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Environment and Communications Legislation Committee
The Australian Senate

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The *Telecommunications Legislation Amendment (Competition and Consumer) Bill 2017* and the *Telecommunications (Regional Broadband Scheme) Charge Bill 2017*

1. Introduction

TPG appreciates the opportunity to provide a submission to assist the Senate Committee's consideration of the *Telecommunications Legislation Amendment (Competition and Consumer) Bill 2017* (**TLACC Bill**) and the *Telecommunications (Regional Broadband Scheme) Charge Bill 2017* (**TRBSC Bill**) (together, **the Bills**).

The Bills have significant financial and operation implications to TPG's business operations. As currently drafted, the Bills damage our ability to compete in telecommunications markets through curtailing our ability to build and operate networks and requiring that we pay a substantial tax that most of our competitors are largely exempt from paying. The Bills are important to the future structure of the telecommunications industry and the provision of modern telecommunications services to the Australian people. It is vital that the Bills implement correct policy and meet their objectives without undue damage to competition.

Though we accept the Government's policy to ensure sustainable funding for telecommunications networks in regional Australia, we consider that the taxation methodology proposed in the Bills is anticompetitive and will not achieve the Bills' purpose. The Bills are anticompetitive because they directly attack the operations of a particular market segment, the fixed line network operators that the Department of Communications and the Arts (**DOCA**) considers to be directly competing with nbn Co. The Bills will fail to ensure a sustainable funding mechanism for basically the same reason; the tax's collection base is too narrow and risks distorting competition so that consumers shift that buying preference away from fixed line broadband. The Bills ignore the rapidly growing importance and technical advancement of fixed wireless and mobile networks and their ability to take considerable broadband market share from nbn Co in profitable urban areas.

2. Executive Summary

- The Bills' narrowly targeted tax on fixed line broadband networks will distort competition in broadband markets as too large a financial burden is being placed on the owners of a particular type of network technology. The cost will be passed on to consumers and risks consumers shifting their buying preference to other technologies such as fixed wireless or mobile that become comparatively cheaper because they are not subject to the tax.

- The narrowly targeted tax risks the funding for nbn Co's non-economic services being unsustainable.

- nbn Co's non-economic services should be funded from general tax revenue. In the alternative, funding should be collected from the broad base of the telecommunications industry in a manner similar to and in replacement of the USO.

- Any decision on funding the nbn's non-economic services must occur in conjunction with decisions about the USO. The Government's decision regarding whether to implement the RBS Charge should be delayed until the Productivity Commission has finalised its current review of the USO.

- The Bills unnecessarily restrict network build by non-nbn carriers. This will hinder innovation and competition.

- OTT players derive benefits from the nbn and should contribute to any fund established to fund the nbn.

- The Bills require an earlier review date in order to address the effect of rapid technological advancements and the extent of competitive distortion caused by the tax.

- nbn Co has recently announced significant improvements in the costs associated with the rollout of its fixed wireless network and substantially increased the footprint of its fixed wireless network. As a result the cost base relied on in setting the RBS Charge needs to be reassessed.

3. The Regional Broadband Scheme Charge

The Bills propose the imposition of a tax against the operators of high speed fixed line broadband networks (**the RBS Charge**). The proposed RBS Charge is approximately $7.10/month for each premise receiving a high speed fixed line broadband service. This represents about 25% of the wholesale price of a broadband service. The tax can be increased if required. The purpose of the RBS Charge is to fund the loss-making rollout and operation of nbn Co's fixed wireless and satellite network in regional areas. It is intended that the RBS Charge will only apply to nbn Co and so-called nbn comparable fixed line networks and provide a cross subsidy for the nbn's services in non-economic areas. Specifically, the RBS Charge will not apply to low speed legacy networks, networks being transitioned to the nbn, mobile networks or fixed wireless networks.

Restricting the RBS Charge to high speed fixed line operators provides a far smaller collection base than the Telecommunications Industry Levy (**TIL**), which supports the Universal Service Obligation (**USO**) and has close correlations to the nbn's regional broadband scheme. In comparison, the USO is funded by a levy collected from all participants in the telecommunications industry with eligible revenue above a set threshold. The result of the narrowly targeted tax is that the RBS Charge per premise or service is significantly higher than would be required if the tax is levied across the industry as a whole.

