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Inquiry into the National Broadband Network

AGFORCE QUEENSLAND SUBMISSION

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AgForce Queensland

AgForce Queensland (AgForce) was established in 1999 and is the peak body representing thousands of Queensland beef, sheep and grains producers who recognise the value in having a strong voice. These broad-acre industries manage 80% of the Queensland landmass for production and most rural and regional economies are dependent on these industries directly and indirectly for their livelihood. AgForce delivers key lobbying outcomes and services for members and presents the facts about modern farming to consumers through the *Every Family Needs A Farmer* campaign. AgForce welcomes the opportunity to provide a submission to the inquiry into the National Broadband Network (NBN).

Introduction

AgForce adopts the Centre for International Economics' definition of broadband, which is that genuine broadband 'means internet access and use that is fast- at least 12mbs with an upgrade path to go faster over time, and accessible, [i.e.] always on, affordable and in widespread use' (Barwise, K (2008) 'Impact of genuine broadband for Australia', *Broadband World Australia 2008*, Sydney, 5 November).

Australia has more expensive and slower internet access than many other developed countries (Rankin 2008) and this can be attributed to the tyranny of distance which often is the cause of high costs and poorer services to regional and remote Australia. In a report prepared by the NSW Parliament's Legislative Assembly Standing Committee on Broadband in Rural and Regional Communities (2009), findings included:

- Broadband services are of poorer quality and more expensive in large parts of rural and regional New South Wales
- Gaps exist in the availability of 'normal' broadband through ADSL connections and will do so until the NBN is completed in regional areas

- Existing infrastructure in rural and regional communities does not support universal broadband services and will not do so until the NBN is rolled out in regional areas.

The Regional Telecommunications Inquiry (Glasson et al. 2002) assessed the adequacy of rural services and found that broadband access is becoming increasingly more economically and socially vital in rural Australia, however associated costs significantly hinder its take-up by government. One recommendation was to establish an incentive scheme for the provision of higher-bandwidth services to rural Australia; another was to provide further support for community demand and to encourage community take-up.

The government has a political obligation to provide access to technologically advanced, up-to-date internet services to people living and working in these remote areas which is of the same quality as internet services provided to people living in urban areas. The NBN must adequately achieve this objective and deliver to the people of rural Australia.

Capacity of the NBN to contribute to social objectives

The delivery of government services and programs

The three levels of government (local, state and federal) hold the responsibility to manage and provide services to the Australian people. These services rely upon and are enhanced by internet connections that allow for intra-organisational computer networks, as well as the delivery of services directly to the public. Health, education, law enforcement, emergency services and welfare are examples of some of the services provided by local government that incorporate the use of the internet for their delivery to the public.

The needs of people living in rural areas, particularly in remote parts of Australia, differ from the needs of people living in metropolitan areas. Often populations are small (less than 1000 people in many cases) and dispersed. Populations are also aging in these areas (Barr 2001), with most producers aged over 65 years (*The Future of Rural and Regional Australia* 2008). It is imperative that broadband services be made available for the delivery of health programs to people in need in all parts of Australia.

Youth in regional areas require access to broadband particularly for education, as a lower percentage of students are enrolled in or complete post-secondary or tertiary courses (Glasson et al. 2002). NBN services delivered to regional areas must be able to support the delivery of technologies such as live streaming and high-speed downloading to adequately meet the needs of students who rely on technology for the delivery of their education, and for other aspects of their studies.

According to Glasson *et al.* (2002), access to adequate internet services for local governments in regional and remote areas varies greatly, and when compared to local government in more urbanised areas, has been described by the authors as 'virtually non-existent' in some cases. As the aforementioned issues stem from the level of local government to state and federal level, AgForce believes collaboration between all levels of government is necessary to provide sound, genuine broadband services to local government so they are able to provide services and programs to local communities. This necessitates the need for adequate provision of genuine broadband to rural Australia.

Achieving health outcomes

Access to emergency treatment in rural areas can often mean the difference between life and death (Kumar et al. 2006). Doctors serving in hospitals in rural areas are mostly general practitioners who are often not confident enough, or equipped with the necessary skills or medical technology, to perform

more demanding medical procedures (Kumar et al. 2006). Patients are often referred to specialists in regional centres and cities, with patient transport required for elderly and disabled patients and special cases.

In a study by Kumar et al. (2006) on emergency eye care in rural Australia, the authors suggested that telemedicine service may enhance the delivery of health services in rural areas. They found that earlier diagnosis and the avoidance of unnecessary patient transport can be achieved through the delivery of medical services via the internet. Their findings also reported that 50-70% of patient referrals did not constitute accidents or urgent conditions, with most conditions able to have been more properly assessed.

