
**Queensland Government Submission
to
the Australian Government**

**on Policy and Funding Initiatives
to provide Enhanced Broadband
to Rural and Remote Areas**

June 2008

Contents

1	Background	4
2	Definitions	7
3	Queensland Requirements.....	7
	3.1 Defining the NBN footprint in Queensland.....	7
	3.2 NBN Plus - Queensland Government telecommunications expenditure..	14
	3.3 Non-NBN services	14
	3.4 Other telecommunications services.....	15
4	Policy Measures.....	15
	4.1 Recognition of convergence	15
	4.2 Extension on NBN open-access networks.....	17
	4.3 Approach to Backbone network.....	17
5	Concerns over previous approaches	18
6	Models for the provision of services for Australians not benefiting from the NBN	20
7	Standard Telephone Service functionality to be retained and supported by the National Broadband Network	21

1 Background

The Australian Government is providing funding of up to \$4.7 billion for the roll-out of an open access, high-speed, fibre-based National Broadband Network (NBN) that will provide access speeds of at least 12 megabits per second to 98% of Australian homes and businesses.

The remaining 2% of Australians not covered by the NBN shall have, as yet undefined, improved broadband services.

On 11 February 2008, the Queensland Government Chief Information Office (QGCI) provided a paper to the Australian Government entitled 'National Broadband Development Group Queensland Government Issues for consideration in implementing the National Broadband Network' through the National Broadband Development Group (NBDG). The paper was updated and provided for discussion at the Online and Communications Council Standing Committee meeting on 28 March 2008. A copy of this document was also forwarded to the 'Panel of Experts' assisting the Australian Government with implementation of the NBN. Queensland Government officials also met with the Regional Telecommunications Independent Review Committee to discuss Queensland's issues.

On 11 April 2008, the Honourable Senator Conroy, Minister for Broadband, Communications and the Digital Economy announced the following in a media release:

1. the release of the NBN tender seeking industry proposals¹ (closing **12 weeks after the date all network information is available**²);
2. an invitation to industry and public interest groups seeking submissions on possible regulatory reforms to be implemented with the NBN (closing **25 June 2008**)³; and
3. a call for submissions on policy and funding initiatives to provide enhanced Broadband to rural and remote areas (closing **30 June 2008**)⁴.

This paper has been prepared to provide guidance on Item 3. For discussions on regulatory measures (item 2) refer to the Queensland Government Submission to the Australian Government on Regulatory Reforms to be implemented with the National Broadband Network.

Constitutionally, the Australian Government is responsible for telecommunications⁵. However, the Queensland Government has, and will continue to use:

- its influence to ensure the Australian Government programs are implemented in a way that provides maximum benefit to Queensland
- its telecommunications expenditure, through state procurement processes, to improve the quality and distribution of private sector telecommunications in Queensland.

Queensland Government Owned Corporations may, as part of their commercial business practices, work with recipients of Australian Government funds to use existing telecommunications assets for the benefit of Queensland.

¹ http://www.minister.dbcde.gov.au/media/media_releases/2008/023

² http://www.minister.dbcde.gov.au/media/media_releases/2008/040

³ http://www.minister.dbcde.gov.au/media/media_releases/2008/024

⁴ http://www.minister.dbcde.gov.au/media/media_releases/2008/025

⁵ http://www.smartstate.qld.gov.au/resources/publications/ss_strategy/economy.shtm

2 Definitions

Australia's definition of broadband adequacy should include:

- an ability for broadband services to carry a wide range of digital content, including Interactive imaging⁶
- symmetrical broadband
- maintaining, and improving, on parity with the best 25% of Organisation for Economic Co-operation and Development (OECD) countries in terms of performance and affordability.

3 Queensland Requirements

3.1 Defining the NBN footprint in Queensland

A key issue for Queensland is the 2% of Australian homes and businesses that will not receive access to the NBN. The Australian Government has not provided any detail on how this will be determined or where the 2% will be located. Also, it is considered that use of a national statistic could adversely impact states, such as Queensland, that have a more dispersed population.

The Australian Government must collaborate with the states to agree on the location of homes and businesses that will benefit from the NBN.

