



**Submission to ACCC Competition in Evolving Communications
Markets Issue Paper**

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NSW Farmers' Association Background

The NSW Farmers' Association (the Association) is Australia's largest State farmer organisation representing the interests of its farmer members – ranging from broad acre, livestock, wool and grain producers, to more specialised producers in the horticulture, dairy, egg, poultry, pork, oyster and goat industries.

Executive Summary

Connectivity is at the heart of productivity growth for farm businesses, and there is enormous latent demand for data in rural and regional Australia, including on farms. Farmers are anxious to overcome the digital divide that they feel currently exists between rural and urban Australia.

However, before farmers can consider investing in new technologies that will drive data consumption and farm productivity, there is a need to overcome the capacity constraints and frustrations that form the existing narrative of rural telecommunications.

Mobile and internet connectivity in particular is well below what is demanded by farm businesses. Presently, there is little recourse for farmers who are unhappy with their (mostly) Telstra mobile service, with coverage constraints of other networks meaning that there is no real alternative available.

As many on farm technological innovations will require connection to the internet, the expansion of 3G, 4G or 5G mobile coverage beyond existing footprints will be crucial in providing the connection required to drive farm business productivity. Given the seeming reluctance of telecommunications companies to do this at the pace at which rural consumers desire, the Federal Government's Mobile Black Spot Programme (MBSP) will be critical in facilitating this expansion of coverage.

As the National Broadband Network (NBN) rolls out that there is also need for the ACCC to examine the framework under which it operates. Arbitrary demand management on the Sky Muster satellite service is a source of enormous frustration to farmers, and could be adjusted or tailored more effectively. The frustration is particularly acute when Sky Muster services are due to be sold to Qantas for on-board streaming during flights. Any spare capacity on the Sky Muster service should be allocated to those who are the intended beneficiaries of the service, not sold to cover a short term revenue gap.

It is clear that current regulatory frameworks are not making *nbn co* accountable for the installation and delivery of its services, particularly when there are issues on the network. There is a need for a transparent wholesale service obligation (setting timeframes for connections, fault repairs, and network reliability benchmarks). This could be delivered through amendments to the current Special Access Undertaking that the ACCC has with *nbn co*.

The use of bundling, particularly with mobile services, has the potential to reduce the consumer benefit that results from the delivery of the NBN. If Telstra is able to bundle its mobile network, which is an effective monopoly service in many areas of regional Australia, with NBN services, this may constitute an unassailable competitive advantage over other retailers. Given the advances in the NBN roll out, it would be timely if the ACCC considered this situation, and whether mandatory 'un-bundling' could deliver an improved outcome for consumers.

Summary of Recommendations

RECOMMENDATION 1: That the Federal Government fund the mobile black spot scheme in perpetuity, and that the scheme continue to be used primarily to extend mobile coverage to areas without any handheld or antenna mobile coverage.

RECOMMENDATION 2: That 'fair use' or traffic management procedures for NBN Sky Muster services be designed using a transparent framework and using publically disclosed information.

RECOMMENDATION 3: That *nbn co* consider changes to the timing or structure of Sky Muster's off and on peak times so that farmers have a realistic means of access to some portion of their off peak data allowance, especially during business hours.

RECOMMENDATION 4: That *nbn co* allow certain services to be metred as 'off peak' regardless of when they are used, such as government websites and banking services.

RECOMMENDATION 5: That Qantas, or any other airline, be restricted from accessing Sky Muster to establish in flight wi-fi services.

RECOMMENDATION 6: That *nbn co* restrict sale of Sky Muster services to regional and rural Australians who have no other reasonable internet access, and investigate how any excess capacity on the service could be made more readily available to these users.

RECOMMENDATION 7: That the Federal Government fund an extension service to provide independent technical advice to farmers on how to connect and how to make the most of their connection to drive productivity on farm. This could be delivered through ACCAN or an industry association.

RECOMMENDATION 8: That the ACCC examine a provision that would prevent Mobile Network Operators bundling mobile services with retail NBN services in rural areas, and particularly whether such a provision would deliver benefits for consumers through improving competition between retail NBN providers compared to a situation where bundling was allowed.

RECOMMENDATION 9: That the Federal Government begin planning for investment to overcome the inevitable capacity constraints that will be encountered on the Sky Muster service.

RECOMMENDATION 10: That the ACCC establish a new Special Access Undertaking with *nbn co* that establishes transparent minimum standards for voice and data service delivery, together with performance standards for fault rectification, installation and service reliability. The NBN's performance against these standards should be regularly and publically reported on.

RECOMMENDATION 11: That the guidelines to the Mobile Black Spot Programme be amended so that any Mobile Network Operator that receives public funding for a tower under the programme be required, at minimum, to wholesale the resulting mobile service.

RECOMMENDATION 12: That the federal government prioritise and fast track the building of mobile black spot towers that will expand handheld 3G and 4G mobile coverage.

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1. Consumer trends and issues

1.1 Current and emerging consumer preferences

While it is true in urban markets that, “technological innovation and improved network infrastructure and capability have fuelled a proliferation of choice and convenience for consumers”,¹ it is a different story for consumers in much of rural NSW, and particularly for those outside major townships.

Farmers, and those in rural and regional Australia, have increased their usage of communications services, and will continue to demand increased data for access to education, health, business and emergency services.² However, they remain frustrated by the services that are available and have not seen the proliferation of competition that is noted by the ACCC. This is especially true in regards to mobile services.