Under the current proposal the lion's share of the RBS Charge will be levied against nbn Co as it will be the main provider of high speed fixed line broadband services. The DOCA estimates that it will require $9.8B to fund the nbn in non-economic regions. Of this amount, it estimates that 5% will be collected from the RBS Charge on non-nbn carriers with the remaining 95% being levied against nbn Co's operations. In contrast, a broad industry levy that included mobile networks would result in nbn Co paying about 13% of the costs for non-economic services.[1] Though the amount being collected from the small number of captured non-nbn carriers is significant to those carriers, when compared to the amount that will be levied against nbn Co it provides a relatively contribution towards the massive ongoing amount required to fund the nbn in non-economic areas. Though it is possibly an unintended consequence, it is clear that the RBS Charge will economically damage the small number of carriers that the DOCA has defined as competing with nbn Co in broadband markets.

4. Funding the nbn's non-economic services

Several recent Government reviews have considered the most appropriate means to fund the nbn's non-economic services. This includes:

[1] Australian Government, Department of Communications and the Arts, Bureau of Communications Research, NBN non-commercial services funding options, Final Consultation Paper, October 2015, p.63.

- the 2014 Vertigan Review;
- the 2015 Bureau of Communications Research (**BCR**) consultation into NBN non-commercial services funding options. The BCR is part of the DOCA;
- the 2015 Regional Telecommunications Review (**RTIRC**); and
- the Productivity Commission's 2017 inquiry into the Telecommunications Universal Service Obligation.

Of these reviews, only the BCR supported a narrowly targeted industry levy. Relevant to the decision reached by the BCR and ultimately relied on by the DOCA, the scope of the BCR's research was constrained by the DOCA's limited terms of reference, which required the BCR to only assess 'direct funding arrangements based on industry contributions'[2] and did not allow it to consider contributions from general tax revenue.

The limited terms of reference given to the BCR are in contrast to the options favoured in the Vertigan Review, which in regards to the funding of the nbn's non-economic services stated:

> By far the best option for funding any ongoing subsidy would be through consolidated revenue. Among other advantages, that would allow Parliament and the public to assess in an ongoing way the benefits of using taxpayer funds for this purpose rather than others.[3]

The Vertigan Review went on to say:

> However, should that option not be adopted, the panel recommends that, if an ongoing subsidy is required and its minimum amount can be reliably determined, a single, annual, broad-based industry levy, covering both voice and broadband services, be imposed to fund that subsidy. This would be similar to the current arrangements for the Universal Service Obligation (USO)…[4]

The RTIRC considered that the existing USO funding model is problematic, stating that advances in technology have resulted in the standard telephone service (**STS**) becoming increasingly obsolete and that loss making services in regional Australia and losses associated with safety net telecommunications services should be dealt with in one scheme.[5] The RTIRC recommended development of a new broad based Consumer Communication Fund for voice and data services[6] and replacing the USO's TIL with a levy to support loss-making regional infrastructure and services, with scope to include subsidies for the non-commercial nbn services.[7] The RTIRC stated, such an overarching regulatory structure would avoid piecemeal and short term regulatory adjustments by putting a more relevant and comprehensive framework in place.[8] This is sensible advice.

USO policies are designed to address the affordability, accessibility and availability of basic communications services. Australia's current USO regulates equitable access to only the STS and public payphones. The Government studies listed above recognised the decreasing relevance of the STS to modern Australia and that it has been replaced by mobile telecommunications and fixed or mobile broadband. It is clear that nbn infrastructure, complemented by mobile coverage, will meet the objective of providing USO *availability*. The nbn's uniform pricing structure and its funding helps to address USO *affordability* and *accessibility.*[9] Clearly, the nbn forms part of Australia's USO policy fulfilment.