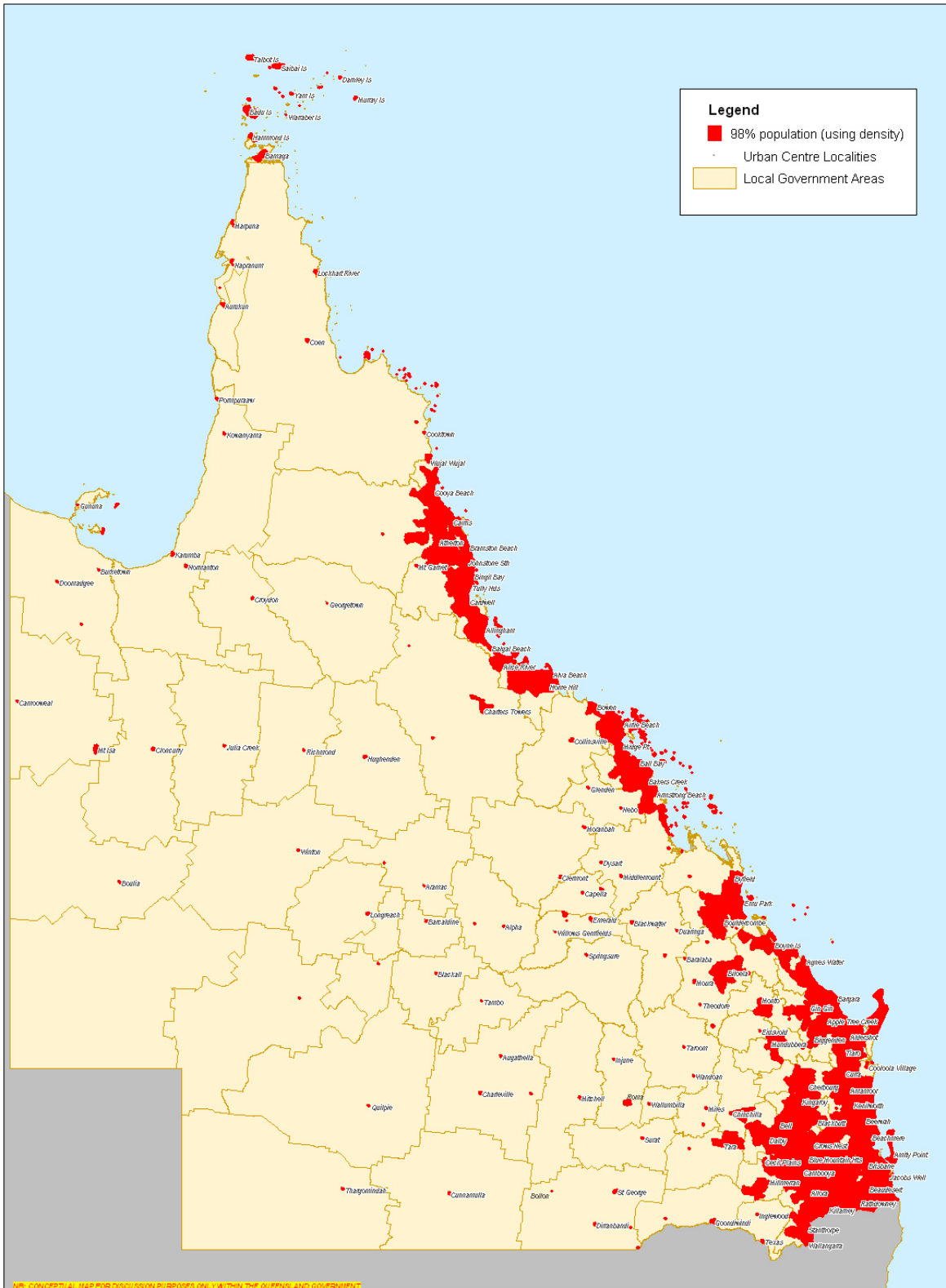
Using population density as a determining factor, preliminary analysis by the Queensland Government Chief Information Office of the possible location of the 98% of Queenslanders and Queensland businesses that could benefit from the NBN is contained in the **Map 1** below. This map was derived by using the population densities of Census Districts⁷, obtained from the 2004 Census, and provides the minimum NBN coverage in Queensland.