Mobile services

The Association supports the Commission’s comment in section 4.8 that rural Australians do have a higher dependency on mobile phones for communication.³ However, this is accompanied by a low level of competitive tension. It is commonly stated that as mobile services are nationally priced, farmers benefit from the competitive tension in urban areas. However, if a farmer has an issue with their Telstra mobile service, they do not have a realistic alternative. The chief impediment to greater telecommunications competition in rural areas is whether a telecommunications company has rolled out sufficient infrastructure to offer a competitive service.

Telstra has approximately 95 percent percent of market share of our members’ mobile services.⁴ The superior coverage area offered by Telstra’s retail mobile network gives it an almost insurmountable competitive advantage when competing for the business of anyone living in or travelling through rural and remote Australia. This market share is achieved in spite of a high level of dissatisfaction with the quality of coverage and customer service received from Telstra. As an example, in a 2014 survey, 70 percent of our members indicated that they were either unhappy or very unhappy with the mobile phone coverage that they received, and 85 percent indicated that they had seen no improvement in coverage in the last two years.

That so many farmers continue to ‘choose’ a Telstra mobile service, in spite of their deep frustrations with the company’s service, reflects the importance that farmers place on having access to some sort of coverage, even if it is frustrating and expensive. An alternative service might have lower costs or better customer service, but these are largely irrelevant factors if there is no accessible coverage.

Coverage will remain the number one issue for farmers when considering mobile service, and is set to become ever more important for farm businesses. Looking into the future, many on farm technological innovations will require connection to the internet. 3G, 4G and 5G mobile coverage will be crucial to providing this connection.

¹ Competition in Evolving Communications Markets Issues Paper, Section 4.2, page 16.

² Regional Telecommunications Independent Review Committee (2015) *Regional Telecommunications Review 2015*, Commonwealth of Australia; Canberra, pp. 12-23

³ Competition in Evolving Communications Markets Issues Paper, Section 4.8, page 17.

⁴ 2014 NSW Farmers’ member survey

Capacity constraints and the digital divide

Ironically, those that face the greatest capacity constraints, users of satellite and mobile internet, have the smallest ability to access data through alternative internet connections (at school, work, or through public wi-fi). Farmers are truly second class citizens when it comes to digital connectivity, and there is a real risk that the digital divide between city and country may actually grow as new technologies rolled out in urban areas lead to an almost exponential increase in network capacity.

Competition and barriers to entry on the NBN

Beyond mobile services, in theory the NBN should offer a reasonably level playing field for retailers of data services, with low barriers to entry. Whether this competition manifests in rural areas remains to be seen. Further commentary regarding barriers to entry and how the NBN interacts with the MBSP can be found in section 4.1.

1.2 Meeting consumer needs

The communications needs and preferences of farm businesses are evolving rapidly, and most farm businesses are already joined to the digital economy to their fullest capacity. However, capacity constraints (particularly over satellite and mobile services) suggest that there remains a significant latent demand for data in regional and rural Australia.

Telecommunications companies have been unable to satisfy the existing demands of rural Australians. The litany of media stories, together with some of the examples outlined in this submission, make that very clear. However, the two arenas of greatest dissatisfaction are in areas where there is no mobile service and where the only internet service available is over satellite.

Many farmers on both the Interim Satellite Service (ISS) and the new Sky Muster NBN service have found that they have reached the end of their allocated usage without undertaking any “data thirsty” activities such as video streaming. While the data use of Internet of Things (IoT) and Machine to Machine (M2M) on farm innovations is likely to be small, the frustrations experienced by many farmers could create a disincentive to engage or invest in future innovations.

In August 2016, Telstra announced an additional \$3 billion of capital expenditure on “next generation network leadership, digitisation and customer experiences”.⁵ The announcement does include an increase in network capacity and greater investment in 4G and 5G services, but it does not include any discussion about increasing the area in which handheld mobile network coverage is available (through expanded 3G network coverage or other means). Telstra’s retail 3G network currently covers 99.3 percent of the population, and it has publically announced its intent to expand 4G to 99 percent of the population. There are many farmers in the last one percent of the population who are will face on going capacity constraints unless the mobile coverage expands beyond its current reach. If and when there proves to be a finite limit on the willingness to telecommunications companies to invest in mobile coverage, there will be a need for government address the coverage needs of rural Australians.

This is further complicated by spectrum issues. Spectrum differences mean that 4G and 5G services do not travel the same distances from a mobile tower as a 3G service.

⁵ Telstra (2016) *Market Release: Telstra invests up to extra \$3 billion on next generation network leadership, digitisation and customer experiences*, available from: <https://www.telstra.com.au/content/dam/tcom/about-us/investors/pdf-e/FY16-Extra-Investment.pdf>, accessed 11/10/16.

Therefore, without an explicit commitment from Mobile Network Operators (MNOs) to expand the area in which handheld mobile network coverage is available and to build new base

Nine years of poor service and an attempted gag order

“We have had problems with our phone, internet and fax ever since NextG technology replaced CDMA nearly 9 years ago. Essentially the NextG mobile towers provide signal to give us landline phone, fax and an internet service. Great when it works, but often it doesn't...we have to drive 70km to town to get a signal to make any sort of phone call or internet use when it's not working. We initially lodged a claim with the TIO nearly 9 years ago and, after going in circles, we all but gave up and lost interest in the on-going people shuffling within Telstra and TIO. Then we had a few outages of weeks at a time, during floods etc. which meant we have no way of getting in contact with anyone at all. We spoke to our local member about it a few times and he spoke with Telstra and intermittent issues were fixed as they happened, but nothing was ever completely fixed so he told us to lodge a complaint with the TIO. So for the last 3 years we have been pretty solidly doing whatever Telstra and the TIO want us to – documenting phone calls that drop out, times and dates that internet doesn't work, faxes that won't send, garbled phone lines, you name it. We also paid for an independent technician to come here a little over a year ago one day when a Telstra technician was here to try to translate the problems between us and Telstra.