In considering the future of the USO, the Productivity Commission recommended "baseline" telecommunications standards be set[10] and that nbn Co have a clearly defined role in providing

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[2] Australian Government, Department of Communications and the Arts, Bureau of Communications Research, NBN non-commercial services funding options, Final Consultation Paper, October 2015, p.50.
[3] Vertigan Review, NBN Market and Regulatory Report, 2014, p.21.
[4] Vertigan Review, NBN Market and Regulatory Report, 2014, p.21.
[5] Australian Government, *Regional Telecommunications Review 2015*, chapter 4.
[6] Australian Government, *Regional Telecommunications Review 2015*, Recommendation 8
[7] Australian Government, *Regional Telecommunications Review 2015*, Recommendation 9
[8] Australian Government, *Regional Telecommunications Review 2015*, p.47.
[9] Australian Government, *Telecommunications Universal Service Obligation*, Productivity Commission Inquiry Report, No. 83, 28 April 2017, p.298.
[10] Australian Government, *Telecommunications Universal Service Obligation*, Productivity Commission Inquiry Report, Recommendations 5.1 and 5.2

baseline telecommunications services[11], in effect largely replacing Telstra as the USO provider. This USO or baseline role is clearly what the nbn's satellite and wireless services will be fulfilling in non-economic areas as voice and broadband services will be provided on that infrastructure in areas where they would otherwise not be available. The funding of the nbn's non-economic services is intrinsically tied to Australia's USO policy. If this was not the case then we would not be having this discussion and the provision of regional broadband would simply be left to the market. To ensure effective regulation, policies setting the funding of the nbn's non-economic services and the USO must be considered together and combined in the same legislation.

The Productivity Commission expressed similar opinions and concerns to the RTIRC, stating:

> The funding of nbn's non-commercial services should, moreover, not be considered independently of universal service policy reforms. In this context, the Commission has faced a unique challenge in responding to proposed government policy on the funding of nbn non-commercial services (the Regional Broadband Scheme) before the conclusion of this inquiry.
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> The Regional Broadband Scheme is proposed to (at least initially) include only a narrow levy base. In principle, the choice of funding model for non-commercial services should seek to minimise distortions in the telecommunications market, the risk of which is heightened with a narrowly-based long-term industry levy. As such, the Government may need to revisit the merits of alternative funding arrangements for nbn's non-commercial services.[12]

The Productivity Commission acknowledged that:

> the BCR and the ACCC have argued for a narrow levy base as they considered that it would maintain incentives for nbn to contain costs and improves productive and dynamic efficiency. However, the Commission considers that, in line with the principles-based approach to funding outlined in this chapter, the choice of funding model should prioritise minimising distortions in the telecommunications market and be flexible, simple and transparent. In this context, alternative funding arrangements such as through general government revenue and/or a broad-based industry levy — should be looked at more closely before implementing a long-term narrow-based funding model in a dynamic industry."[13]

The Regulatory Impact Statement (**RIS**) in the Bills' explanatory memorandum states that the Government's broadband policy reforms adopt overarching principles, and with relevance to funding, that

- regulation should allow wholesale and retail competition (**the competition principle**); and
- industry players should be treated consistently (**the consistency principle**).

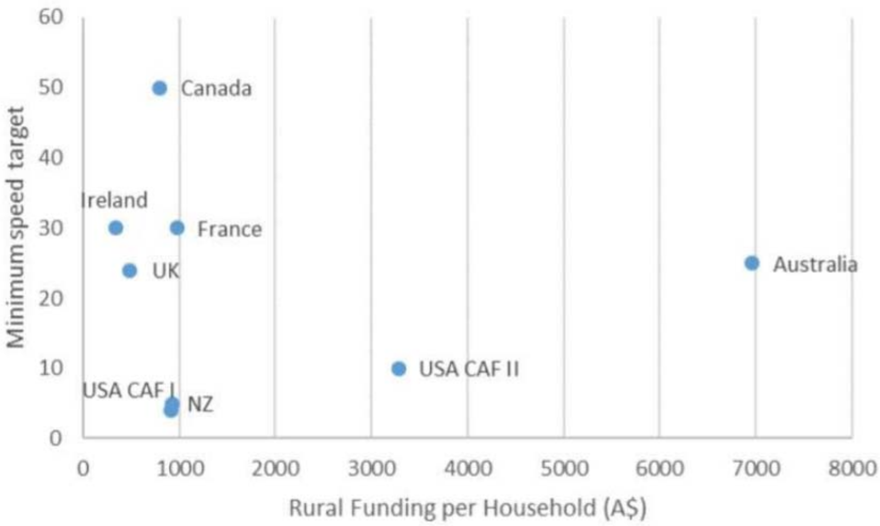
The RIS states that the competition principle risks the sustainability of nbn Co's cross-subsidy and that the consistency principle is addressed by treating all *fixed line* carriers consistently by requiring them to contribute to nbn Co's costs[14], which is an attempt to address the subsidy problems that arise through application of the competition principle. These two principles can be described as encouraging competitive neutrality, however, we consider that the proposed RBS Charge does not achieve this purpose as the considerable cost it imposes on specific networks distorts competition in favour of non-fixed line technology and negatively affects allocative efficiency by distorting consumer buying decisions towards potentially inefficient purchases.

