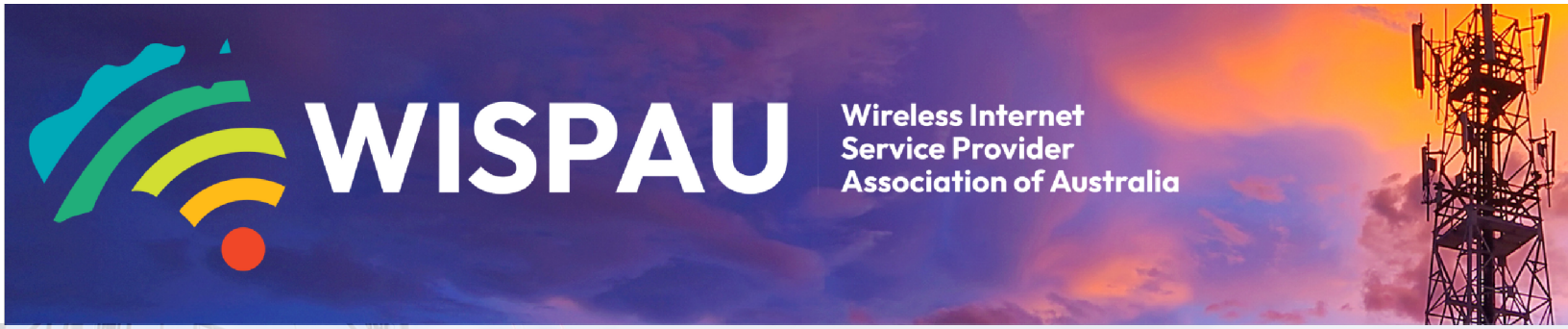

Wireless Internet Service Providers Association of Australia Response

2024 Regional Telecommunications Independent Review

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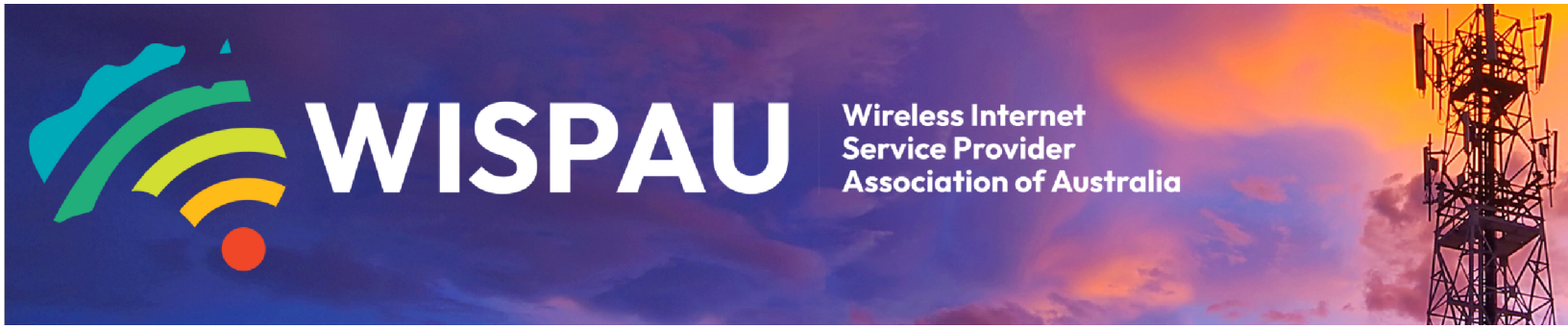

ABOUT WISPAU

WISPAU (Wireless Internet Service Providers Association of Australia) Members offer broadband services into remote, regional and underserved markets in Australia. We offer local services that deliver many economic benefits including affordable broadband, skilled local employment, training, technology provision and support for the communities we operate in.

For over 10 years WISPAU has supported Wireless Internet Service Providers in Australia, combining the experience and talent of those dedicated business owners who are striving to deliver improved coverage and service in areas whilst also providing economic benefits and support to the local community.

