



# Inquiry into co-investment in multi-carrier regional mobile infrastructure

**NBN Co submission to the House of Representatives Standing Committee on Communications and the Arts**

**9 December 2022**





Thank you for the opportunity to provide input to the House of Representatives (HOR) Standing Committee on Communications and the Arts inquiry into co-investment in multi-carrier regional mobile infrastructure (HOR Inquiry).

Any future multi-carrier infrastructure arrangements will have some impact on the provision of existing services in regional and remote areas, where NBN Co Limited (**nbn**/ the Company) is an active participant.

In this submission, **nbn** briefly describes its role in regional and remote Australia, and offers observations on three topics for the Committee to consider in its investigation on challenges and opportunities for co-investment in regional Australia:

- the impact of competing services within regional Australia;
- an ongoing need for all networks to implement arrangements that still achieve resilience and redundancy during network failure or in response to natural disasters; and
- existing colocation arrangements on regional tower infrastructure.

## **nbn's role in regional and remote Australia**

**nbn's** purpose is to lift the digital capability of Australia. Over the past decade, the Company has made investments in its regional networks to increase access to the technologies and infrastructure that will enable Australia to transition to a digitally-enabled economy. **nbn's** footprint located in regional Australia comprises premises with access to either **nbn** Fixed Line, **nbn** Fixed Wireless or **nbn** Satellite technologies. The Company continues to dedicate significant resources and capital to help regional and remote areas of Australia stay connected and aware of their broadband options. **nbn** will continue to improve its wholesale services to address access challenges in regional and remote areas, including in those areas where mobile coverage is limited. **nbn** has an ongoing role to improve outcomes in regional and remote areas, including proactively engaging with stakeholders and working with governments and other organisations to identify ways to fund and deliver enhanced services.

**nbn** does not supply mobile services. **nbn's** tower infrastructure is focused on supplying Fixed Wireless services. This network currently comprises approximately 2,400 sites in rural, regional and outer-metro fringe areas and **nbn** continues to invest to extend the range, speed and capacity of its Fixed Wireless network to deliver the best possible customer experience.

In March 2022, a \$750 million investment in the **nbn** Fixed Wireless and **nbn** Sky Muster satellite network was announced – \$480 million from the Australian Government and \$270 million from **nbn**. The program will expand the reach of the existing **nbn** Fixed Wireless footprint by at least 50 per cent, as well as enabling two new high speed Fixed Wireless plans. **nbn** is currently in the process of consulting with industry in relation to the launch of the higher speed tiers. The additional capacity and reach available on the upgraded network will enable up to 120,000 existing **nbn** Sky Muster satellite-only premises to access **nbn** Fixed Wireless for the first time. The program has also delivered enhanced data limits across the **nbn** Sky Muster satellite network.

To deliver these improvements for customers, **nbn** will use 4G technology and software enhancements, as well as introducing 5G mmWave technology, to extend the range, speed and capacity of the existing network to deliver improved customer experience.



In early October 2022, **nbn** enabled more than 1,000 homes and businesses in the satellite footprint that do not have a current **nbn** connection to move to the **nbn** Fixed Wireless footprint. These homes and businesses are now eligible to order a **nbn** Fixed Wireless service via a participating phone and internet provider.

## Multi-carrier arrangements increasing competition in regional areas

**nbn** continues to have a keen interest in ensuring that the right regulatory settings are applied to ensure a level playing field for competition for broadband and voice-capable services in regional areas, so that the long-term interests of end users in accessing voice and broadband services can be realised.

**nbn** notes the Australian Competition and Consumer Commission (ACCC) is currently reviewing whether there will be both short-and-long-term benefits from the proposed infrastructure sharing deal between Telstra and TPG, and competition with fixed wireless operators is a factor under review. For example, in its preliminary views published in September 2022, the ACCC stated:

- TPG has advised the ACCC that, should the proposed Telstra/TPG merger authorisation application (in particular, the multi-operator core network (MOCN) arrangements) be approved, it will *“be able to offer access to the MOCN as a ‘fallback’ or ‘failover’ option for its NBN fixed line services in the Regional Coverage Zone”*.<sup>1</sup>
- Telstra also submitted it would be able to provide additional coverage for some customers.
- Both parties have submitted that the *“Proposed Transaction will also result in public benefits through enhanced competition and expanded choice for mobile and fixed network customers (in competition with **nbn**) in regional and rural areas.”*<sup>2</sup>
- The ACCC’s preliminary view observed that TPG is unlikely to supply non-**nbn** Fixed Wireless access services in the short term but may in the longer term. It considers Telstra is likely to achieve an improved ability to compete in supplying fixed wireless access services, against both **nbn** and other Fixed Wireless providers.<sup>3</sup>
- The ACCC has also stated that, *“when considering competition in fixed wireless...**nbn** is an alternative option that provides a competitive constraint.”*<sup>4</sup>

Regardless of the outcome of this proposal, it is clear increased competition is likely to be of benefit to consumers, but its impact on the ability to supply existing services must also be considered carefully.

In its own submission to the ACCC, **nbn** acknowledged it faces competition from 5G mobile services, including from Telstra and TPG, where mobile voice and data are marketed as **nbn** alternatives or substitutes for voice-capable services, fixed broadband services, and internet-of-things services. **nbn** notes also that improved competition from other fixed wireless providers offering ‘substitutable’ services may be a welcome addition to services available for regional Australians. However, because providers of substitutable fixed wireless services are not currently included within the Regional Broadband Scheme (RBS), increased competition in regional areas,

<sup>1</sup> ACCC, *Statement of Preliminary Views, Telstra Corporation Limited and TPG Telecom Ltd, Application for merger authorisation MA1000021*, p37.

