



TOWNSVILLE CITY COUNCIL

OFFICE OF THE CHIEF EXECUTIVE

Date >> 11 March 2011



Andrew McGowan

Inquiry Secretary

Standing Committee on Infrastructure and Communications

House of Representatives

Parliament House

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Dear Mr McGowan

SUBJECT>> New Inquiry into the National Broadband Network

Townsville City Council (Council) welcomes the opportunity to provide a submission to the above Inquiry by the Standing Committee on Infrastructure and Communications. The attached submission outlines the view of Council in relation to the capacity of the National Broadband Network (NBN) to contribute to the areas of interest to the Committee. I appreciate your extending the time for Council to lodge its submission.

As home to a NBN first release site, Townsville is keenly aware of the potential impacts the NBN might have and Council is seeking means by which the benefits that will accrue might be facilitated. Our submission highlights a number of these benefits, as well as several issues that will need to be addressed in the roll-out of the NBN.

The NBN is seen as being a key element of enabling infrastructure that will assist communities, particularly those in regional and remote Australia, continue to contribute to the economic and social base for the nation. It will assist in addressing issues related to distance and allow for Townsville and other regional communities to reach their potential.



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The NBN will greatly assist in ensuring that our community is connected with the wider world, thereby affording residents opportunities that are available to others in larger metropolitan areas. It has the potential to provide a catalyst for new ways of doing business and for new ways of people interacting.

Should the Committee require further information, Council's contact officer on this matter is Doug Hayward, Senior Economic Development Officer who may be contacted at

Yours sincerely

Neil Allen

Acting Chief Executive Officer



TOWNSVILLE CITY COUNCIL

Submission

for

*House of Representatives Standing Committee on Infrastructure and
Communications*

New Inquiry into the National Broadband Network

March 2011

House of Representatives Standing Committee on Infrastructure and Communications

New Inquiry into the National Broadband Network

Submission from Townsville City Council

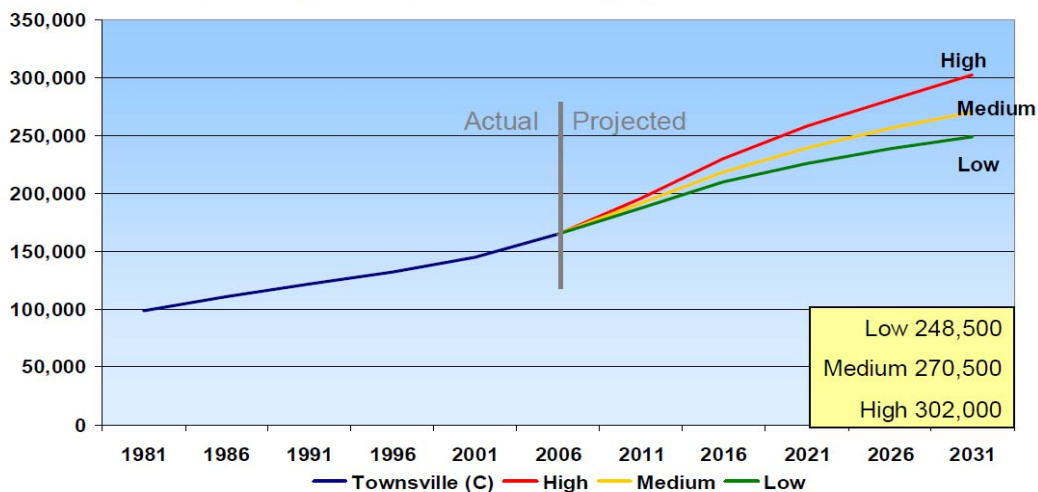
Townsville City Council welcomes the opportunity to provide a submission to the House of Representatives Standing Committee on Infrastructure and Communications *New Inquiry into the National Broadband Network*.

As a first release site for the National Broadband Network (NBN) roll-out, Townsville is keen to maximise the benefits that will accrue to the community from this infrastructure. Council is of the view that having access to enhanced digital communications infrastructure facilitated through the roll-out of NBN will provide benefits and opportunities not only for its own operations, but also to the broader community.

The Townsville region has a rapidly expanding population and economy as set out below

- Total North Queensland Population: 227,340
- The region's population is projected to increase to over 317,000 by 2031
- The current unemployment rate for the region is 3.2%
- The average unemployment rate for the two years to October 2010 was 4.2%, well below the Queensland and Australian average of 5.2% and 5.3% respectively.
- Gross Regional Product (GRP) in 2008/09 was \$12.062 billion.
- The region has experienced strong and steady economic growth over the past decade with an average of over 10% nominal growth per annum.
- There are no signs of the region's growth slowing down, with approximately \$13 billion worth of mining, construction and infrastructure projects either currently underway or proposed.