Together, these businesses through collaboration of this organisation are not necessarily competing against the national carrier but complimenting the vision for better connectivity outcomes for all Australians. In many instances we are working towards the same goal as the national carrier, complementing and increasing the coverage provided with connectivity options available for Australians.

THE IMPORTANCE OF WISP'S FOR REGIONAL AUSTRALIA

Fixed wireless internet service providers (WISPs) play a crucial role in enhancing connectivity in local Australia, particularly in regional and rural areas.

WISP providers offer reliable high-speed internet access by transmitting data via radio signals from a base station to a fixed antenna on the customer's premises. This technology is especially significant in Australia due to the vast and often challenging landscape, which can make traditional wired infrastructure expensive and difficult to deploy.

The importance of fixed wireless ISPs in local Australia includes:

1. **Bridging the Digital Divide**: Fixed wireless ISPs help bridge the gap between urban and rural areas, ensuring that people in remote locations have access to the same internet speeds and quality as those in cities. In some instances the local WISP is critical to providing connectivity and support to these customers and the regional community.

2. **Cost-Effective Solutions**: Implementing wired infrastructure in rural areas can be prohibitively expensive. Fixed wireless solutions provide a more cost-effective alternative, making it feasible to deliver high-speed internet to sparsely populated or difficult-to-reach areas.

3. **Rapid Deployment**: Compared to laying fiber-optic cables or other wired solutions, fixed wireless networks can be deployed more quickly. This rapid deployment is crucial for responding to the immediate connectivity needs of communities, particularly in areas where infrastructure development has lagged or implementation has stagnated.

4. **Supporting Local Economies**: By improving internet access, fixed wireless ISPs enable local businesses to operate more efficiently and compete on a broader scale. Enhanced connectivity supports e-commerce, remote work, and access to global markets, driving economic growth in regional areas. In many instances the WISP's are local also creating job opportunities and economic benefit and re-investment in the local area.

5. **Enhanced Quality of Life**: Reliable internet access is fundamental to modern life, providing access to information, entertainment, social connectivity, and essential services. Fixed wireless ISPs contribute to improving the quality of life for residents in local Australia by ensuring they can fully participate in the digital age and reduce the digital divide.

QUESTIONS FOR COMMENT – RESPONSES FROM WISPAU

1. **What initiatives or tools could be implemented by the telecommunications industry or the Australian Government to improve connectivity literacy and make it easier for regional consumers and businesses to understand their connectivity options and help them to choose affordable services that meet their needs??**

   WISPAU supports the great work that is being implemented by The Regional Tech Hub and by BIRRR (Better Internet for Rural, Regional and Remote Australia).
   It is important that these sites provide independent information to inform consumers of all their available choice and options for internet connectivity for their location as well as the available connectivity methods that is fit for their purpose and budgets.

2. **What further initiatives can be implemented to support First Nations communities in developing and leading their own digital inclusion solutions while ensuring cultural appropriateness?**

   WISPAU is supportive of the community wifi initiatives from the current Government. This strategy will greatly improve opportunities in these remote communities for education, business and overall connection to others.

We do however also encourage the Government to review all possible connection strategies in remote areas and simply not just look at connecting via NBN's Sky Muster technology in all cases.

WISP's provide a unique opportunity to not only provide backhaul connectivity, but also lead in community education and investment in an area, and continue to improve services in areas for the benefit of those in the community.

WISPAU would also like to encourage the potential possibility of funding for training and development of jobs in the technology sector for First Nations people also.

3. **How can government and industry address any misleading and inaccurate information surrounding telecommunications services in regional, rural and remote areas, to ensure consumers and businesses have access to reliable and unbiased information when making decisions about their connectivity options?**

WISPAU supports recent changes and strengthening of regulations and standards in the telecommunications sector. There have been guidelines set for telecommunication companies to provide details on their products so customers can make comparisons when choosing between telecommunication providers.

What may not be as clear is the issues around how the technologies are delivered and the advantages or disadvantages of the technology to deliver the required connectivity.

For example, there can be differences between a local WISP delivering a higher speed fixed wireless connection on mmWave or an NBN Fixed wireless connection to a customer. Likewise there may be a difference between a lower frequency wireless in 3.4Ghz to deliver to a customer in non-Line-Of-Sight conditions, vs a LEO option for the customer.

