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Submission Against Increasing the Minimum Broadband Speeds for Statutory Infrastructure Providers in Australia

1. Executive Summary

The Australian Government Department of Infrastructure, Transport, Regional Development, Communications and the Arts has released a consultation paper proposing an increase in the minimum regulated broadband speed for Statutory Infrastructure Providers (SIPs) from the current 25 Megabits per second (Mbps) to 100 Mbps.[1] While the intention to improve broadband speeds is acknowledged, this submission expresses significant concerns regarding, in particular, the financial pressure and ultimately financial viability of this proposal, particularly for smaller SIPs. Further, based on Australian Consumer and Competition (ACCC) data, **over 70% of broadband users are currently utilising 50Mbps[12] or lower**, indicating that there is no market impetus for a minimum speed requirement of 100Mbps.

Our submission argues against an increase to a minimum of 100Mbps because:

- the reasoning and benefits provided to justify such an increase are misguided, both technically and from a market demand perspective. Higher speeds are available in the market today, however, over 70% of Australian's require 50Mbps or less to meet their needs;
- without overwhelming market demand for higher speeds, there is no mechanism to recover capital expenditure. Further, based on NBN costs, the payback for such an investment is over 20 years and coupled with Regional Broadband Scheme (RBS) levy and ACCC regulated wholesale pricing, many smaller providers may struggle to remain financially viable; and
- financial viability of providers will ultimately reduce investment, innovation and competition in the telecommunications industry, leading to a predominant

duopoly (like the supermarket industry) in the fixed-line wholesale market and increased pricing for consumers.

We propose a more cautious approach, advocating for a wholistic approach of:

- an increase to a minimum speed of 50 Mbps down and 20 Mbps up;
- a long phase-in period tailored to individual SIPs and their specific market demand. This would be achieved over an extended and appropriate timeframe to accommodate industry, supply chain and SIP build capacity limitations;
- substantial government financial support for fibre upgrades; and
- a significant increase in the RBS levy exemption threshold to from 2,000 to 20,000 premises to enable smaller carriers to invest in necessary infrastructure improvements.

2. Introduction: The Evolving Landscape of Australian Broadband and the SIP Regime

The Statutory Infrastructure Provider (SIP) regime in Australia was established under Part 19 of the Telecommunications Act 1997, commencing on 1 July 2020.[1] The fundamental objective of this regime is to guarantee that all Australians have access to high-speed broadband services, recognising the essential role of connectivity in modern society.[1] NBN Co Limited serves as the default national SIP, responsible for the majority of the Australian broadband infrastructure. However, the framework also allows other carriers to become SIPs for specific geographic areas, often in new developments or estates, thereby expanding the reach of regulated broadband services.[1] Currently, the minimum regulated speeds that these SIPs are obligated to support are a peak download speed of 25 Mbps and a peak upload speed of 5 Mbps.[1]

In April 2025, the Department of Infrastructure, Transport, Regional Development, Communications and the Arts released a consultation paper addressing the regulation

of broadband speeds for SIPs.[1] This paper puts forward a proposal to significantly increase the legislated peak download speed that SIPs must be capable of providing to at least 100Mbps.[1] The rationale behind this proposal, it is argued, stems from increasing demands from various stakeholders who recognise the necessity of appropriate broadband speeds for effective participation in the economy and society.[1]

