NSW Farmers' submission to the 2024 Regional Telecommunications Review

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About NSW Farmers

NSW Farmers is Australia's largest state farming organisation, representing the interests of its farmer members in the state. We are Australia's only state-based farming organisation that represents farmers across all agricultural commodities. We also speak up on issues that matter to farmers, whether it's the environment, biosecurity, water, animal welfare, economics, trade, workforce or rural and regional affairs.

Agriculture is an economic 'engine' industry in New South Wales. Despite having faced extreme weather conditions, pandemic and natural disasters in the past three years, farmers across the state produced more than $23 billion in 2021-22, or around 25 per cent of total national production, and contribute significantly to the state's total exports. Agriculture is the heartbeat of regional communities, directly employing almost two per cent of the state's workers and supporting roles in processing, manufacturing, retail, and hospitality across regional and metropolitan areas. The sector hopes to grow this contribution even further by working toward the target of $30 billion in economic output by 2030.

Our state's diverse geography and climatic conditions mean a wide variety of crops and livestock can be cultivated here. We represent the interests of farmers from a broad range of commodities – from avocados and tomatoes, apples, bananas and berries, through grains, pulses and lentils to oysters, cattle, dairy, goats, sheep, pigs and chickens.

We have teams working across regional New South Wales and in Sydney to ensure key policies and messages travel from paddock to Parliament. Our regional branch network ensures local voices guide and shape our positions on issues affecting real people in real communities. Our Branch members bring policy ideas to Annual Conference, our Advisory Committees provide specialist, practical advice to decision makers on issues affecting the sector, and our 60-member Executive Council makes the final decision on the policies we advocate on.

As well as advocating for farmers on issues that shape agriculture and regional areas, we provide direct business support and advice to our members. Our workplace relations team has a history of providing tailored, affordable business advice that can save our members thousands of dollars. Meanwhile, we maintain partnerships and alliances with like-minded organisations, universities, government agencies and commercial businesses across Australia. We are also a proud founding member of the National Farmers' Federation.

Executive summary

NSW Farmers welcomes the opportunity to provide a submission to the 2024 Regional Telecommunications Review, undertaken by the Regional Telecommunications Independent Review Committee (RTIRC) every three years to review the adequacy of telecommunications services in regional, rural, and remote parts of Australia.

Telecommunication services are fundamental to everyday economic, social, health and educational outcomes, the importance of which is often heightened for those living outside of metropolitan areas. With greater reliance on digital communication, both for business and personal use there is an assumption that all with mobile and internet connections can equally access this type of service and information delivery. It should be a given that all users should expect to have equitable access to quality, reliable and affordable telecommunications. However, this is not the case, and the digital divide between rural and urban Australia is not closing.

In rural, regional and remote areas of Australia many barriers remain, resulting in challenging access to critical telecommunications services. These are in part due to the ever-changing technology available that exacerbate the existing concerns about stability and surety of access. Telecommunications are an essential service and improvements that deliver quality and reliable connectivity is critical for rural and farming communities in NSW.

NSW Farmers members are identifying increased challenges in accessing high quality, reliable data and voice services, in part due to increased uses across the population. This is increasingly critical with the shutdown of the 3G network by September 2024 fast approaching. The network closure must not result in a loss of mobile service coverage for rural, regional and remote New South Wales, and 4G coverage at a minimum must be equivalent to if not better than the existing 3G network. Recent feedback from NSW Farmers members identifies a major lack of confidence that coverage will deliver equivalent access for rural communities once the shutdown occurs.

In June 2024, NSW Farmers conducted a member survey to understand the key issues and experiences of telecommunications in regional, rural and remote areas of New South Wales. This feedback forms the basis of this submission.

Recommendations

NSW Farmers makes the following recommendations to this Review:

1. That the Federal Government and telecommunications companies accelerate improvements to connectivity infrastructure to ensure regional, rural and remote communities in New South Wales have access to quality and reliable telecommunications.
2. That dedicated technical support for regional, rural and remote customers is available to ensure that connectivity challenges can be readily resolved.
3. That State and Federal Governments prioritise funding to accelerate industry and regional digital capabilities and literacy through investments in skills and support services.
4. That the Federal Government provide ongoing funding for the provision of independent and reliable telecommunications information to regional customers including continuation of the Regional Tech Hub and supporting greater awareness and usage of these services.
5. That State and Federal Governments support programs that assist farmers to innovate and adopt new digital technologies that meet their business needs.
6. That the Universal Service Obligation continues beyond 30 June 2032 and be extended to all telecommunications services including voice, mobile and data.
7. That the Federal Government prioritises investment to overcome challenges for continued poor mobile service coverage including regional connectivity programs to reduce black spots with the aim of 100% mobile phone coverage in NSW.
8. That the Federal Government ensures that the shutdown of the 3G network does not result in a loss of mobile service coverage for rural, regional and remote New South Wales, and that 4G coverage must at minimum be equivalent to, if not better than that provided by the existing 3G network.
9. That the ongoing role of the 4G network and rollout of the 5G network delivers better connectivity outcomes for regional, rural remote communities.
10. That any future shutdown of the 4G network is informed by learnings from the shutdown of the 3G network to ensure that regional communities and farm businesses have certainty and are not adversely impacted.
11. That ongoing innovations to continue advancing broadband capabilities in rural and remote areas be a priority, ensuring that network capacity and reliability keeps pace with demand.
12. The Government and private investment prioritise network resilience programs to better support service continuity during periods of natural disaster.
13. That mobile roaming be made available on all wireless telecommunications structure to improve connectivity for disaster resilience and emergency response.
14. That a regional, rural and remote telecommunications investment planning connectivity strategy be developed including the establishment of a dedicated fund to resource long-term and ongoing investments.
15. That feasible infrastructure sharing arrangements for regional, rural and remote areas be encouraged to deliver better connectivity for users and efficient asset use.

