

September 29, 2021

Regional Telecommunications Review 2021

Regional Development Australia Southern Inland (RDASI) would like to thank the Department of Infrastructure, Transport, Regional Development and Communications for the opportunity to comment on the Regional Telecommunications Review 2021.

RDASI is part of a national network of 52 Regional Development Australia Boards across Australia and one of 14 in NSW. RDASI is a federally-funded, non-government body, encompassing seven Local Government Areas – Wingecarribee, Goulburn Mulwaree, Yass Valley, Snowy Monaro, Hilltops, Queanbeyan-Palerang and Upper Lachlan.

Our role is to promote economic development in the region by identifying opportunities for business development and linking businesses and community organisations with government grants, programs and infrastructure investments, creating jobs and encouraging prosperity for the region's population.

In preparing this submission, RDASI distributed the Issues Paper to, and sought and received feedback from, a wide range of local stakeholders, including: Councils, Chambers of Commerce, telecommunications providers, businesses and individuals in the community.

Their responses were reviewed and a summary of the key points mentioned in the feedback provided to each of the questions posed in the Regional Telecommunications Review 2021 Issues Paper is attached to this cover letter.

The perspective of this submission is regional, rather than mentioning individual LGA's within the Southern Inland region. That said, the matters raised would appear to be relevant across all of these LGA's.

RDASI welcomes recognition of the challenges of regional telecommunications facing regional businesses who require reliable data and mobile telecommunications to ensure continuity of business operations and community engagement and safety. RDASI views reliable and adequate regional telecommunications as being 'the great leveller', both from business and broader societal contexts, and the most important facilitator of regional growth and economic development.

For its part, RDASI is committed to assisting business and community organisations in relation to regional telecommunications and to playing a central role in facilitating stakeholder liaison, business development, skills matching, job creation, facilitating access to funding, advocacy and communications support.

Yours sincerely,



Carisa Wells

CEO and Director of Regional Development

E carisa@rdasi.org.au

SUMMARY OF STAKEHOLDER FEEDBACK

ADEQUACY OF SERVICES

Changing Demand (Mobile, Broadband, Fixed Voice)

1A. What telecommunications services are required in regional Australia to meet current and future needs?

- Regional economic centres in the Southern Inland region are dynamic, growing, diverse and increasingly reliant on digital telecommunications for continued business growth.
- Existing and growing business demand, an increase in the number of work-from-home employees and the demands of students forced to study from home due to pandemic lockdowns, have all placed heavy burdens on the existing telecommunications network and have broadly highlighted the shortcomings of a network with which business has been struggling for some time.
- High speed, high capacity, quality telecommunications networks are becoming a necessity for business and community growth and, for business, telecommunications is on an equal footing in importance with other utilities such as power, gas, water, sewage, and other vital infrastructure, such as roads.
- Agriculture is a major industry sector in the Southern Inland region, and regional and rural Australia generally, and farming communities need greater telecommunications capability to do business in an ever-increasing, expanding environment.
- In addition to agriculture, it is expected that greater use of technology in regional, rural and remote areas in other industries, such as water and energy management, education, manufacturing and mining will require stronger telecommunication links, enabling remote monitoring, controlling, forecasting and reporting, e.g. driver-less trucks, excavators and trains, irrigation and environmental monitoring, construction and maintenance management, etc.
- We must look to new technologies, such as fixed wireless networks, that are provided by small, regional companies that have access to existing infrastructure to deploy services at low cost, utilising cutting edge wireless technology and security software that will be capable of providing superfast, highly secure and consistent internet speeds to the most remote regional locations.
- If spectrum in lower bands was made available to smaller operators and their communities, then their ability to deliver services into lower density population areas would go a long way to solving the access problems.
- Regional areas also need to disaster-proof home telephone services and small, regional companies can provide a bushfire proof telephone service through its internet service and wi-fi calling to keep home telephone services working when landline telephone poles are destroyed by bushfire.
- To deliver NBN FTTN, some areas within the Southern Inland region are reliant on an old copper network which is prone to faults with slow fault resolution and at times unacceptable due to NBN and Retail Service Provider (RSP) support systems and workloads. FTTP (Fibre To

The Premises) via NBN or other wholesale providers is the most reliable fixed broadband but is priced too high in both access and build costs to end users. With ever-increasing demand, regional areas need FTTP up to 100/40 unlimited.