WISPAU would also like to see improvements on coverage area maps available for people in the regional and rural areas displaying local WISP options, not just coverage maps for the nbn. The work by BIRRR is an example where alternative WISP options may be available to customers in certain areas and may in fact be a better alternative to a fixed wireless nbn connection or a Starlink (LEO) connection option.

4. **Deploying and maintaining telecommunications infrastructure in remote areas requires a skilled workforce. What initiatives can be implemented to ensure there is a skilled workforce in regional and remote Australia capable of supporting the construction, maintenance and operation of future- proof telecommunications infrastructure?**

   WISPAU would like to see more targeted funding options provided to regional and rural WISP business operators for the purpose of job employment incentive payments, and training costs in the telecommunications industry.

   This will allow WISP's in these local areas to recruit and train persons within the regional or rural area, developing telecommunication skills in the area it is required and also improve the services in these areas.

   Employing persons with existing telecommunication skills in regional and remote areas is difficult, and assistance with targeted funding from State or Federal sources to assist with employing and training local people in these areas will greatly assist with the skills shortage currently being seen in these areas.

5. **Could the NBN fixed wireless network or other alternative networks be used to provide reliable and affordable voice services in remote areas? Are there any consumer safeguards or guarantees that need to remain or be changed under reformed universal service arrangements?**

   Fixed wireless networks are used to deliver voice services in remote and regional areas, and in some instances are the only available option due to poor or no mobile coverage. WISP's can deliver both residential and business voice services to customers.

   WISPAU supports the Governments initiative in reviewing and trialling alternative technologies so as to gain data on the issues that affect regional and rural customers who require reliable voice services.

   WISPAU would suggest that any changes should also include discussion with regional and rural WISP's in coverage and connectivity, and not just the nbn or on non-sovereign entities (such as Starlink or other LEO operators) that may not be obligated (or choose to enforce) any Australian policies.

6. **In modernising universal service arrangements, should access to public phone infrastructure continue and are there particular areas of need? Could technologies beyond traditional payphones be explored to meet this need?**

The usage of public phone infrastructure is becoming less of a requirement, where access to public and community wifi has become increasingly more important and functional.

The benefit of replacing public phone infrastructure with public and community wifi centres or hubs means that various communication methods are available across various devices.

Wifi communication can also make it more accessible for those that cannot effectively use payphones (such as speech impediments or other disability restrictions).
WISPAU supports a review of possible alternate technologies (such as wifi) in line with societies current changing connectivity requirements in regional and remote areas where there is a need.

WISP's can work with local communities and Councils in areas to provide and maintain public wifi infrastructure and working together may find ways to leverage off each others assets to provide cost effective and maintainable community wifi infrastructure.

7. **What should the minimum internet speed guarantee be (currently a peak speed of 25/5 Mbps) to meet modern needs? Should minimum data download/upload allowances be regulated? What other factors are important, like latency, reliability and affordability?**

When discussing minimum internet speeds, it is important to note that the speed required is often dictated by the needs of the consumer. Not all customers necessarily want higher speeds but would gladly have reduced speeds if it meant reduced cost.

Even a very low cost plan (say a 15Mb/5Mb speed) will allow most streaming platforms to run and allow effective communication via online means to a customer with only one or two devices (say a retired couple).

It is more critical that there is availability of choice to consumers on the cost, speed and data usage of plans, rather than set a minimum "modern" speed restriction. This allows the consumer to effectively choose the plan speeds / data usage as per their requirements. Ie Some will require much higher speeds and look at paying for higher monthly costs, whilst others will be looking for budget plans that can still meet their minimum requirements.

WISPAU would caution against simply setting regulations for minimum data download / upload allowances.

Some considerations should include -

1. **Market Flexibility**: The telecommunications market is dynamic, and certain regulations might stifle innovation and flexibility. Some providers in certain areas may also find it challenging to offer diverse plans tailored to specific consumer needs and budgets if constrained by minimum allowances.