“Some time ago (1-2 years), we got sick of the constant requests for handwritten notes getting us nowhere and so we suggested that if Telstra could not work towards fixing it then they should at least refund us half the cost of our phone bill for the period since the NextG setup was installed, as our documentation which we were sending them showed that the service was only ever working for approximately half the time. We only ever suggested it as a possible incentive for Telstra to get the service fixed but nothing happened. Then, all of a sudden in July this year, the TIO person we were dealing with at the time wrote to us suggesting Telstra reimburse us for half our bills and for the private technician. This was agreed before we asked the technician to come here... Then we were sent an agreements / gag orders which we keep refuting and so there have been a few amendments which have led to the “final” version.

“The main reason we do not want to sign anything is our understanding is that we will be receiving a refund as the service suffers a major fault under Australian Consumer Law. (We are not covered by any Customer Service Guarantee due to us having the NextG service).

“As Telstra have not fixed anything we know these problems will likely continue. If they were to have a major breakdown at harvest time or an emergency then there likely would be an actual compensation claim. Technically we could claim for losses to date but we simply cannot spare the time or mental anguish of having to go through such detail with Telstra. Plus we understand things are not perfect where we live, but we do want them to be improved and we have tried to help that to happen. Our concern with signing this release with Telstra is that if any future “events” would be a result of previous “events” not fixed and that we have released Telstra from by signing this... we at least need to be able to go back to our local member and show him the outcome of the TIO complaint so that he can do something ... we are concerned signing this agreement means we cannot talk to our local member about it.

“We don't believe that getting the phone fixed, or getting a reimbursement for a fault, needs to become a legal issue but here we are!” – NSW Farmers' member, North West NSW

stations, it is conceivable that we may enter a situation in rural Australia where there is a gradually diminishing area that can access new technologies and network improvements. The reluctance of major telecommunications companies to provide a service that meets the current demands of rural consumers, together with their reluctance to extend the boundaries of their mobile network provides ongoing evidence of the need for the government to commit funding to the MBSP in perpetuity. For many areas with inadequate service, this is the only conceivable means through which the mobile network coverage will expand to meet their needs.

RECOMMENDATION 1: That the Federal Government fund the mobile black spot scheme in perpetuity, and that the scheme continue to be used primarily to extend mobile coverage to areas without any handheld or antenna mobile coverage.

Uptake of online services and growing data demands

Data from a communications survey conducted by the Association in 2011 showed that only 15 percent of survey respondents used the internet for mobile banking, the second lowest category of use (below *Facebook* and above videos). The same survey conducted in 2014 showed that internet banking had become the second most common reason for usage of the internet, with almost 90 percent of respondents utilising the service. This demonstrates that rural Australians are ready to utilise online services and innovations once they are accessible, and also that they are willing to innovate by taking their business activity online. Indeed, the shift towards online service delivery for both government and commercial services, makes it such adaption mandatory, as in many cases it is the only practical means through which farmers can access services and information.

While farmers are willing adopters of services available over the internet, their day to day activities are not typically within the bounds of fixed line telecommunications services or wi-fi networks. This means that the increasing utilisation of data for farm business activity leads to a heavy reliance on mobile data. As the installation of farm wide wireless networks in its infancy, for many farmers this means that (when available) hand held mobile coverage is an indispensable tool for facilitating farm business productivity. In many areas, this reliance on mobile phone services is accentuated by the poor landline and internet services delivered over existing fixed line infrastructure.

Furthermore, as most farms are also family residences, the data demands of a business are also interwoven up with those of a family. This includes the massive data demands associated with education. The early experiences of farming families balancing the data demands of a farm business, personal use, and the data requirements of educational resources have been a source of frustration, particularly when access is via satellite services.⁶ The ability to have separate internet accounts for business activity and family activity, particularly over Sky Muster, would assist in the management of capacity constraints and would be an appropriate recognition of the complex communication needs of farming families and farm businesses.

⁶ For example see *ABC Landline* from 4 October 2015, transcript available at <http://www.abc.net.au/landline/content/2015/s4324687.htm>.

Declining quality of service over existing networks

When the Naradhan mobile tower was established, it serviced the school and the township, providing internet and mobile services to both. However, over the past three years, service from the tower has progressively declined to the point where the school and the town can no longer access mobile and internet services from the tower. For the school, this has meant switching over to a satellite service, which has been unable to provide sufficient service to undertake even the most mundane of activities that should be supported in a 21st century classroom.

In addition, there are also on going issues with the landline services at Naradhan. Anyone with a landline up to four kilometres from the town struggles to hear calls. Telstra has attempted to remedy the issue, but existing work has not made any substantive improvement to the service.

