Quick Guide to the National Broadband Network

How Local Government in South Australia Can Support and Prepare for the National Broadband Network (NBN) Rollout and Implementation

Local Government Association of South Australia
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1. Introduction

The Local Government Association of South Australia (LGA) engaged Nayda Associate Consulting (NAC) to design and deliver a practical, non-technical source of information about the National Broadband Network (NBN). The resource is to be used by Council staff in a variety of roles, as well as elected members, as a quick and easy-to-read reference to find basic information on a wide range NBN topics.

There is a large volume of information available about the NBN. As such, it can be confusing to find a starting point for a topic, and then distil the volume of information into the elements which are most important for a Council to consider.

This guide will provide brief information in each section on topics most relevant to Local Government. References and sources of information are also included under most topics, where more detailed information can be sought. The purpose of this guide is to enable Councils to:

1. have access to the most vital NBN information in a concise form;
2. commence preparations for NBN rollout in your region;
3. learn from the experiences of Councils already involved in early stages of NBN rollout;
4. make key decisions about what your Council’s role will be in the NBN rollout; and
5. start to think about the benefits of the NBN to the services and operations of your Council.

In developing this resource, NAC consulted with five Councils to establish a framework for this resource and to understand the experiences of Councils who have already been involved with the NBN.
2. Executive Summary

The National broadband Network (NBN) is a long term project that will establish reliable, high speed broadband services to all Australian households and businesses. It is one of the most significant infrastructure projects in Australia’s history and is set to transform many aspects of our daily lives. The NBN will be planned, designed, constructed and managed by NBN Co, a Government Business Enterprise.

The NBN is a significant opportunity that will have wide ranging, long term impact on our communities and economy. Local Government plays a critical role in the success of the rollout and implementation of this major infrastructure initiative.

The NBN will provide benefits to households, business and industry by providing access to transactions and services through faster and more reliable high speed broadband services. Delivery of Government services will also be enhanced or transformed as people conduct Government business on-line. For example, access to specialist health services and education can be done on-line, as well as simple transactions such as drivers licence renewals applications and dog registrations.

The high speed broadband service will be delivered through the NBN, which is a national network consisting of three technologies to deliver the services to all Australians. The majority (93%) of premises will be connected to the NBN via fibre optic cable. This fibre network will be constructed over ten years and, where practical, will use the existing passive infrastructure that supports the copper telephone network minimise impact. This is determined through a binding contractual arrangement between NBN Co and Telstra, called The Definitive Agreement.

The remaining 7% of premises will access the NBN via fixed wireless and, for remote areas, dedicated satellite services. The fixed wireless and satellite services are scheduled to be mostly completed and operational by the end of 2015, although an interim satellite service is already available.

NBN Co acknowledges that Local Government is a key stakeholder, playing a vital role in the NBN rollout. As such, NBN Co has a dedicated Council engagement resource in each state – a Community Account Manager. Your strategic engagement partner – from planning, design, through to construction and operations is:

Christopher Gregory
Community Account Manager SA / WA
Corporate Affairs
P +61 8 8193 3608 | M +61 (0) 400 697 928 | E chrisgregory@nbnco.com.au
Community Infoline: 1800 687 626
Level 2, 31 - 33 Richmond Road, Keswick SA 5035

As well as its role in building and infrastructure, Councils have relationships and communication channels into communities that can facilitate the understanding and uptake of the benefits of the NBN for local households and business. These benefits and the transformational improvements the NBN can deliver are often referred to as the ‘digital economy’.

Councils also need to consider the digital economy in their own organisation and delivery of services. The NBN provides opportunities for reshaping Local Government, enabling Councils to deliver more sophisticated services to ratepayers more efficiently.
Although the NBN is a long term project, Councils should now begin to consider their role and how the NBN can uniquely benefit their communities.
3. What is the National Broadband Network?

3.1. Definition
The NBN is a high speed, broadband network that will reach 100 per cent of Australian premises with an integrate network of three technologies: fibre, fixed wireless, and satellite. It is important infrastructure that will keep Australia at the forefront of an increasing on-line world. Broadband services are now becoming a part of essential and valued services for more Australians. NBN delivers ubiquitous, uniform, open-access reliable capability.

The NBN will be the platform for telecommunications services, including telephone (it will replace the existing network of copper wires in fibre served areas), internet services, entertainment, health and education. The NBN will be used across a wide variety of applications once established to enable services to reach more people reliably, quicker and more cost effectively.