Past and future growth, Townsville (C)



The NBN roll-out will be an essential element in the regions continued growth, enabling Townsville to contribute strongly to the national economy.

Council has been an active participant in the *Broadband Today Alliance*, a grouping of over 40 local governments with a focus on harnessing the benefits of enhanced

broadband. This group provides a forum for local governments to share and exchange information and experiences around broadband and the digital economy, and to facilitate interaction with both NBN and policy agencies.

This submission will seek to address the issues highlighted in the call for submissions from both a Council perspective and from a broader community perspective.

a) *The delivery of government services*

As Australia's largest city north of the Sunshine Coast, Townsville is increasingly becoming a centre for government administration, both at a state and federal level. This was further emphasised in 2010 when the Queensland Premier promoted the concept of Townsville becoming Queensland's "second capital" ... '*a rival for Brisbane in terms of economic, cultural and social opportunities*'. In order to take up this role, the city will require a range of infrastructure consistent with that of a capital city, including telecommunications infrastructure.

Townsville is geographically distant from both the state and national capitals. This has led to communication difficulties and a sense of isolation from decision-making processes. An enhanced broadband network will assist in overcoming this, with applications such as video-conferencing allowing for improved service provision and delivery and increased participation in policy development and decision-making processes.

Townsville City Council has recognised the benefits accruing from improved communications between operational sites. To this end, Council has undertaken extensive and expensive works in connecting a number of sites through fibre optic cable. This has allowed for a more integrated service network and a higher level of functionality within Council operations. However, the benefits from this investment have significantly been internal with limited additional capacity gained in the community's capacity to access Council services. This role needs to be played by an NBN-type network, which facilitates a more effective interface between Council and other service providers and the community.

Council has also identified a number of commonly available applications that are not currently used due to concerns around variations in available bandwidth. Having a broadband network accessible to the community will enable Council to provide a greater range of services and information to the community.

b) *Achieving health outcomes*

Health is a key area where developments in telecommunications have demonstrably driven improvements and efficiencies in service delivery. From the state and private hospitals, to the divisions of general practice and allied health, it is widely acknowledged that the need for secure bandwidth exceeds current capacity. The installation of ubiquitous high speed broadband over fibre and wireless network will significantly enhance the capability of our health system and its ability to interact with all other sectors.

As a key regional centre, Townsville serves as a locus for health services for much of northern Australia, and to a lesser extent, the Asia Pacific region. Many of the communities in the region are distant and isolated, resulting in greater problems in service delivery. The availability of enhanced broadband services will allow these communities to access the medical system through tele-medicine and other technology-based approaches. As outlined above, applications such as video-conferencing allow for public health programs to be delivered in remote communities.

As a tertiary facility operating in conjunction with James Cook University, the Townsville General Hospital, with the availability of increased broadband capacity promised by the NBN, will be able to provide students with a range of currently unavailable learning experiences, capabilities and methods. Connectivity to other institutions will allow for a sharing of knowledge on a level previously unattainable.

c) *Improving the educational resources and training available to teachers and students*

Education is a key area where greater broadband capacity will have an impact. Within the NBN First Release site of Mundingburra/Aitkenvale, educational facilities are examining means by which students and teachers can access learning opportunities. More broadly, schools in the region are looking to ensure their students are able to gain exposure to the wider world.

Being located in regional Australia, Townsville students do not always have access to the range of educational opportunities available to Capital City students. Increased broadband capacity is an essential component in addressing educational disadvantage resulting from isolation.

James Cook University, located in Townsville, is home to over 10,000 students and 3,000 academic staff. The University has a particular focus on tropical sciences and expertise. In an increasingly competitive tertiary education sector, remoteness from major population centres can act as a disincentive for students to enrol. Connectivity through a broadband network will assist in addressing issues associated with costs of provision of education and also costs associated with students being able to access leading edge research.

Although currently associated with the Australian Academic and Research Network (AARNET), James Cook University does suffer due to its remoteness from other institutions, primarily due to issues related to backhaul capacity. A larger broadband network, as envisaged through the NBN, will assist the University in overcoming perceptions of being technologically disadvantaged, and should assist in attracting greater interest from researchers and academics. Such a focus will assist in furthering the region as a global centre for tropical sciences and knowledge.

Broadband has the potential to open up the world for students and allow them to explore areas of study previously unavailable to them. It will allow them to connect with their peers in a global community and share knowledge in a manner that will enhance their understanding of the world they live in. This will assist in developing student's ability to take their place in the wider world.

Access to a better broadband network will provide teachers with new ways of delivering instruction and learning, and will also allow them to liaise and consult with colleagues not only in the next classroom, but in the next state and next country. This will facilitate greater levels of collaboration, with commensurate increases in learning outcomes.