⁶ This includes interactive real time applications such as gaming and high quality videoconferencing.

⁷ The basic concept of a CD is that it defines an area that one census collector can cover, delivering and collecting census forms, in about a ten-day period. In urban areas CDs average about 220 dwellings. In rural areas the number of dwellings per CD reduces as population densities decrease. By design, CD boundaries do not cross SLA (and thus LGA) boundaries.

<http://www.abs.gov.au/ausstats/abs@.nsf/Previousproducts/776B53BC062A0792CA25697E00184C2B?opendocument>

Map 1 – Minimum coverage using population density



However, the Queensland Government does not wish the NBN 98% threshold to be allocated in Queensland purely on a population density basis.

The Queensland Government has the following requirements of the NBN and its 98% coverage. The NBN needs to service:

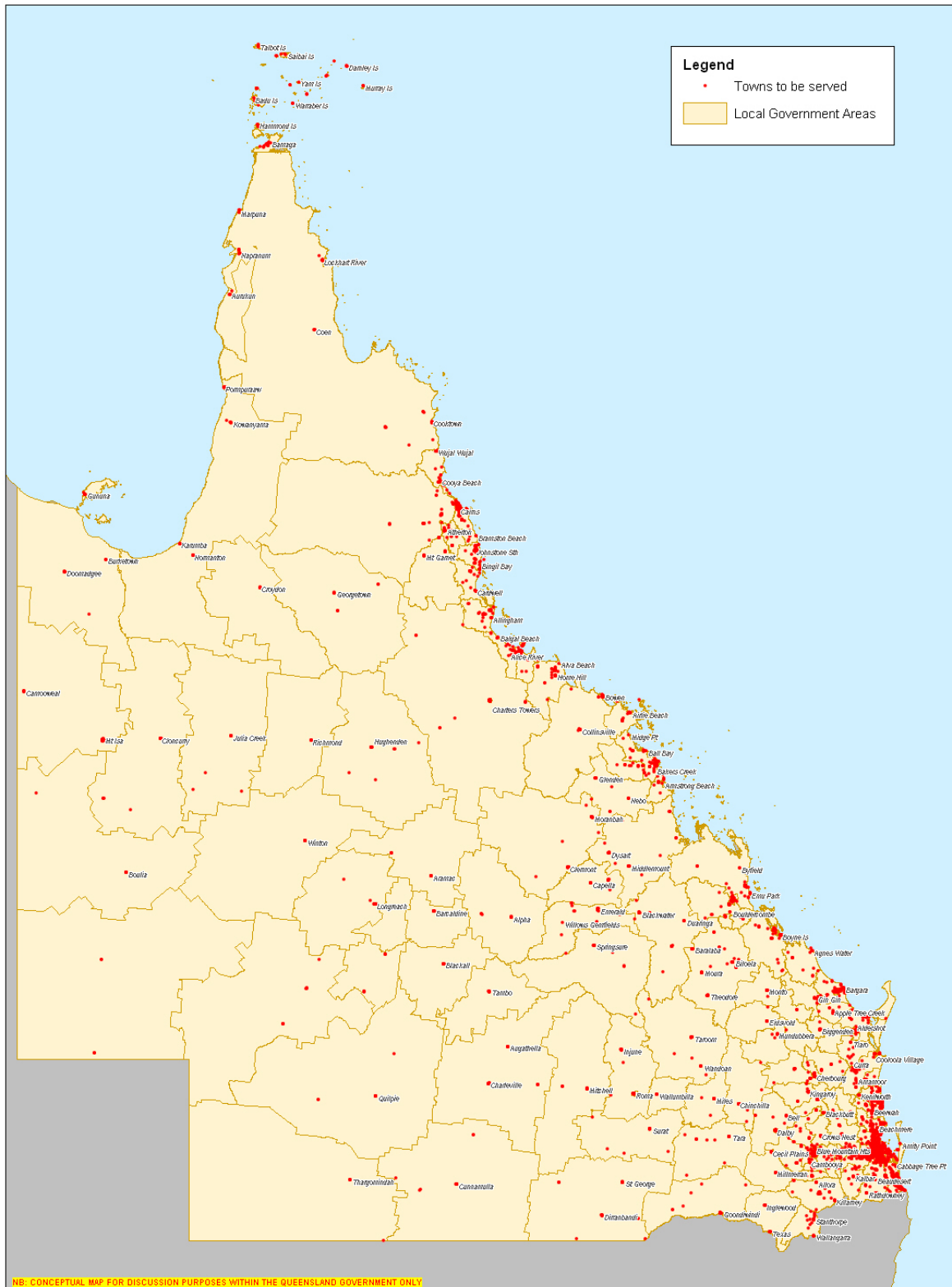
- population centres in Western Queensland, not just those centres within a few hundred kilometres of the coast
- all bounded localities and hub towns⁸
- every school, health, public safety facilities (ie. police, ambulance, SES and Fire services) and tertiary education campuses in Queensland
- all state and local government libraries.