2. **Cost Implications**: Implementing and enforcing minimum standards could increase costs for providers in some areas, which might be passed on to consumers. Smaller providers, especially in rural areas, may struggle to meet these requirements if the cost effective backhaul capacity is not available in these areas, potentially reducing competition and availability of choice for consumers in these areas.

3. **Technological and Regional Variability**: Different regions and technologies (e.g., satellite vs. fiber vs. fixed wireless vs. mobile) have varying capabilities and costs, making a one-size-fits-all approach difficult. What is feasible in urban areas might not be practical in remote regions with different infrastructure challenges.

WISPAU would also caution using latency as a defining measurement as latency can provide an incomplete picture of performance.

WISPAU would encourage that a more holistic measurement approach is used that should include metrics such as –

1. Download AND Upload speeds – these should reflect the provider plan speeds at most periods

2. Reliability – measurements of uptime and frequency of outages

3. Jitter and Packet Loss – this shows the quality of the connection

4. User Experience – subjective assessment of user satisfaction with the connection and the Quality of Experience (QoE).

WISPAU would also point out the value of local support to consumers and the value of having a local WISP provider that can respond quickly to a regional and rural customers issue on site and determine if the issues are a result of poor wifi performance within the home, or the actual broadband connection itself, as it is common for a poorly setup

local wifi network within the home to greatly affect the quality of experience to the end customer.

8. How can we achieve equity with respect to mobile services (voice, data and SMS) in regional, rural and remote communities and on regional and remote roads?

AND

9. How can we ensure regional, rural and remote areas have access to the networks, equipment and capacity they need for improved household connectivity and to foster innovation and efficiency across regional industries, including for IoT applications?

AND

10. The cost of building and maintaining telecommunications infrastructure in rural and remote areas can be a barrier to offering better services. What can be done to improve the fixed broadband options available to regional, rural and remote Australians?

One of the core functions of the WISPAU is to see WISP's in Australia improve and increase their coverage in areas to cost effectively connect Australians and provide them with reliable, improved network connections with local support.

Unfortunately there are a number of barriers in the way of WISP's in Australia to grow their coverage and increase their network capacity.

Some of these barriers include –

1. Fibre backhaul costs to remote and regional areas – the network connectivity to areas can vary greatly depending on the availability of fibre backhaul. Reducing this cost and improving backhaul fibre connectivity and competition to lower wholesale internet connectivity costs is an important factor for WISP's.

2. Infrastructure costs – costs for radio towers, rental on towers, access to towers and costs of leased land (in particular regional Councils or Crown land) can all be prohibitive for a WISP in a regional and remote area. WISPAU would like to see local Councils in areas of poor connectivity look at potentially reducing access to infrastructure (or leased land) to allow for WISP's to reduce ongoing costs and allow them to be commercially viable and able to not only operate at a sustainable level but then allow them to be profitable to re-invest and improve with new emerging technologies (such as future 6Ghz radio equipment or mmWave technologies).

3. Subscriber Density – in some areas, the subscriber density (or number of available homes) to connect in an area makes it uneconomical and commercially not viable for WISP's to connect new services as the return on capital investment for a new tower or equipment to cover the subscribers is not financially viable for a sustainable long term business. Trying to cover large areas with small numbers of homes makes it difficult to also supply higher capacity broadband plans as the frequencies available and limitations on these frequencies set by the ACMA make it difficult to do so for WISPs.

So what can be done to improve in remote and regional areas?

Improving access to fibre backhaul with competitive pricing for WISP's will allow them to deliver increased capacity and improved network services to end customers. This has been starting to occur in some regional areas, however there is still much more work to be done to improve fibre capacity into regional and remote areas and competition to reduce the cost of internet connectivity across the fibre.

State Government owned organisations can (and are currently) improving the issues by either installing or allowing access at competitive rates, that will then force the other larger commercial operators to (in time) improve their price offerings. This should continue to improve and where possible review possible potential future government (or supported private) fibre installations into regional and remote areas offering access at competitive pricing to local WISP's.