Experiences in New South Wales

Like all Australians, farmers require quality, reliable, and affordable access to telecommunications to complete everyday tasks from business activities, to education, to catching up with family and friends. A key requirement of quality and reliable telecommunications is certainty of access; that is, access to quality telecommunications whenever it is required or desired. Residents in regional, rural and remote areas consider that voice and data services should be recognised as an essential service and developed/ delivered in a strategic manner. It is a necessity to be connected to be able to operate in the modern world, from payments to Government related services, which all require connection. While significant advances have been made in recent years, many regional Australians continue to face connectivity challenges. This includes recent concerns from some NSW Farmers members that the aim of the 3G shutdown is to upgrade the mobile network, however, members around the state are already reporting that they are experiencing downgrades with reduced coverage availability and capacity.

Service quality, reliability and accessibility issues remain, presenting ongoing primary connectivity barriers for communities, farm businesses and workers in regional New South Wales. Throughout this submission, connectivity refers to both network coverage and capacity. As economic activity and service delivery continue to migrate online, these connectivity accessibility challenges must be addressed. However, improving connectivity in regional areas continues to present a fundamental opportunity to drive the competitiveness and productivity of the agricultural sector in the decades to come. New South Wales agriculture's goal is to be a $30 billion ag sector by 2030, contributing to a national target of $100 billion. Key to this will be reliable and improved connectivity on farm to drive innovation and realise the production benefits and efficiencies from emerging applications of agricultural technology.

To achieve this, communities need access to an appropriate telecommunications service for their location, and then must have continual access to that service no matter the weather, time of day or number of users. Unfortunately, uncertain and unreliable access is amongst the most common telecommunications challenges faced by regional customers in New South Wales. Farmers and regional communities continue to experience the challenges of mobile 'black spots' in their homes, across their farm business footprint, and the broader regions. In some instances, this is due to topography that disrupts signal; in others, this is due to the perceived lack of adequate infrastructure to cover large distances resulting in low signal strength that reduces access to technology applications that require data.

In June 2024, NSW Farmers conducted a member survey to understand the key issues and experiences of telecommunications in regional, rural and remote areas of New South Wales. This feedback forms the basis of this submission and responses to the 2024 Regional Telecommunications Review consultation questions are provided throughout this submission.

Key trends from the survey responses include:

- 64% indicated they are unsatisfied with their mobile reception coverage.
- 77% identified poor coverage and loss of signal away from major residential building as a major inhibitor.
- 66% experience lack of continuous access during mobile voice calls with service drops outs being a major challenge.
- 65% use Wi-Fi calling and texting over home broadband internet indicating mobile coverage is still poor in the regions.
- 88% indicated that when choosing a mobile provider, quality and reliability are the priority.
- 58% have invested in technology to enhance their telecommunications signal.

Comparing the results to NSW Farmers previous telecommunication survey for the previous RTIRC review, there have been some improvements since 2021. For example, modest improvements in satisfaction with mobile coverage, with 78% unsatisfied in 2021 and 64% in 2024. In regard to internet service, 55% were previously dissatisfied with their broadband, and now in 2024 62% are satisfied, attributed largely to the rise of new technology such as low earth satellite technology. However, significant advancements are still required to ensure telecommunications are fit-for-purpose in rural, regional and remote New South Wales.

Improved telecommunications infrastructure is a key enabler for agriculture and regional community amenities. Infrastructure is important for regional areas in achieving competitiveness in business. It can be a major factor in incentivising jobseekers to take up employment with agribusiness employers and retaining staff in regional areas. The quality-of telecommunications in rural and regional NSW does not currently meet the standards many Australians expect and more investment in and maintenance of telecommunications infrastructure will be required to attract and retain skilled workers in the rural and remote areas.

Recommendation: That the Federal Government and telecommunications companies accelerate improvements to connectivity infrastructure to ensure regional, rural and remote communities in New South Wales have access to quality and reliable telecommunications.

Telecommunications Consumers

1. *What initiatives or tools could be implemented by the telecommunications industry or 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?*
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?*
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?*
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?*

Technical support

Many rural and regional customers have more complex telecommunications issues then their metropolitan counterparts, whether this be determining services to invest in or troubleshooting. The survey results indicate that there are still significant improvements to be made regarding customer experience with service providers in relation to resolving issues for example around response times, satisfaction and understanding of users localised challenges.

Members have indicated in NSW Farmers survey that when they seek assistance from their service provider to resolve a conflict, for the majority it will take longer than one day. 23% indicated that it took over one month to resolve their last connection difficulty, 23% that it took between one week and one month, 31% that it took between one day and one week, and only 6% indicated it was resolved within a day. An even bigger problem for members is the perception that when they seek help from the providers, they do not understand the issue. Only 8% indicated the provider fully understood the extent of the challenge, while 55% said they did not understand and 36% said they did somewhat understand somewhat. Regarding satisfaction with service provider responsiveness when issues occur, 25% were satisfied, 35% were neutral and 36% were unsatisfied. It is important that there is further improvements to customer experience to minimise customer frustrations about being able to get through to someone within their service provider to resolve their issue without spending hours on the phone.

