrum (we discuss the implications of the 2.5 GHz FDD configuration below) – if anything, this points to the value of 2.3 GHz spectrum currently being potentially greater than the value of 2.5 GHz, but we have no strong evidence of whether this difference is significant. Given the similar propagation characteristics and use cases of the bands, combined with a lack of clear evidence for treating them differently, we expect that a priori they can be grouped together.’³¹
- And on the 2.5 GHz FDD configuration consideration ‘... the majority of the Upper 1-3 GHz observations are from the 2.6 GHz band, which is typically configured for FDD use, with TDD spectrum available in the 2.6 GHz duplex gap. The 3.4 GHz band, on the other hand, offers a large amount of TDD spectrum, which is more flexible as it can support different uplink/downlink profiles, making it more valuable in data heavy environments

²⁸ Data from IMDA Telecom Statistics 2025

²⁹ Data from OFCA Annual Report 24/25

³⁰ Data from ACMA Communications Market Report 2025

³¹ DotEcon ‘Review of the ACMA expiring spectrum licence pricing, Prepared for the ACMA September 2025’, page 28-298



where downlink traffic exceeds uplink traffic. We note that there is a now a general preference for awarding spectrum in a TDD configuration and the 2.6 GHz FDD band plan is arguably there for historical reasons, rather than being the best way to use this spectrum. This likely depresses the current value of the 2.6 GHz band relative to 3.4 GHz. Hypothetically, rationalisation of the 2.6 GHz band plan could remove this difference, with the only remaining difference being modest propagation differences.³²

The limited number of awards in the 2.3 GHz and 2.6 GHz bands means there is insufficient evidence to draw robust or defensible conclusions that the two bands should be valued equivalently. Further, claims that TDD/FDD configuration supports parity in 2.3 GHz and 2.6 GHz pricing are unsupported by the regulatory framework surrounding the use of the spectrum in Australia. In practice, the purported flexibility benefits of TDD configured spectrum are materially constrained by fragmented spectrum ownership and mandatory frame configuration synchronisation conditions, which significantly reduces its effective value. In addition, nbn has incurred substantial costs to develop a viable ecosystem for the 2.3 GHz band, further indicating that it is less desirable than the 2.6 GHz band and should be priced accordingly.

- Awards for 2300 MHz spectrum around the world have been relatively rare, and as a result there is significantly less international experience in network design best practice for the spectrum.
- As a result of the lower availability of spectrum, the supplier ecosystem has been slow to develop in the 2.3 GHz band, and the availability of supported and implemented 3GPP band combinations for use in both 4G and 5G has driven significant effort and investment adding to the costs of deployment from nbn and our vendors to enhance its utility.
- There remain limitations in availability of combinations, particularly for nbn's network as a solely TDD configured spectrum owner without any FDD configured spectrum to use as anchor layers. This spectrum combination limits the flexibility of service delivery and increases network design complexity and ongoing capacity and performance management to optimise the performance of the network.
- Whilst TDD configured spectrum offers flexibility in allocation of uplink (UL) and downlink (DL) resources, this is of benefit only when used in conjunction with ample low or low-mid spectrum configured in FDD to deliver both the maximum effective coverage and UL performance. In reality, there is limited autonomy for nbn in our use of our 2.3 GHz (and 3.4 GHz) spectrum due to the need to co-ordinate frame configurations. This frame co-ordination ultimately facilitated more effective use of the full 3.4 - 3.8 GHz

³² DotEcon 'Review of the ACMA expiring spectrum licence pricing, Prepared for the ACMA September 2025', page



band for industry with consistent fallback synchronisation but at the expense of nbn's UL potential for this spectrum.

