

## Regional Telecommunications Review 2015 Issues Paper – Submission from RDA Central West

### Introduction and Regional Context

The NSW Central West region comprises 11 Local Government Areas from Lithgow in the east to Lachlan in the west, covering 63,000 km<sup>2</sup> and a population of 177,000.

Policy measures that enhance competitiveness of the economies of regional, rural and remote Australia are essential and are strongly supported. The identification and rectification of telecommunications infrastructure priorities and constraints is fundamental to ensuring competitive, resilient and prosperous regional economies.

Telecommunications infrastructure delivery, service standards and accessibility for high-speed broadband and mobile phone coverage in regional, rural and remote communities has fallen short of standards typically enjoyed in metropolitan and urban coastal centres. The NSW Central West is no exception. This is in spite of the region's proximity to both Sydney and Canberra and the role that the Central West plays in connecting Western NSW businesses to eastern ports and markets. The future of the NSW Central West economy is promising but a lack of telecommunications connectivity is a headwind for increased business productivity, new business development and economic growth.

This submission has been built around the evidence base that RDA Central West has developed in recent years as well as feedback received from close to 50 regional businesses on the topics raised in the Issues Paper. We acknowledge and appreciate the efforts of regional firm *Adloyalty* for their assistance in promoting awareness of this review as well as compiling an extensive amount of consolidated feedback from regional business stakeholders.

With over 1,700 full time equivalent job losses across the NSW Central West announced for the next two years, there is an urgency to provide the right environment for investment, business growth and development, and new industry opportunities. It is essential that this region leverages its current strengths and assets to ensure the long term sustainability of the region.

In this context, the 2015 Regional Telecommunications Review is important and timely.

Telecommunications infrastructure enables education, health and business activities to be carried out more productively and efficiently by using the latest available online technology. It enables new jobs and services to be created in regional areas and contributes positively to the productive capacity of the region. It is essential.

Mobile phone and data services in rural areas are prone to monopolistic characteristics due to limited available service providers. Regional Australians can pay significantly more for data and voice quotas than metropolitan areas.

RDA Central West recognises that providing FTTP or FTTN broadband services to communities with small population centres in regional Australia is cost prohibitive, and that alternatives such as NBN Fixed Wireless or Satellite services will be provided at comparable pricing to similar services in urban areas.

In addition, further 4G (and ultimately 5G) mobile coverage in regional communities will provide services comparable to those already enjoyed in metropolitan areas.

Telecommunications service restrictions and failures reduce the capacity of regional businesses to compete with urban and international competitors. For example, overseas farmers and farmers closer to metropolitan areas are able to more effectively utilise new farming equipment and management tools that rely on data technologies such as GPS. Yields and productivity are increasingly being improved through yield mapping, stock tracking, and automated plough and harvest operations technologies reliant on telecommunications services & infrastructure.

The importance of high speed broadband and mobile telecommunications connectivity to regional, rural and remote communities, inclusive but by no means limited to the agriculture sector, is vital to support remote community health through the provision of digital health services. It is also increasingly important for export market e-commerce which utilises online transactions.

There are also other broader social and economic considerations. A lack of satisfactory mobile coverage and high speed internet provides a significant disincentive for professionals and non-professionals relocating to regional communities. This results in skill shortages in key occupations in regional towns and surrounding communities.

In the NSW Central West, there is a significant net import of professional and technical services as well as financial and insurance services. Imports in the Central West in 2009-10 of professional, scientific and technical services were \$358 million alone<sup>1</sup>. This represents the region's highest value category of imports.

There are many towns in the NSW Central West that have stable or marginally declining population forecasts for the next 15 years<sup>2</sup>. These towns have considerable heritage and charm but are at risk of further decline through ageing population and structural changes to the local employment base.

There is a particularly pressing need to create the right amenity and opportunities in these rural communities to encourage new residents relocating from coastal cities, several of whom would bring an online or home based business with them. Improved telecommunications connectivity is a high priority consideration for many.

One way that the Government could acknowledge the importance of communications connectivity to regional, rural and remote Australia would be to elevate regional communities in the roll-out schedule of NBN services and other communications infrastructure.

