



Response to:

New South Wales Legislative Assembly Standing Committee on Broadband in Rural and Regional Communities: Discussion Paper

Telstra Corporation Limited

Chapter 1 - Background Telecommunications and Broadband

Massive progress has been made in extending advanced communications across Australia in recent years. Telstra believes that people living in regional, rural and remote NSW should share in the benefits of advanced communications, which improve business productivity, improve the viability of small communities and allow health and education services to be delivered nationally.

Telecommunications in regional areas across Australia has improved in ways unimagined just eight years ago. In 2000, the AMPS analogue mobiles network was being closed down and the CDMA network was being rolled out. Today, the Next G™ wireless network offers network coverage four times greater than that offered by AMPS and double that offered by the original planned CDMA network.

In 2000, no ADSL broadband was available and high-speed Internet was only available in metropolitan areas covered by the HFC cable. The Besley Inquiry stated that data speeds of between 14.4 kbps and 28.8 kbps provided a reasonable service for the current usage of most residential customers.¹

Today, Next G™ mobile broadband offers average downlink speeds of 550 kbps to 3 Mbps to 99 per cent of the population, with peak network speeds of 14.4Mbps, and by the end of 2008, peak networks speeds of up to 21Mbps.² ADSL is available to 92 per cent of the population and ADSL2+ to 79 per cent of the population, providing speeds of between 8 Mbps and 20 Mbps.

¹ TSI, *Connecting Australia, Report of the Telecommunications Service Inquiry*, September 2000, p100.

² With the use of a suitable antenna.

TABLE 1: INDICATORS OF TELECOMMUNICATIONS PROGRESS 2000-08

Measure	Year 2000	Year 2008	Improvement
Mobile coverage	AMPS 500,000 sq km 91% population CDMA 960,000 sq km 95% population	Next G™ network 2m sq km 99% population	Area covered 200% - 400% Population 2.6m – 3.4m people with additional coverage
Mobiles penetration	8.5m SIOs	22m SIOs	14m SIOs
Wireless data speed	CDMA WAP 40 kbps	Next G™ network average downlink speeds of 550 kbps to 3 Mbps (peak network speeds of 14.4Mbps, reaching 21Mbps by end of 2008)	13 to 75 times faster
ADSL coverage	Nil	ADSL 92% population ADSL2+ 79% population	ADSL 92% population ADSL2+ 79% population
Fixed Internet speed	Narrowband 20 – 56 kbps ISDN 64 kbps	ADSL up to 8 Mbps ADSL2+ up to 20 Mbps	10 to 1000 times faster

Telecommunication needs of people living in rural and regional NSW

The Committee's Discussion Paper has highlighted one of the challenges faced by telecommunications providers: that the cost of providing broadband services is higher in regional and rural areas than in the major cities. There are a number of factors contributing to the increased costs, including distance from a customer's location to the service equipment, density of population and terrain. One of the main reasons there are fewer competitors to Telstra in regional and rural areas compared with major population centres is because the commercial return on any investment made is much lower.

However, Telstra disagrees with the Committee's statement that "where services are available, limited competition between carriers means that prices may be higher and services of a lesser quality."³ People living in regional and rural New South Wales gain the benefits of competition even where no competitor to Telstra is present.

Telstra generally sells retail services at the same price across Australia regardless of where a customer lives, even though the cost of serving central Sydney is much less than outer metropolitan areas and a fraction of serving regional, rural or remote communities. High levels of competition in metropolitan areas drive prices down to the benefits of all customers, including in regional and rural locations. This also applies to mobile communications: people in rural and regional areas pay exactly the same for mobile voice and data plans as people in city locations.

However, it is true that broadband in Australia is provided using a mix of technologies (fixed, mobile and satellite) and that these technologies have different cost structures associated with them. Mobile, or wireless, broadband and broadband via satellite, in general terms, can be more expensive to use than, for example, ADSL broadband (depending on usage). In Telstra's opinion, one of the

³ NSW Legislative Assembly Standing Committee on Broadband in Regional and Rural Communities, Report No. 1 – March 2008, p 1

issues the Committee may wish to consider is how to help bridge the 'gap' between the end-user costs of these different technologies, where ADSL broadband is not available.