The delivery of genuine broadband to regional communities will assist with the delivery of health services to Australians, through its ability to communicate information from specialists who may be thousands of kilometres away directly into hospitals, aged care facilities, indigenous health centres and general practices. As well as professional assistance, the internet is used for the cost effective delivery of initiatives such as HealthConnect, HIC and PBS Online to the health industry, and its access in regional areas for participation by rural clinics is required (Health Insurance Week 2005). It would also be possible to relay live streams for the consultation and remote diagnosis of patients living on isolated properties and during emergency situations.

According to a report from the Regional Telecommunications Independent Review Committee (2008), 85% of Australia can be considered remote. Isolation can cause mental health issues, including depression (Chamberlain 2003). However, broadband can be used as a means to bridge the distance between people by allowing social inclusion and engagement through live streaming. The Regional

Telecommunications Independent Review Committee (2003) report gave a case study which explained how a group of women who live on isolated, rural properties held morning teas via teleconference. The women have tea and biscuits while they socialise with others who are in similar situations as themselves. The club has become an outlet for these women to talk about how they have been affected by such things as the drought, and allows them to seek support from other people who understand what they are going through.

AgForce believes that provision of the NBN for the delivery of health services to rural Australia will see health outcomes achieved through ease of access to specialist services delivered online, continuing use of enhanced online health initiatives and opportunities to deliver medical assistance via online streaming to people living on isolated properties. It will necessitate the need for adequate staffing of websites used to deliver these services, as well as equipment and technical support and training. This would see a responsive increase in job creation for the evolving telehealth industry that would benefit communities and lead to regional economic growth.

Improving the educational resources and training available for teachers and students

Genuine broadband access in rural Australia will allow for the delivery of educational services to the public and support for teachers and others working in education. Broadband is the only telecommunication medium that is able to host synchronous and collaborative e-learning, and its interactive ability to host streamed voice and video technology and other similar communicative programs will improve the skill base of many professionals working in rural Australia. The benefits to teachers and support staff working in education would be similar in context to the benefits discussed for medical practitioners.

Broadband is desirable for remote/distance education as it allows for fast download times and enables participation in interactive programs. Its efficacy for self-directed learning is unrivalled, with many part-time and external students at tertiary institutions reliant upon internet access for their studies (pers. obs.).

AgForce recognises that now, more than ever, there is a need to retain youth in rural areas. By delivering broadband to rural communities, access to education beyond compulsory schooling years may positively counteract the exodus of youth from the bush. Halsey (2009) states that limited post-secondary education and training is a significant reason for young people leaving the bush. Enhancing the learning experience may also resolve this problem. According to Schacter (1999) 'technology rich' environments improve students' performance and enhances the enjoyment of learning. Furthermore, Mann (cited in Firth & Mellor 2005) states that computer education is more cost-effective in achieving improved student results than does increasing instructional time, decreasing class sizes, and administering cross-age tutorial programs for primary and secondary education.

The delivery of genuine broadband through the NBN will provide support for teachers and other education professionals to encourage ongoing professional development, and will provide access to online teacher services. It will allow for the delivery of courses and schooling to students in tertiary and secondary studies, and may even reduce the migration of youth out of rural areas which has lead to skill shortages in regional Australia. There are distinct benefits gained from providing education through e-learning, including cost efficiency and improved student results. AgForce strongly advocates access to genuine broadband in regional Australia to enhance and promote education in rural areas.

The management of Australia's built and natural resources and environmental sustainability

Producers occupy and manage 61% of Australia's landmass (469 million hectares; NFF 2011) and are active environmentalists in terms of land care and sustainable practice. During 2006-2007, farmers spent \$3 billion on natural resource management, including pest and weed management practices, land and soil conservation measures and native vegetation and water management (NFF 2011). By providing producers with access to genuine broadband, a gateway is created that allows for easy access to information on sustainable farming practices, as well as a system to network and manage on-farm technology which is used in everyday operation.

Farmers use the internet for a variety of on-farm practices, including weather reports to track rainfall, on-site remote monitoring through telemetry for issues like bore flow and watering reports, medication of water for livestock and automated drafting. It also provides real-time access to market information and road reports, email for communication with contractors and suppliers and online services such as those offered by the Department of Primary Industries and Fisheries. This leads to greater profitability and profit margins with a resultant positive effect on businesses and regional, state and federal economies. Because of this, AgForce strongly advocates the provision of genuine broadband access to rural Australia as a service to allow primary producers advanced technological options to sustainably manage their businesses.

Impacting regional economic growth and employment opportunities

A report by BCC (2004) stated that technology can bring about development at the business level and regional economic level. Providing rural businesses with genuine broadband access will give these enterprises the opportunity to grow from operating in their local region to the world (Galloway 2005).