If you think about how wide reaching the impact and use of the internet has become in just the last ten years, you can begin to appreciate how important the NBN will be as part of most Australian’s daily lives over the mid to long term. It is likely that, in the mid to long term, Australians will view the NBN as an essential service, such as electricity or water supply.

3.2. Benefits
The NBN is a powerful tool that will enhance social and economic development via the features of:
- faster, more reliable broadband services for telephone, internet and other on line services;
- higher download and upload speeds of data and information;
- improved stability and reliability of the services;
- ubiquitous coverage – the same minimum wholesale service and speed irrespective of location; and
- open-access wholesale network – greater competition and choice for the consumer.

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Key Benefits</th>
</tr>
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<tbody>
<tr>
<td>Residents and communities</td>
<td>• on line transactions and communication faster and more reliable;</td>
</tr>
<tr>
<td></td>
<td>• telecommuting or teleworking, enabling more flexible work arrangements;</td>
</tr>
<tr>
<td></td>
<td>• in-home information and entertainment;</td>
</tr>
<tr>
<td></td>
<td>• ability to participate in education and other services with more flexibility and more options;</td>
</tr>
<tr>
<td></td>
<td>• access to many different service providers for a range of services for different services if they so choose (one for phone, one for internet, etc.); and</td>
</tr>
<tr>
<td></td>
<td>• home based, small business opportunities.</td>
</tr>
<tr>
<td>Business and industry</td>
<td>• increase on line transaction opportunities;</td>
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<td></td>
<td>• increased ability to access new markets, including export markets;</td>
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<tr>
<td></td>
<td>• new opportunities for marketing and communicating with customers;</td>
</tr>
<tr>
<td></td>
<td>• improved communications within a network of sites or offices and with off-site and remote staff; and</td>
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</tbody>
</table>
Quick guide to the NBN
Local Government Association of South Australia

### Additional Resources

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information sources</th>
</tr>
</thead>
</table>

### 3.3. NBN Technology

The NBN will deliver high speed broadband through one of the following three technologies. NBN Co selects one of these technologies for each area as the most efficient and reliable delivery method, depending on existing infrastructure and location.

<table>
<thead>
<tr>
<th>Technology</th>
<th>Description</th>
<th>When and Where</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fibre Cable</td>
<td>A tried and tested technology that has the capacity for further upgrades in the future. It has many advantages over the existing copper wire network, including: fast upstream and download speeds; capacity to carry more data simultaneously; and stronger and more stable signal over greater distances. More reliable as it does not corrode from water, air or chemicals as copper wire does</td>
<td>93% of premises across Australia Rollout from 2011 to 2021. Target 3.5 million premises by 2015.</td>
</tr>
<tr>
<td>Fixed Wireless</td>
<td>Fixed wireless is where fibre optics is laid as close as possible to a premise and the transmission is complete via a wireless connection using the latest 4G technology.</td>
<td>Rural and regional communities Completion by 2015 Dates for NSW, Qld and Tas. only at this stage.</td>
</tr>
<tr>
<td>Satellite</td>
<td>Purpose built satellite service to provide high speed broadband to remote areas and external territories.</td>
<td>For remote locations ISS now available in eligible rural and regional areas.</td>
</tr>
<tr>
<td>Technology</td>
<td>Description</td>
<td></td>
</tr>
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<td>------------</td>
<td>-------------</td>
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</tr>
<tr>
<td></td>
<td>Interim satellite service (ISS) to run until 2015 when NBN Co will launch its own satellites.</td>
<td></td>
</tr>
</tbody>
</table>

NBN Co determines which of the three technology options is most suitable for establishing high speed broadband services in any given area. The fibre optic network footprint will service the majority of premises. Fixed wireless services will be established where fibre is not viable to sustain a reliable service. Satellite technology will provide services to the more remote communities of Australia.

**Local Councils or premise owners do not have control over decisions regarding which technology will be used.** These decisions are made by NBN Co and its Shareholder Ministers.

### Addition Resources

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information sources</th>
</tr>
</thead>
</table>

### 3.4. Pricing

The NBN regulations are designed to deliver uniform wholesale pricing that allows Telephone and Internet Service Providers (e.g. Telstra, iiNET, Optus, iPrimus, etc) to provide access to affordable high speed broadband Australia wide. This means that any Australian household or business can access high speed broadband at the same wholesale price. However, each household or business will deal with a Telephone and Internet Service Provider, where services and pricing may vary. But as each of those retailers will be paying a consistent wholesale price, pricing should be relatively similar regardless of where the house or business is located in Australia.