Issues raised – Service provision

2.1 Closure of the CDMA network

Telstra publicly committed to providing the same or better coverage on the Next G™ network before closing the CDMA network on Monday 28 April 2008. Throughout 2007 a series of network and software upgrades extended the coverage range of the Next G™ network at remote locations to replicate the range and performance of the CDMA network.

The Next G™ network build, in terms of meeting our commitment to provide the same or better coverage as the CDMA network, was completed in mid October 2007. This meant that the Next G™ network coverage was now available everywhere there was published CDMA network coverage.⁴

One of the key ways in which engineers from Telstra and its strategic build partner Ericsson demonstrated that the Next G™ network met or exceeded CDMA network coverage was a four-month national drive survey, which involved:

- More than 20 two-person teams driving a total of more than 120,000 kilometres - roughly equivalent to driving three times around the earth's equator - along Australia's network of major regional and rural highways as well as many secondary roads;
- Capture of performance data from a large, representative regional and rural Next G™ network and CDMA network coverage footprint; and
- The teams collected 500 gigabytes of information - roughly equivalent to 100 computer-burned DVDs' - which was combined with the network performance data continually captured from every base station in Australia, for a comparison of the performance and coverage of both networks.

The Next G™ network continues to be expanded with more base stations being added to extend the breadth and increase depth of coverage where customer demand and commercial outcomes align. The Next G™ network now offers more than 190 network coverage locations where no CDMA network coverage existed before. It reaches 99 per cent of Australia's population and covers more than 2 million square kilometres of Australia's landmass, compared with 1.6 million square kilometres covered by the old CDMA network.

By the end of this year, Next G™ wireless broadband will offer peak network speeds of up to 21 Mbps and by the end of 2009, up to 42Mbps. Importantly, the content and services offered on the Next G™ network is highly valued by people in regional areas. The use of Next G™ mobile data services such as BigPond®, mobile games and sport by Telstra's Country Wide® customers is twice that of our other customers.

⁴ Like any other mobile network, Next G™ mobile telephone coverage depends in part on where you are, what particular handset you are using and whether your handset has an external antenna attached.

2.2 Commonwealth and State Programs

Commonwealth: National Broadband Network

On 11 April 2008, the Minister for Broadband, Communications and the Digital Economy, Senator The Hon Stephen Conroy, released a Request for Proposals (RFP) to roll-out and operate the National Broadband Network.

According to the Government's proposal, the National Broadband Network should deliver minimum download speeds of 12Mbps to 98 per cent of Australian homes and businesses; be rolled out and made operational progressively over five years; and support high quality voice, data and video services including symmetric applications such as high-definition video-conferencing.

The Government has determined that it will be an open access arrangement that allows all service providers access to the network on equivalent terms and enables uniform and affordable retail prices to consumers, no matter where they live. Proposals must be received by 25 July 2008. Under the conditions laid down by the Commonwealth, Telstra is unable to comment on its response to the RFP.

Simultaneously, the Minister also called for submissions on policy and funding initiatives to provide enhanced broadband to rural and remote areas outside the National Broadband Network footprint.

This process will explore long-term options that ensure rural and remote areas of Australia have access to the best available broadband services through future-proofed telecommunications infrastructure. This could include enhancing the Australian Broadband Guarantee program to achieve outcomes comparable to the National Broadband Network.

Submissions will be considered by the Regional Telecommunications Independent Review Committee, led by Dr Bill Glasson AO, who will deliver a comprehensive report to the Minister in August 2008 on ways to improve telecommunications in rural and remote areas of Australia. Submissions are to be received by 30 June 2008.

New South Wales: Government Broadband Service

In New South Wales, the State Government developed its Government Broadband Service which provides broadband for Government agencies, with network access points in 24 regional towns.

By contrast, Telstra has more than 530 Government Wideband IP (GWIP) exchanges operating over Telstra's Next IP™ network across New South Wales that provide high-speed fibre based broadband services to Government Agencies. These exchange locations ensure Departments in regional and rural areas have the same access to high-speed broadband as Departments in metropolitan locations.

Telstra's Next IP™ network can enable the New South Wales Government to provide services to regional New South Wales that could only be imagined a few years ago. For example:

- High-speed internet (with speeds greater than 12 Mbps);
- Mass deployment of VoIP (Voice over Internet Protocol);
- Seamless telecommuting; and
- Video on demand and IP video conferencing.