The lack of visibility and disclosure as to the NBN forward roll-out schedule in various regional cities, towns and smaller communities across the NSW Central West is also an impediment to attracting investment and the relocation of businesses to the region. As an example, Bathurst is a thriving gateway city in NSW with a population of 41,000 people and one of the highest annual population growth rates in the Western NSW region but the scope and timeframe for NBN roll out in the city and its environs has still not been disclosed.

A number of communities within the Central West region have significantly less access to publically funded services in health, education and transport. Additional costs of living pressures due to remoteness from retail and recreational facilities are also encountered. A number of these towns in the region are rated in the lower deciles of the SEIFA Index<sup>3</sup>, indicating relatively low levels of education and income and higher levels of social disadvantage.

As a consequence, residents in these regions need to drive long distances for business and family reasons.

The absence of such services coupled with a lack of high-speed broadband capacity to access these services in an on-line environment results in a compounded degree of disadvantage to businesses and residents in those communities.

## **Demand for Telecommunications Services**

The issues paper notes that the nature of demand for telecommunications services in Australia has changed significantly. It also notes that trends resulting in increased adoption and take-up of services that are data requirement intensive will “become even more profound”.

These assertions appear reasonable. In an article published in the Washington Post in July 2011, internet services provider Verizon was quoted as claiming that 95% of its users never hit a monthly 2GB mark<sup>4</sup>. In comparison in 2015, the issues paper boxed case study at page 12 refers to a family living in remote Australia with a download requirement of at least 3GB to 4GB *per day*. (emphasis added). This is a dramatic difference in a period of some 4 years. Assuming that this is not an atypical example of the change in data requirements for regional, rural and remote Australians in respect of distance learning education

requirements and other data needs, the conclusion drawn from this comparison is one of the following:

- (i) Either rural, regional and remote Australians have considerably higher data requirements than those in urban areas; and/or
- (ii) There has been a massive increase in typical data requirements in recent years with the advent of email attachments, smart device web surfing, photos / social media, streaming video, smart device apps and growing business data needs.

Even if the current evidence was to show that there is no discernible difference between data usage patterns and needs of urban and regional Australians, it seems reasonable that the demand from regional, rural and remote Australians could potentially be greater once the comparable high-speed broadband services are more readily available in the regions. The presumption here is that this would be due to less availability of urban-comparable educational, health and other place-based services within commuting distance.

In view of this, and given the rapid rate of change and adoption of online technology services, the Issues Paper assertion that “all of these cabled approaches support performance levels well above what most users need...” may soon be redundant as was Verizon’s claim back in 2011. This could particularly be the case in rural, regional and rural Australia where the issues paper notes that the roll out of fixed network, cabled approaches is less likely due to uneconomic smaller population centres. A cautious approach to forecasting future data needs is warranted as is an infrastructure build plan that assures sufficient capacity and redundancy in the system beyond the short term.

**Issues Paper Q1. Do people in regional Australia believe their reliance on telecommunications differs from those in urban areas? How does it differ and can you provide examples?**

NSW Central West Businesses have responded to this question as follows:

“Yes”	72.7%
“No”	27.3%

NSW Central West businesses have advised that geographical distances in the region require a greater reliance on technology and telecommunications in order to effectively conduct business. Although challenges around the economics of high-speed connectivity in regional areas due to lower population density is recognised, it is pointed out that the needs of regional consumers and businesses are similar if not great than those of city dwellers.

Some businesses that are located in regional cities such as Lithgow, Bathurst and Orange have staff working from home after hours in order to communicate with overseas suppliers and customers in different time zones. Even if their office premises have reasonable and reliable broadband speed and quality, there need to be equivalent capabilities at the home office in order to conduct business effectively.