Due to the large distances required to travel to the nearest provider's store (usually Telstra) it is unsurprising that 58% identified as over the phone assistance as their preferred way to resolve issues. This is of course inhibited if there are persistent telecommunications issues. This demonstrates the frustrations from rural and regional customers in trying to fix their telecommunications issues as well as the difficulty in having to understand every technical term. In comparison, a customer can expect to have their electricity connected, operating and fixed without needing to understand the specifics of electrical grids and networks. Additionally, the 3G shutdown has highlighted the challenges around connectivity access and for many – including what they don't know – to be able to resolve issues, maintain access to telecommunications or determine which alternate technology might best suit their requirements and circumstances. The impacts of the closure also extending to some fixed line services has been a key gap raised by NSW Farmers members, with many not realising these relied on 3G.

Government and industry will need to work together to provide technology support that is easy to understand, timely, accessible to rural communities. Dedicated regional teams should be used by the major telecommunications company to support regional customers with their unique challenges and provide speedy resolutions with uncomplicated processes.

Recommendation: That dedicated technical support for regional, rural and remote customers is available to ensure that connectivity challenges can be readily resolved.

Independent advice and digital literacy

Key challenges highlighted by our members are the ability to gain accurate advice on which services to use, and the risk of service quality differing in practice compared to the information available. Whilst coverage is affected by various factors, including the demand on a particular tower and the type of network devices used, it is commonly reported by our members that service access is much more uncertain than the understood at the time of the service purchase.

Telecommunications are an essential service, and it will be important that improving technology literacy in addition to the connectivity status quo in rural, regional and remote NSW is a critical priority for government and service providers. The survey results indicate a clear opportunity for greater tailored support for rural customers to assist decision making around their technology needs and digital literacy. Continued efforts to improve digital literacy are important to support regional customers to make correct decisions when choosing a provider and the most suitable service. This extends to troubleshooting issues and understanding technology and equipment options that could better suit their needs for example satellite and booster solutions. Greater digital literacy will also assist in helping users to combat digital scams that prey on vulnerable members of the community.

NSW Farmers strongly supports the provision of independent and reliable telecommunications information to regional users. Continuation of the Regional Tech Hub, funded by the Australian Government to provide free, independent advice is important to continue tailored support for regional users to navigate voice and internet connectivity issues. The Hub is having a positive impact for rural, regional and remote users who are aware of the service. However, feedback from our survey shows that only 8% have accessed the Regional Tech Hub, with 71% of responders having not heard of it and 20% having heard of it but have not accessed it. Further activity is needed, including from Government, to amplify knowledge of the Regional Tech Hub and increase awareness and usage for customers in rural communities. It will also be important that the Regional Tech Hub has adequate resources to continue providing these services and facilitate increased engagement as awareness grows.

Recommendation: That State and Federal Governments prioritise funding to accelerate industry and regional digital capabilities and literacy through investments in skills and support services.

Recommendation: That the Federal Government provide ongoing funding for the provision of independent and reliable telecommunications information to regional customers including continuation of the Regional Tech Hub and supporting greater awareness and usage of these services.

Adoption of ag tech

Access to reliable and quality connectivity is a key barrier to adoption of digital technologies in farming businesses. Overcoming poor connectivity and access to data services is critical to supporting Research and Development (R&D), growth and uptake of ag tech. Given the mounting environmental and social-economic challenges confronting agriculture in NSW, farmers are constantly tasked with achieving greater production efficiencies and business sustainability. To thrive in this demanding landscape, farmers are actively seeking and will continue to require access to all available tools in the

toolbox, including a range of applications of digital ag technology in agriculture that assists farmers to make decisions and gain efficiencies, driving innovation and productivity.

The Australian Farm Institute estimates the adoption of digital technologies could add up to $20 billion to agriculture's bottom line. To achieve this regional, rural and remote areas must have access to connectivity and telecommunications options comparable to their urban counter parts. To deliver this, improvements are required to provide access to services that are fit-for-purpose. NSW Farmers survey indicated that not knowing what solutions might help (53%), not having the time to research available solutions (45%) and being unsure of the return on investment (49%) are major barriers for technology adoption on farm.

Quality of current internet service continues to be a significant limitation for farmers in New South Wales when it comes to their ability to adopt new or additional technologies on farm to aid productivity. As such, there is a critical role for government in support connectivity infrastructure, digital literacy education and upskilling services to ensure agriculture can adopt ag tech innovations and realise the benefits of R&D for productivity and the broader community.

Recommendation: That State and Federal Governments support programs that assist farmers to innovate and adopt new digital technologies that meet their business needs.

Universal Service Arrangements

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?*
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?*
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?*

A key requirement of quality and reliable telecommunications is certainty of access; that is, access to quality telecommunications whenever it is required or desired. Unfortunately, uncertain and unreliable access is amongst the most common telecommunications challenges faced by all Australians. While technological improvements have allowed greater access to rural and regional customers, there needs to operate a framework of minimum standards to allow continued access for all rural, regional and remote users, no matter the circumstance.