The NBN Co is the wholesale provider of NBN services and thus will charge a wholesale price to the retailers such as Telstra and Optus. The wholesale price for a premise connection is currently set at $24 per month. This will be passed on to consumers as part of the retail pricing, the same as line rental charges for telephone services are currently.

Billing is expected to stay much the same as for current services.

### Additional Resources

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information sources</th>
</tr>
</thead>
</table>

### 3.5. NBN Co

NBN Co Limited is a Government Business Enterprise, wholly owned by the Commonwealth Government. It was formed to provide a high speed, integrated national broadband service. Its role is to install the network infrastructure and provide wholesale services to Telephone and Internet Service Providers. It is building the platform for Telephone and Internet Service Providers such as Telstra and Optus and other like companies.
NBN Co is a wholesaler of services, so when the network is complete and operating, Telephone and Internet Service Providers (such as Telstra and Optus) will deal with residents and businesses to provide services. Effectively, NBN Co customers are the Telephone and Internet Service Provider (e.g. Telstra and Optus, etc), while the Telephone and Internet Service Provider customer is the consumer, the end-user is the business or home user.

NBN Co is also responsible for co-ordinating communication between various parties during all stages of the rollout, planning and design, construction and operation of the network.

3.6. Contractors
NBN Co will engage contractors for the construction of the broadband network and the installation of service equipment into premises.

Currently, Syntheo has been contracted in South Australia to construct the fibre optic network. This company is a joint venture between Lend Lease (who works with Telstra’s network) and Service Stream, a company that designs, constructs and maintains both fibre and copper wire networks across Australia. Syntheo is also constructing the NBN network in Northern Territory and Western Australia.

Ericsson is involved in the construction of the wireless network in South Australia. Optus is contracted to provide the interim satellite service (ISS) in the State.

Service Stream has been contracted in South Australia to construct the fibre optic network in New Development (Greenfields) locations.

NBN Co will engage other contractors to provide services as part of the NBN rollout as construction progresses. NBN Co will maintain its role to facilitate relationships between communities and the contractors, as well as engaging the contractors to perform work on the NBN construction.

3.7. Telephone and Internet Service Providers
A Telephone and Internet Service Provider is a company or organisation that offers telephone and / or internet services over the NBN.

Additional Resources

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone and Internet Service Providers</td>
<td>NBN Co. Telephone and Internet Service Provider Fact Sheet (May, 2012) Phone: 1800 881 816.</td>
</tr>
</tbody>
</table>

3.8. Other Key Stakeholders
There are a number of organisations involved in the NBN at this early stage in addition to NBN Co. Some of these are below:

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Role</th>
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</table>
| Department of Broadband Communication and the Digital Economy | The department has five main areas of focus:  
  • implement the digital economy strategy for Australia;  
  • transforming the structure of telecommunications;  
  • switchover to digital television and enhancing the |
<table>
<thead>
<tr>
<th>Stakeholder (Role)</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Department of Further Education Employment Science and Technology (DFEEST)</strong></td>
<td>DFEEST promotes and supports digital and technology developments within Government, business and community sectors, ensuring that strategic policy is developed for economic and social benefit to the State. Working together with business, industry and the community, DFEEST seeks to help all South Australians get connected. <a href="http://www.dfeest.sa.gov.au">www.dfeest.sa.gov.au</a></td>
</tr>
<tr>
<td><strong>Local Government Associations</strong></td>
<td>Both Australian Local Government Association (ALGA) and the LGA (SA) are proactively involved in providing information to Local Councils to prepare for participation in the NBN. A key focus is to support the digital literacy and NBN usage of both households and business in communities.</td>
</tr>
<tr>
<td><strong>The Communications Alliance</strong></td>
<td>The primary telecommunications industry body in Australia. Through a range of successful programs, events and initiatives, Communications Alliance has a leadership role in facilitating industry-based solutions to sectoral issues and is taking steps to bring to fruition the broadband and digital era, including leading the industry’s involvement in the National Broadband Network implementation.</td>
</tr>
<tr>
<td><strong>Telecommunications Industry Ombudsman</strong></td>
<td>The TIO is a fast, free and fair dispute resolution service for small business and residential customers who have a complaint about their telephone or internet service in Australia. 1800 062 058 <a href="http://www.tio.com.au">www.tio.com.au</a></td>
</tr>
</tbody>
</table>
4. NBN Rollout and Connections

The NBN is to be progressively rolled out across Australia from 2011 and is estimated to take ten years to complete. A number of first release sites (as test sites) have been established and are operating, including Willunga in South Australia.