<sup>2</sup> ACCC, *op.cit*, p38.

<sup>3</sup> ACCC, *op. cit*, p34.

<sup>4</sup> *Ibid*.



while highly desirable for consumers, could potentially reduce the RBS funding base to the extent there is increased churn away from fixed-line operators to fixed wireless operators.<sup>5</sup>

In reporting any challenges for co-investment in regional mobile infrastructure on the basis of this HOR Inquiry, **nbn** suggests the Committee consider whether it would also be appropriate for 4G/5G fixed wireless network operators that provide ‘substitutable’ services to premises to be subject to the RBS levy and, if so, to make recommendations to the ACCC to assess this option in their next review.

Given the purpose of the RBS levy is to fund the net costs of non-commercial **nbn** Fixed Wireless and Satellite broadband services in regional Australia, there will be a role for the Government to assess the churn of services from fixed-line network operators to fixed wireless operators and Mobile Network Operators (MNOs); and to assess the impact this shift will have on both the RBS funding base itself and on the ability for fixed wireless operators such as **nbn** to compete with future multi-carrier MNO arrangements.

## Network resilience and redundancy

The availability of additional services for consumers could potentially be useful for enabling redundancy in times where networks experience damage due to natural disasters and other adverse events, but only to the extent that any common infrastructure used in multi-carrier infrastructure sharing arrangements is not damaged.

Where common infrastructure is relied upon by more than one carrier, it will be increasingly important that all operators have temporary network infrastructure to keep end users connected and maintain network resilience in regional areas. **nbn** notes measures implemented by the Federal Government in recent years under the *Telecommunications Act 1997* and *Telecommunications (Low Impact Facilities) Determination 2018* should assist carriers to develop their suite of low-impact temporary facilities including temporary towers in order to provide services to emergency service organisations or to assist in restoring services until a carrier’s permanent facilities are rectified.

Carrier cooperation to bolster network resilience will be crucial to ensuring the benefits of infrastructure sharing are not outweighed by common points of failure where specific infrastructure is impacted. **nbn** understands carriers have also cooperated with each other in sharing resources to provide emergency management support/operations in some circumstances, e.g., temporary equipment that is non-network specific such as battery backup/power generators.

## Colocation on regional tower infrastructure

As the Committee notes in its Terms of Reference, there are various models through which infrastructure may be shared by multiple carriers. As noted above, **nbn** does not offer mobile services and therefore our participation in sharing tower infrastructure is limited to investing in colocation opportunities under the facilities access regime where **nbn**’s Fixed Wireless footprint is overlaid with networks of MNOs or infrastructure owners. Approximately 30 per cent of **nbn**’s Fixed Wireless sites are currently colocated on towers owned by either MNOs or infrastructure owners such as Indara and Amplitel. **nbn** also offers colocation arrangements on its own towers by agreement upon request.

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<sup>5</sup> NBN Co, *Submission on Telstra and TPG application for merger authorisation for proposed spectrum sharing in regional Australia*, 14 June 2022, p3.



Co-investment in tower infrastructure can reduce upfront capital and ongoing site fees. Colocating on third-party tower structures can also have a lower site acquisition risk than building new tower infrastructure for a carrier's own use. However, colocation arrangements can also involve upfront costs for structural upgrades and power upgrades. This includes strengthening the existing infrastructure for additional load which can be expensive. Ongoing operational costs are often also higher due to site sharing fees.

In addition to cost considerations, there are a range of factors a network operator must consider before a decision to invest in a colocation arrangement is made. In **nbn's** case, any new or replacement sites required within the Fixed Wireless network must meet specific network technical requirements. For example, **nbn's** transmission towers are built in chains that are connected to each other through microwave links, with a hub transmission tower connected directly to an exchange via fibre. **nbn's** ability to achieve the height it needs to extend the range of its Fixed Wireless signal and ensure line of sight within its neighbouring chain of sites and to the premises it is seeking to serve is an important factor in selecting suitable infrastructure or sites when adding or replacing tower infrastructure.

As noted above, **nbn** currently colocates on towers owned by MNOs and infrastructure owners. **nbn** believes the recent activity to divest tower assets by MNOs is unlikely to impact fixed wireless operators, such as **nbn**, in their ability to gain access to towers in regional areas where technical requirements allow. The new owners rely on business from **nbn** and other entities and are therefore incentivised to reach agreement with parties to allow colocation on their structures.

However, the impact of an increased demand for 5G services in regional areas more generally is likely to create additional demand for apertures and/or structural loading on existing network structures such as towers and supporting passive infrastructure, which will exacerbate the existing physical constraints impacting network operators' ability to colocate. This may increase the likelihood of a structure upgrade to be needed if colocation is possible, and thereby increase deployment costs and time for these types of arrangements.

## Conclusion

**nbn** is grateful for the opportunity to make submissions on these issues. As technology continues to emerge and Australians' usage of it changes, it is critical that our infrastructure, processes and policies remain fit for purpose. **nbn** continues to look for opportunities, with its upgraded network and working closely with industry, to better support operators and the Federal Government's programs including for example through improving its co-location processes for smaller operators to gain access to **nbn's** sites. Within the Company's current capital expenditure constraints, the focus is on optimising the performance, capacity and resilience of the **nbn** network.

If the Committee would like to discuss these issues further, please contact Sarah Alderson, General Manager, Regulatory Affairs, at [sarahladerson@nbnco.com.au](mailto:sarahladerson@nbnco.com.au)



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