Though we understand their rationale and the need to impose discipline on nbn Co to be cost-effective, we disagree with the view of the BCR and ACCC that the importance of encouraging nbn Co to be efficient by making it pay most of its costs in regional areas overrides important concerns about competitive distortion. There are other effective ways to encourage nbn Co's

[11] Australian Government, *Telecommunications Universal Service Obligation*, Productivity Commission Inquiry Report, Recommendation 7.1
[12] Australian Government, *Telecommunications Universal Service Obligation*, Productivity Commission Inquiry Report, *Overview & Recommendations*, No. 83, 28 April 2017, pp 16-17.
[13] Australian Government, *Telecommunications Universal Service Obligation*, Productivity Commission Inquiry Report, p.322.
[14] Telecommunications (Regional Broadband Scheme) Charge Bill 2017, Explanatory Memorandum, p.5.

efficiency that do not create the same competitive distortion as a narrowly targeted tax. For example, the distribution of funds to nbn Co based on regular scrutiny of nbn Co's forecast and actual costs by informed industry participants is likely to be very effective and more transparent than self-regulation of internal costs by nbn Co. This type of review can only be achieved if the industry participants taking part in the costs scrutiny are financially interested in the outcome, i.e. it must be directly relevant to their level of contribution to nbn Co's costs. The most thorough review of nbn Co's costs would require input and assessment from broad segments of the industry in order to gain access to particular skill sets, knowledge and in-depth analysis. For example, carriers and RSPs that operate or acquire access to satellite and fixed wireless networks are likely to have particularly relevant insight into the manner that nbn Co operates such networks. Given its massive resources and in-depth industry knowledge including knowledge gained through decades of being the primary USO provider, Telstra's input would also be invaluable. Such detailed industry scrutiny only occurs if there is a broad industry levy.

The views of the BCR and the ACCC about nbn Co's incentive to be cost efficient do not stand up to reality. According to recent research commissioned by Ovum, nbn Co's investment of almost A$7,000 per household on regional and rural broadband is more than double the amount spent by its nearest international counterpart. The report found nbn Co's expenditure per premise is significantly more than the A$3,200 spent in the US (the second highest outlay in the world, under the Connect America fund) with several other countries including France, the UK and Canada all spending less than A$1,000 per household. The graph below demonstrates the discrepancy between rural broadband expenditure in Australia and other countries studied by Ovum.[15]



Though comparisons with network costs in other jurisdictions are a blunt instrument given differences in population density, geography, labour costs and to some extent technology; such a stark difference in costs suggests significant inefficiency in nbn Co's expenditure on networks in non-economic areas. This sets a concerning precedent regarding nbn Co's ability or willingness to implement internal accounting measures to ensure that it is prudent in its expenditure without its funding being subject to detailed external scrutiny.