NSW Farmers strongly supports having minimum consumer standards that support regional customers telecommunications needs. This is what the universal services arrangements seeks to achieve in ensuring customers in thin markets have access to essential telecommunications. NSW Farmers continues to support the Universal Services Obligation (USO) and continuance of the agreement beyond 30 June 2032 for broadband connection and standard telephone services. It is important that this is maintained to provide a baseline level of connectivity to all Australians. In principle, a USO needs to set consumer protection standards, that are technology agnostic, and address availability, affordability, accessibility, and reliability; and must exceed the existing reliability standard.

Currently, under the USO, Telstra is both required to ensure all Australian's have reasonable access to standard telephone services (STS) and maintain the copper connection outside of the NBN fixed line service footprint under the copper continuity obligation (CCO). Telstra is paid $230 million per annum (partly funded by industry levies) to maintain STS and the CCO which expires 30 June 2032. As of September 2023, there is approximately 300,000 USO voice services provided by Telstra of which most are supported by copper and ADSL.

NSW Farmers position is still to support the continuation of copper if someone elects to do so, though we acknowledge the carriers are informing consumers that the life of copper is running out as the technology ages and supporting technology, such as replacement parts that are becoming more difficult to procure as maintenance costs increase. Moving forward, if the Government proposes the removal of the CCO from the USO, the government or Telstra under a future framework must ensure all 300,000 customers are supported in a transition to new technology. A future framework will need to include a reinvestment requirement by Telstra for all areas currently covered by copper line outside of the NBN fix line footprint as of 1 July 2012.

The Government has been suggesting a technology neutral approach which involves new satellite and wireless technology such as NBN fixed Wireless and Low Earth Orbit satellites (LEOSats) being used moving forward as a replacement for copper and fixed line as the final guarantee of telecommunications. For rural and regional NSW to accept a technology neutral approach, the new technology will need to be resilient and able to deliver coverage when systems fail. Telstra or the

government should demonstrate, with data, that a new technology is more resilient and reliable than copper technology. A resilience requirement under a new framework is needed to ensure coverage during natural disasters. Copper currently serves as certain backup if every other item fails.

If the CCO is to be discontinued when the USO expires in 2032, preparations need to be made to ensure everyone who will be affected by the end of copper will be able to connect to a new technology. If the new technology offered is not as reliable as the copper fixed line, the CCO should not be discontinued. If LEOSats or another technology are able to reach every location in Australia by 30 June 2032 a USO guarantee must ensure Telstra will have the resources to connect all regional customers to the system, including additional help to members of the regional community who may not be technologically savvy. Right now, concern is being expressed that new technology is being rolled out without adequate testing and that it is not more reliable than copper.

There have been issues reported from members using the new technology such as loss of coverage during cloud cover and rain fade. A major concern raised is relying on one source for every need means, when there is a power outage in an area, all forms of communication are lost. The copper and ADSL network can currently provide backup communications when there is a power outage. RTIRC needs to consider the reliability and the resilience of the new satellite and wireless broadband technology.

A new framework must also guarantee a level of customer support and needs to consider affordability. If the cost of ensuring coverage is high with a new technology, NSW Farmers would not want to see high prices passed onto the consumer. The requirements for reasonable access to the STS needs to continue so prices do not become unaffordable. Telstra currently has priced the voice-only landline services at $50 per month, with the possibility there may be additional costs for connection and delivery. We want to see the price remain the same for basic voice service, no matter the technology and performance standards exceed copper technology. This would ensure geographic equality and support low-income earners.

We are between generations of technology, at a time of high dependency on technology for business, education, social interaction, WH&S. A robust consumer protection instrument needs to be in place, a USO should set a reliability standard, which ensures accessibility and reliability of this essential service. The USO should provide parity to urban counterparts and be better than the current lived experience.

NSW Farmers considers the continued maintenance of USO payphones important as part of any framework. They provide important for certainty of access for vulnerable members of the community and an alternative for regional residents, especially in areas outside of mobile coverage range. In this way, they provide a backup form of communication that should be maintained as an emergency response strategy including for access in natural disaster events. Now that Telstra has made them usable at no fee, their usage and popularity has increased and any USO framework should continue to support payphones.

NSW Farmers policy further supports the extension of the USO to include voice, mobile and data. As such, this Review should investigate and consider extension of the USO to include mobile voice and data, in addition to a universal framework that includes price requirements and minimum internet speeds that cover all quality parameters.

Recommendation: That the Universal Service Obligation continues beyond 30 June 2032 and be extended to all telecommunications services including voice, mobile and data.

Mobile

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?*
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?*

Mobile network coverage and capacity still provides significant day-to-day challenges for many farm businesses and rural communities in New South Wales. Many farmers do not have reliable or constant mobile network coverage across their farming properties or surrounding road networks. This restricts access to essential telecommunications and the full utilisation of digital equipment and technology.