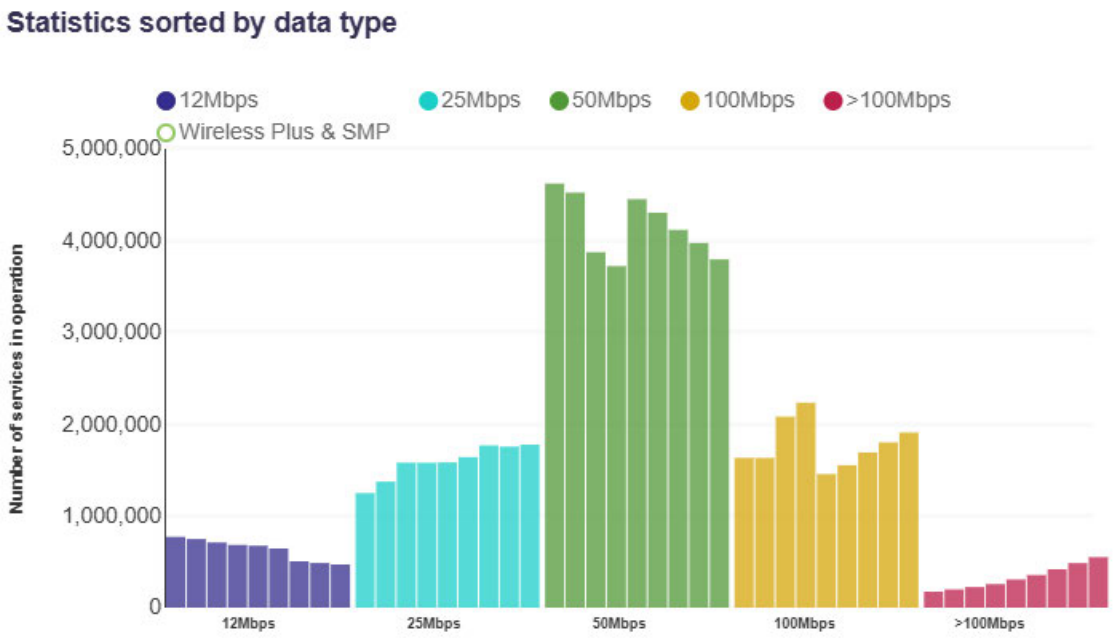
This submission aims to provide a critical analysis of the proposed increase in minimum broadband speeds for SIPs, focusing on the potential negative consequences for smaller providers and the broader broadband market. It will examine the current state of broadband speeds experienced by Australian consumers and businesses, evaluate the significant challenges and costs associated with the proposed increase, consider the perspectives of various stakeholders within the telecommunications industry, analyse the impact of the RBS levy, and assess the financial implications of infrastructure upgrades. Ultimately, this submission will argue for a more measured approach to increasing minimum broadband speeds, while reducing the financial impacts of the RBS levy, to ensure the sustainability and competitiveness of all providers in Australia.

3. Analysis of the Consultation Paper: Key Arguments and Proposals

The Department is proposing to increase the mandated minimum broadband download speed for Statutory Infrastructure Providers (SIPs) in Australia from 25Mbps to 100 Mbps, recognising current network advancements outpacing existing regulations. This would apply to all SIPs, including NBN Co, with the option for flexibility in offering faster or slower speeds beyond this baseline, as it is today. The consultation paper also seeks feedback on increasing the current upload speed requirement of 5Mbps. While we acknowledge that fibre-based fixed-line networks may support the increase immediately, however, technologies based on copper and coaxial infrastructure may not.

4. Current Broadband Speeds in Australia: A Snapshot of Consumer and Business Experiences

An examination of the current broadband landscape in Australia reveals that while speeds have improved, the vast majority of Australian's are still on lower-tier plans, and a significant portion may not require or be willing to pay for 100Mbps speeds. While average speeds are reported to be in the range of 66 to 79Mbps [5], data from Cloudflare in 2023 suggests that the most common connection speeds experienced by Australian users are still in the 50Mbps and 100Mbps range, with an overall average of around 68 Mbps. Notably, the NBN 50 speed tier remains the most popular among Australian subscribers.



Source: ACCC - NBN Wholesale Market Indicators Report - December Quarter 24

The figure above, sourced from the Australian Communications and Media Authority

(ACCC), highlights that in the quarter ending December 2024, the vast majority of fixed broadband subscribers, **approximately 71%**, were utilising services of **50Mbps or less**. Whilst the data shows a trend to higher speeds, the figure clearly indicates that a significant portion of the market is adequately served by speeds lower than the proposed 100Mbps minimum.