- Mobile voice and data services over 3G/4G/5G are good when in service range and more towers are needed to increase coverage in regional/remote/rural areas.
- Fixed wireless (through NBN and other private suppliers) can be suitable for Small-Medium Enterprise and home use where FTTN/FTTP is unavailable but is limited in coverage due to topography, prone to outages and overloading, with slow fault resolution. More towers and capacity are needed, along with business grade service levels.

1B. Are there any things regional communities and businesses need to do, but can't, on their existing services?

- As a broad-based comment, many people in regional communities and businesses have little or no internet coverage, restricting them from some of the most basic internet functions like accessing online emergency information, sending and receiving emails, accessing web sites and functioning in the online economy.
- Blackspot areas pose personal safety risks; as one respondent reported, when a local woman's car broke down on the Kings Highway between Bungendore and Braidwood, there was no reception and so she had to rely on a stranger taking her home to Braidwood at 1am.
- People in some remote regional communities also find that they can't rely on their existing landline telephone services to remain operating during natural disasters, especially bushfires, and don't have reception through mobile phone networks.
- Businesses aren't able to transfer and receive large amounts of data and aren't able to undertake VoIP or video-conference calls; there is often a lag and there may be no connection at all.
- Farmers can't remain competitive with agriculture in other countries through the use of low-power, wide-area network (LoRaWAN) technology, such as water monitoring devices and other new farming machinery that require interconnectivity.
- Reliable broadband is the enabling technology and with the continual shift to cloud-based Point of Sale software, Single Touch Payroll, cloud-based technical software and increasingly cloud-based government services, more and more businesses require fast, reliable internet; reportedly, wireless NBN connections are simply not up to the task.
- Poor reception affects the ability of some regional businesses to undertake basic functions, such as taking money via EFTPOS; most small business payment systems are reliant on Wi/Fi and, therefore, when the service 'drops out' it causes major issues, including loss of sales, as customers are reluctant to find a bank and teller machines are being phased out.

2. What changes in demand, barriers or challenges need to be addressed when it comes to telecommunications services in regional, rural and remote Australia?

- The challenge is that Rural Australia is huge, undulating and our population is sparse in rural areas, so infrastructure that is fit for purpose, not just one size fits all, is what is required.

- The NBN is not a feasible option for many regional areas when faced with the realities of geographic size, difficult terrain and thinly dispersed populations. Outdated infrastructure, such as old copper cable, also provides unreliable Internet connections, particularly to those working from home.
- The copper network needs to be replaced with Optic Fibre cabling, as was the original plan for the NBN, and wireless towers need to be phased out, as they need line of sight connection and reception is worse on cloudy or wet days due to signal interference.
- The pace of regional telecommunications development and the technologies of 4G and satellite are not keeping up with the pace of regional growth, which relies on the capacity, speed and reliability of Wi-Fi/Internet.
- Access to Crown and Council Land at a reasonable, subsidised cost would be a huge help to increasing coverage; small regional telecommunications providers deal in small numbers of end users from sites but the pricing is set for large mobile operators.
- The larger mobile telecommunications companies have left remote areas short on services, even though they hold the spectrum needed to cover these areas. Enabling smaller telecommunications providers to have access to lower band spectrum would dramatically increase the capacity and coverage of their sites.
- Rather than trying to solve regional connectivity problems through one large network, the answer is to be found through smaller, more agile ISPs, providing custom technology-based solutions to each area based on its geography, industries, community needs and existing infrastructure.
- Smaller, low-cost infrastructure sites should be explored to lift the target coverage to 100% of all areas, not just the 70-80% that large sites do; this approach would mean smaller infrastructure communication sites, utilising solar / wind power options, radio backhaul options to centralized, low-cost fibre sites which would all significantly lower the establishment cost.

3. How have the Government's policies and programs affected telecommunications service outcomes in regional, rural and remote Australia? How can these be improved?

- Acknowledgement is made of the recent focus on regional communications through the Regional Connectivity Program (RCP) which aims to improve regional communications infrastructure and see the establishment of new communications sites in many areas, with its focus on smaller scale solutions combined with large scale ones.
- Government needs to have an ongoing regular dialogue with regional communities, and especially business, to ensure telecommunication services are keeping pace with the fast-changing business landscape in which regional communities now operate.
- A policy model that has both short-term and long-term solutions should be developed to achieve the best outcomes for all, increasing the rollout speed of coverage dramatically.
- The short-term solution is to provide funding for small infrastructure that is quick to implement, targets small, underserved areas and offers services for countless years until large infrastructure is possible. The long-term solutions allow for full-scale mobile towers, with all carriers, and access for small low impact sites.