Through this review, RTIRC needs to consider the continued difficult experience our members still have with poor mobile coverage that restricts the full uptake of telecommunications technology. Key insights include that:

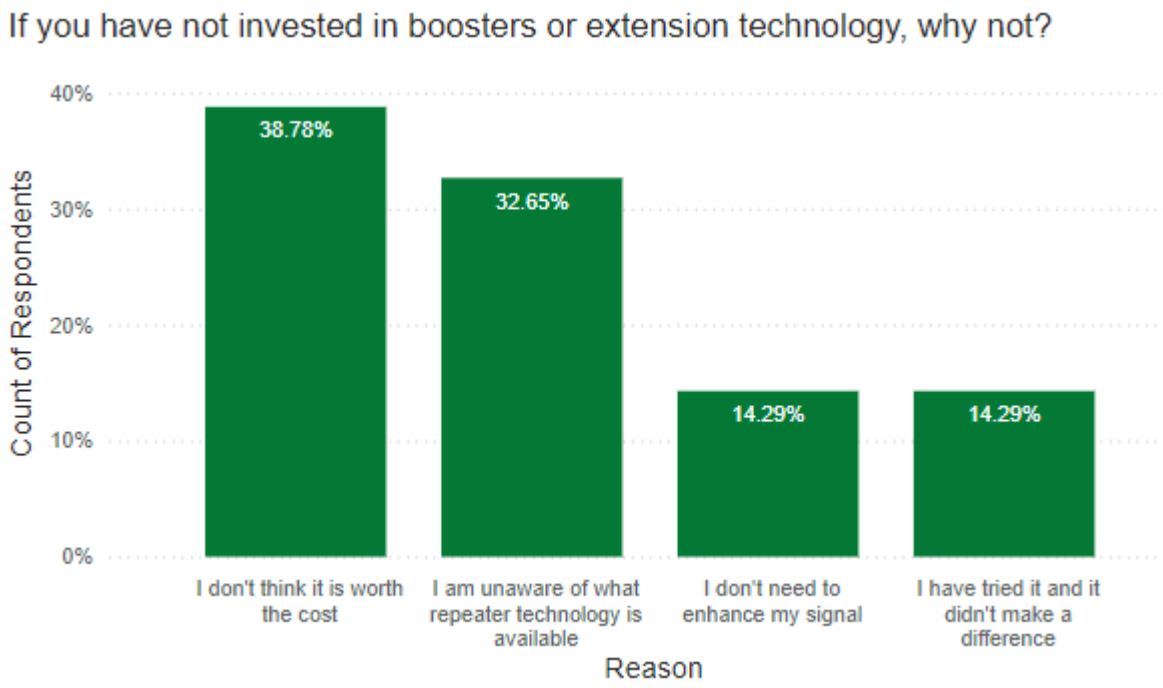
- 65% of members were unsatisfied or highly unsatisfied with their mobile service coverage with only 21% indicating they were satisfied or very satisfied with their coverage.
- A key number of our members (35%) no longer have a reliable landline fixed connection for phones. This makes them reliant of satellite and data mobile coverage.
- 77% reported poor coverage – loss of signal away from residential building
- 63% reported service dropouts.
- 52% reported quality of connection e.g. distorted voice.
- 36% reported lack of mobile internet access
- 31% reported the high cost compared to access and reliability
- 18% reported delays in restoring mobile service following outages.

Additionally, this Review should consider that members are reporting that in some cases mobile coverage is getting worse. The comments below were provided through NSW Farmers survey indicating concerns that mobile service is deteriorating:

> *"5-10 years ago I would have said our service was good! It's getting worse even after spending additional money on boosters it's made no difference!"* – 2400 near Moree.
>
> *"Since the wind back of 3G we have to redial at least 5 times during a 5minute call. 4G is not stable at all"* – 2643 near Howlong.
>
> *"we have worse service past 12 months then we had 5 years ago"* – 2880 around Broken Hill Far West
>
> *"We can only access mobile for our home internet so we pay a lot for what's supposed to be a good service and it was a good service until 5g. We used to get 5 bars in our home but now only get 1-2 and the mobile tower is less than 1 km from our house... very poor form."* – 2354 Walcha region
>
> *"Often do not receive SMS messages till 2-3 days after they are sent"* – 2329 Merriwa region
>
> *"No coverage at all at home even with an external antenna. Need to go 5km for any coverage."* 2404 Bingara
>
> *"No mobile coverage over our whole farm."* - 2551 near Wonboyn

To enhance their coverage, many members need to pay for booster or extension technology to improve signal coverage at their home and on farm. The survey indicates that 58% have made

investments in these technologies including repeaters and external aerials to extend coverage around their farms and on vehicles to improve their quality of service. In contrast, this is not required by metropolitan customers. The survey showed that the average members have spent on additional booster technology over the past two years has been $2,580, with members reporting investments as high as $27,000. Key reasons for those who have not invested in booster technology were that they were unaware of what repeater technology is available (33%) or that the return on investment was not worth the cost (39%). Only 14% indicated that they did not need to enhance their signal. This shows that there are significant costs for farm businesses to invest in booster technology, which in some cases is prohibitive for those who don't think it is worth the cost or where there are information gaps on the available technology.



Continued investment in connectivity to provide expanded coverage is important for ongoing farm productivity improvements and innovation. Technology innovation is the fundamental source of productivity improvements and economic growth in the farming sector and beyond. There have been a lot of technological improvements in agriculture however lack of internet coverage creates limitations. When asked in the survey how technology may aid your farm productivity and to what extent do you think the quality of your current internet service limits your ability to adopt/add-on new or additional technologies, 47% says it created significant limitations while 33% says it created some limitations. This stifles on-farm connectivity and the take up of new technologies that would improve productivity and farm output. Supporting continued public investment in infrastructure is a public good and a benefit to society.