Reports from the ACCC through their Measuring Broadband Australia program indicate that, on average, download speeds on NBN fixed-line services often meet or exceed the advertised plan speeds for NBN 25, 50, and 100Mbps plans during busy hours.[9] However, performance can be variable, particularly for 100 Mbps plans during peak usage times in the evening.[10] Notably, Fibre to the Node (FTTN) technology consistently shows underperformance compared to other fixed-line technologies like Fibre to the Premises (FTTP) and Hybrid Fibre Coaxial (HFC).[9]

The following table summarises the average download speeds reported by various sources in late 2024:

Source	Average Download Speed (Mbps)	Notes
Speedtest Global Index	66.58 - 79.18	Fixed broadband
Opensignal (October 2024)	Around 42-62	Fixed broadband experience (varies by provider)
ACCC (December 2024)	101.3% of plan speed	Average across all NBN fixed-line plans during busy hours [13]
Cloudflare (2023)	68	Real speeds experienced by users

This snapshot further highlights that a large segment of the market, particularly those on

the popular NBN 50 tier, do not currently require or utilise high speeds. Forcing providers to upgrade infrastructure to meet a new higher minimum speed will not align with actual consumer demand and would lead to unnecessary costs and limited availability to recoup the investment made.

5. Benefits of Increasing the Minimum Download Speed to 100Mbps for Australia

While proponents argue that increasing the minimum download speed for SIPs to 100 Mbps could lead to productivity gains, enhanced access to online services, and improved international competitiveness, these benefits must be carefully weighed against the potential negative consequences and costs, especially for smaller providers.

Productivity Gains: Faster internet speeds can contribute to productivity, particularly for businesses reliant on cloud-based applications.[1] However, the extent of these gains are in our option, overstated., The immediate need for a 100Mbps minimum for all users is questionable, given that many businesses today currently operate effectively with lower speeds, as evident in the data above. Economic modelling that suggests a correlation between increased broadband speeds and GDP growth [20] should be considered in the context of actual user needs and the required capital costs needed to achieving such widespread high speeds. Furthermore, higher speed tiers are currently available for users today if they choose to procure them, which there are not. Therefore, the argument of increasing the minimum speed tier for the possibility of productivity gains is irrelevant and misguided especially when compared to the capital outlay required to achieve these speeds.

Enhanced Access to Online Services: It is argued that a minimum download speed of 100Mbps would improve the experience for data-intensive applications like 4K video streaming and cloud gaming.[1] However, over 70% of Australian households, those procuring 50Mbps or less plans, find these speeds sufficient for their online activities.

Forcing an upgrade to 100Mbps could lead to increased costs for consumers who do not necessarily require this level of bandwidth.

Picture Quality	Resolution	Recommended Bandwidth (Download)
SD (Standard Definition)	480p or lower	1.5 Mbps
HD (High Definition)	720p	3.0 Mbps
Full HD	1080p	5.0 Mbps
4K (Ultra HD)	2160p	25 Mbps
8K (Ultra HD)	4320p	50 Mbps

Important Notes:

- These are generally the *minimum* recommended speeds for a stable streaming experience.
- Different streaming services might have slightly different recommendations.
- Consider additional bandwidth for multiple devices or other internet usage.
- Information sources from Netflix Help Centre

As highlighted in the table above, Full HD streaming for video conferencing applications can easily be achieved with the current minimum speed requirements. This is further supported by the fact that most modern web camera resolutions are typically HD only. For content streaming, as shown in the table, 4K streams can be accommodated with the current minimum speed requirement. Further, from the table above, it shown that a 8K stream can be accommodated via a 50Mbps bandwidth. As with the productive gain argument, higher speed tiers are currently available for users if they choose to procure them, therefore the argument of increasing the minimum speed tier for the purposes of

enhanced access to online services is technically not required, is misleading and is irrelevant.

Improved International Competitiveness: While Australia's ranking in global internet speed comparisons [5] indicates room for improvement, these comparisons are driven by the speed tiers that users select. We would argue that cost-of-living factors have more of an impact on speed-tier choice, than the available speed tiers. As highlighted above, more than 70% of Australians choose a speed tier of 50Mbps or less for their service, even though speed tiers 20 times faster are commonly available in the market. Given this, the argument of increase the minimum speed tier for the purposes of improved international competitiveness is misleading and irrelevant.