- Credit is due to Service NSW for their efforts in training, coaching and helping older people with the technology, e.g. within Service NSW Offices and visits to Nursing Homes (pre-COVID). Typical of regional small businesses, staff are often terrific in helping people with little digital numeracy to manage their affairs.

Service Reliability

4. How do service reliability issues impact on regional communities and businesses?

- Reliability of telecommunications, especially mobile phones, is critical in regional and rural communities.
- There are numerous 'black spots' for mobile phones remaining in rural and remote areas, even on major highways. Of particular concern are regions where there are traffic issues due to narrow and winding roads where vehicle and motor-cycle accidents are more prevalent.
- Rural areas have lower numbers of doctors per head of population. Increasingly, the delivery of health services is undertaken via video conferencing and, without reliable service to access these, rural and remote communities are at a disadvantage.
- Mental health can be a significant problem in regional areas where the lack of a reliable internet service increases people's lack of social connection with their community and government assistance.
- Without a reliable internet service, many regional businesses are unable to function properly. Frequent outages in certain LGA's have severely affected businesses that rely on EFTPOS, particularly those involved in tourism.
- Increasingly, online decision support tools are used in agriculture, including climate and weather forecasting services, crop modelling tools to provide yield estimates based on seasonal conditions, satellite imagery of crop condition, as well as web-based applications to interpret this data. These tools and the increasing data from on-farm sensors enable improved farm management and adaptability to changing conditions. Without a reliable internet service, farmers have less ability to make informed decisions which impact their profitability.
- Loss of simple phone line connections, especially to older residents has meant the requirement of more expensive Internet based telephony needs to be installed. This is also less reliable because as soon as there is a loss of power, internet and telephone services cease operating.

How do outages, including in natural disasters, impact on communities and businesses?

- Poor internet and phone service reliability impacts regional communities and business in term of their safety, as well as economically and socially, and the bushfire crisis in the summer of 2019/20 highlighted the serious need for significantly improved and less vulnerable telephone services in regional Australia during a natural disaster.
- Fixed wireless networks, where they exist, allow people to use their mobile phones with excellent wi-fi reception through the Internet, if their landline telephone services go down.
- Outages during the fires have meant that people on rural properties could not reach the fire brigade to warn of new fire breakouts, risking not only property but also lives. For

communities it creates a heightened sense of fear because they are cut off from communications and cannot assess the situation to make decisions.

- Whilst some regional, rural and remote communities and business may have reasonable connectivity, this can be affected as a result of disruptions in power supply, cable damage and severe weather, times when connectivity is most critical.

5. How might such impacts be addressed to ensure greater reliability? How can the network resilience be addressed in regional areas?

- There appears to be a lack of awareness in some areas as to the age of current infrastructure. Greater resilience will be enabled through the replacement of old copper lines, which are, reportedly, over 50 years old in some councils, with a new fibre to the premises network.
- Resilience depends on capacity and there is ever-growing concern that the increasing demand on capacity due to download demand.
- Resilience can be supported through the establishment of off-grid, back-up power options, with local telecommunications sites being enabled with solar and battery power.
- Regional resilience can be enhanced as a result of there being greater collaboration with regionally-based telecommunication experts in the private sector to investigate and design suitable solutions.
- Local telecommunications companies state that they have the technology and locally provided services to solve current problems with internet and home phone services in regional, rural and remote areas, using a combination of unused broadband fibre optic infrastructure and recently developed fixed wireless technology.
- Such companies are able to provide a high-speed, reliable internet signal to geographically large and remote areas with a relatively low network build cost, drawing on access to existing infrastructure to provide greater reach with comparably less cost than other fixed wireless services.
- Improved satellite technologies will help build a more robust Wi-Fi network with the installation of more towers and improved technologies to address black spots. Greater use of satellite technology would also enable farmers to better utilise technology which is currently not available to them or not in the capacity they require.

COVID-19

6. How did the use of digital services change for regional consumers and businesses during the response to the COVID-19 pandemic? What insights for future service delivery does this provide?

- The COVID-19 pandemic has dramatically enhanced the regional migration trend, which is expected to continue, resulting in an ever-increasing number of people re-locating to the Southern Inland region, particularly given its location between the large metropolitan areas of Sydney, Canberra and Wollongong, and beyond.