NSW Farmers supports the Government continuing regional connectivity programs such as the blackspot program and the better connectivity plan for Regional and Rural Australia. These public investment programs are critical to ensure connectivity service expansion and quality improvements. The program design must consider the ongoing advancement of technological solutions, such as satellite-delivered connectivity and in-field connectivity solutions.

Recommendation: That the Federal Government prioritises investment to overcome challenges for continued poor mobile service coverage including regional connectivity programs to reduce black spots with the aim of 100% mobile phone coverage in NSW.

3G shutdown

It is critical that after the shutdown of 3G, there is equivalent coverage for rural, regional remote NSW. At a minimum the 4G network must reach all areas currently covered by 3G to ensure that farmers and rural communities are able to call for help if we run into trouble or have an accident. NSW Farmers understands the long-term goal of the transition away from 3G is to increase capacity in the network with 5G by repurposing the 3G spectrum. However, there is a need for greater assurances that after the shutdown of the 3G network, and the ongoing rollout of 4G and 5G networks, there is improved connectivity outcomes outside of urban areas in both the short and long term.

Even with the 3G network in place, there are horror stories of accidents occurring on farms or on isolated country roads, where people have not had the mobile coverage, they need to contact emergency services and receive lifesaving help. The 3G network has been an essential lifeline in regional communities during emergencies and natural disasters and naturally, this shutdown is causing anxiety in rural and remote communities.

The survey of NSW Farmers has shown that 70% have indicated they checked their devices, including any aerials and repeaters, and are ready for the closure, 30% are either waiting to the last minute to upgrade or are not prepared at all. While the majority of members have checked their devices are compatible with 4G, confidence is low that they will have the same level of connectivity when 3G service ends. For example, 54% of respondents are not confident, and another 25% were unsure, this means only 20% are confident that they will have equivalent service. It will be also important that there is ongoing access to competent first responders from telecommunications companies to provide technical support and troubleshoot connectivity issues well past the network shutdown date.

In addition to telecommunications being needed for essential connectivity purposes, there are a range of farming operations that are reliant on connectivity applications in equipment that use sensors, devices and handsets that are solely supported on 3G. Once 3G is switched off the equipment won't be able to transmit and receive data and one of the key challenges for agriculture is that this equipment will need to be upgraded or replaced at a cost to farmers, so that it can perform the job it is intended for and ensure continuity of their operations. There is a range of affected agricultural equipment from small to large including irrigation and soil moisture sensors, monitors on bores and water tanks, automatic weather stations, and modems in tractors that are used for diagnostic purposes.

Many farmers have invested many thousands of dollars into farm equipment that will become redundant unless upgraded or replaced. As an example, John Deere has indicated that customers using 3G modems in their machines may be experiencing problems due to reduced network coverage, decreased transmission speeds, or complete loss of function where 3G technology is no longer available. Our members have reported costs in the order of $2,000 -$10,000 for farmers to retrofit modem upgrades in these tractors to prevent them coming to a halt. Other examples provided are the replacement costs of signal repeaters as they will no longer work on the network once 3G is shutdown. One member has indicated they have five repeaters that need to be replaced at approximately $1200 per device included aerials and installation. It will be important to ensure connectivity continuity so that agricultural productivity and efficiencies are not detrimentally impacted.

Further, there is some concerns about how far off the next shutdown will be where 4G is superseded. The 2G network began getting turned off in 2016, and as the rate of change is speeding up with increasing usage, technology needs to keep pace with user demands, farmers will need certainty of investment moving forward due to the significant costs at the expense of their businesses to stay connected. There is uncertainty about the life cycle of 4G and the risk of farmers investing in new technology that will become redundant if the 4G network is turned off in the near future. For many devices reliant on connectivity, farmers need to upgrade to 4G as 5G functionality is not yet available

and there is concerns that they will need to pay for further device upgrades again within a shorter lifecycle if the 4G network is superseded at a faster rate than the previous 3G network.

Recommendation: That the Federal Government ensures that the shutdown of the 3G network does not result in a loss of mobile service coverage for rural, regional and remote New South Wales, and that 4G coverage must at minimum be equivalent to, if not better than that provided by the existing 3G network.

Recommendation: That the ongoing role of the 4G network and rollout of the 5G network delivers better connectivity outcomes for regional, rural remote communities.

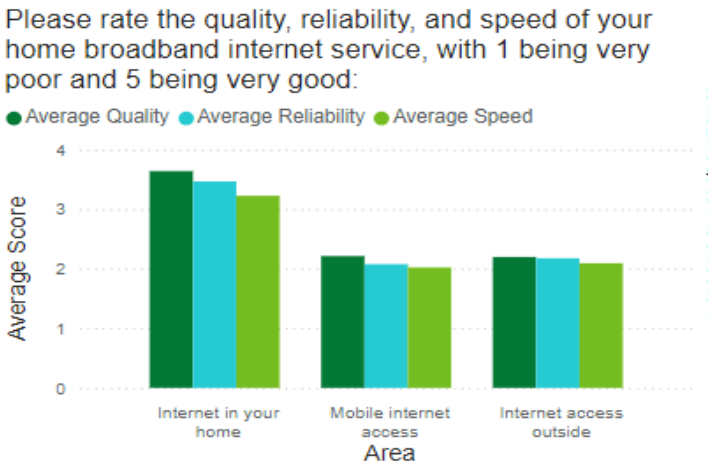
Recommendation: That any future shutdown of the 4G network is informed by learnings from the shutdown of the 3G network to ensure that regional communities and farm businesses have certainty and are not adversely impacted.