The Next IP™ network is one of the largest fully integrated national IP networks in the world. It is scalable up to 92 terabytes per second and has 600 per cent more coverage than its nearest competitor. Its nearest competitor has 2,221 points of presence nationally, compared with the Next

IP™ network's 15,800 points of presence⁵. To provide some idea of what this means in terms of capability and speed, Telstra's Next IP™ network can transfer the entire contents of the Australian National Library in 4.6 seconds and connect three billion telephone calls in one second.

New South Wales Government agencies can enjoy the full benefits of this network, including regional schools and hospitals who may want to access high quality, secure video conferencing and tele-health applications that are comparable to services enjoyed by Sydney schools and hospitals.

For example, Telstra and Polycom® recently demonstrated real-time virtual trauma care services that can significantly improve the availability of trauma medicine in the Loddon Mallee region of Victoria. Using Telstra's Next IP™ network and supported by Polycom's high definition telepresence platforms and Telstra Conferencing Managed Service agreement, this major initiative is connecting trauma units in regional areas with specialists in major metropolitan hospitals in real-time⁶.

This initiative will allow trauma specialists at metropolitan hospitals to work in real-time with emergency department teams at regional hospitals with visibility of a patient's vital signs, clinical test results and x-rays to stabilise the patient and reduce the need to transfer many regional patients from regional to metropolitan facilities.

The real-time system to be employed by the Loddon Mallee Health Alliance consists of a mobile wireless video conferencing unit, which can be placed at the foot of a patient's bed or intensive care ward. The unit contains sophisticated High Definition video cameras, monitors and associated equipment, connected to Telstra's Next IP™ network, which is planned to connect the four largest metropolitan hospitals in Melbourne with regional hospitals in Bendigo, Swan Hill, Mildura and Echuca.

Barriers and Disincentives to Service Improvement

2.4 Commercial imperatives

The key driver of improvements in regional, rural and remote communications has been investment. Regional, rural and remote Australians have benefitted from Telstra's investments as advanced capabilities available in populated areas across the country.

Over the long term, Telstra will deliver increasingly fast and integrated services as widely as possible. Telstra CEO, Sol Trujillo, stated: "When I say fast I don't mean 1, 3 or even 12 megabits per second. Australia's Gigabit future will need 30, 50 or 100 megabits per second in a relatively short period of time." He stated new "bandwidth ravenous" applications and devices will proliferate.⁷

However, Australia has one of the world's most challenging combinations of distance, density and terrain. Telstra decisions on investment in network extension, including in more sparsely populated rural and remote areas will be determined in accordance with company policy.

⁵ As at Telstra's Investor Day 1 November 2007:

http://www.telstra.com.au/abouttelstra/investor/docs/tls571_investordaypack2.pdf

⁶ Telstra media release, "Real-time Virtual Trauma Care a step closer for Regional Victoria" 15 April 2008

⁷ See "Towards the Gigabit Age", by Sol Trujillo, Chief Executive Officer, Telstra, Keynote address to Comms Day Summit, 15 April 2006

Telstra competes for investment capital in international financial markets against other telecommunications companies and industries.⁸ The Board of Telstra as agent for shareholders is required to ensure that investments, including those in regional, rural and remote Australia, are in the interests of shareholders and deliver required commercial returns.⁹

Telstra Chairman, Donald McGauchie, has stated that the company must meet market expectations on investment and be confident that returns on invested capital will justify technology risk and not be undermined by uncertain regulatory outcomes.¹⁰

It is Telstra's view that Governments should not look to 'pick' technology winners or direct technology choices: it is up to the consumer-driven market to decide the most effective and sustainable options.

The regulatory framework has a fundamental impact on the extension of advanced communications networks across regional New South Wales. Regulation that keeps wholesale access to Telstra's unconditioned local loop service (ULL) artificially low in metropolitan areas has led to a significant barrier to investment infrastructure in Australia. This is best exemplified by a comparison between the PSTN (or fixed line telephony) and mobile networks.

Regulation of PSTN and fixed networks has distorted or frozen investment. Below cost access to Telstra's ULL services has meant that competitors have concentrated their investment in urbanised areas. In fact, ULL pricing determined by the ACCC is higher in so-called Band 3 and 4 areas that cover smaller regional and remote areas, discouraging competitive investment. It is important to note that backhaul is a declared service, so as with all declared services access seekers can approach the ACCC about price and non-price terms and conditions if they are unsatisfied with a negotiated outcome.