- While the ACMA-led defragmentation of the 3.4 GHz and 3.5 GHz bands ultimately unlocked additional spectrum for the industry, it also tightened the interplay with the other spectrum holders whilst introducing 5G. Their markedly different spectrum holdings and ample FDD configured spectrum result in quite different network performance outcomes that nbn is required to 'engineer' around to achieve the performance outcomes with the use of our outdoor customer equipment (WNTD), again adding additional costs to nbn.
- The fact that some markets have allocated 2.5 GHz or 2.6 GHz with TDD and FDD configurations does not have any relationship to the value of 2.3 GHz either internationally or locally. Indeed, the 'value proposition' of TDD and its flexibility is not strictly accurate due to the different spectrum holders in different areas of the country and the need to co-ordinate frame configurations.
- nbn was required to invest significant resources including the time and effort of personnel to establish a viable ecosystem with delayed access to features such as carrier aggregation combinations and other capabilities to enable us to get the most efficiency capacity and speed from the FW network a result of the lack of an established ecosystem

A combined use of PPP exchange rates and spot (market) pricing would more accurately reflect the cost base of operators used to determine the value of spectrum

We consider that both PPP exchange rates and spot (market) rates should be used to determine the relevant figure at which to convert award prices to Australian dollars. We consider that using these two approaches would more accurately reflect the relevant commercials used by operators to determine the total value of spectrum and that the correct figure would land somewhere between the two bookmarks.

- PPP rates reflect the cost of local services, particularly labour and power costs, but significant investment in mobile networks is on equipment and infrastructure which is bought on an international market, at spot rates.
- We note that nbn purchases significant amounts of network equipment on the international market using spot rates, and therefore spot rates inform a significant portion of the commercial business case that is relevant to the price that nbn is willing to pay for spectrum. These purchases, made in the past, reflect the actual Australian Dollar amount paid, and are not subject to a 'short-run exchange rate volatility' issue cited by Dotecon as a reason to prefer PPP. This could be an issue if we were seeking to apply these conversions in the future, but the comparisons are being made based on



actual spot exchange rates in the past, generally smoothed over time due to the dataset used by ACMA in previous analysis.

- Therefore, when considering the total value of spectrum – which is based on the profitability of mobile networks, derived from revenues and overall costs – we must allow for exchange rates to take into account both these factors.

We note Dotecon's view that '... intersecting the two sets of results under different exchange rate assumptions is difficult to justify. If the ACMA is agnostic between the use of PPP and spot rates, taking the intersection does not make the results less certain and it would be more justifiable to use the union of the two ranges'.

We believe this is based on a false premise – that the ACMA is agnostic between the two conversion rates. Instead, we believe that the ACMA understands that both PPP and spot rates are relevant when considering the cost base of a mobile network – and therefore the value of spectrum – but it is not possible to pinpoint a single ratio of how important these are. Instead, the ACMA correctly reported a range of spectrum values in the previous consultation, and was seeking views on where the final value should be placed in that range.

The ACMA should extend time trends for different spectrum bands. Failing this, the MSR index should be used as opposed to CPI to adjust prices to 2025 values and from there, to the point that the final prices are determined for renewed licences

The ACMA is proposing to change how award prices are adjusted to reflect their value in 2025, and from there to the point that renewed licences are paid for, from use of the MSR index to the use of CPI, meaning that benchmark prices reflect changes in general price levels rather than considering how values have changed in the telecommunications industry specifically.

We consider that use of the MSR index (MSR/MHz/pop index) to bring prices forward to 2025 (and beyond to the time that the spectrum value of a ESL is finalised) is more robust and defensible than CPI for the following reasons.

- The MSR index better reflects spectrum value drivers (which include revenue, supply of spectrum, population) than inflation. The value of spectrum to network operators specifically depends on the profitability that can be obtained from its use. For CPI to be a reasonable adjustment index, we would need to see profitability – not just revenue – increasing at the same rate as everything else in the economy. Instead, we observe a global trend for falling ARPU which is predicted to continue and increasing costs, meaning a greater fall in profitability (and therefore the value of all inputs).
- While we note the recent change in ARPU in Australia, they have been historically falling / flat for much of the term of existing licences and the general fall in ARPU is recognised internationally and predicted to continue (as discussed further above on page 8). Given



this, it is currently unreasonable to expect prices or revenues to increase over time, as is the assumption made if prices are adjusted using CPI.