Fixed broadband

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? 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?*

Quality and reliable internet including broadband is essential for rural communities and farming businesses. There is ever increasing reliance for everyone to use digital services for both personal and business including from government. For example, the increase in online services to access health, banking and technology troubleshooting tools. This is particularly important for those outside of urban areas who rely on telecommunications to access key services, which adds to the stress where rural communities do not have fit-for-purpose coverage. For many farm businesses, the home is also the workplace and this adds additional stress and risk where there is uncertainty of reliable and quality internet and mobile service. Broadband, and alternatives such as satellite will become even more critical with the shutdown of 3G and the uncertainty about coverage equivalence of the 4G network.

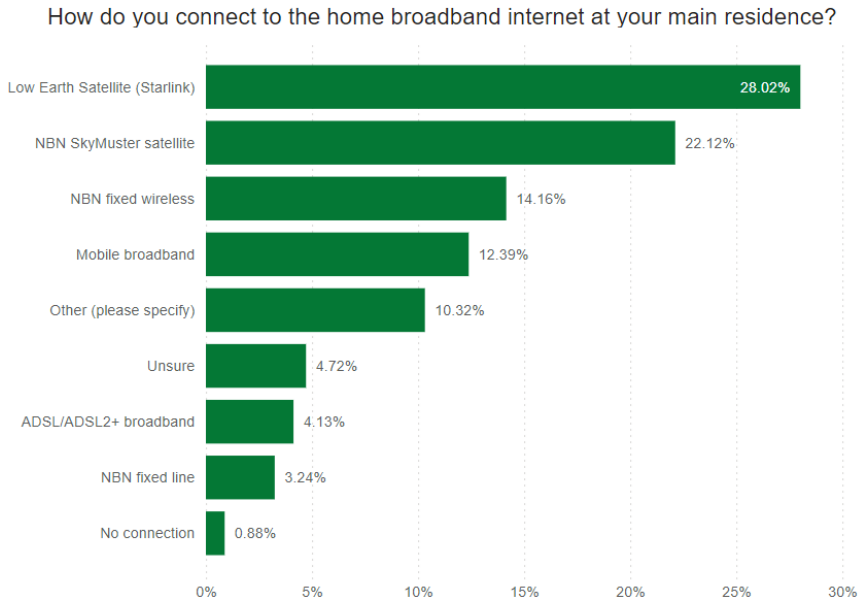
The survey identified 62% of members as having some degree of satisfaction with their internet access inside their home, while 33% were unsatisfied. Members were asked to rate the quality, reliability and speed of their internet connection, inside and outside (on the property) of their home. Results below show a high rating for internet connection inside the home and lower for outside and mobile.



The advancement of technology has been closing gaps in access to reliable and quality internet services. NSW Famers members have reported largely positive but still mixed experiences using emerging technology such as NBN Fixed Wireless and Low Earth Orbit (LEO) satellites. The expansion of remote broadband services also enables users to utilise voice services rather than being fully reliant on mobile coverage. However, as the results above indicated, coverage becomes weaker the further away from the home you are. Availability of options for customers to make choices around their specific geography or capability needs continues to be important in rural and remote areas.

The uptake of these technologies has been strong, particularly for Starlink. As regional users rely on broadband as the base of all their telecommunications needs, this creates a potential risk such as if a problem emerges in the delivery of fixed wireless or LEOSats, then the entire basis of communications is stopped for the home. It will be important that the Federal Government and telecommunications providers ensure that the network capacity of newer technologies such as LEOSats keeps pace with user demand in rural, regional and remote areas including connectivity quality and speed. Ongoing

innovations to continue advancing broadband capabilities that is affordable in rural and remote areas should be prioritised, including for satellite technologies.



Recommendation: That ongoing innovations to continue advancing broadband capabilities in rural and remote areas be a priority, ensuring that network capacity and reliability keeps pace with demand.

Disaster resilience and emergency

11. *What can be done to maximise access to multiple connectivity options in case of outages?*
12. *What can be done to increase capacity and improve the reliability of telecommunications services in regional, rural and remote Australia?*
13. *How can the energy and telecommunications sectors work more effectively, especially with respect to redundancy?*
14. *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?*

Telecommunications during and after natural disasters and emergencies are critical for the safety of communities and to coordinate emergency responses. Telecommunications enable calls for help, keep community members informed, and provide timely information to emergency personnel during emergencies and natural disasters. During natural disasters such as bushfires, key mobile infrastructure such as towers can become unavailable due to loss of power. When this happens mobiles cannot make or receive emergency calls or access the internet.

NSW Farmers supports temporary disaster roaming capabilities on all wireless telecommunications as a practical solution to mitigate this risk of being left temporarily without lifesaving mobile telecommunications. Text, voice and data services should all be made available during emergencies through temporary roaming arrangements to users to ensure they have telecommunications access. Triple zero calls are permitted on all networks, however, there are other critical communications that are required during emergency responses. This includes the communication of key information from response agencies, between family members, the broader community and the ability to access support services. Other instances include calls that may need to be placed to triple zero via the Video Relay Service or other National Relay Service calling options which require text or data capability. This is particularly important in cases where people in transit may be unexpectedly caught in an emergency situation and require assistance, such as fire or flood, or during prolonged events where telecommunications infrastructure has been damaged and may require lengthy or complex repairs.