While the PSTN network is heavily regulated, the mobile network is not. Within a few months of Telstra's rollout of the Next G™ network across Australia in October 2006 to 98 per cent of the population (now 99 per cent), Optus announced it would roll out a national 3G High-speed Packet Access (HSPA) network covering 96 per cent of Australia's population. Recently, it announced it would extend this to 98 per cent of the population¹¹. Vodafone has also announced a 3G HSPA \$500 million national mobile broadband network that will expand Vodafone's mobile broadband coverage reach to 95 per cent of the population. The project is earmarked for completion by December 2008.¹²

Recently, after the Federal Government made clear it did not consider a compelling case had been made for regulating third party access to the service, Telstra announced the extension of its ADSL 2+ services to an additional 900 exchanges across Australia, 80% of them in regional and rural locations. Telstra had sought this assurance from the previous Government for more than one

⁸ See comments on growth of Next G™ and investment attractiveness by Sol Trujillo, Chief Executive Officer, Telstra, Merrill Lynch Investor briefing, New York, 10 September 2007. See also Donald McGauchie, Chairman, Telstra, The Broadband Impasse, New Agenda for Prosperity 2008 Economic and Social Outlook, March 28 2008

⁹ http://www.telstra.com.au/abouttelstra/investor/docs/board_charter.pdf

¹⁰ Donald McGauchie, Chairman, Telstra, The Broadband Impasse, New Agenda for Prosperity 2008 Economic and Social Outlook, March 28 2008

¹¹ Optus media release, "Optus sets new milestone with the expansion of mobile network coverage to 98 per cent," 07 May 2008

¹² Mahesh Sharma and Michael Sainsbury, "Vodafone picks Ericsson for mobile broadband", The Australian, 6 March 2008

year.¹³ Following the announcement, the rollout to 907 communities was completed on 10 April 2008.

It is no coincidence that recent investments such as those outlined above have occurred in the least regulated services – to the benefit of residents in regional and rural New South Wales.

With reference to the Discussion Paper's reference to 'Longline ADSL', Telstra trialed this technology and found it to be an uneconomic technology – a technology that will largely be superseded by the Federal Government's National Broadband Network.

2.5 Impact of Commonwealth and Strategic Policies

The Discussion Paper makes a comment as to whether the Universal Service Obligation (USO) for telephony should be extended to broadband.

The primary purpose of the USO is to ensure all Australians have equitable access to a Standard Telephone Service. For some Australians, principally in rural and remote areas, Telstra's costs entailed in delivering the USO as the primary Universal Service Provider, are not covered by the revenues received through the provision of the service. This shortfall is meant to be shared across the telecommunications industry by a Universal Service Level. However, the reimbursement that Telstra receives to make up for this shortfall is a mere fraction of the shortfall itself.

Over the years, the requirements around the Standard Telephone Service have become increasingly unwieldy. In fact the Standard Telephone Service has become the instrument of choice to which new government obligations are tied. There are now well over 50 separate requirements tied to the Standard Telephone Service.

At the same time, new technologies are able to deliver both a voice telephony service capably of any-to-any connectivity as well as enhanced data services. These technologies provide a real opportunity to improve the services available to people in rural and remote areas and potentially also to reduce the cost of delivering the USO. However, the deployment of these technologies is being held back by the raft of increasingly unnecessary and outdated requirements that are linked to the Standard Telephone Services, and indirectly, the USO.

As indicated above, extension of regulation such as that applied to PSTN services today will halt expansion of advanced communication services. This type of regulation is incompatible with global standards and will lead to unacceptable and costly forms of technology modification. In addition, regulatory imposts will undermine investment certainty.

Telstra is of the view that a better outcome for people in regional and rural New South Wales could occur with a Government focus on creating incentives for carriers to extend their network capabilities to areas where it would otherwise not be commercially viable.

In addition, Telstra believes that Government should specify required user outcomes and not seek to mandate particular technologies in the delivery of modern communications services. Commercial decision-making should determine the appropriate means of delivering the required outcomes.