Asymmetric information and latent demand

The potential market for communications technology in rural Australia, and particularly on farms, is characterised by asymmetric information and a lack of coordination. Farmers know the problems that they face on farm, and want to be able to implement innovative solutions using the next generation of technology. Technology developers have products that can help to solve the problems, but struggle to communicate to their potential users, in areas where mobile coverage or internet connections are not yet of sufficient quality to justify the purchase of relatively unproven technology. MNOs see the opportunity, but the long lead time on network investment means that network infrastructure has not, to date, matched the demands or expectations of users in regional Australia.⁷

The full extent of the latent demand in regional, rural and remote Australia will not be evident until there is sufficient coverage and capacity in telecommunications networks to substantiate farm businesses investing and implementing new on-farm, data driven technology. The inability to quantify the potential demand has arguably driven underinvestment in rural areas, particularly at the edge of the mobile network. If this trend continues in the long term it will result in lost productivity growth across Australian agriculture and the economy more broadly.

Satellite Services – capacity constraints, peak and off peak

Frustration regarding connectivity has been most acute for those farmers on a satellite service. The shortcomings of the Interim Satellite Solution (ISS) have been well documented.⁸ The new Sky Muster service should resolve many of the issues previously experienced over the ISS, at least in the short term. Unfortunately, for many users, the expected benefits are yet to materialise, or have proven to be disappointed.

Technical faults aside, disappointment is partly driven by the new peak/off peak limitations imposed on those that have been transitioned to the Sky Muster service from

⁷ Neales, S. (2016) Telstra's Hugh Bradlow pushes hi-tech agriculture solutions, *The Australian*, 9 September 2016, available from: <http://www.theaustralian.com.au/business/companies/telstras-hugh-bradlow-pushes-hitech-agriculture-solutions/news-story/17a50f50645a20f52c53ef9477e5f0c9>, accessed 9 September 2016.

⁸ Courtney, P. (2015) *Data Drought*, ABC Landline, available at <http://www.abc.net.au/landline/content/2015/s4324687.htm>, accessed 20/10/16.

the ISS. On Sky Muster, *nbn co* has set the time for peak use to be any time outside of a 1am-7am window. This is a reduction of the off peak times available on the ISS. Even though users that transition from an ISS service to Sky Muster will, notionally, have substantially higher peak time data allowances, the changes to what is regarded as 'on peak' will mean that they are likely to use this allowance much faster.

Without paying a substantial premium for a larger peak time allowance under the current 'fair use' policies, many Sky Muster users are likely to hit the limits of their data capacity very quickly. The Association has made repeated requests to *nbn co* to explain the basis on which it chose to set the new off/on peak times for the Sky Muster service, and has requested *nbn co* model what could be done to improve the accessibility of off peak data allowances, especially given that it now has several months of usage data that can be mapped against network capacity constraints.

Farmers that have been connected to Sky Muster regard their off peak data allowance as effectively useless, and the inability to make effective use of the off peak allowance is becoming a source of extreme frustration. This is accentuated by the lack of transparency around the frameworks and data used to set the peak and off peak times.

The acrimony that farmers feel over this change is even greater because of news that Qantas will use the Sky Muster satellites to establish on board wifi networks for its domestic flights that will allow passengers to stream videos and movies.⁹ If there is sufficient excess capacity on the Sky Muster satellites to allow in-flight streaming, then the NBN should make this capacity accessible to the isolated Australians who were the intended beneficiaries of the service.

Satellite Services – quality of service

Unavoidable impacts of new peak/off peak times:

The Association was recently contacted by a member that had switched from a 5 GB plan on the Interim Satellite Solution to a new 30 GB Sky Muster plan. The member had never previously had an issue with the 5 GB data limit, but proactively changed her pattern of usage when starting on Sky Muster to accommodate the new peak/off peak periods. In spite of this, the member was notified 10 days into her monthly usage that she was past 50 percent of her peak allowance.

The Association has also been contacted by members connected to Sky Muster who have experienced intermittent connections or service disruptions and well below advertised speeds following installation, regardless of the time of use. This has led one member to continue to pay for access to a weak wireless connection after connecting to the Sky Muster service, as the weak wireless connection has proven more reliable. It is natural that a service of this nature will have teething problems, but given the previous experience with the ISS, the initial problems that have been brought to the attention of the Association are concerning.

⁹ Coyne, A. (2016) Qantas to use NBN satellites for free onboard wi-fi, available from: <http://www.itnews.com.au/news/qantas-to-use-nbn-satellites-for-free-onboard-wi-fi-415490>, accessed 20 October 2016.

Waiting for a better service - can't do banking or accounting

“Our family business is an intensive 3500 head beef cattle feedlot eight kilometres from Balranald. Our mobile service is so bad we use satellite for our internet through Bordernet.

I have applied for Sky Muster but we are still waiting. The internet speed is so slow that 90 percent of the time I cannot use my on line accounting or banking service. Our mobile service is very limited as well, even though we are only 8 kilometres from Balranald which has a mobile tower in the town.” – NSW Farmers’ member, near Balranald, South West NSW

Co-sharing of infrastructure

To date there has been limited co-sharing of infrastructure between *nbn co* and MNOs. In the long term, greater co-sharing between MNOs and *nbn co* would lead to expanded mobile coverage and greater capacity to deploy fixed wireless, all of which would take pressure of what is certain to become a data constrained satellite service.

Legacy Landline Services

Paradoxically, while mobile phones and internet access are of increasing importance for rural Australians, legacy landlines are also likely to remain a vital piece of infrastructure over the foreseeable future. This is due to the backup role that they play in situations of emergency, such as a fire or blackout, when internet or mobile services might be disrupted. While it is not within the scope of this review, the Association believes that an updated Universal Service Obligation needs to cover both voice and data, and also needs to have a grandfathering provision to maintain landlines in areas where internet and mobile services are regularly disrupted.