93% of the NBN will be fibre (fibre optic cable). The fibre rollout will usually follow the same path as the current telephone wires and associated passive infrastructure. This is usually underground cable, but may also be overhead, following the path of existing copper wires. The network is operational as it is rolled out, with NBN services ready to use approximately one year after construction commences in an area.

The remaining 7% of the network (where fibre optic cable is a less realistic option) will be connected through fixed wireless service or satellite service. It is anticipated the fixed wired service will be completed by 2015.

The satellite service is temporarily provided by an interim satellite service (ISS) which is now available in eligible regional and rural areas. NBN Co plans to launch its own satellites to establish the longer term satellite service from 2015. A household or business may be eligible if it does not currently have broadband services available in its area.

NBN Co determines which of the three technology options is most suitable for establishing high speed broadband services in any given area. The fibre optic network footprint will service the majority of premises. Fixed wireless services will be established where fibre is not viable to sustain a reliable service. Satellite technology will provide services to the more remote communities of Australia.

Connection from the network to premises is by:
- for fibre: by underground wire or overhead cable to the eaves of premises; and
- for fixed wireless and satellite by an antenna and radio transmitter on the roof or eaves of the building.

As premises are connected, households and businesses do not need to change existing services. However, the existing copper wire based service will be disconnected 18 months after a fibre construction area is deemed, ‘Ready For Service’. NBN Co delivers a mandatory communication program, termed Public Information Migration. The copper wire network will be maintained in areas using fixed wireless and satellite services for the next 10 years.
For fibre serving areas, the following table details the construction process, including average times for each phase:

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<tr>
<th>Month</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<th>18</th>
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<tbody>
<tr>
<td>Planning</td>
<td>NBN Co</td>
<td>Delivery</td>
<td>Partner</td>
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<td>Detailed Design</td>
<td>Delivery</td>
<td>Partner</td>
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<td>Remediation</td>
<td>Delivery</td>
<td>Partner</td>
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<td>Construction</td>
<td>Zillow</td>
<td>Delivery</td>
<td>Partner</td>
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<tr>
<td>Testing</td>
<td>NBN Co</td>
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<tr>
<td>Activation</td>
<td>NBN Co</td>
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Indicative timeframes

These stages overlap and may vary, depending on the requirements for each area.

**Additional Resources**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information Sources</th>
</tr>
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</table>

**4.1. South Australia**

Much of South Australia already has access to broadband services, either through ADSL, ADSL2+, fixed wireless, mobile broadband (3G or 4G) or satellite. The NBN has already begun rolling out in South Australia with Willunga being one of the first towns connected as a ‘test site’; one of five on mainland Australia. There are a number of other early sites in South Australia where planning or constructions have
commenced as at March 2013. However, it is likely that the NBN installation as a whole will take at least ten years to complete.

**NBN Co fibre rollout program as at March 2013 is as follows:**
1. First Release Trial Sites; released in 2011; Willunga;
2. Second Release Trial Sites; released in 2011; Modbury, Prospect, McLaren Vale, Seaford;
3. Early Release Site (12-month plan); see below;
4. National Rollout (Phase 1) – 2012 to 2015; refer to NBN Co website, rollout map; and
5. National Rollout (Phase 2) – 2013 to 2016; March 2013 release.

Planning and construction has already commenced at a number of early sites, which includes the following Councils:

<table>
<thead>
<tr>
<th>Metropolitan Councils</th>
<th>Regional Councils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onkaparinga</td>
<td>Port Augusta</td>
</tr>
<tr>
<td>Prospect</td>
<td>Yankalilla</td>
</tr>
<tr>
<td>Tea Tree Gully</td>
<td>Alexandrina</td>
</tr>
<tr>
<td>Charles Sturt</td>
<td>Victor Harbor</td>
</tr>
<tr>
<td>Walkerville</td>
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<td>Pt Adelaide Enfield</td>
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<td>Adelaide</td>
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<td>Adelaide Hills</td>
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<td>Salisbury</td>
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<tr>
<td>Playford</td>
<td></td>
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<tr>
<td>Mitcham</td>
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<tr>
<td>Gawler</td>
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### Additional Resources

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information sources</th>
</tr>
</thead>
</table>

### 4.2. Interactions with Households and Businesses

During the planning and construction phase, NBN Co will work with the council to communicate with local communities to inform them of the impacts of construction and engage them in the benefits of the NBN services. This can range from mail outs to householders to conducting public information sessions at venues such as libraries. Under Public Information Migration requirements, NBN Co will deliver a number of Local Area Marketing activities, including:
- press releases;
- print;
- radio;
- television;
- digital;
- shopping centre information kiosks;
- posters (mobile, static);
• switch on / photo opportunity events;
• direct mail for Ready For Service;
• direct Mail for Disconnection Commencement Date; and
• various construction communications (newspaper adverts; direct mail).