5. Wireless and mobile operators

The RBS Charge's narrowly targeted collection base stems from the DOCA's view that direct competition with the nbn will be limited to a 5% market share taken by other fixed line networks. The DOCA's decision to ignore the competitive impact of mobile and fixed wireless broadband networks is based upon its analysis of increasingly out of date evidence regarding the ability of these technologies to compete with the nbn's fixed line technology. Mobile and fixed wireless broadband are already successful substitutes for fixed line broadband for a growing segment of the community and will increasingly affect nbn Co's viability and its ability to cross-subsidise non-economic services. 4G mobile broadband is a substitute service for consumers with low data use

[15] Reported in Communications Day on 18 May 2017.

and who value mobility. Wireless broadband is a direct substitute service to fixed line broadband, offering comparable speeds and data quotas at similar prices to plans on the nbn.[16]

5G mobile is likely to be commercially available in Australia in 2020. 5G mobile will have substantially increased speeds and data capacity than existing 4G mobile networks. 5G mobile's vastly increased bandwidth capacity[17] will make it suitable for data intensive applications such as video and as such it will be a more effective substitute service and have the ability to win larger shares of the broadband market from fixed line networks. The DOCA's refusal to recognise the negative effect that advances in fixed wireless and mobile technology will have on nbn Co's market share is out of step with views in the telecommunications industry, which understands that accelerating technological advancement and innovation in mobile network capability will play a large part in shaping the future of the communications sector.

Fixed to mobile substitution of voice communications is very advanced, however, fixed to mobile substitution in the broadband market has been slower. In comparison to fixed line broadband, mobile broadband services offer lower data caps and higher data charges. These limitations are gradually being removed, with steady increases in mobile data caps at lower prices. Recent news reports predict that TPG's shift into mobile means "the average retail price of mobile data across the industry [is] about to come down substantially"[18], i.e. as incumbent mobile operators lower their data prices in response to TPG's market entry.

The Productivity Commission's research shows that most data download occurs via fixed line services but it went on to say:

> Nonetheless, broadband consumption is highly asymmetric. In 2013-14, around 90 per cent of premises in the United States were below average users of fixed broadband, and the bottom 50 per cent of premises accounted for just 10 per cent of total fixed broadband consumption. Assuming similar trends carry over to Australia, this suggests that the needs of many households may be adequately catered for with mobile broadband.[19]
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> (references removed)

The Productivity Commission went on to say:

> These trends are indicative of the complementary nature of fixed and mobile broadband access. Australians appear to strongly prefer fixed broadband for downloading bandwidth intensive content (such as video), while mobile broadband is used more frequently but with less intensity. This reflects the large differences in price and, especially, data quotas offered by these services. Reviewing several recent international studies, analysis by Ockerby and Wongsosaputro for nbn finds that 'the most likely service where fixed to mobile substitution will continue is for voice and lower bandwidth broadband services. However, to the extent that mobile data quotas expand, there may be increased substitutability between these services in the future.[20]
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> (references removed)

We agree with the Productivity Commission's analysis. Though mobile data quotas and pricing currently makes fixed line broadband better suited to large data users, for a reasonable segment of the community mobile broadband is sufficient. If a consumer does not use a video streaming service such as Netflix, then they may not need a fixed line broadband service and will be sensitive to price variations between competing technologies in making purchase decisions. Australian Communications and Media Authority (**ACMA**) research states:

> A significant group of Australians does not have a fixed internet connection—instead using mobile devices or a mobile broadband connection to access the internet. At December 2014, there were 3.9 million adult Australians (21 per cent) who were mobile-only internet users. This is an increase of two percentage points from December 2013, when 19 per cent (3.5 million) adult Australians were mobile-only internet users.[21]

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[16] For example, see Uniti Wireless's residential fixed wireless plans at: https://unitiwireless.com/residential-plans/
[17] Australian Government, *Telecommunications Universal Service Obligation*, Productivity Commission Inquiry Report, No. 83, 28 April 2017, box 2.8, p.57.
[18] http://www.canberratimes.com.au/business/media-and-marketing/telstra-must-increase-spending-to-protect-mobile-at-shareholders-expense-ubs-20170702-gx2wzp.htl
[19] Productivity Commission full report, p. 44.
[20] Productivity Commission full report, p. 46.
[21] http://www.acma.gov.au/theACMA/engage-blogs/engage-blogs/Research-snapshots/Australians-get-mobile

The ACMA's research states that there are clear patterns in mobile only internet users, with consumers in the 25-34 age group being twice as likely to be mobile only than a person aged over 65. This correlates with our experience, young Australians often use only their mobiles for internet access, whereas older Australians are used to having a fixed line service. As demographics age with time it is likely that the percentage of Australians that only use or predominantly use mobile broadband will grow accordingly.