RECOMMENDATION 2: That ‘fair use’ or traffic management procedures for NBN Sky Muster services be designed using a transparent framework and using publically disclosed information.

RECOMMENDATION 3: That *nbn co* consider changes to the timing or structure of Sky Muster’s off and on peak times so that farmers have a realistic means of access to some portion of their off peak data allowance, especially during business hours.

RECOMMENDATION 4: That *nbn co* allow certain services to be metred as ‘off peak’ regardless of when they are used, such as government websites and banking services.

RECOMMENDATION 5: That Qantas, or any other airline, be restricted from accessing Sky Muster to establish in flight wi-fi services.

RECOMMENDATION 6: That *nbn co* restrict sale of Sky Muster services to regional and rural Australians who have no other reasonable internet access, and investigate how any excess capacity on the service could be made more readily available to these users.

1.3 Information available to consumers

Farmers continue to experience frustrations when selecting telecommunications products and services, particularly with the expensive products that they are sold by retailer service providers which promise, often falsely, to improve their on farm mobile or internet connection.

Farmers are by nature innovators. However, there is the real danger that following repeated failures to improve telecommunications on farm, some farmers who should be

early adopters will become “burned” and as a consequence will actually become late adopters of innovation, delaying increases to economic productivity.

There is no agency or organisation that is equipped to give independent, individual advice to a farm business on what they need in order to get the best out of their connection, or how their connection could be used to benefit the farm business.

An accredited price comparison scheme for voice and data services would also be helpful for those in rural areas, particularly those without access to a high speed data service that they could use to research their different options.

RECOMMENDATION 7: That the Federal Government fund an extension service to provide independent technical advice to farmers on how to connect and how to make the most of their connection to drive productivity on farm. This could be delivered through ACCAN or an industry association.

1.4 Bundling of Services

Bundling of landline, internet and mobile services could possibly constrain the competition benefits that might otherwise arrive from the roll out of the NBN in rural areas.

Notwithstanding issues such as backhaul and points of interconnection, in theory, the NBN creates a relatively level playing field for any Internet Service Provider (ISP) to be able to offer services to a large part of the Australian population. This should foster competition along the lines of price, customer service and product composition. However, if Telstra proves able to bundle vastly superior mobile coverage with the same internet/data services as any other ISP, then this could constrain the benefits that accrue to consumers from competition for provision of NBN services.

Telstra’s dominance of the mobile market in rural areas means that they have a comparative advantage in bundling mobile services, particularly if they choose to bundle their retail mobile services with with NBN voice and data services.

It is also increasingly difficult for farmers to work out what services they will be able to access, or what represents the best value for them given the constrained access that they may have to either mobile service or internet bandwidth/data allowance.

RECOMMENDATION 8: That the ACCC examine a provision that would prevent Mobile Network Operators bundling mobile services with retail NBN services in rural areas, and particularly whether such a provision would deliver benefits for consumers through improving competition between retail NBN providers compared to a situation where bundling was allowed.

2. Emerging services

2.1 Over the top services

Because of the quality of internet service often available to them, farmers have either no access or constrained access to Over the Top (OTT) services. Again, this is one element of the latent demand in rural Australia that would utilise a much greater network capacity if it was available. These services could be used to enhance business as well as social connectivity.

2.2. Content services and bundling

The Association agrees with the Commission's comments regarding bundling in discussion point 5.15. As indicated above, there is a danger that Telstra will be able to bundle its superior mobile coverage with NBN services in a manner that constrains the competitive benefits that should accrue to consumers from the rollout of the NBN network.

2.3 Data traffic management

Farmers are already intimately familiar with the congestion issues discussed by the Commission in point 5.20, particularly over satellite services.

As touched on above, many members who were connected to the ISS were subject to shaping, and all satellite customers are anxious to avoid this situation again. However, the current demand management tools (division between off peak and peak times) appear to be arbitrary and relatively untargeted. The system should allow enough capacity for farmers to conduct ordinary business activities in ordinary business hours, and not have an incentive structure which results in perverse outcomes (such as 1am online banking).

While most of those who are connected to the Sky Muster service are happy with its performance to date, the expectation of many connecting to the service is that the growth in demand for data and fixed network capacity will likely mean that congestion will become an issue sooner than expected, and possibly before there is any coordinated plan to address the issue.

RECOMMENDATION 9: That the Federal Government begin planning for investment to overcome the inevitable capacity constraints that will be encountered on the Sky Muster service.

2.4. Internet of things and machine to machine communication

The growth in data demand from IoT and Machine to Machine technologies may change some of the perceived demand dynamics that have led to constrained investment in rural and regional Australia. While the current public discussion by large telecommunication companies about the ability of IoT to transform agriculture is positive, it is yet to result in the expanded network coverage that may be necessary to facilitate the deployment of next generation technologies on a large scale. For the public discussion to translate to real economic activity, it will be necessary for telecommunications companies to invest in expanding coverage to areas that would otherwise have been regarded as uneconomic. Without this first step, the deployment of next generation technology could occur in a slower and more fragmented manner than would be optimal.

The emergency of a new layer of providers who are providing on farm wireless networks and relatively low cost backhaul may help to overcome the issues that are likely to arise if

the geographic area where handheld mobile coverage is available does not increase in the long term.