The following statements articulate the differences for business reliance on telecommunications across the NSW Central West region compared to businesses in urban areas:

**Illustration 1: Why there is greater telecommunications reliance in regional areas compared to urban areas**

“Many of our clients are remote from our office and cannot attend our office without travelling long distances, a great deal of communication is done via telephone and internet. I have worked here for 15 years and never met some of my clients” (business stakeholder A)

“Greater reliance is required to access the diversity of services not available in regional areas for example education, shopping and business operations” (business stakeholder B)

“Distance is a barrier. I continue to structure my consulting business to take advantage of online delivery capability, without which I am at a distinct disadvantage to metro competitors. My office presently only has mobile broadband access which is expensive for low data limits.” (business stakeholder C)

“We are a community that has residents who may live kilometers from the nearest town. These community members rely on telecommunications for their livelihood, socialisation and at times safety” (business stakeholder D)

“We rely on phones/skype for meetings with partners that would otherwise be undertaken in person. For example, it is not practical to drive to Sydney for a 1 hour meeting (it takes 4 hours each way) and therefore we are dependent on a reliable high performance communications infrastructure” (business stakeholder E)

The reliance on telecommunications services is strongly recognised throughout the region. This necessitates suitable and widespread service provision in respect of coverage areas, high-speed data download and upload speeds, and reliability.

In relation to wireless broadband and mobile phone service coverage in regional areas, the need for wireless is greater due to distances travelled as well as isolation factors and safety. As one respondent remarked, “There is not a ‘Wi-Fi Hotspot’ under every tree”.

## **Telecommunications Delivery in Regional Australia**

The NBN has yet to make any significant impact in the NSW Central West region due to a lack of connections to date. There remains a high level of interest in the broadband roll-out coupled with considerable frustration as to the length of time this is taking as well as a lack of clarity around the roll-out schedule and type of NBN service to be provided in some instances.

The NBN coverage map outlines a number of areas where fixed wireless broadband services will be provided. However, there are many communities relatively close to or on the limits of regional cities and towns that have yet to be identified for the roll-out. For example, on the coverage map it is apparent that fixed wireless services are currently available in Perthville (Bathurst region) and work has commenced on fixed wireless for O'Connell. However, what is the intended plan for surrounding communities such as Rockley Mount, The Rocks, Wimbleton and much of Bathurst itself which remain unmarked? Is the final service to be FTTN, fixed wireless or satellite, or a combination thereof? When will the build commence? These are significant questions for businesses, consumers and residents alike.

**Issues Paper Q2. For those users already connected to an NBN network service, has the service met your expectations?**

Based on business feedback received to date, only 11% of Central West businesses are connected to the NBN network at the present time.

Of those that are connected, the majority of businesses advised that their experience with NBN service was in line with expectations or could be better. Only 25% of respondents believed that the experience with NBN was better than expected.

We will continue to monitor this customer experience and report against this metric in future.

**Issues Paper Q3. Having regard to the technical solution likely to be used in your area, do you have views on the adequacy of that solution in terms of meeting needs now and into the future?**

We have asked regional business stakeholders whether or not they were aware of the technical solution that is likely to be rolled out in their area. An overwhelming 79.4% of businesses indicated that they are not aware. This is a concerning result indeed. The lack of awareness as to the nature and timeframe of the technical solution is creating considerable uncertainty for business. It undermines business confidence as well as the ability and willingness to make technology related business decisions and investments in the interim.

Such a degree of uncertainty is not only a frustration for businesses but it is an impediment to investment and economic development in the region more generally.

In the absence of clarity around the technical solution and timeframe, there remains a risk of a loss of Central West business owners to other regions or metropolitan areas where the NBN has been rolled out and where there are more satisfactory mobile coverage networks already in place.

As to the adequacy of the solution in meeting future needs, business in the region are concerned that it will be expensive, slow and generally inadequate. Concerns have been

raised as to the potential for obsolescent technology by the time of roll-out compared to competitors in Asia and Europe.

**Issues Paper Q4. Irrespective of the adequacy of your local access, are there issues with backhaul or long distance carriage that impacts on your use of telecommunication services?**

Just under half (46.9%) of businesses across the region have reported issues with backhaul or long distance carriage impacting on their telecommunications services.

Issues reported included:

- Over-subscription to exchanges at locations such as Parkes
- Numerous mobile blackspots in the area between Cowra, Canowindra and Orange where back to base contact by mobile phone is not possible
- Restrictive and expensive network connections
- Drop-outs due to back-haul to Sydney via Dubbo for internet, email and streaming services
- Slow, variable and unreliable services including at certain times of the day
- Weak signal strengths in various communities
- Inability to network with other sites due to phone line access issues

Negative sentiment has also been frequently expressed regarding the lack of options with service providers and the length of time and difficulty in getting service problems resolved.