6. Challenges and Costs Associated with Implementing 100Mbps for SIPs

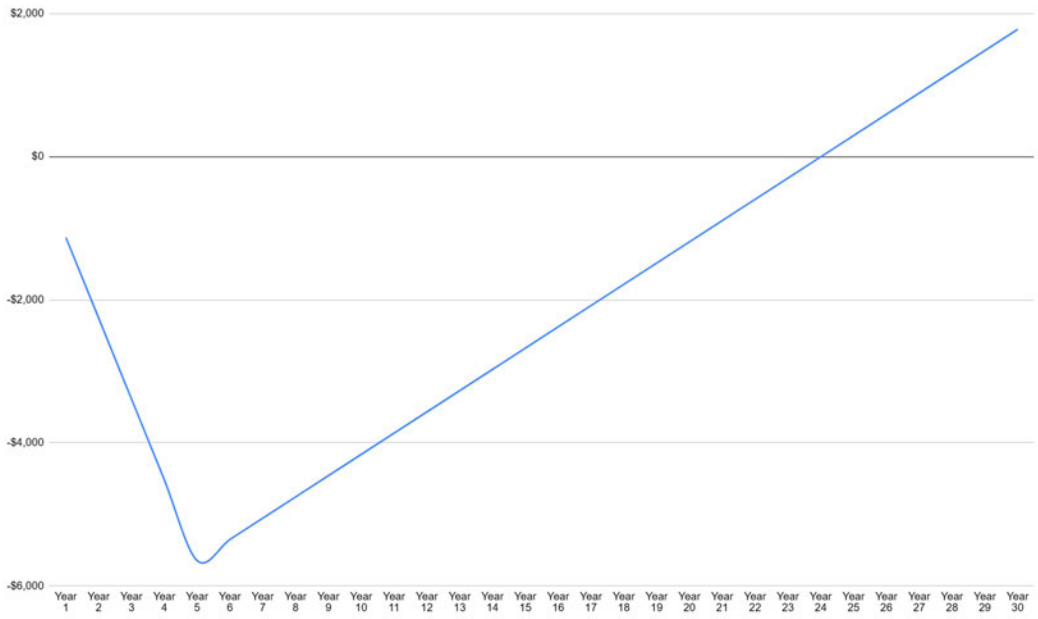
The implementation of a 100 Mbps minimum download speed for SIPs presents significant challenges and costs, particularly for smaller providers. To achieve this minimum speed, SIPs would need to upgrade either costly headend equipment and potentially copper based infrastructure to fibre infrastructure. Besides the technical challenges, including physical access, this would be a costly and time-consuming exercise.

Using the NBN announcement of $3 billion of government funding and $800 million of NBN funding to upgrade around 622,000 homes[76] as a proxy, this equates to over $6000 per home to upgrade.

The graph below is based on the following parameters:

- Average Revenue per User per month - [redacted] (Ext GST) not indexed
- 100% utilisation per year, per service
- Capital investment of $6000 (as above)

- Weighted Average Cost of Capital - [redacted]
- Loan term - 60mths
- Regional Broadband Levy - $8.26 not indexed



Source: Frontier Networks modelling

This graph highlights that just for the capital investment required for a fully fibre upgrade, a SIP would not reach break-even on that investment for at least 24 years - assuming 100% service activation for that period, which is unlikely. This is BEFORE considering the investment for the existing infrastructure build.

Further, the effect of the Regional Broadband Scheme (RBS) levy is significant. The removal of this levy reduces the break-even period back to 18 years, however, again this is based on the assumption that the service is 100% active during the period, which is highly unlikely. As highlighted, the cost to the SIP is significant. There is no economic modelling to justify this investment, presumably, this is why the government has funded approximately 80% of the costs to achieve this for NBN.