NSW Farmers supports the use of temporary disaster roaming and seeks that Government and telecommunications providers develop frameworks and protocols with the mobile network operators for initiating and deactivating temporary mobile roaming. Development of protocols and methods for attributing appropriate costs and charges to the correct customers the may also be required to facilitate this.

Recommendation: The Government and private investment prioritise network resilience programs to better support service continuity during periods of natural disaster.

Recommendation: That mobile roaming be made available on all wireless telecommunications structure to improve connectivity for disaster resilience and emergency response.

The impact of government and private investment

15. *What lessons can be learned from private sector investment in regional telecommunications in closing the digital divide in regional and remote areas?*
16. *What has been your experience as a consumer of Australian Government programs aimed at improving regional communications? What improvements would you suggest?*
17. *What changes to Australian Government investment programs are required to ensure they are successful, efficient and effective in delivering improved, reliable and equitable telecommunications for regional, rural and remote consumers?*
18. *How could Australian Government programs better align with state, territory and local government planning and funding processes in delivering telecommunications services and infrastructure?*
19. *What other matters should the Committee consider in its review and why are they important?*

Residents in regional, rural and remote areas consider that voice and data services should be recognised as an essential service and be both developed and delivered in a strategic manner. Telecommunications infrastructure is expensive and needs ongoing maintenance and upgrades, and NSW Farmers considers that a national investment and planning connectivity strategy must be developed as a key priority to address these challenges. The objective of this strategy should be to determine clear priorities for future place-based public investment and the establishment of a dedicated fund to resource long-term and ongoing investment commitments.

Government programs at a state and federal level have been important to encourage operators to build new infrastructure by reducing the associated costs. Most operators would not have built these towers if it weren't for programs such as the Mobile Black Spot Program which has provided important government co-investment with network operators and infrastructure providers to improve mobile coverage. However, there are still significant mobile coverage gaps and service quality issues to be addressed throughout regional New South Wales, and continued co-investment by government is needed to minimise mobile blackspots.

Government funding has also not been successful in encouraging the sharing of publicly subsidised infrastructure between multiple mobile network operators. Telstra has delivered approximately two thirds of the total sites under the Blackspot program[1] across regional Australia which has provided improvements to mobile coverage in some areas. However, this also means that there is still little competition regarding mobile providers for regional customers, reinforcing Telstra's high market share. NSW Farmers considers that any telecommunications company that receives public funding for infrastructure should be obliged, at minimum, to provide the ability for wholesale access to services from that infrastructure to other companies.

Regarding choice of providers, NSW Farmers survey has indicated that 85% use Telstra as a mobile service provider, whilst only 3% chose Optus and the remaining use other providers. The key reasons provided for choosing Telstra are:

> *"Limitation of choice"*
>
> *"Limited options"*
>
> *"Because it's the only one with service where I live"*

[1] Telstra, no date. Mobile Black Spot Program. Accessed: https://www.telstra.com.au/coverage-networks/mobile-black-spot-program

"One that has most coverage in the area."

"Allegedly the best cover in rural areas"

"Meant to have the best coverage"

"Best coverage out of a bad bunch of other options with no coverage"

"The only one that remotely works in this area"

"It is the only reliable service "

"Telstra had better mobile coverage than Optus"

Additionally, NSW Farmers broadly supports infrastructure and spectrum sharing arrangements with the objective of delivering enhanced connectivity and network expansion through more efficient use of infrastructure, use of underutilised spectrum, and promoting competition.[2] The cost of building infrastructure is high in regional New South Wales and becomes more expensive with remoteness, in particular the backhaul required for towers. This high cost incentivises network operators to 'co-locate' on existing infrastructure which is more cost-effective than building new towers. However, there are barriers to co-location such as the cost of upgrading the towers and high access fees from the current infrastructure owners.[3] Neutral host models may provide a suitable alternative, however, are not commonplace in Australia and would require greater integration of operational systems. Spectrum sharing may also present opportunities for more efficient use of underutilised spectrum and expanded service provider competition in regional areas. Sharing arrangements should not compromise operators' capacity and coverage upgrade decisions that would negatively impact user experience.

This Review should further investigate tower sharing arrangements to determine cost effective and feasible models for regional, rural and remote Australia. This should focus on promoting competition and identifying the appropriate model/s that will prioritise the delivery of new infrastructure, network upgrades and maintenance to maximise coverage and capacity for regional, rural and remote users.

Recommendation: That a regional, rural and remote telecommunications investment planning connectivity strategy be developed including the establishment of a dedicated fund to resource long-term and ongoing investments.

Recommendation: That feasible infrastructure sharing arrangements for regional, rural and remote areas be encouraged to deliver better connectivity for users, network expansion and efficient asset use.

[2] NSW Farmers submission to ACCC Market Inquiry into the Optus Mobile Pty Ltd and TPG Telecom Limited proposed network and spectrum sharing – July 2024.
[3] ACCC, July 2023 Regional mobile infrastructure inquiry – Final Report. https://www.accc.gov.au/system/files/Regional%20Mobile%20Infrastructure%20Inquiry%20final%20report.pdf?ref=0&download=y