As a key regional centre serving a large regional catchment, Townsville is host to a number of vocational training providers. Students are often required to travel to Townsville to undertake classroom training to supplement their on-the-job learning. Increased broadband capacity, particularly in regional and remote communities, will revolutionise the way in which training is delivered and potentially allow trainees to spend more time in the workplace and less in classrooms.

d) ***The management of Australia's built and natural resources and environmental sustainability;***

An ability to monitor the health and well-being of our built and natural environments is fundamental to the development sound management systems. It has been suggested that resource managers do not had the tools to understand impacts on a real-time basis, and that decision-making is reactive and based on historical data. This has the potential to delay decisions, and to allow decisions to be made with less than complete information. Increased broadband capacity across a network will allow for resource managers to better manage their resources.

One area where the NBN will provide significant benefits for resource managers is remote sensing. Having a network capable of relaying large volumes of information from a wide range of sites and having applications able to process this information will allow for more effective and efficient management of resources.

NBN will also facilitate much more efficient use of energy. The development of smart networks and smart systems able to monitor energy usage across a wide area will mean that energy will be able to be allocated on an as needs basis, with network optimality being a likely outcome. Townsville City Council was a key partner in a proposal developed by Ergon Energy as a part of the Federal Governments *Smart Grid* Program. A key feature of this proposal was the integration of remote monitoring and demand management to achieve network optimality and a highly efficient energy distribution system. The savings both to consumers and distributors were potentially significant.

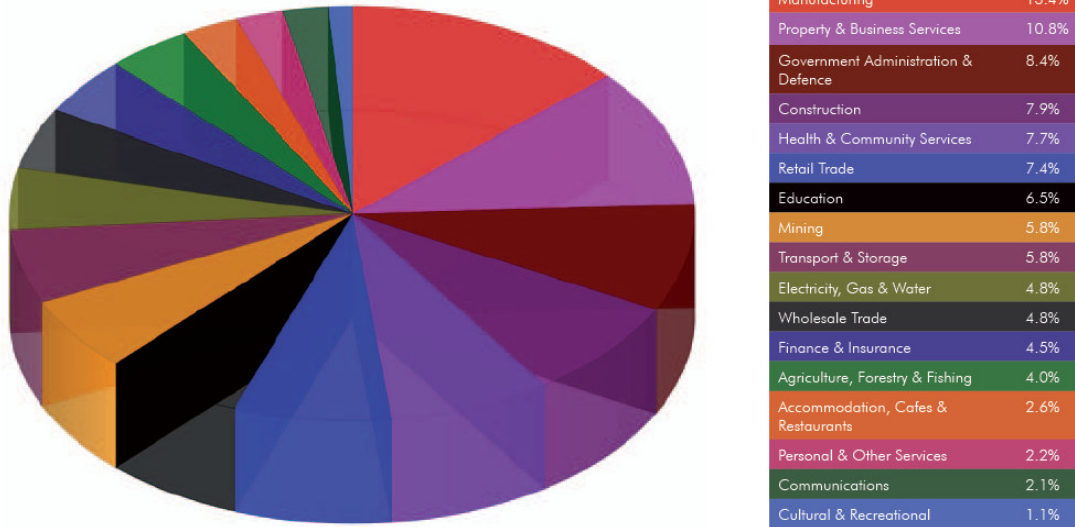
While the proposal was not ultimately successful in gaining funding support through the *Smart Grid Program*, the knowledge acquired from the proposal formulation are being applied by a number of organisations in the region and will ultimately result in higher levels of sustainability in energy production and use.

e) ***impacting regional economic growth and employment opportunities;***

The NBN roll-out is seen as having significant potential to assist in economic growth and business opportunities, not only for Townsville but for the entire nation. The ability for business and industry to communicate rapidly is central to maximising opportunities for regional economic growth.

Much of the economic activity in the Townsville region has an international focus. There are a number of significant international companies, particularly in the mining and agricultural sector, that have a presence in Townsville. Companies such as BHP Billiton, Xstrata, Sucrogen, and Sunmetals have a significant role in the Townsville economy and rely on Townsville as a conduit for their export activities. To effect their business activity, they need to develop on an on-going basis communication capacity in order to facilitate management opportunities and growth opportunities. This capacity will be enhanced through a high capacity broadband network.

The Townsville region gross regional product is approximately \$12billion (2008-09), and has experienced strong growth over the past 5 years. Widely recognised as having the most diverse economy of any region in the country, no one sector contributes more than 12 percent of the total regional economy. This economic base provides stability and opportunities for long-term growth.