- CPI adjustments wrongly treat spectrum as if it is a consumer good or service, consumed by households, and ignore the fact that it is an input used in the telecommunications industry – the value of which is influenced by technological developments, market structure, profitability and competition. As stated above, profitability for telecommunications operators is steadily falling, meaning that the value of all inputs is also falling.
- Spectrum markets have experienced real price declines, which CPI cannot capture. Again, this is due to the fact that spectrum is not a general consumer service, but instead is a specific input to a particular industry, one in which overall value is falling.
- Inflation overstates forward prices and risks inefficient outcomes for consumers, industry and the economy. Given the demonstrated declines in spectrum prices, inflation-only indexation will overstate the current value of earlier awards, resulting in inflated renewal charges. For bands where no significant upward trend exists, CPI adjustments would be economically unjustified and inconsistent with empirical evidence.
- Indexation should align with sector-specific economic activity as reflected by the MSR index, not general economic inflation as measured by CPI. General economic inflation is not uniform in its impact across the economy.
- MSR index is consistent with ACMA's own valuation methodology and stakeholder feedback.

The ACMA's own view as expressed in the Stage 3 Consultation Papers is that 'the use of the MSR/MHz/pop index will enable its direct benchmarking approach to reflect contemporary spectrum values more appropriately than other indexation methods, as its ESL preliminary pricing analysis in this paper demonstrates that spectrum values have been trending lower.' Although nbn noted in our response to the Stage 3 Consultation Papers that MSR likely did not go far enough in estimating the falling value of spectrum (since as well as revenues falling, we noted that input costs were rising, leading to an overall greater fall in profitability), this decline in value more accurately reflects the international experience in spectrum valuation rather than a steady increase as would be presented by use of the CPI.

Therefore, while trends derived from the MSR index as published by the ACMA in the Stage 3 Consultation Papers were not consistent over time, they did show a tendency for a downward trend which supported the overall trend in falling spectrum value. It is clear from both these pieces of evidence that future spectrum values should be estimated at a lower quantum than that currently proposed. Further, that the MSR index should be applied into the future rather than assuming static prices after 2025.



We consider that the factors that the ACMA has set out in its Stage 4 Consultation Papers support the use of CPI would also apply to the use of the MSR index.

- The use of the MSR index is a transparent and objective way to bring historical prices forward as shown by the analysis contained in the ACMA's Stage 3 Consultation Papers.
- Similarly, the fact that a key input is mobile revenue means that it aligns with broader economic conditions. We consider that use of the MSR index more accurately reflects sector-specific economic activity noting that general economic inflation does differ widely in its impact across the economy.

Further, we consider that the concerns expressed by Dotecon regarding the MSR index do not support the use of the CPI index set out in more detail below:

- Dotecon's view: that use of the MSR index applies uniform time trends across all band groups, despite evidence that price movements differ significantly between bands.
 - The use of the CPI would similarly apply a uniform increase across all the band groups – and indeed apply a uniform increase across every industry in the economy. Further, the use of benchmark data which the ACMA is proposing to continue to collate in the time period up until applications are due would also mean that the effect of any significant price movements between bands would be mitigated by this input. For completeness, we note that we consider a time trend analysis would be more appropriate.
- Dotecon's view: the MSR index is sensitive to short-term changes in spectrum supply, such as large awards that temporarily depress the index.
 - Similarly, the use of benchmark data which the ACMA is proposing to continue to collate in the time period up until six months before the renewal application period for each ESL band would mean that the effect of any temporary decrease of the MSR index would be mitigated by this input. Further, rather than disregarding the MSR index as a whole due to short-term fluctuations, a smoothed index could be constructed with a rolling average, which again would provide a more robust estimate of value over time.
- Dotecon's view: its construction may not reflect actual dynamics between revenue and spectrum valuations, particularly as spectrum valuations reflect forward-looking expectations while revenue trends are current.
 - There has been a long term decline in the ROIC in the Australian telecommunications industry as discussed above in this submission which is directly relevant to forward-looking expectations and spectrum valuations.

For completeness, we note our previous concerns regarding the fact that the MSR index does not take into costs including increased investment requirements and rising operational costs, meaning that even stable revenues can result in declining profitability, lowering spectrum



value. In addition, we also have concerns that the MSR index applies in the same way across all spectrum bands given the significant differences in time trends across the different bands.

We consider that the ACMA should extend the time trends that have already been calculated (or use a logarithmic trend into the future) for the different spectrum bands in order to adjust prices to 2025 and to the date that the final price of the spectrum licence is determined. This is noting that future values of spectrum are likely to be lower based on the trend of decreasing spectrum values. See our Stage 3 Consultation Paper for further discussion on this point. Failing this, we consider that use of the MSR index to adjust prices to 2025 and till the time period that the value of the ESLs are finalised is more robust and defensible than the current proposal to use CPI.