AgForce believes this would positively impact regional economic growth, and would allow for improvement in logistical and managerial parts of the business, such as supply chains and staff efficiencies. Global exposure of regional areas may also see an increase in the tourism industry. This would lead to job creation and further economic growth.

Businesses can save on costs by communicating quickly and effectively via online technologies. The money saved from doing so would result in increased revenue which can be spent on other areas of the business. Once again, this could see jobs created for locals and the growth of the region's economy. It would also mean that businesses could remain in the local area, and new businesses may 'set-up shop' in the region. Flow-on benefits to state and federal economies would ensue.

Businesses will be able to access services that may not be available in the local area. Services such as education (training) and accounting may be accessible through broadband internet, and businesses would have the option to link their staff who may be absent from the office via an internal network.

The agricultural-agribusiness sector relies heavily upon technology, both on- and off-farm. Many on-farm technologies are able to be networked via internet connections, such as GPS systems for machinery, electronic irrigation systems, computerised water consumption monitors and drafting gates. Providing farms access to genuine broadband will enhance on-farm and business efficiencies, resulting in reduced costs of production. Off-farm, agribusinesses rely on internet connections in much the same way as businesses in urban centres do.

It is important to remember that farmers are employers. 1.6 million Australians are employed in agricultural and related industries in both metropolitan and rural Australia, accounting for 17.2% of the

workforce (NFF 2011). Delivering broadband to producers will lead to on-farm job creation and an increased need for staff in agribusinesses. This will have a flow-on effect on regional economies, boosting regional populations and decreasing the unemployment rate.

The Centre for International Economics simulated the impacts providing genuine broadband would have on Australian industries (Barwise 2008). Results of the simulation showed that the agricultural industry would benefit with the introduction of genuine broadband, and the flow-on effect would be a rise in GDP. These benefits would continue well into the future, with a projected increase of approximately 1.4 per cent after 5-6 years. At the time of writing (2007-2008), this was equivalent to \$15 billion in terms of GDP.

AgForce believes the positive effects and advantages of genuine broadband access on economic growth and employment opportunities in regional areas must be promoted to the community. This will require marketing and possibly education services and technical support to people who are not adequately computer literate.

Impacting business efficiencies and revenues, particularly for small and medium business, and Australia's export market

Broadband access for businesses will improve operating efficiencies and revenue, especially for small and medium businesses in rural areas that adopt the technology, and impact Australia's agricultural export market. Small and medium businesses (which include farms and other agribusinesses) would be able to minimise operating expenses in some form or other by increasing their use of broadband and computer technologies in everyday business. Examples of how these technologies could be incorporated

include using email instead of telephone, live-stream conferencing instead of travel, online banking, and accessing professional services, such as accounting, via online operations (Galloway 2005).

For businesses with staff who work in the field, access to remote log-in for email could increase staff and business efficiency and replace the need for mobile phone or expensive satellite telephone calls in rural areas. By reducing the cost of operations businesses' profit margins will increase, resulting in more revenue that could be reinvested into the business, and that may have positive flow-on effects for regional economies.

Agriculture is a major contributor to Australia's export industry. Australia exports, in volume, 60% of its domestically-produced agricultural product (NFF 2011). During 2008-2009, exports earned the country \$32.1 billion, representing 11.9% of total exports and 14.7% of merchandise exports (NFF 2011). By providing broadband to the agricultural-agribusiness industry, it will be easier for agricultural businesses to connect to international markets, promote Australian produce and decrease operating costs. In turn, businesses will experience increased revenues and greater operating efficiencies if they successfully use broadband to access markets and use the technology to its full potential.

Conclusion

The NBN has the ability to provide services to rural Australia which will benefit Australians through its contribution to the delivery of social objectives. These social objectives include health and education services, regional economic growth and employment opportunities, business efficiencies and revenues, the export market, management of natural resources and environmental sustainability. It is acknowledged that distance and low populations present problems for the rollout of broadband in regional and remote areas; however, as outlined by this paper, the results of providing genuine

broadband access to the bush will see major benefits for local economies with positive flow-on effects at state and federal levels. AgForce Queensland, on behalf of its members, will continue to comment and provide feedback on the NBN inquiry as the organisation seeks adequate broadband access for rural Queensland.

Contacts

Drew Wagner

Policy Officer

AgForce Queensland

Ph: (07)3236 3100

Fax: (07)3236 3077

Email: wagnerd@agforceqld.org.au

Ashley Cooper

General Policy Officer

AgForce Queensland

Ph: (07)3236 3100

Fax: (07)3236 3077

Email: coopera@agforceqld.org.au

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