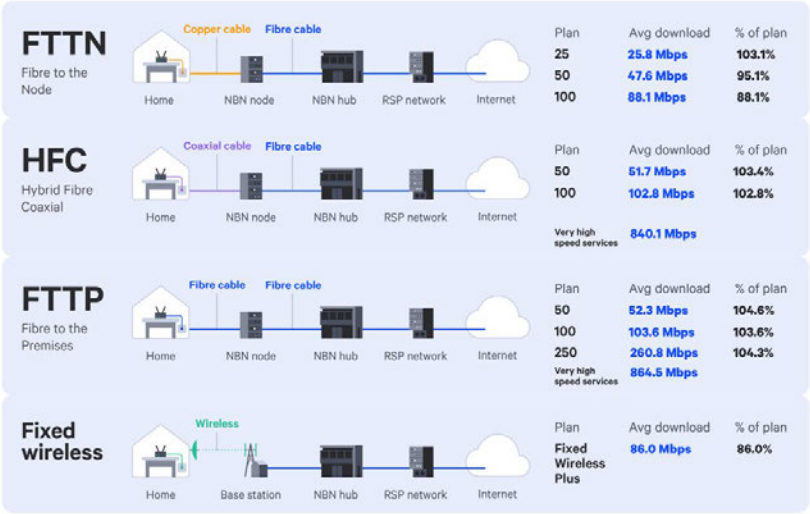
Financial Implications for SIPs: The costs of these infrastructure upgrades will have a direct and potentially devastating financial impact on SIPs, especially smaller providers with limited capital. The RBS levy, currently at approximately $8.26 per premises per month [47], further exacerbates this financial burden. This levy, intended to fund broadband services in regional areas, acts as a tax on non-NBN fixed-line networks, placing smaller competitors at a disadvantage as they do not receive any direct benefit from the RBS funding despite competing with NBN Co.[52] The levy increases the overall operating costs for these providers [50], and represents [redacted] of the average wholesale revenue., When combined with the significant capital expenditure required for upgrades to meet the 100Mbps minimum, it could render many smaller SIPs financially unviable.[52] Concerns have already been raised about the fairness and economic efficiency of the RBS levy, with arguments that it harms market competition and contestability.[50] Further, the ACCC recently moved to regulate wholesale pricing for SIPs, removing any ability for SIPs to recover RBS levy costs or capital outlays required to implement the proposed policy.

The cumulative effect of the RBS levy, regulated pricing and now potentially expensive mandated infrastructure upgrades could lead to smaller providers, either abandoning unprofitable infrastructure or becoming financially unviable and ultimately reducing competition, innovation and investment in the telecommunications sector.

Technical Challenges: Physical access for the deployment of fibre cabling, especially in multi-dwelling units (MDUs) is a technical risk which may increase the cost for deployment. Further, body corporates may mandate unrealistic or uneconomical demands of SIPs in the deployment within a MDU. This could result in the SIPs not being able to gain site access to complete the works.

Ensuring that consumer premises equipment (CPE) and in-home wiring can support 100Mbps and higher speeds is another challenge.[9] In our experience most consumers connect to their CPE wirelessly. Certain physical and environmental conditions within a

particular home, such as concrete structural pillars, the distance of the CPE relative the user and other transmitting sources, could mean that the effective available bandwidth for a user may be reduced. In our experience this can sometimes be as high as 40%. The figure below has been sourced from the recent ACCC broadband speed report and shows the average download speeds by technology type. With respect to the FTTN technology type, this shows that on average across the three most common speed tiers, users achieve 95.4% of their chosen speed tier, with an average of 88.1Mbps for 100Mbps speed tiers. Given the technical deployment issues raised and the environmental effects on WiFi performance, the considerable capital investment in infrastructure required to achieve 100Mbps would equate to approximately **$504 per 1Mbps increase**. This does not represent a sensible or sustainable investment outcome.



Source: ACCC - Measuring Broadband Australia Program Report - Dec 2024

7. Stakeholder Perspectives on the Proposed Speed Increase

While consumer advocacy groups generally support increased broadband speeds[1], the negative investment impacts and technical challenges must be considered. Major

telco's have previously suggested a more gradual increase to 50Mbps[1], indicating a recognition of the challenges associated with a rapid jump to 100Mbps and the lagging consumer demand. Technology experts acknowledge the importance of robust broadband infrastructure[43], but the economic and technical realities for the extremely limited benefits and consumer demand must be considered.