Collection and ownership of data

Owning the data for IoT and M2M technology will provide the greatest leverage for driving revenue and return on investment on farm. If farmers do not end up owning the data from their own farm sensors and technology, they will end up in a situation of diminished market power compared to the companies that own the data. This could have long term impacts on the nature of competition, pricing and service delivery of telecommunications in rural Australia.

3. Fixed-line voice and broadband services

3.1 Comparing IP voice interconnection with the legacy PSTN network

While cost is an important consideration for farm businesses, integrity of connection is a higher order issue. In regions that are prone to blackouts, or where internet service can be interrupted by natural disasters, many may view the legacy public switched telephone network (PSTN) as preferable to IP voice connections for some time. With this in mind, it may be necessary to grandfather the legacy PSTN network as part of any changes to the telecommunications network, particularly relating to the Universal Service Obligation.

3.2 NBN products and pricing

While not directly discussed in the Commission's Issues Paper, it may be timely to examine what can be done to amend the NBN's Special Access Undertaking (SAU) with the ACCC so that there is greater accountability placed on *nbn co* in regards to installation time frames, fault repair and service delivery/quality of service. The current SAU does not provide sufficient transparency on the performance of the NBN and accountability when *nbn co* is at fault. The Association is aware of multiple incidents within our membership where a customer has reported a fault to their service provider, the service provider has indicated that the fault lies with *nbn co*, and *nbn co* has either failed to respond in a timely manner or has denied responsibility for the fault. In addition, the Association has been contacted by numerous members who have communicated their frustration at having the installation date for their Sky Muster service repeatedly delayed, and often at short notice.

Following meetings with *nbn co* and other advocacy groups, the Association has learned that these are far from isolated issues. While in many cases the internet service provider will also bear some fault, broadly these incidences demonstrate the lack of a transparent and effective framework for the customer or an internet service provider to hold *nbn co* to account. This would be the equivalent of a wholesale service obligation setting timeframes for connections, fault repairs, and network reliability benchmarks.

If *nbn co* is ever to be privatised (a possibility following the end of its network roll out in 2020) then it will be important that there are appropriate frameworks in place to hold the company to account regarding the performance of its infrastructure and its employees. As *nbn co* will effectively be a monopoly wholesale provider of broadband services in many regional and rural areas, there must also be consideration given to what requirements and resources will be put in place to ensure that investment in network resilience, capacity and coverage continues across rural and regional Australia.

RECOMMENDATION 10: That the ACCC establish a new Special Access Undertaking with *nbn co* that establishes transparent minimum standards for voice and data service delivery, together with performance standards for fault rectification, installation and service reliability. The NBN's performance against these standards should be regularly and publically reported on.

Lack of accountability: repeated delays to installation dates (1)

“Mum applied for NBN back in May and signed up with Activ8me... She has so far been given four installation dates (she did have to cancel one as she was away) but NBN continue to cancel them as the date approaches, and every time it seems to be another month. As far as she understands, you don't get to organise a date – they just allocate one – but she believes she is going to the bottom of the list every time they cancel, even though it is NBN cancelling. They have now called it off again due to weather.” - NSW Farmers' member, South West NSW.

Lack of accountability: repeated delays to installation dates (2)

“I have been having issues with my NBN install. Back in early May I was notified that we were going to be connected shortly. A week later I was given a date for the connection.

Two days prior to that date I was contacted again to say that they were running ahead and could they come the afternoon before the original date. I agreed to this and the installers duly turned up the following afternoon at around 4:30 pm.

They took a quick look at the existing installation, several photos, and pronounced that they didn't have enough time to complete the work that day and that they were very sorry, and left. At that point I was asked to sign on an ipad to confirm that they had been.

Several days later when I was able to make contact with my provider (Activ8me) they said they would look into it for me. After several communications from them inquiring if I had heard anything from NBN they then contacted me to confirm my street address saying that NBN were claiming that the installers were unable to find my property (therefore my fault that the installation wasn't done).

Needless to say the address is correct. I was also able to confirm with Activ8me that I had an independent witness at the property on the day that the installers had been, who could confirm that the installers had actually been here and not attempted the job. I also told Activ8 that typing in my address to Google maps would bring anyone to the back door of the house.

Anyway it seems the upshot is that Activ8me have had to re-start my application and I have gone to the bottom of the list. I am very frustrated by this treatment but am at their mercy or rather lack thereof.” – NSW Farmers' member, Central West NSW.

Inability to resolve poor Sky Muster service

“We would estimate that since being connected to the NBN we spent the first ten days or so without any internet courtesy of Activ8me.

The actual *nbn* staff were reasonably helpful, but the automated assistance line for activ8 was a debacle...One call back service went over 6 hours and various members of our family waited for 1-2 hours without getting to talk to anyone.

I eventually lodged a complaint with the telecommunications ombudsman and then they gave me a direct number so that we could talk with something other than a machine. The staff at Activ8me are helpful and courteous, but it's pretty clear that the management are not sympathetic to someone trying to run a business without internet for an extended period of time.

I contacted our local member's office who advised us to get hold of the ICN number that would indicate it was a NBN problem, if it was a server problem, they would not be able to supply one. It is a server problem as no ICN number was supplied by Activ8me. We have since had a good internet service initiated and for a couple of days it was great.

However, it stopped working reliably again over the last few days. Last night there was no internet again when we were trying to book teacher interviews for the kids at boarding school. This morning it was ok and working but we missed the deadline for interviews. This sort of thing is just a nuisance but not being able to promptly pay suppliers was really annoying.” – NSW Farmers' member, North West NSW.