Refer to **Map 2** for a graphical representation of the Queensland Government's requirements in addition to the population distribution (**Map 1**).

By servicing these requirements, there is an expectation that NBN broadband services will also be available to the community and businesses in the surrounding area.

⁸ A hub township is a small rural township offering both residents (and businesses) of the township and outlying areas access to core services. These core services include one or any combination of: a police presence, school, library, shopping and light industry, post office or agency, fuel depot, significant tourist attraction or major road intersection. Their function is convenience, social amenity and service level and as such its importance is beyond the simple consideration of the resident township population. Examples of these types of towns are Carnavon Gorge, Rolleston and Rubyvale.

Map 2 – Queensland Government Requirements beyond population distribution



3.2 NBN Plus - Queensland Government telecommunications expenditure

The Queensland Government would consider using its telecommunication expenditure to support the extension of NBN bidder proposals should they not meet all the Queensland Government's requirements as described in section 3.1. By servicing these requirements, there is an expectation that due to the open-access nature of the NBN, broadband services will also be available to the community and businesses in the surrounding area.

3.3 Non-NBN services

As a general principle, broadband services need to be functionality based, rather than determined by the technology platform. There should be no substantial difference in the availability and service quality received by NBN and non-NBN consumers. The proportion of the population that does not benefit from the NBN should receive broadband services that are no less than 75% of the capacity and speed of that offered by NBN provider(s) for terrestrial-based services, and no less than 25% for satellite base services. Should the NBN offer improved services overtime, this should be reflected in the services available to the non-NBN customers.

Affordability and demand are closely associated. Without a government subsidy, remote broadband consumers will be severely disadvantaged. It is the Queensland Government's position that remote consumers should not pay more for their broadband service, as described above, than that paid by consumers for the minimum NBN service. The difference in the costs of provision needs to be provided through an Australian Government subsidy to the provider.

The Queensland Government has suggested in its submission called 'Queensland Government Submission to the Australian Government on Regulatory Reforms to be implemented With the National Broadband Network', that the NBN needs to be regularly benchmarked to maintain parity with the best 25% of OECD countries in terms of performance and affordability.

3.4 Other telecommunications services

It is considered that mobile services will approach adequacy when all bounded localities⁹, national highways and state strategic roads have mobile coverage, with the same functionality available throughout the network.

The Queensland Government considers Standard Telephone Service (STS) functionality should be retained and supported by the NBN. Section 7 contains a list of the STS measures that should be retained.

4 Policy Measures

4.1 Recognition of convergence

Traditionally, telecommunications services have been categorised into four key services¹⁰:

- fixed voice services (telephone)
- mobile voice and data services
- fixed data services (eg. Internet, corporate networks)
- content services (eg. radio, television, media and interactive games).

⁹ Population centres of at least 200 people

¹⁰ http://www.qgcio.qld.gov.au/01_strategies/qtsf.htm

In many cases, these services are delivered via separate independent networks. As the information economy evolves and the underlying networks converge, the distinction between these forms of communication is blurring. For example, mobile phones serve as Internet browsers and the Internet now provides fixed voice telephone services and delivers television and radio content.