**Issues Paper Q5. For users living in areas without mobile coverage, what priorities, other than specific locations, do you consider should be recognised in future efforts to improve coverage?**

A total of 61.3% of businesses consulted in relation to this Issues Paper indicated that they do not receive full mobile coverage. The difficulties that this presents in undertaking business activities should not be underestimated.

Such difficulties can be depicted in a number of ways which include, but are not limited to:

- Interrupted business communications due to mobile blackspots when travelling throughout the region to customers, clients and sites
- Interrupted business communications at business premises due to weak signal strength and unreliable coverage
- An inability to relay data (e.g. photos, images and text content) back to the office or to customers etc. when working in the field.
- Inability to access company data, email and internet when in an area without service

- Safety and cost related risks and issues when accidents and breakdowns arise in remote regional locations

As for the future priorities and efforts for improved coverage, the prevailing view is that while Wi-Fi hot spots can have a role to play in towns and urban locations, of far greater importance to regional businesses is a fast, cost effective and reliable service. Signal stability appears to be a commonly-shared concern for many businesses. Increased mobile phone coverage through ongoing black-spot removal initiatives is of high importance.

Support has also been expressed for additional fixed wireless broadband towers, using a co-investment funding framework where those opportunities exist. Feedback suggests there should be a greater incidence of fixed wireless solutions with satellite NBN a last resort due to the inherent latency problems. From a business perspective, there is a desire to have additional FTTN or FTTP availability in regional towns and industrial park precincts. The path forward as to how this can become a reality needs to be more clearly articulated and widely communicated.

The following quote from a business owner who recently relocated their business captures the prevailing sentiment well:

*“We had to wait to connect to ADSL when we moved location as there were limited ports available. This is ridiculous in this day and age. We have also heard from others that NBN is no quicker or more reliable than ADSL. Priorities need to be put into mobile coverage between towns, internet access for all especially within large regional centres”*

## **Use of High-Speed Broadband in Regional Australia**

The potential to leverage existing strengths in the Central West economy in education, training and health through high-speed broadband enabling infrastructure is high and will result in economic benefits to the region.

Education and Training is a key sector within the Central West region providing significant employment opportunities, potential for further export growth and new investment, educational and vocational training opportunities and learning and community benefits for local residents. The sector accounts for 6% of the region’s Gross Regional Product and is ranked 5<sup>th</sup> nationally in the Regional Competitiveness Index “Presence of Research Organisations”<sup>3</sup>.

Educational institutions such as Charles Sturt University and TAFE Western have a number of innovative, award winning on-line course offerings. The roll-out of high-speed broadband infrastructure across the region and beyond will enable further take-up of flexible learning options and enable educational course offerings to be more accessible to

more people. Export growth in online program offerings through enrolments outside of the Central West will boost income in the regional economy.

A similar situation applies to the health and aged care sector in the Central West region, which accounts for 7.3% of the region's GRP. The 65 years of age and over cohort is expected to grow by 61% over the next 20 years<sup>6</sup>, resulting in significant increased demand across the Central West region for both new and existing medical services and associated infrastructure. High-speed broadband, when rolled out, will unlock opportunities for the provision of online health services including consultations, information exchange and other forms of real-time patient care for residents across the region. This will provide more equitable access to medical services for those living further away from regional and city centres and also reduce journey time and inconvenience for travel to medical facilities.

In the meantime, residents in the regions without access to high-speed broadband remain at a comparative disadvantage to their urban cousins in relation to equivalent access to a growing range of on-line content in education, health and other information and services. Ironically, it is those residents who need effective and reliable on-line access the most in order to overcome the tyranny of distance and to enable greater participation in the economy and society in both an on-line context and otherwise.

**Issues Paper Q8. How might new applications and services that utilise mobile networks for voice and data transform the way you live and work?**

Most businesses across the Central West believe that high-speed broadband and more extensive and reliable mobile voice and data networks could significantly change the manner in which their business is conducted. This ranges from greater flexibility and mobility (for example, by being able to work from home), to take-up multi-media solutions (such as Skype) that currently do not work well in a low-speed or unreliable internet environment, and through adoption of online e-business and e-commerce.