Consumers on the nbn are overwhelmingly purchasing plans at 25Mbps or less. The ACCC's most recent NBN market indicators report states that 82% of consumers are purchasing these low-speed plans though faster speeds are available.[22] There has been a lot of discussion regarding whether this is because the pricing of nbn Co's usage based wholesale charge, the CVC, restricts the take up of high speed plans, however, we consider the answer is simpler, for the vast majority of consumers low-speed broadband is easily sufficient for their requirements and they see no benefit in paying more for higher speeds that they don't need. For example, the introduction of Netflix resulted in large increases in data usage and it remains one of the largest sources of data consumption despite only requiring a transmission speed of 3Mbps. The transmission speed of existing mobile and fixed wireless networks are easily capable of handling Netflix and most other consumer requirements, in fact mobile and fixed wireless networks in Australia have speeds comparable to or faster than the speeds that most consumers are acquiring on the nbn. The issue is not speed but whether the mobile and fixed wireless networks provide consumers with sufficiently high data quotas to allow them to use a broadband service as they wish without worrying that their data quota will be exceeded. As discussed above, mobile data quotas are sufficient for a significant percentage of consumers and as mobile data quotas grow, mobile broadband will increasingly become a substitute rather than a complement to fixed line broadband.

It is difficult to quantify the extent that the DOCA's disregard for mobile and fixed wireless broadband risks competitive distortion and failing to achieve adequate funding for the nbn's non-economic services, but given that the DOCA is relying on thin evidence with little regard to current trends or imminent technological advances, we consider it is a brave and possibly wrong decision to conclude that higher fixed line prices because of the narrow RBS Charge will not result in substitution to mobile and fixed wireless networks.

6. The close proximity exemption

Part 8 of the Telecommunications Act (**the Act**) provides the so-called level playing field rules that protect the nbn's market share and require other high speed fixed line networks to operate on a wholesale only basis unless they comply with limited exemptions. An exemption that is relevant to TPG is the 1km exemption, which allows us to extend our pre-2011 network by 1km without being captured by the Act's wholesale only obligation. The TLACC Bill proposes repealing the 1km exemption, which will result in any further extensions of TPG's network having to instead comply with the close proximity exemption. The effect of this is that if we extend our pre-existing network to connect premises that are not in close proximity to infrastructure of our network as it stood before 1 July 2018, we are prohibited from providing retail services on the network unless we functionally separate our company. The term "close proximity" is not defined, except to say that it may be determined by the Minister. Until the Minister makes a determination, it is uncertain how far our network can be extended to connect new premises, however, given that the TLACC Bill proposes repealing the 1km exemption, it appears likely that the Minister will determine "close proximity" will be less than 1km.

Even with the 1km exemption, Part 8's wholesale only obligations hamper competition and innovation in Australian telecommunications markets. In many areas, Part 8 ensures that there can be only a single monopoly provider of wholesale fixed line services and that consumers are deprived from the benefits that flow from competition at the infrastructure or wholesale level. The close proximity exemption greatly exacerbates this problem. It also currently carries a level of uncertainty that we feel is commercially unacceptable until such time that the Minister determines the definition of "close proximity", though there is little doubt that it will severely restrict the benefits that TPG can gain from our very considerable investment in infrastructure and is contrary to the reasonable and legitimate expectations and business plans that we are entitled to hold for

[22] https://www.accc.gov.au/system/files/Copy%20of%20NBN%20Wholesale%20Market%20Indicators%20Report%2031%20March%202017.pdf

network infrastructure that has been installed in strict accordance with relevant laws, including the currently applicable 1km exemption.