8. Arguments and Recommendations: Towards a Sustainable Broadband Future for Australia

Based on the preceding analysis, the following arguments and recommendations are put forth to ensure a sustainable and competitive broadband market in Australia:

Arguments:

The proposed immediate increase in the minimum download speed for SIPs to 100 Mbps poses a significant financial risk to smaller broadband providers due to the high costs of infrastructure upgrades and the burden of the existing RBS levy.[52]

Over 70% of Australian broadband users are currently on 50Mbps or lower plans [12], suggesting that an immediate and mandated upgrade to 100Mbps would not align with current consumer demand and would lead to unnecessary financial strain on providers.

The RBS levy, in its current form, disadvantages smaller fixed-line broadband providers as they are required to contribute without receiving direct benefits, further impacting their ability to fund necessary infrastructure upgrades.[52]

Forcing smaller providers to undertake rapid and costly upgrades could lead to increased service prices for consumers, reduced market competition, and potentially the exit of some providers from the market.

Our Recommendations:

The following recommendations are holistic in approach, not individual.

The government should reconsider the proposed immediate increase to 100Mbps and

instead consider a more structured approach, such as:

- a potential increase to 50Mbps for the minimum download speed for SIPs. This lifts the minimum speed inline with customer demands without the need to replace copper-based infrastructure unnecessarily;
- removal of the lower 12Mbps speed tier;
- A longer phase-in period should be established for **any** increase in the minimum speed requirement to allow all SIPs, particularly smaller ones, sufficient time to plan and execute necessary infrastructure upgrades.
- Upgrades should only be triggered when at least one of the following occurs:
    - The site/service area undergoes substantial redevelopment; or
    - The peak customer speed-tier demand distribution curve moves from 50Mbps to 100Mbps for a given SIP (in case of SIPs with mixed technology only). This allows for individual SIPs to upgrade in accordance with their unquie customer-base;
- The government must provide substantial financial support and incentives specifically targeted at smaller SIPs to assist with the significant costs of upgrading their networks from copper-based technologies to fibre. For example, using the NBN case above, 80% of $6000 capital costs per Lot or $4800 per Lot. This support is crucial for ensuring their continued viability and competitiveness;
- The exemption threshold for the RBS levy should be significantly increased from the current 2,000 premises to at least 20,000 premises. The levy should also be altered to only commence being applicable on the connection of the 20,001st active premises. This would provide much-needed financial relief to smaller carriers, allowing them to reinvest in their networks and better compete in the market which will ultimately drive down costs to consumers through increased competition[52]; and
- The government should conduct a thorough review of the RBS levy's impact on

market competition and explore alternative funding models for regional broadband services that do not disproportionately burden smaller providers. This should include all service types available including satellite and wireless based services not just fixed-line services.

9. Conclusion

While the goal of increasing minimum broadband speeds in Australia is commendable, the proposed immediate jump to 100Mbps for SIPs, without adequate consideration for the financial and technical realities, especially for smaller providers and the impact of the RBS levy, could have detrimental consequences for market competition and consumer affordability. A more measured approach, focusing on a potential upgrade to 50Mbps with a longer transition period, coupled with significant government financial support for fibre upgrades and a substantial increase in the RBS levy exemption threshold, is essential to ensure a sustainable and competitive broadband future for all Australians. We strongly urge the government to carefully consider these recommendations so as to foster a thriving and equitable broadband market that benefits both providers and consumers.

Appendix A - Responses to Specific Questions

1. **Do you support an increase to SIP speed requirements?**

   As outlined in the submission above, Yes, but **only to 50/20Mbps**. We feel this is a reasonable minimum speed given customer demand and the considerable cost and technical risk outlined in our submission.

2. **What benefits would this deliver to consumers?**

   As per our submission, we believe there are minimal benefits to the consumers. Drawing on the ACCC broadband report highlight that for FTTN 100Mbps speed tier the effective available speed is 88.1Mbps and given NBN's cost estimate, we have calculated that to achieve a minimum speed of 100Mbps it would cost approximately $504 per 1Mbps. Furthermore, we have shown limited, if any benefit to the likes of productivity, digital access and other arguments raised, remembering that consumers currently can procure these high-speed services if they require them.