On the other hand, there are a number of businesses who are unsure or remain to be convinced as to potential benefits and what this means for them. These businesses want to see what the local technical solution looks like and how effective the high-speed broadband will be.

In overall terms, the positive impacts are seen to be as follows:

- (a) Improved product and service offerings through multi-media solutions, which to the present time have been hampered by a lack of speed, reliability and cost;
- (b) Greater mobility through an improved voice network – being able to work out the office with more confidence;
- (c) Increased business productivity and performance through more efficient, reliable and real-time voice and video communications;
- (d) More options to work from home;

- (e) A greater ability to adopt new e-based applications and technologies;
- (f) Ability to communicate visually with customers and business partners;
- (g) Implementation of electronic payment systems and e-commerce in general;

One regional stakeholder summed up the transformational opportunities in the following terms:

*“It will allow businesses to be more effective and to fully participate in the digital economy - the extremely slow internet access is deterring businesses from even trying (they are giving up in frustration). We could have contacted the bushfire brigade and each other after the lightning strike took the phone lines out and started a bushfire. It will allow university students to participate in their courses remotely. It will enable commuters who travel to Canberra to work to do it from town - saving a significant amount of time and money, as well as reducing congestion and emissions. Government services could be completed out online. It will allow farmers to engage with the necessary technology to improve their management practices - such as monitoring water points, entering data in real time, etc. The list goes on.....”*

**Issues Paper Q9. What communications barriers have you experienced in expanding or operating your business or providing services, such as health or education? Have you been able to overcome these barriers and if so, how?**

Communications barriers experienced by businesses in the region are real and have an adverse impact on operations.

It is worthwhile examining some of the barriers cited by business in order to get a clear picture as to the day-to-day problems that are faced on the ground:

- Inability to consistently and reliably provide customers with real time updates on market prices for commodities;
- Inability to engage with other publishers and view and edit articles efficiently via broadband;
- University students unable to continue to study from home effectively at end of semester due to inadequate internet connections;
- Impacts on GPs due to slow ADSL speeds attempting to move to telehealth services;
- Inability to consult with a remote medical specialist other than through attendance at a GP clinic;
- Restrictions on the ability to move to more progressive online accounting software;
- Inability to participate in web conferences due to slow internet speeds and unreliable connections;

- Point of Sale system malfunctions and problems at registers, requiring a GPRS or wireless back-up option;
- Limited mobile coverage necessitating a land-line back to base contingency;
- Inability to conduct business via a mobile service during periods of peak demand on the network;
- Delays with patient care due to slow internet speeds when attempting to access Medicare records such as Child Dental Benefits Schedule;
- Restrictions due to low data limits from broadband plans which results in having to balance monthly usage in order to ensure that basic services can be provided to clients

**Issues Paper Q10. What communication functions (for example, speed, mobility, reliability, data, etc) would best suit your needs, noting the limitations of each technology (for example, mobile, wireless, satellite, fibre)?**

We asked businesses to prioritise their communication functional requirements from highest to lowest.

The results were as follows:

Ranking	Function	Score
1	Reliability	4.46
2	Speed	4.54
3	Access	4.11
4	Cost	3.19
5	Data Size	2.81
6	Mobility	2.07

Reliability and speed are considered to be the two most important functional considerations for businesses at the present time, with access in third place.

## Consumer Safeguards

As at time of writing, the Department of Communications website states the following:

*“The Australian Government plans to give all Australians access to high-speed broadband.”*

and

*“The national broadband network will give all Australians access to very fast broadband over fixed lines, wireless or via satellite.”<sup>7</sup>*

In view of these commitments to provide all Australians with “very fast” and “high-speed” broadband, it is entirely reasonable to provide consumer safeguards to ensure this occurs.

The right to high-speed broadband, and the obligation of service providers to provide it, should be enshrined in a legislative mechanism similar to the current Universal Service Obligation (USO) for telephony services.

The USO for high-speed broadband services would outline reasonable service standards and expectations in relation to those factors outlined above in Question 10.

It is recognised that due to population density and other factors, FTTN or FTTP services or indeed fixed-wireless services will not be economical. However, there appears to be a growing interest in exploring co-development opportunities for greater fixed-wireless infrastructure. This is primarily in order to avoid the inherent issues of latency that are associated with satellite broadband.