Inability to connect to NBN fixed wireless

“Some months ago now, we were contacted by the NBN informing us that the fixed wireless service has gone live in our area. At this stage this was already common knowledge as some of our very nearby neighbours had already had the service installed.

So we pursued this lead and an NBN tech was sent out to complete an install... However, the service provided was very poor and not helpful - there was very little effort and attempt in finding the best location for the clearest signal and we were labelled with a 'nil signal' reading upon install. Even though households and businesses in our very near vicinity have great signal.

The tech referred us to enquiring back with NBN and maybe look into the satellite service. Leaving us to retreat back to our troublesome, expensive and frustrating existing service.

Our business is rapidly expanding into the export sector and we find day-to-day activities (sending and receiving emails, executing payroll obligations, business transactions and customer communication) at times impossible to complete as we are constantly confronted with extremely poor network signal even though we are paying an absolute premium for this so called service.” – NSW Farmers' member, Riverina NSW.

NBN Sky Muster installation issues

“I applied for NBN Skymuster and chose and confirmed a plan with a new ISP (my existing NBN ISS provider did not release plans and I chose a “new” ISP). I had no communication from the ISP, and two cancelled installation appointments from Hills Industries

An installation took place on the 31st of May 2016. The old ISS equipment was not removed despite me questioning this. Part of the installers contract is to remove the ISS equipment.

No router arrived from the ISP for the installation and no label for the NTD (modem) was provided as per installation guidelines. Handwritten label provided by me was hastily stuck to NTD with promise of correct one to be sent for me to stick on. This has still not been received.

The installers told me that connection was working on their equipment but no check was made on mine. Time constraints prevented them from checking or caring to see that it was working. Nice guys, but certainly under time constraints and a proper job not done.

I expressed my frustration to my new ISP about a) no router b) failure of installers to remove old equipment and check it was all working. The new ISP denied I requested a router (I immediately found a copy of the request email and forwarded it to them, they say busy times, got lost in system). They questioned what I am saying as being unsatisfactory, bad hair day for them I think coupled with a rude and uncooperative staff member and they cancelled my contract and switch off my connection immediately.

I contact my previous ISP who have, since I ordered the service (with the new ISP), announced Sky Muster plans. I have been with them for many years without a hitch. I spoke to them on the 1st of June explaining my situation and immediately request a reconnection of my service with them as my ISP.

As at today, I still have no NBN Skymuster connection. My ISP blame NBN, NBN blame my ISP. The problem has been escalated with the NBN countless times. It seems the NBN is lacking of humans. No one can speak with anyone, it is all electronic requests. My ISP is certainly making a lot of effort and sharing my frustration. So to summarise, I had an installation with numerous problems on 31st May and as at tonight, I still have no connection. I have been frustrated and am now over it. The lack of communication, passing of blame and inability to fix my issue is ridiculous...this is six weeks on.” – NSW Farmers’ member, Central West NSW.

4. Mobile voice and broadband services

4.1 Competition in the mobile sector

Noting that issues regarding mobile competition have already been discussed in this submission, the Association would like to emphasise the comments of the ACCC in discussion points 7.7 and 7.8.

Marketing claims regarding the percentage of the population that is covered by each network are a constant source of frustration to farmers, who are typically in the 1-2 percent that fall outside of the network coverage. The limited infrastructure competition between MNOs in rural areas is reflected in Telstra's dominance of the market – as discussed earlier, in a 2014 survey 95 percent of our members reported that they used Telstra for their mobile service. There is demonstrably constrained competition for mobile service in regional areas. The experience of the Association's members suggests that this also often leads to complacency on behalf of Telstra and poor customer service.

There remains an unsatisfied demand in rural areas for greater mobile coverage and a higher standard of service. The lower population density in rural, regional and remote Australia does not negate this market failure. Current technologies and investment plans have proven unable to meet the demands of many rural Australians. It is the view of the Association that future developments in 'big data' and the increasing deployment of sensor technology on farm may overcome perceptions about revenue streams which have contributed to under investment in regional mobile networks.

The obstacles to Mobile Virtual Network Operators (MVNOs) providing competitive mobile services depend on the relative portions of the MNO networks that they are able to access through wholesale agreements. Telstra does not wholesale its entire mobile network. It retains portions of its 3G and 4G networks that are only available through a Telstra retail service. This allows them to retain a substantial competitive advantage in rural areas, and means that anyone wishing to compete with them must match their geographical coverage – a substantial barrier to competition.

Regardless of debates about the extent to which Telstra's mobile network has benefited from legacy publically funded infrastructure, they have made a commercial decision to invest funds to establish a network with superior geographic coverage. How to best address the competition issues that will arise from this will be considered in more detail when the ACCC considers a declaration on mobile roaming.

Mobile Black Spot Programme

However, roaming aside, there has also been a developing competition issue develop related to the roll out of the MBSP. As touched on earlier, Telstra's ability to bundle NBN services with their geographically superior mobile network could limit the competition benefits that might otherwise accrue to rural consumers from the NBN roll out. Any Mobile Black Spot tower that does not fall within Telstra's wholesale network and does not have another carrier choose to co-locate becomes a publically subsidised extension to what is effectively a monopoly service, adding to the advantage that Telstra has. This does not accord with the principle that public funding should result in public access and improved competition.