- The pandemic has seen an exodus of people from the cities to regional centres, with those people who previously had city office jobs finding that they can work from home, in many cases more productively and with substantial environmental and personal benefits.
- There has obviously been an increased uptake in the use of online services and cloud-based applications for remote work and study, with many people looking to continue these practices to provide flexibility in their workforces and lifestyles.
- At the same time, with restricted regional travel, there has been a substantial shift to on-line shopping and business transactions, with many businesses having to move on-line to survive.
- As a result, more pressure has been on the current infrastructure which is not equipped to fully meet the change in demand. Many regional homes and businesses have found that the current internet services that are available to them have fallen well short of their needs in this time.
- COVID 19 has had an unfortunate disproportionate adverse impact on older citizens, particularly in Nursing Homes and Retirement Villages and being cared for at Home. Although many have been offered devices, there is a reluctance to use the devices leading to an increased fear of isolation from family and friends. The staff who care for these folk do not have the time to regularly help them to connect with family and friends, particularly necessary due to excluding visitors. A significant improvement opportunity exists for some Government support to enable staff to coach and help people in aged and disability care to become more digitally competent and confident.

Indigenous Australia

7. What can be done to improve the access and affordability of telecommunications services in regional, rural and remote Indigenous communities?

- As previously stated, the goal should be to improve the telecommunications network to make sure it is reflective of the needs of all consumers in regional, rural and remote Indigenous communities to ensure they are not disadvantaged.

OPPORTUNITY

Regional Development

8. How can investment in telecommunications infrastructure work with other programs and policies to encourage economic development in regional Australia?

- Telecommunications should be viewed as being as essential as roads, water and sewerage infrastructure in underpinning regional migration and economic and community development strategies.
- Local workforce procurement and development strategies should be reviewed, so that an emphasis is placed on local tower manufacturers and local contractors for installation, rather than contractors from the nearest city location.
- Local employment would enhance the development of local manufacturing capability, flow-on benefits to parts of local economies, customer service and community resilience.

- Different Public-Private investment models should be explored with local providers to develop solutions within regional communities that create local employment, providing opportunity for the advancement of local business and enhancing the skill sets of local communities to participate in the building of local networks to meet local needs.

9. What role could innovation, including new models, alternative investors or new ways of doing business, play to encourage investment in regional telecommunications infrastructure?

- Investment in regional telecommunications infrastructure may be encouraged through new stakeholder engagement and consultation models:
 - Between all levels of government, resulting in:
 - An alignment of development strategies that can be applied to suit local requirements (not be 'one size fits all') and can take into account large geographic areas with lower population densities compared to urban areas.
 - Local councils becoming sufficiently informed about local telecommunications infrastructure strategy, in order to be able to act as a reference point for local residents and businesses.
 - With regionally and locally based technology providers, who are able to consult with a local government representative to lend their local knowledge and experience to identify localised solutions.
 - With local communities to identify coverage weaknesses and to provide reassurance that their issues and concerns are being heard and addressed, as well as ensuring that they are aware of the technological options open to them.
- Investment in infrastructure and in regional telecommunications providers may also be encouraged through increased regional grant funding by governments.
- Regional and local telecommunications providers cannot compete with large telecommunications companies for large-scale applications and who, supposedly, 'ignore' the micro-communities.
- The focus of small technology providers is on the level of connectivity in regional communities, achieved through low-cost, innovative solutions, rather than it being on a minimum level of return on investment.

Emerging Technologies

10. To what extent will new technologies enable significant change to the delivery of telecommunications services in regional Australia over the next 5-10 years?

- Significant change may be brought about through the increased ability of local telecommunications providers being able to offer solutions to telecommunication challenges, based on a deep knowledge and experience of the local community's demand requirements and innovative thinking.
- As an example, a local business based in the Southern Inland region has created a microwave network, using AARNET as its backbone, with many small towers to get around hills, trees and valleys to connect the community.

- New fixed wireless internet technology is capable of enabling revolutionary change to the delivery of telecommunications services in regional Australia over the next decade, particularly if this is supported by increased government investment.
- The internet speeds and consistency of service that fixed wireless technology delivers is far superior to the existing 4G and satellite technologies currently providing internet to regional Australia. This will result in a shift away from 4G and satellite internet services and the construction of fixed wireless networks in regional areas across the country.
- High-speed internet services provided by fixed wireless technology will also make telephone services in remote homes more reliable, especially during natural disasters such as bushfires.
- Mobile phones will have significantly improved call reception by connecting via 'wi-fi calling' to the home wi-fi zone. This will allow calls to be made and received when home landlines go down due to bushfire destroying telephone poles.
- As more homes and businesses in regional Australia take advantage of the improved internet services provided by fixed wireless networks, fewer of them will have a landline. In time, this will significantly reduce the cost of maintaining telephone lines in regional areas.

11. How can Government better support the rapid rollout of and investment in new telecommunications solutions in regional areas?