3. **Should there also be an increase to the current legislated peak upload speeds from 5 Mbps?**

   Yes, this should be in line with the 50Mbps speed tier of 20Mbps.

4. **Are there any other changes that you think the department should consider to support better consumer outcomes?**

   Please see our detailed submission above, including changes to the RBS levy. A strong and competitive wholesale market will ultimately drive down prices for the consumer.

5. **What do you consider would be an appropriate timeline for an increased SIP requirement?**

   This is difficult to predict, to a number of factors such as:

   - Government funding support
   - RBS levy reform
   - Consumer demand
   - Contractor availability
   - Supply chain issues
   - Other items outlined in our submission

   We believe that a more structured and fiscally appropriate approach should be undertaken to gradually replace copper-based services.

   As an example, we recently undertook an upgrade of a HFC site of approximately 300 homes to a fibre-based solution. This process took approximately 12mths from initial planning to final site readiness. For smaller operators it will not be feasible to upgrade multiple sites at the same time and will be dependent on factors such as:

   - Location
   - Availability of contractors
   - Number of homes
   - Physical access availability to homes
   - Supply chain issues

6. **Do you consider there would be a need for a staged approach that allows networks to be upgraded before being subject to the new speeds?**

   Yes, absolutely. As per our submission, given the costs it is not economically feasible to upgrade copper-based solution to fibre as the payback period is not

within any sensible timeframe. We recommend that the minimum level be increased to 50/20Mbps in line with consumer demand and then triggered for upgrade depending on factors relevant to the individual SIP and service area(s).

7. **Do you anticipate any difficulties meeting the requirement, including for networks which have existing capability to meet the requirement?**

   Yes, as outlined in our submission. There is no economic rationale for an upgrade given the consumer preference for typically 50Mbps. Further the technical argument for increased productivity and access to increased online service are floored given the consumer's preference to 50Mbps or less services and the widespread, but very low adoption, of the higher speed-tier services.

8. **Would you need to upgrade infrastructure or equipment? Please provide details of any upgrades that would be required and how long these would take to complete?**

   As outlined in our submission; to achieve the minimum speed requirement of 100Mbps the underlying infrastructure would require to be upgrade. This may require updated to active equipment or may require upgrades from a copper-based solution to a fibre-based one. This would require a complete replacement of the infrastructure and the equipment supporting it. In some cases, this may also require extensive and expensive replacement of pit and pipe infrastructure.

9. **Should different speed standards apply across different technologies? What are your views on when the obligation should take effect for specific technology?**

   Yes, given the extensive technical risks and economic downside of a complete replacement of the infrastructure. There is no economic case that supports this replacement.

As outlined in our submission, at best it would be an 18-year payback period, with a probable case of approximately 25 years. If copper-based services were mandated to be 50Mbps and fibre-based were mandated to be 100Mbps, then extremely expensive infrastructure replacement costs would be avoided completely. That said however, as the market currently offers speeds over 100Mpbs and higher, but the market demand of these speeds is only 30%, it does not make sense to increase the minimum speed requirement, regardless of technology type, to above 50Mbps.

10. **Are there other factors which would impact on how soon you could meet the requirement, such as cost or availability of contractors?**

There are many factors that affect this as outlined in our submission. This is mainly driven by the need to complete a wholesale replacement of the underlying infrastructure from copper to fibre. As we have highlighted there is no economic rationale for this, either from the cost to build or from the consumer and their ability or willingness to pay additionally for this.

Further, over 70% of Australian users have signalled that they are content with a 50Mbps or lower speeds and the technical reasoning for this selection is sound. That said, increased speed tiers are available to the consumer, should they require it.

We have provided an example in our submission for an upgrade program that required 12 months to complete. This was for approximately 300 homes. There are many factors that will drive this timeframe and for smaller operators it will not be feasible to complete more than one or two projects or sites at a time.

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