Options for improvement of service delivery

2.6 Regional communities establishing local services

¹³ See "More high-speed broadband after Government removes roadblock", Telstra media release 6 February 2008

Telstra welcomes competition from local and other internet service providers in regional and rural New South Wales. However, any proposal to fund regional broadband providers in towns and areas that already have access to broadband (for example, through ADSL or ADSL 2+ broadband) fails to address the digital divide between those who have access to terrestrial broadband technologies and those who do not.

There are numerous examples of small community telecommunications companies that have failed and wasted millions of dollars of taxpayer provided public funding. One of the most recent was NORLINK in Lismore, which was established with \$1.5 million funded by the Federal Government through Networking the Nation, but went into receivership¹⁴. Such ventures fail because they lack the scale and resources required to provide a competitive world class telecommunications service.

2.7 Role of planning

Windmill Hill Estate near Tamworth is a good example of how cooperation between infrastructure providers, local councils and developers can provide state-of-the-art Fibre to the Premises (FTTP) such as Telstra Velocity™. There are several more developments that have rolled out, or contracted to roll out Telstra Velocity™ throughout New South Wales.

It is Telstra's view that Local Councils could play a role in ensuring new developments provide for future communications requirements.

2.8 Role of State Government

One option the Committee may wish to consider in terms of making broadband more affordable is a recommendation for the provision of a subsidy to individual users who are unable to access ADSL broadband (not to a service provider).

This would provide consumers with a choice of their preferred provider, while accessing broadband via satellite or mobile wireless technologies at equivalent prices to land-based technologies such as ADSL broadband. It would also help address the real regional-remote divide between those who have access to ADSL broadband and those who do not.

There is considerable merit in the question of whether State Government has a role in developing skills and digital literacy. Not only does this align with the Government's core role in education, increasing the number of rural and regional residents who understand and use broadband in their every day lives will help to increase the demand for services. As demand increases, so does the justification for further investment, thus further benefiting regional and rural communities.

Telstra is already making a contribution to improving digital literacy in the community. Telstra recently launched a \$3 million grant program to help older Australians use mobile and internet technology to improve communication and social interaction.

Telstra Connected Seniors will provide \$1 million each year for the next three years in the form of small grants (up to \$5,000) to community organisations such as bowls clubs and gardening groups to run programs that equip their members with new skills such as connecting with other seniors online, making video calls or sending text messages.

¹⁴ <http://www.smh.com.au/news/business/telco-forced-into-administration/2005/08/17/1123958114393.html>

The quality of life for seniors is strongly influenced by social connectivity and technology can play a vital part in meeting new people, discovering new interests and developing new hobbies, which contribute to healthy lifestyles. Research has found that:

- Two thirds (66 per cent) of people aged over 60 own a mobile phone but they only use their mobiles occasionally compared to younger age groups. Of those, few have sent an SMS or picture message¹⁵;
- 35 per cent of people over 60 want to use technologies to communicate with their friends and families but claim that they feel uneasy about how to use new technology¹⁶; and
- 720,000 people over 60 years have home computers and 60 per cent of them regularly use the internet. The most popular things they do online are sending email, browsing news sites and researching hobby interests such as genealogy or gardening.¹⁷

Modern telecommunications can help older Australians maintain their social relationships, yet many seniors are simply unaware of the new technology or daunted by the prospect of using it. Telstra Connected Seniors program provides a practical solution to this need.

Other considerations

With the development of new technologies and the advent of high-speed broadband, a real opportunity has emerged for Government to deliver cheaper, more equitable service delivery that overcomes geography and tyranny of distance.

A solid framework for the management of information and communications technology (ICT) with careful planning and consideration will provide an opportunity for Government to service its citizens in a manner which is cheaper, faster, smarter and via a channel that is convenient for them to use. More importantly, it will enable Government to meet the challenges of the future and give Australia the platform to strengthen its economic foundations for decades to come.

It is Telstra's view that the role of Government in ICT is at a cross roads, becoming more like a coordinated enterprise rather than a collection of independent agencies. To meet Government objectives, delivery of services should be focussed on business and policy outcomes that are enabled, not determined, by ICT (including broadband).

Australia is witnessing an unprecedented growth in information traffic. In February 2001 Telstra networks carried approximately 200 terrabytes of traffic. Five years later they carried more than 8,000 terrabytes. Just fifteen months later – in November 2007 – the traffic had grown to 18,000 terrabytes for a single month. This represents a ninety fold increase in seven years – and the pace is not slowing down.