Convergence means that television, voice, radio and internet services will be delivered by common telecommunications infrastructure to businesses and residences. This common infrastructure will increase flexibility and reduce costs. This allows more efficiency and effectiveness in the delivery of services.

The artificial separation of the different forms of communication to different infrastructures is increasingly out of step with the rest of the world and will place Australia at a long term disadvantage.

The Australian Government has historically taken a different approach to funding each element of this converged landscape. For instance, radio services (ABC), TV services (ABC, SBS and IMPARJA), Internet services (The Higher Bandwidth Incentive Scheme (HiBIS), Australian Broadband Guarantee (ABG)) are funded from consolidated revenue, while telephone services are funded through a levy on the telecommunications industry.

The Queensland Government suggests that all converged telecommunications services should be funded via a consistent approach.

4.2 Extension of NBN open-access networks

The extension of open-access networks should be a focus of Australian Government efforts in areas not covered by NBN funding. Where financial support is provided for infrastructure provision, this should be in accordance with principles underpinning the NBN, particularly the development of open-access networks.

4.3 Approach to Backbone network

The telecommunications infrastructure should be built through cooperation and collaboration between major telecommunications carriers and Government Owned Corporations on a commercial basis.

Adequate backbone network capacity and contention ratios should be maintained to support high levels of customer service.

New backbone network infrastructure should only be implemented where the provider of non-NBN services cannot gain timely, cost effective access to appropriate infrastructure or where the infrastructure cannot be accessed with satisfactory regulatory changes.

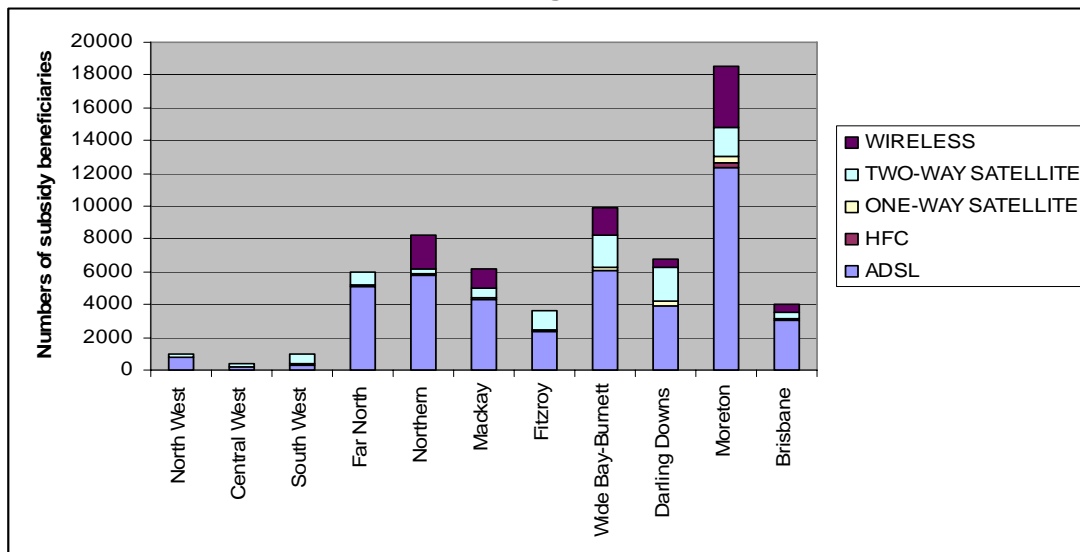
5 Concerns over previous approaches

Based on June 2007 figures, Queenslanders benefited from over \$103 million in the HiBIS and the ABG funding. Over 57%, almost \$60 million, of these subsidies were provided to Telstra. Analysis shows all other recipients were significantly below this.

A key concern with approaches, such as HiBIS and ABG is that service provision tends to be focussed on the more populated and more profitable locations, resulting in areas with real need being neglected.

Existing programs ask providers to deliver services on the basis of a sustainable business case. Many of the more remote areas of Queensland would not sustain a business case and would only be successful with ongoing subsidy. Evidence of this is provided in the following graph which shows the vast majority of beneficiaries of subsidies being located on the more profitable Queensland coast. The long term provision of broadband in communities with non-sustainable business cases will need to be provided through the equivalent of a broadband Universal Service Obligation.