Also, reducing infrastructure costs imposed on WISP's by either –

- Capital funding assistance from Government (Federal, State, or Local) on installing capital intensive equipment (such as new towers or new technology radio access points on the towers) – this could be in the form of grants or low cost / reduced interest loans specifically for telecommunication providers in regional and remote areas

- Reduced lease costs when on local Council / Crown land to allow improved financial returns from smaller subscriber density areas

- Access to existing tower / building infrastructure (State Government Owned Organisations or Councils) at reduced costs to local WISPS

- will also have an impact on improving services from WISPs in remote and regional areas.

11. Have you had experience with new or alternate service providers such as Starlink or WISPs? If not, why not? What additional measures would persuade you to consider new technologies?

Of course, WISPAU will encourage that consumers consider a local WISP as a connection alternative. Local WISP organisations are not only great local businesses that also invest back into the remote and regional community and provide employment for skilled telecommunication workers in the areas, but they also provide much needed local support to customers in a space where technology developments can happen quickly and 'over the phone support' or an 'online app' may not be helpful as a site visit to fix a customer's connectivity issues.

In many instances the money invested with a local WISP is then re-invested for network improvements and resilience to deliver better and more reliable network connectivity to the local customers.

12. What can be done to maximise access to multiple connectivity options in case of outages?

WISPAU would encourage the review of not only mobile network operators, but WIPS's be considered as potential suppliers of connectivity in case of mobile network outages. In many instances wifi can be used to make calls on mobile networks and available community or home wifi connected to local WISP's can provide an alternative should mobile network availability be unavailable.

13. What can be done to increase capacity and improve the reliability telecommunications services in regional, rural and remote Australia?

WISPAU would suggest –

1. Review Federal Government funding to also include funding for local WISP's in remote and regional areas other than just the nbn fixed wireless networks. In many cases WISP's can deliver improved services, offer local support and invest in technologies that will deliver better broadband faster than investments made in the nbn. Whilst the nbn is critical to improving services in Australia, WISPAU also believes that funding and supporting WISP's in areas will also lead to improved coverage, competitive pricing and improved network services to those in need of local support and encourage local investment in jobs and the local community.
   Funding could be targeted for constructing / locating on towers to increase coverage into underserviced areas, low cost / low interest loans for WISP's to purchase and implement new fixed wireless technology to deliver faster and

improved coverage to customers in remote and regional areas.

2. Increase the scope of the recent Mobile Networking Hardening Program (or other similar resilience funding programs) to specifically include WISP's to apply for funding to strengthen the resilience of fixed wireless networks (other than the nbn fixed wireless network). This could include such programs as backhaul radio redundancy, power resilience and backups, and portable deployable temporary fixed wireless communication trailers in the event of a natural disaster.

14. How can the energy and telecommunications sectors work more effectively, especially with respect to redundancy?

WISPAU works with its members to review and discuss power resilience options on operators networks. Through collaboration, ideas on improving resilience is shared and business owners and operators can then review and implement strategies to improve redundancy and reduce outages or recover faster from any outage or emergency events.

WISPAU will continue to work with vendors (such as Remote Energy, Helios, Polarium), its WISPAU members and other agencies to continuously assist members with options to improve and harden their WISP networks and deliver effective and reliable fixed wireless networks in Australia.

15. What innovative solutions can be explored to ensure telecommunications infrastructure remains operational during and after natural disasters? How could partnerships with local communities improve the maintenance, security and availability of infrastructure?

WISPAU would encourage discussions with local WISP's in areas to further discuss potential options in their respective areas.

Temporary trailer fixed wireless portable units, community wifi centres, increased telecommunications employees and traineeships, and temporary emergency access provisions to networks are all potential solutions.

Working with local WISP's in communities will allow for flexible and innovative solutions outside those that may be available from other non-local communication providers

ADDITIONAL

WISPAU is open to discussions from any organisation or agency that is keen to assist in the delivery of better, reliable and faster broadband services to all Australians.

We encourage those that have the same vison as WISPAU and its members to reach out to WISPAU so that together with our WISP members and vendors we can deliver improved connections to those in Australia whilst also delivering sustainable economically viable local businesses that invest back into the regions they cover.