The primary reason for the network limitations imposed by Part 8 are to assist nbn Co's ability to cross-subsidise its networks in non-economic areas and to ensure that consumers have access to the benefits of competition at the retail level. Whether it is a broad or narrowly targeted tax, the RBS Charge will provide the shortfall in funds that nbn Co requires for its non-economic networks. As such, cross-subsidisation will occur from a range of carriers and the rollout restrictions on non-nbn networks is not required. Further, as TPG's network and any other relevant fixed line network is subject to a carrier licence requiring the provision of wholesale access to networks built in reliance on the 1km exemption[23] and to the TLACC Bill's statutory infrastructure provider obligations, consumers already have access to retail competition.

Repealing the 1km exemption so that carriers can only rely on the close proximity exemption will curtail fixed-line network expansion except where carriers are willing to be wholesale only or incur the costs of functional separation. This will create inefficiencies and distort competition as carriers will install alternative networks such as fixed wireless technology even if fixed-line networks would be cheaper and provide a superior service to end-users.

We submit that the 1km exemption should not be repealed and effectively replaced with the close proximity exemption. The amendment has no purpose and removes the benefits to consumers and the economy that flow from vibrant fixed-line infrastructure competition. There is nothing preventing nbn Co from overbuilding the fixed-line infrastructure of other carriers and competing for market share on its merits. We consider that being subject to competition at this level will serve an additional purpose in encouraging nbn Co to be cost efficient to improve its ability to win market share.

7. OTT players' contribution

Over the Top (**OTT**) players derive considerable benefits from network improvements without incurring the associated costs. The services provided by OTT players include services that are direct substitutes for services provided by carriers and carriage service providers, such as video calls and messaging services. This reduces the traditional revenue base of carriers and carriage service providers. OTT players include many of the world's most profitable companies such as Google, Skype and Facebook. We submit that OTT players should contribute to any levy for funding the nbn's non-economic services. We consider that this is fair as OTT players derive more financial benefit from nbn Co's services in regional areas than the carriers operating competing networks in other geographic areas, who do not actually derive any benefit from the nbn. The OTT players' contribution could be collected by a specific levy, such as the TIL, or via company tax or the Diverted Profits Tax with an associated contribution from general tax revenue subsequently being allocated to the nbn fund.

8. Review Date

The Bills propose a review within the first 5 years. We submit that it is appropriate for the legislation to be reviewed every 18 months after implementation to gauge the effect on competition and the ongoing sustainability for the funding of the nbn's non-economic services. A short review date is necessary because the Bills risk considerable competitive distortion and because the telecommunications industry is subject to imminent and relevant technological advancement, particularly with regard to 5G mobile.

9. nbn fixed wireless costs

On 14 July 2017, regional communications minster Fiona Nash announced that nbn Co was increasing the footprint of its fixed wireless network and that the maximum speed of fixed wireless services was to be significantly increased.[24] Further, it was reported on 17 July 2017 that nbn Co

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[23] *Carrier Licence Conditions (Networks supplying Superfast Carriage Services to Residential Customers) Declaration 2014*

[24] http://www.fionanash.com.au/Media/MediaReleases/tabid/84/ID/1660/Fixed-wireless-broadband-network-expands-across-rural-Australia.aspx

had considerably decreased the estimated cost of fixed wireless connections.[25] In particular, it was reported that:

- The footprint of the fixed wireless network will be increased from 4% to 6% of all nbn premises.

- In early 2018, the maximum download/upload speeds available on nbn Co's fixed wireless network will be increased to 100/40 Mbps, up from the network's originally planned 25/5 Mbps and the currently available 50/20 Mbps. This supports the fact that nbn Co's fixed wireless competitors can provide services that will directly compete with the fixed line nbn for broadband market share in profitable areas.

- nbn Co's average cost of connecting a fixed wireless service is now $3550 per premise, a decrease from its previous estimate of $4000 to $5000. This is a decrease of between 11% and 29% in nbn Co's costs and makes fixed wireless cheaper than nbn Co's FTTP connections. This raises questions regarding whether the estimated costs used in the BCR's calculations of the levy required to fund the nbn's non-economic services are now obsolete and whether the RBS Charge needs to be reassessed, particularly as the cheaper fixed wireless network will be rolled out to 50% more premises than previously planned.

[25] Communications Day, 17 July 2018