Higher Bandwidth Incentive Scheme and Australian Broadband Guarantee Funding in Queensland



Source: Queensland Government Chief Information Office based on information provided by the Department of Communication Information Technology and the Arts

The Queensland Government recommends that an aggregation based approach be adopted for the provision of services to non-NBN consumers wherever possible.

It is considered that the continuing ad hoc provision of broadband satellite services, under schemes such as ABG, to satisfy individual requests in a town will produce less than optimal outcomes. It is suggested that, with limited intervention, the collection and analysis of requests in a town could open the possibility of alternative solutions that would produce a better long-term future proofed telecommunications infrastructure for the community.

Provision of a service that combines broadband demand, voice services and television services could also contribute to this better outcome.

The priority should be to build terrestrial links to create the foundations for improved backhaul capacity and higher levels of service in the future.

State and local governments could play a role to facilitate the identification and profiling of the demand in these townships.

It is recognised that for individual households in sparsely populated regions, where separation from neighbours is defined by significant distances, satellite technology is the best pragmatic solution. However the current approach of providing funding for a maximum period of three

years for these citizens needs review as it does not provide the basis for a long-term sustainable service.

6 Models for the provision of services for Australians not benefiting from the NBN

Technical solutions should have sufficient latent capacity with a low enabling cost so as to connect all future customers with a service when requested.

Possible approaches to the provision of broadband services to Australians that do not benefit from the NBN include using converged telecommunications solutions that provide digital television, Internet and voice services. These possible approaches include:

- a) the provision of optical fibre Customer Access Networks (CAN) in smaller towns with the backbone network provided by a shared high capacity Satellite service
- b) affordable high-speed satellite solutions for remote homesteads
- c) using 3G mobile or similar wireless networks based in small communities to provide broadband and phone services outside the reach of the optical fibre CAN.

The Queensland Government suggests that:

- wireless is preferred over satellite provision, where groups of residents (and/or businesses) express an interest in broadband services
- a special class of spectrum be reserved by Australian Government for rural/remote broadband service delivery and that the fees be waived for use of this spectrum
- funds dispersed for the provision of services to non-NBN recipients needs to include contractual measures requiring 'open access' on any backbone infrastructure established.

7 Standard Telephone Service functionality to be retained and supported by the National Broadband Network

Table 1 defines the measures the Queensland Government considers should be retained in the Standard Telephone Service, regardless of the technology used to provide the service.

Table 1 – Standard Telephone Service functionality to be retained

Functionality	Comment	Retain
Existing Standard Telephone Service		
Calling line identification	A telephone service that transmits the caller's telephone number to the called party's telephone equipment. This service enables a customer to identify from what number an incoming call is being made. It is available to customers with suitable equipment.	Y
Directory assistance services	STS providers must provide a directory assistance service that customers may contact to find the number of another customer's STS. This information may be provided by means of an automated voice response system.	Y
Operator assisted services	STS providers must provide an operator service that customers may contact for assistance with faults and service difficulties in connection with that service.	Y
Free emergency services access	STS providers must provide, free of charge, the emergency call service to people requiring urgent help from police, fire or ambulance services in a life threatening or time critical situation. It is accessed by dialling '000', the free 24-hour emergency services number.	Y
Itemised billing	STS providers must provide itemised billing for each of their customers. The bill must show basic details such as the: <ul style="list-style-type: none"> • date on which the call was made • number to which the call was made • duration of the call • charge applicable to the call. <p>On request, these details must also be provided for local calls.</p>	Y

**Queensland Government Submission to the Australian Government on Policy and Funding Initiatives
to provide Enhanced Broadband to Rural and Remote Areas**

