



nbn's submission on Spectrum sharing, overview and new approaches information paper

27 Sep 2019



Submission on Spectrum sharing

Thank you for the opportunity to comment on the issues set out in the 'Spectrum sharing, Overview and new approaches, August 2019' information paper.

nbn has rolled out a fixed wireless (FW) and satellite network to service end users in homes and businesses to assist in meeting the Commonwealth Government's expectation that all Australians have access to very fast broadband as soon as possible, at affordable prices, and at least cost to taxpayers. The Government also expects that **nbn** will ensure upgrade paths are available as required¹.

nbn is currently experiencing demand growth [C-i-C] [C-i-C] and upgrade paths are required for the FW and satellite networks to lift the digital capability of Australia and meet growing customer expectations.

Further, **nbn** submits that its spectrum requirements for its FW and satellite networks constitute a high value use of spectrum in assisting it to meet the government's Statement of Expectations and to offer services that would not otherwise be offered given the loss-making and non-commercial nature of these networks.²

In this context, **nbn** supports the ACMA investigating the potential for appropriate sharing arrangements to enable a more efficient use of spectrum.

- We agree that dynamic spectrum access (DSA) approaches have relied on a hierarchical approach for access to spectrum involving lower-tier users making way for higher-tier uses wherever, and whenever, that spectrum is required for use and that in many cases this would not provide the level of certainty needed to meet a lower-tier user's business requirements.
- Further, that tiered sharing works best when accommodated uses are complementary, rather than competing. That is, tier 2 status users must alter / cease operation where and when specified when notified of pending use by tier 1 users that are itinerant, nomadic or sporadic in their use of spectrum.
- We also agree that the current global scarcity of DSA implementations is likely due to technology limitations, spectrum availability factors and an inability for those models to meet user expectations / requirements.

nbn submits that the use of spectrum by its FW and satellite network is generally not suited to proposed dynamic spectrum access techniques. This is noting, for example, that tolerance to interference is low given contractual obligations and customer experience expectations and use is neither itinerant or sporadic in nature.

Further, certainty of tenure and the technical capabilities of spectrum (including availability and resulting impact on product performance) are important considerations given the long term and high-cost nature of **nbn**'s FW and satellite network planning decisions. The use of different spectrum bands can also require significant investment in new network and consumer premises equipment.

nbn has no further comments based on the currently available information.

¹ See page 1 of NBN Co Ltd Statement of Expectations 24 August 2016 at: <https://www1.nbnco.com.au/content/dam/nbnco2/2018/documents/Policies/soe-shareholder-minister-letter.pdf>

² The Department of Communication's Bureau of Communications and Arts Research (BCAR) determined that nbn's FW and Satellite network is loss-making and non-commercial, and estimated that the net present value loss for FW and satellite services to FY2040 is approximately \$9.8 billion. In FY2015 real terms, this loss represented a per-month subsidy of approximately \$105 and \$110 for each FW and Satellite premises activated. See BCAR 'NBN non-commercial services funding options, Final report' March 2016, p7 at <https://www.communications.gov.au/publications/nbn-non-commercial-services-funding-options-final-report-march-2016>