Given the lack of competition that is prevalent in rural and regional mobile phone markets, the Association believes that amendments should be made to the MBSP guidelines so that any mobile network operator that receives public funding for network infrastructure is required at a minimum to wholesale the resulting service. These amendments could be tailored so that they did not diminish the incentive to invest for telecommunications

companies. For example, contracts could include provision for a limited period of exclusive use to recover any capital committed by a MNO.

Fortunately, the roll out of towers under Round One of the MBSP appears to have avoided the full extent of the potentially adverse competition effects. Up to 85 percent of the towers that Telstra will roll out under Round One of the programme will either be co-shared or wholesaled.¹⁰ However, the reasons for this are not exactly welcome news, as it appears that the high percentage of MBSP towers being wholesaled reflects their role as ‘filling in’ gaps in network coverage, rather than pushing out the boundaries of the network. This was reflected in the findings of the Australian National Audit Office that 89 of the 499 base stations under Round 1 offered minimal new coverage of additional premises and transport routes.¹¹

Round 2 conditions have been amended to require minimum areas of new coverage from any tower constructed under the program. Therefore, it is timely to reflect on how these new, publically funded towers might contribute to constrained competition in the long term. The importance of new coverage cannot be overemphasised, and the Association would not want to see concerns about competition impact upon continued provision of Commonwealth funding for this important program. However, the Association believes that the programme can achieve greater outcomes for both competition and coverage, particularly through the introduction of a mandatory wholesaling provision.

It may be argued by MNOs that any requirement for mandatory wholesaling would diminish their incentive to invest alongside the Commonwealth in expanding their networks. However, in reality, Rounds 1 and 2 of the MBSP may have exhausted much of the ‘low hanging fruit’, and we may now be in a situation where MBSP towers require an increasingly large proportion of public funding. This is reflected Telstra’s publically announced investments, mentioned earlier, which do not make any specific comment about expanding 3G handheld coverage.¹² For coverage to continue to expand, there may soon come a time when the Commonwealth wholly funds black spot towers, through the NBN or some other commercial partnership.

RECOMMENDATION 11: That the guidelines to the Mobile Black Spot Programme be amended so that any Mobile Network Operator that receives public funding for a tower under the programme be required, at minimum, to wholesale the resulting mobile service.

RECOMMENDATION 12: That the federal government prioritise and fast track the building of mobile black spot towers that will expand handheld 3G and 4G mobile coverage.

4.2 Mobile network infrastructure sharing

The Association notes that the low population density and large distances involved in the deployment of telecommunications infrastructure in regional Australia make parallel mobile networks economically unfeasible in many areas, resulting in constrained infrastructure based competition in these areas. However, as touched on above, when

¹⁰ Information received from Telstra staff. Further information about the wholesaling of Telstra towers built under the Mobile Black Spot Programme is available at:

<https://www.telstrawholesale.com.au/products/mobiles/mobile-blackspot-program.html>.

¹¹ Australian National Audit Office (2016) *Award of Funding Under the Mobile Black Spot Programme*, available from: <https://www.anao.gov.au/work/performance-audit/award-funding-under-mobile-black-spot-programme>, accessed 1 September 2016.

¹² Telstra (2016) *Chairman and Chief Executive Officer - Annual General Meeting presentations*, available from <https://www.telstra.com.au/content/dam/tcom/about-us/investors/pdf-e/111016-2016-AGM-Presentation.pdf>, accessed 11 October 2016.

faced with a binary choice between expanded competition and coverage, competition always becomes a second order issue. It is important that in any attempt by the regulator to deliver greater competition in rural mobile markets it does not create impediments to on-going commercial investment in expanded mobile coverage.

4.3 Data growth and mobile network capacity

Data from the 2015 Regional Telecommunications Review has shown that demand for data in rural areas follows the same trend as that in urban areas. Therefore, demand will continue to increase almost exponentially *once sufficient network capacity is available*. However, as discussed above, there are issues in quantifying the possible demand, leading to systematic underinvestment at the end of the network. In many rural areas, networks are already at capacity, and require upgrading just to deliver a baseline landline and mobile service.

Without investment in network coverage and capacity, farmers will be unable to invest and deploy the next generation of technology to drive farm productivity. As discussed in sections 4 and 5, it is the belief of the Association that the latent demand that exists in rural Australia, together with the potentially large increase in demand drive through the rollout of IoT and M2M technologies could reverse the dynamics that have previously acted to constrain investment in network coverage and capacity in rural Australia. Without investment in network capacity and coverage the productivity gains via IoT and M2M for Australian agriculture and the economy more broadly will remain constrained.

5. Interaction between fixed-line and mobile services

Rural Australians are more reliant on mobile phones for voice services than those in urban areas. This is reflected in recent research done by Vodafone, and also in the findings of the 2015 Regional Telecommunications Review.¹³ Given the time that farmers spend outdoors, they are also increasingly reliant upon mobile data to access the internet and for safety in the event of an accident. If they live in an area where there is poor fixed line internet speed, mobile data can often provide a superior service. However, as indicated by the Issues Paper, the expense of mobile data prohibits it from being a more complete substitution for fixed line internet services.

As the deployment of 5G will use a higher frequency spectrum and “denser mobile networks”, the Association is concerned that 5G will be deployed over a much reduced geographical area than existing 3G and 4G networks – adding to frustrations over the existing geographical mobile coverage.

¹³ Regional Telecommunications Independent Review Committee (2015) *Regional Telecommunications Review 2015*, Commonwealth of Australia; Canberra, p. 13.