**Issues Paper Q11. Do we need to continue to guarantee the standard telephony service for all (or only some) consumers, and if so, to what extent?**

A total of 75% of businesses in the Central West region that were asked this question indicated that the standard telephony service needed to be guaranteed for all consumers.

The remaining 25% of businesses referred to farmers as well as older citizens as being consumer groups that should be assured continuity with the provision of standard telephony service. Elderly and immobile residents were more likely to have a standard telephone as a “lifeline” and connection to family and assistance when needed.

**Issues Paper Q12. Are there new or other services, the availability of which should be underpinned by consumer safeguards?**

Where the only high-speed broadband option available for a community is satellite broadband, there should be minimum guarantees as to speed and reliability, amongst other factors. There needs to be sufficient satellite capacity to underpin these safeguards. As far as practicable, download and upload speeds via satellite broadband should be approximate speeds achievable via a fixed wireless connection.

Where possible, new mobile phone towers being erected in regional, rural and remote communities to address mobile blackspot issues should be designed and built so as to be

able to deliver a future fixed wireless service from the same infrastructure. This would avoid more expensive retrofitting options at a later stage and minimise the incidence of disconnected single purpose towers.

As for mobile phone coverage safeguards, views have been expressed that the network should not be impacted in an emergency, for example, when a town is without power.

Consumer safeguards regarding privacy and security have also been flagged as areas for consideration by some businesses.

It is noted that the Australian Government as well as State and Territory Governments are working collaboratively to address priority mobile black-spots. These will eliminate many but not all of the known blackspot areas. It would appear that a collaborative approach between all 3 levels of Government, telecommunications providers and in some cases local businesses is generating some encouraging results for regional, rural and remote Australians. In the Central West, a second Telco will be investing in mobile phone services in the region which will rectify a number of blackspot issues but, in the longer term, potentially provide greater competition for consumers.

The current lack of competition in the retail market in regional areas is a significant concern. If consumers in regional areas are not able to be provided equivalent reliability, speed and access to high-speed broadband options that are enjoyed in urban areas, the least that they can be guaranteed is that they will not be required to pay more for less. In other words, a lack of competition should not result in restricted plan options, higher costs for data downloads and uploads, and more expensive capped services than what would typically be available in the city.

Given the tyranny of distance, consumers in regional, remote and rural communities should be entitled to reliable and prompt customer service that *exceeds* that enjoyed in urban areas. Such a guarantee would recognise that the special circumstances of Australians living in the regions such as remoteness, access, poor mobile coverage and other comparative disadvantages warrant these customers being prioritised for assistance. If the technical experience cannot match that enjoyed in the city, at least the personalised service and response times can.

**Issues Paper Q13. What standards should apply to your services? How might they best be enforced?**

Businesses in the Central West have indicated that service standards should be prescribed in terms of key metrics such as percentage uptime and speeds. For example, 98% uptime and minimum download and upload speeds.

Credits and refunds to consumers should be payable when reported performance does not match minimum service standards.

As mentioned in Q12, reasonable response times for rectification of service issues and faults should be mandated, with penalties applying for excessive outages or service restrictions beyond the allowable limits.

## **References**

- 1 The AECGroup, *NSW Central West Region Export / Import Contribution Study*, October 2014
- 2 *2011 Census of Population and Housing*, ABS Census (2012)
- 3 Australian Bureau of Statistics, *Socio-Economic Indexes for Areas*, 2011
- 4 Washington Post, *How Much Data Are we Using?*, 7 July 2011 at: [http://www.washingtonpost.com/blogs/faster-forward/post/how-much-data-are-we-using-really/2011/07/07/gIQAa8BU2H\\_blog.html](http://www.washingtonpost.com/blogs/faster-forward/post/how-much-data-are-we-using-really/2011/07/07/gIQAa8BU2H_blog.html)
- 5 Regional Australia Institute, *[In]Sight, Australia's Regional Competitiveness Index*.
- 6 AEC Group, 2014
- 7 Department of Communications, *National Broadband Network*, 13 Jul 2015 at website <https://www.communications.gov.au/what-we-do/internet/national-broadband-network>