3 Other pricing considerations

Updating benchmark data prior to renewal windows

We consider that this approach could increase the robustness of the benchmarking exercise. However, noting the high degree of subjectivity which is involved in selecting awards and countries, we consider that the exclusion of outliers and countries not representative of Australia should continue to apply to any revisions to the benchmark dataset including a clear rationale for the inclusion (and exclusion) of awards as relevant.

We agree that the ACMA needs to allow adequate opportunity to source and verify new data, as well as to communicate updated pricing views to licensees in a timely manner. Further, we consider that the ACMA needs to allow sufficient time to incorporate the views of licensees including potentially additional awards.

An important consideration that needs to be kept paramount is that certainty of pricing of the ESLs is crucial for confidence in long term investment making decisions. Given this, we consider that the ACMA should not significantly change prices after including new information.

4 Adjusting spectrum access charges based on payment timing

We consider that determination of the spectrum value and timing of payment are matters that raise different considerations. In order to provide the certainty that operators require regarding a) the spectrum value given the long-term nature of investment decisions and the significant sums involved, and b) timing of payment noting the significant sums involved and implications if it falls in one financial year or the following financial year for instance, we consider that the ACMA should adopt the following approach:

- The spectrum value should be determined following consultation on a revised benchmarking dataset (which the ACMA has proposed to be calculated to include



awards up to 6 months prior to renewal application period) and incorporation of relevant feedback. That is, there should be no further adjustment to this value including by CPI as currently proposed. We note that in this current climate, inflation levels have been unpredictable and as previously discussed, we consider that applying a CPI adjustment factor to spectrum values rather than an industry appropriate metric such as the MSR index disregards the inputs to spectrum values and indeed – disregards the declining spectrum value trend.

- Based on the ACMA's proposal to require upfront payment, we consider that timing of the full payment should be set for the same time period for all renewed licences in the same spectrum band irrespective of when the application was made and process completed. For example, two months prior to commencement of the renewed licences. This would provide operators with clarity regarding the dates for payment noting that there remains uncertainty regarding the timeframes for the application process.

We consider however that instalment options should be made available due to the asymmetric risks posed by incorrect spectrum pricing, noting that the considerations cited by the ACMA as factors that mean that instalments would not be appropriate are in our view not applicable (as discussed further in the 'Introduction' section). In these circumstances, we consider that the value of the spectrum licences and the amount to be paid in each instalment could similarly be determined in line with the above proposal, and the first instalment payment would be required 2 months prior to commencement of the renewed licences. .

5 Proposed application and decision-making process

We have set out our responses below to the questions as posed by the ACMA regarding the proposed application and decision making process.

Do you foresee any practical reasons that would prevent you from providing information that is accurate as of a date closer to when the application is made? (For example, accurate as of 30 days prior to when the application is made.)

Based on the information currently available, we do not foresee any practical reasons that would prevent nbn from providing the relevant information at a date more proximate to when the application is made. For completeness, we note the different use case for nbn's FW network in that it is designed for deployment to fixed premises rather than ubiquitous mobile coverage and therefore references between nbn and MNO networks should be treated accordingly.



Do you foresee any practical issues that would prevent you from providing the proposed documents about existing and planned sites and coverage in the required format to the ACMA as part of a renewal application?

Based on the information currently available, we do not foresee any practical reasons that would prevent nbn from providing the relevant document/s in the proposed format.

Do you foresee any practical issues that would prevent you from providing the proposed documents about third-party authorisations and in the required format to the ACMA as part of a renewal application?

Based on the information currently available, we do not foresee any practical reasons that would prevent nbn from providing the relevant document/s in the proposed format.

Do you foresee any practical issues that would prevent you from paying the spectrum access charge in full in the proposed timeframes?

See our response in the 'Adjusting spectrum access charges based on payment timing' section above, noting that we consider that the option to pay via instalments would mitigate the risk of incorrect spectrum pricing and that the considerations cited by the ACMA as factors that mean that instalments would not be appropriate are in our view not applicable (as discussed further in the 'Introduction' section).