Functionality	Comment	Retain
The option of untimed local calls	Telstra was the selected tenderer in a \$150 million tender to provide untimed local calls in the 'extended zones' ¹¹ in rural and remote areas of Australia. As a result of Telstra successfully winning a \$150 million Australian Government tender, extended zone customers will have access to untimed calls at the local call rate of 22 cents per call ¹² . This applies to calls: <ul style="list-style-type: none"> • within your extended zone and to adjoining extended zones • between your extended zone and its community service town and to the community service towns of adjoining extended zones. 	Y
Pre-selection capability	The ability of customers to select their telecommunications services provider. It allows a customer to use more than one provider of services. For example, a customer may receive their standard telephone service through Telstra but select Optus to provide their long distance national and international calling services.	Y
Number portability	Enables phone customers to change their residential address or telecommunications service provider but retain the same telephone number. This allows consumers to choose between competing providers based on price, quality, type of service and (for mobile phone users) coverage without the inconvenience and expense of having to take a new number when moving between providers.	Y
Suitable equipment for customers with disabilities ¹³	Enables people who have vision, hearing or speech impairments to communicate with other people over the telephone network via operator-assisted text and voice telephony.	Y
Network Reliability Framework (NRF) ¹⁴	Monitors and improves the reliability of phone services at both the network and the individual service level. NRF applies to all Customer Service Guarantee (CSG) services (ie. customers with up to five lines) provided by the Universal Service Obligation provider (currently Telstra).	Y
Additional Requirements on Telstra	Telstra has a licence condition requiring it to offer a Priority Assistance service to residential customers who have a diagnosed life-threatening medical condition with a high risk of rapid, life-threatening deterioration. The Priority Assistance service provides for connection and repair of the services of priority customers within 24 hours in urban and rural areas and 48 hours in remote areas.	Y
	Retail price regulations require Telstra to put downward pressure on its telephone call prices and, indirectly, those of its competitors. The current regulation which applies until 30 June 2009 when it will be reviewed: <ul style="list-style-type: none"> • maintains the 22 cents cap on untimed local calls • promotes pricing parity between metropolitan and regional areas for local calls and line rentals • ensures that increases in the cost of phone connections are linked to inflation • protects consumers from major line rental increases by only allowing basic line rental products to increase to match inflation • caps local calls from Telstra payphones at 50 cents. 	Y
	As the universal service provider, Telstra must offer an interim service ¹⁵ or the choice between an interim and alternative ¹⁶ service to its customers when it is unable to connect an STS within timeframes specified in its Standard Marketing Plan. Interim or alternative services are offered under the following circumstances ¹⁷ : <ol style="list-style-type: none"> 1. Inability to connect a service within 30 working days 2. Extended service faults 3. Recurrent service faults 4. Service faults occurring after restoration 5. Inability to connect or repair a service as required by Telstra's priority assistance policy. 	Y
Customer Service Guarantee (CSG)	An industry standard required by the current legislation ¹⁸ . The CSG requires telephone companies to pay financial compensation to customers where minimum performance requirements are not met.	Y

¹¹ In general terms, extended zones are areas that fall outside Telstra's standard local call charging zones. They are defined by telephone number ranges and are not always linked directly to a geographic boundary. They also generally exclude town centres and higher population density areas. There are 102 extended zones, of which 98 are active, ranging in size from 8,400 to 304,000 square kilometres. They are located in the most sparsely populated areas of Australia. Within these zones, which cover close to 80% of Australia's land area, there are about 40,000 services.
http://www.acma.gov.au/WEB/STANDARD/pc=PC_1785

¹² http://internet.aca.gov.au/WEB/STANDARD/pc=PC_1699

¹³ http://www.acma.gov.au/WEB/STANDARD/pc=PC_1738

¹⁴ http://www.acma.gov.au/WEB/STANDARD/1001/pc=PC_1736

¹⁵ a voice telephone service (or an equivalent form of communication where voice telephony is impractical for customers with a disability) that uses mainly mobile or satellite technology and is charged at standard telephone service rates.

http://www.acma.gov.au/WEB/STANDARD/1001/pc=PC_1717

¹⁶ provides customers with access to a telephone service and can be supplied in a variety of ways, such as through call diversion to a customer's mobile or a second fixed line service. Telstra is not required to charge STS telephone rates for outgoing calls from this service, but no charge is made for setting up the diversion, or for the diversion component of received calls.

¹⁷ http://www.acma.gov.au/WEB/STANDARD/1001/pc=PC_1717

¹⁸ http://www.acma.gov.au/WEB/STANDARD/pc=PC_1712