- Government at all levels can better partner with private enterprise in innovative solutions and, as a result, be responsive and provide quick solutions that meet the needs of individual communities and businesses within them.
- One LGA in the Southern Inland region has the following action in its Regional Economic Development Strategies (REDS): 'In collaboration with the private sector, audit digital connectivity blackspots and support the development of improved and new telecommunication facilities where this assists business expansion.'
- Government can also implement processes and systems that better identify where broadband black spots exist, providing a prioritised roadmap for addressing the black spots with consideration of equity and sustainability for regional communities.
- Government can ensure the broad promotion of tenders that aim to address the identified black spots, so that smaller regional providers have an opportunity to participate in the tenders. Using local providers within regions keeps jobs local and supports the overall local economy.
- Government financial assistance is required to extend the fixed wireless networks that will enable a much faster rollout of high-speed internet for regional areas.
- The limiting factor to telecommunications in regional areas is that the cost of establishing services has been so high that only the big players have been able to operate and establish themselves.
- Due to the high cost of the technology required to set up telecommunications networks in remote areas, small ISP's need government financial assistance in the form of project sponsorship and grants.

- Grant funding applications, which were supported by Regional Development Australia – Southern Inland, have enabled local telecommunications companies in the Southern Inland region to expand their reach into some remote, regional areas.

Maximising Outcomes

12. How can different levels of Government, the telecommunications industry and regional communities better co-ordinate their efforts to improve telecommunications in regional Australia?

- As they work across all levels of Government, Regional Development Australia (RDA) regions are well placed to facilitate regular forums between consumer, private enterprise, Local Government and telecommunication providers to understand the evolving needs of business in the technology and telecommunication space.
- The different levels of Government need to listen to technology providers in regional areas, beyond Telstra, Optus, NBN. As stated elsewhere in this submission, the large player solutions are not always what is best nor available for many communities.
- LGA's also need to adopt a more proactive role in relation to how telecommunications infrastructure facilitates economic development within regional Australia, by communicating back to State Government, championing the issues affecting progress and ensuring that policies allow LGA's to support more economic progress.
- LGA's could also work together more as a combined group that would provide for greater network capacity and reliability across our regions and increase the awareness to State and Federal Governments of regional telecommunication requirements.

13. What changes to Government investment programs are required to ensure they continue to be effective in delivering improved telecommunications?

- Government funding programs need to be equity-based in this regard, rather than being based on customers reached/served which does not serve regional areas where businesses and residential communities are disenfranchised through limited broadband access.
- The relatively smaller size of regional communities does not make them any less deserving of access to reliable telecommunications infrastructure and the equity it serves in terms of access to education, health, commercial, government and commercial services.

AWARENESS

Education

14. How can regional consumers be better supported to identify, choose and use the best connectivity options for their circumstances, as well as to understand and use their consumer rights?

- As with a number of products and services, there are different consumer attitudes. On one level, consumers don't care how it is delivered, just that it works reliably and at required speeds, and there is a level of natural human inertia in people reviewing alternative services and 'sticking' with who they know, such as recognisable major telecommunications companies.

- On another level, there is a need for a greater level of localised and simplified education in relation to available regional telecommunication solutions in certain areas.
- As an example, a new 'one-stop-shop' website could be created that is like other consumer sites, such as Choosi, iselect, comparethemarket and Finder.com, which enables businesses and consumers to provide their information and for corresponding, different services to be explained simply in understandable terms and compared.
- Local government communications channels, in particular, would be used to build awareness of the site.
- When plans change and based on usage or when something more appropriate service becomes available, the RSP should contact the user accordingly.
- Further education also required at a local level in relation to options for issues resolution, including the involvement of the Telecommunications Industry Ombudsman.

Public Information

15. To what extent is public information on connectivity options, including predictive coverage data and speeds, sufficient to help regional customers make informed decisions? What other information is needed?

- Generally, this type of information is hard to find, too technical and doesn't really serve the needs of the average consumer.
- Trust and reliability in data speeds needs to be improved for consumers are making purchasing decisions, as it is essential that regional consumers are assured of ongoing speeds. Regional customers base their choice of telecommunication provider on prices, speeds, reliability and service.

16. What other matters should the Committee consider in its review and why are they important?

- As technological development is now measured in months not years, more frequent, ongoing assessment of regional telecommunications is required, also given the dynamic nature of regional population growth and parallel economic development.
- The availability of metrics, including relevant graphs, as background information would be particular helpful as background information for future regional telecommunications reviews and as an annual report card, indicating progress on achieving key performance indicators.