The Gigabit future is here now and coming in a rapid and chaotic way, driven by the growing demands of Australians on broadband in their homes, businesses and now on their mobile devices wherever they go for work or play.

Careful consideration is needed in terms of policy and investment settings in both the private and public sectors. It is Telstra's view that Government should carefully consider these future needs in planning their own ICT approach across Government agencies, as Governments are a critical part of the ICT ecosystem.

¹⁵ Source: Roy Morgan Single Source

¹⁶ Source: Telstra Consumer Segmentation: DBM Research

¹⁷ Source: Telstra Consumer Segmentation: DBM Research

Telstra's experience is that to deliver better services in New South Wales, its citizens should be at the centre of any approach by State Government. A key objective for Government should be to deliver services faster, cheaper, smarter and via a channel that is convenient to those receiving the service.

Technology is an *enabler* that is driven by required business or policy outcomes. For example, 'Generation Y' users have technology permeate all aspects of their lives and are always 'on the go'. They may demand access to Government services via mobile technology. The elderly and those with mobility challenges will want options that enable them to receive government services without going into an office. Governments need to understand *how* citizens and businesses want to interact with them, as opposed to simply *what* services they need to deliver.

2.9 Institutional structures

Telecommunications is an industry regulated by Federal Government legislation. The industry is a sector subject to disproportionately onerous and cumbersome regulatory overreach and reporting. The vast majority of this regulation and reporting is borne by Telstra to the detriment of investment, innovation and consumer choice.

Any proposal by State Government to aid the better coordination between various levels of Government in New South Wales should aim to reduce, not increase, the amount of regulation, reporting and red-tape requirements imposed on the telecommunications sector.

Issues Raised – Social and Economic

Benefits of broadband and consequences of lack of adequate broadband

3.1 and 3.6: Health

The ability to provide metropolitan standard health services is of immeasurable advantage to rural and remote communities. Telecommunications can provide remote access to patient records, video-conferencing, real-time digital imaging and remote vital signs monitoring.

Reference has been made in the Discussion Paper to the Royal Flying Doctors' Service Eastern Division's use of broadband to provide health professionals with access to vital patient information at the treatment site (p11). In Tasmania, BreastScreen Tasmania has launched a mobile breast screening unit that uses Telstra's Next G™ network to send digital mammogram images, in real time, direct to Hobart for diagnosis from anywhere in Tasmania where there is Next G™ network coverage. This delivers real benefits for women in regional and rural communities, who no longer have to wait days for the results¹⁸.

Telstra has also recently unveiled a display of medical technology at the Telstra Experience Centre in Sydney, including a new wireless version of the traditional doctors' stethoscope and intelligent remote monitoring systems that can help treat and support people outside of hospitals and nursing homes¹⁹.

With nine per cent of Australia's GDP spent on health and increasing every year, care outside hospitals and residential facilities will become more important. Smart networked health technology linked by high-speed broadband can make that possible.

¹⁸ "Next G™ network mobilises BreastScreen Tasmania", Telstra media release 29 April 2008, 119/2008

¹⁹ "Technology the key to Australia's health challenges", Telstra media release 30 April 2008

3.2 Education

High-speed broadband is transforming education. E-education improves access to education resources around the world. It allows for interactive learning, where students and children can collaborate with their peers in other towns and across the globe. It means people in regional, rural and remote New South Wales can pursue further education and training opportunities without having to leave their local communities.

3.3 Social impacts

Access to high-speed broadband helps families in their every day lives as well as supporting economic sustainability. It facilitates social networking and inter-action among communities. Families use broadband networks for business, health, education, entertainment and social interaction.

Young people connect to their friends, social and sporting associations and the wider world. Older people rely on mobile, fixed and Internet services to remain connected with their families and to play an active role in the community.

Advanced communications allows families greater choices in balancing work and family lives. High-speed broadband allows people to work from home and will create new forms of home or community based small business.²⁰ On-line information and education means families and people can be part of the knowledge economy.

Consumer expectations will continue to grow. For example, consumers will expect the ability to download high-definition video and have real time interactive interactions over broadband fixed and mobile networks.²¹

Advanced communications can support policy in areas such as climate change. A study by Climate Risk Pty Ltd found seven ways in which telecommunications can achieve close to a five per cent reduction in Australia's national emissions, while achieving \$6.6 billion a year in ongoing cost savings for businesses and households.²² Gains would be made from better use of renewable energy, decentralisation of business districts, improvements in public transport and freight efficiency, use of video conferencing, and better power management of energy consuming devices.