This continued sound economic growth will require the provision of infrastructure, including broadband infrastructure. An NBN style network will allow the Townsville region to maintain its place in the wider economy through connectivity and linkages both within the region and externally. Existing industries will be assisted in maintaining the advantages they have through broadband capability.

An expanded broadband capacity also allows for new industries to be developed within the region as well as existing industries to be enhanced. For example, data-warehousing and remote service centres are industry sectors that are currently emerging. High speed/high capacity broadband access will allow regional centres such as Townsville to pursue these sectors and further broaden the economic base for the city.

f) ***impacting business efficiencies and revenues, particularly for small and medium business, and Australia's export market;***

The NBN roll-out will offer significant potential for regional businesses to improve efficiency and access markets, thereby increasing revenue, profitability and viability. While some larger organisations within the region have reasonably well-developed strategies around information management, this is an area where the NBN provides a platform for growth in the small and medium business sector.

A significant issue affecting many organisations with a “branch” office in Townsville is their ability to integrate systems and communicate on an organisation wide basis. There are costs associated with this issue that impact on those organisations. A higher capacity network such as NBN will enable this disadvantage to be addressed, as well as providing opportunities for the region to attract more “branch” offices and potentially head offices.

NBN is seen as enabling infrastructure from which businesses are able to develop new and enhanced means of operating. A key challenge in the short to medium term will be to encourage these businesses to use the potential of the NBN and assess their operations to determine opportunities for new markets and enhanced efficiencies.

In the past few years there has been a growth in home based businesses. Having access to a high speed broadband network will allow this sector to continue to grow and provide opportunities to local entrepreneurs. It will also mean that many of the services that residents and businesses might have had to access external to the region, might now be able to be sourced locally.

Council recognises the opportunities increased broadband capacity can bring to the business sector and in view of this, will be undertaking the development of a Digital Economy Strategy. This strategy will provide a framework for fostering the uptake of opportunities arising from advances in digital connectivity, and will seek to encourage regional collaboration around these opportunities.

g) ***interaction with research and development and related innovation investments;***

Townsville is host to a number of institutions focussed on research, with much of this research having potential commercial applications. These institutions include James Cook University, Australian Institute of Marine Science, the Great Barrier Reef Marine Park Authority and CSIRO, all of which are leaders in numerous fields and rely on digital communications to undertake much of their research and development activities.

A specialty of these organisations and other organisation in the Townsville region is tropical science and expertise. In a global context, former Queensland Chief Scientist Professor Peter Andrews estimated in 2009 that the global “tropical zone” had an economy in excess of A\$40 trillion. Gaining an advantage in this field has potential to add significantly to the regional, state and national economies. Central to gaining an advantage is the development of connectivity and applications that facilitate the rapid transfer of knowledge and information. The NBN will be pivotal in achieving this.

h) ***facilitating community and social benefits;***

The NBN will provide a range of community and social benefits. Many of these relate to people having greater levels of connectivity. Having applications that facilitate communication will enable many community members overcome issues of isolation and remoteness. This is particularly the case for those whose family and friends have either moved away from Townsville or for those who have moved to Townsville.

Townsville is home to one of the largest defence communities in the country. Given the nature of this community and its relative transience, being able to communicate with friends and family is important in overcoming feelings of dislocation that may occur. Additionally, Townsville is also home to a large number of people employed on a fly-in/fly-out basis with a number of mining operations. Again, the ability to communicate with family and friends is important to overcoming issues associated with this type of employment.

Enhanced broadband capacity also opens up opportunities for greater levels of involvement within communities through the establishment of both real and virtual networks. Being able to share greater amounts of information within and between networks enables heightened levels of engagement and interaction, with resulting increases in empowerment within the community.

Council, along with many other organisations, is making increasing use of technology to provide information to residents. A very recent example of this was Cyclone Yasi, where Council utilised various forms of social networking to provide information to residents. As a result, the community was informed of emergency procedures before, during and after the event. Current capacity on the network does place limitations on this data exchange and the NBN will assist in overcoming this.

- i) ***the optimal capacity and technological requirements of a network to deliver these outcomes.***

To deliver the benefits outlined above, a network needs to be robust enough to handle large amounts of data as rapidly as possible with as little disruption as possible. Currently Council, along with many organisations, is limited in the type of information it can provide to residents through the “size” of files. Having a network able to accommodate larger amounts of information will mean Council is able to provide residents with an increasing amount of information.

One issue that needs consideration in the roll-out of the NBN is backhaul. Concerns have been expressed within Townsville that while there may be a network within the city able to meet local needs, the ability for the city to connect to the wider world may be compromised through lack of backhaul capacity to Brisbane and the wider world. While there have been assurances provided that the larger NBN network will meet current and future needs, reservations still exist as to whether constraints will arise in terms of this connectivity with the wider world.