3.4 and 3.5 Business impacts

Extending advanced communications to sparsely populated areas will improve business and industry productivity.

In larger businesses, sales, order processing, marketing, finance, supply, manufacturing and distribution can be connected electronically. Employees can access on-line human resource management, payroll, supply and customer service applications. Financial management can use on-line billing, invoicing, receipting and banking.

²⁰ See "Happy home workers", Daily Telegraph, Edith Bevin, April 21, 2008, <http://www.news.com.au/business/story/0,23636,23572421-5012424,00.html>

²¹ See "Towards the Gigabit Age", by Sol Trujillo, Chief Executive Officer, Telstra, Keynote address to Comms Day Summit, 15 April 2006

²² See "Cleaning up the climate change debate - how telecommunications permits a shift from accounting to conservation", by Philip M. Burgess, Background prepared for remarks to the Foreign Correspondents' Association Newsmaker Luncheon, Sydney, Australia, February 5, 2008. See detailed report "Towards a High-Bandwidth, Low-Carbon Future- Telecommunications-based Opportunities to Reduce Greenhouse Gas Emissions", Climate Risk Pty Ltd (Australia), http://www.telstra.com.au/abouttelstra/csr/docs/climate_full_report.pdf.pdf

For smaller businesses in farming, manufacturing or service, high-speed Internet will provide more efficient and secure payment and supply management.

The potential benefits to business and industry are highlighted by a study on the Next G™ network carried out by Econtech for Telstra and Ericsson in November 2007.²³ It found productivity gains averaging 9.3 per cent. It involved detailed interviews with 26 businesses across Australia using the Next G™ network for an average of seven and a half months and represented 15 industries.

The highest productivity gains were being achieved by businesses operating in rural and remote areas and with staff working out of the office. Productivity gains were generated by employees remotely accessing information through Next G™ mobile broadband. They could work out of the office and no longer required administrative staff to supply information.

Using the Next G™ mobile broadband network to access the Internet while travelling, converted dead travel time into productive time. Use of video calling supported on-the-spot technical trouble-shooting; for example, transmitting live images of difficult repair tasks to other team members for suggestions. The Next G™ network improved inventory management by allowing customers to record and send details of required parts and equipment.

Respondents also reported benefiting from faster mobile Internet access particularly those customers who needed to access large amounts of data when out of the office. The Next G™ network's coverage and speed reduced the time customers spent trying to make and receive calls, text messages and emails.

²³ See "Productivity boost from Next G(tm) wireless – study", Telstra Media Release, November 2007

Concluding remarks

While broadband technologies have helped to bridge the distance between city and country, lack of access to high-speed broadband has in fact created another gap: the digital divide. This divide is not only between those people in regional and rural New South Wales who enjoy access to high-speed broadband services and those who must rely on satellite broadband, but also between those who can afford it and those who cannot; and those who understand it and those who do not.

Telstra is continuing to invest in regional and rural communities and is determined to bring world class leading technologies, such as Telstra's Next G™ network to Australia. We cannot afford to fall behind the rest of the world in terms of access to high-speed broadband networks across Australia.


Telstra has a proud record of investing in broadband technologies in regional and rural New South Wales. Our Connected Seniors program is reaching out to older Australians who may be unfamiliar with using technology to help them understand how to communicate using the internet and mobile phones, and in doing so, helping to bridge the generational divide.

Telstra believes that Government should not try to direct technology choices or subsidise investment in rural and regional areas that already have access to metro-comparable broadband technologies. However, there is clearly a role for State and Federal Governments to facilitate infrastructure development in commercially unviable locations. A Federal Government subsidy for those who can't access terrestrial broadband may assist in enabling access to broadband via satellite or wireless technology at ADSL equivalent prices. To maximise choice in the marketplace, subsidies should be provided to the end-user (consumer) rather than service provider.

The New South Wales Government's consideration and prioritisation of communications requirements of regional and rural communities is commendable and Telstra supports the endeavours of the Committee in this regard.

Thank you for this opportunity to respond to the Discussion Paper.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Brett Riley', with a stylized flourish at the end.

Brett Riley
Executive Director NSW
Telstra Country Wide®