NBN Co through its Community Account Manager will develop and deliver a local Communications and Engagement Plan, to maximise understanding, awareness and activations at a local contextual level.

To date, Councils involved in early site rollouts have indicated that interest from the community is high and that negative impact or complaints have been minimal. Local Councils can play a critical role in connecting with communities due to their existing relationship with and knowledge of the people in their region.

When the infrastructure construction is completed, the installation of NBN equipment in households will then take place. NBN Co or its contractor will make contact with households. The equipment installed in premises is not dissimilar to facilities for internet, security systems or cable television services currently used.

It is at this point that some objection to the work may take place and Councils should be prepared for enquiries as residents will then be more aware of the rollout and may be sensitive as it now has impact on their own premises.

4.3. Opt Out Policy
The NBN has an ‘opt out’ policy for the installation of connections. Thus, a household or business must actively choose not to be connected to the NBN, or they will be connected. Councils may also receive some enquiries regarding this and should direct them to NBN Co or the appropriate Telephone and Internet Service Provider.

Once the NBN service is connected, the Telephone and Internet Service Provider will then contact premises regarding services that can be provided, pricing and packages on offer. At this stage, a household could choose to continue with existing services and not upgrade. However, 18 months after the NBN is connected in that area, the existing copper wire services will be disconnected. At that stage, existing service can continue via the NBN network, although pricing and packaging of that service may change.

Both NBN Co and TUSMA (Federal Government Agency; Telecommunications Universal Service Management Agency) undertake a number of Public Information Migration communication activities, aimed at ensuring consumers understand what is going on, why and what their choices are.
4.4. Key Roles

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Engaging with NBN</th>
<th>Plan and construction</th>
<th>Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBN Co and / or its Contractors</td>
<td>Providing detailed information. Participate in conducting seminars with public</td>
<td>Work closely with councils to ensure minimal impact and cost efficient rollout. Likely</td>
<td>Contact households and businesses services when ready and prior to</td>
</tr>
<tr>
<td></td>
<td>Letters to premises prior to construction.</td>
<td>separate contractors installing inside.</td>
<td>disconnect of copper wire services.</td>
</tr>
<tr>
<td>Telephone and Internet Service Providers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Can choose to play a key role in engaging local communities.</td>
<td></td>
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</tr>
<tr>
<td>Local Government</td>
<td>Provide detailed information to NBN Co at early stages.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Households and Businesses</td>
<td>Attend information sessions and learn about NBN.</td>
<td></td>
<td>Connect to NBN via Telephone and Internet Service Provider.</td>
</tr>
</tbody>
</table>

4.5. Criteria for rollout of fibre network

First release sites were selected to be able to pilot or test the network rollout via a diverse selection of housing, geographic and climatic conditions.

Decisions about where and when to rollout the NBN are determined by a combination of general policy directives from our shareholders (Federal Minister for Finance, and the Federal Minister for Broadband, Communications and the Digital Economy) and engineering considerations.

For example:

- the directive to prioritise the rollout to regional communities is balanced against the availability of existing infrastructure which NBN Co is seeking to use to make the construction of the NBN more efficient; and
- key engineering, network design and logistical criteria central to NBN Co’s rollout strategy determine decisions about the selection of rollout sites.

A number of basic engineering principles were applied to determine the rollout schedule including:

- existence of transit network in an entire loop for an entire region;
- availability of ‘Points of interconnect,’ (large phone exchanges, largely reflecting Telstra’s current aggregation points);
- suburban telephone exchanges, dark fibre links, and construction of fibre nodes;
- sequencing the build from neighbouring areas once started in that region to minimise costs and operate efficiently;
• prioritising the links and step off points that will support the fixed wireless and satellite networks;
• balancing between the states, and complete Tasmania by 2015;
• balancing between regional and metropolitan Australia;
• completing the sites that we had already announced;
• prioritising growth corridors and new development (Greenfields) sites; and
• ensuring the build is balanced for contractors and adjusted if likely to cause congestion in local communities.


4.6. New Developments (Greenfields)

This term is used to refer to housing developments planned or under construction that will have the NBN infrastructure installed as part of its constructions. For reasons of efficiency and practicality, the installation will occur simultaneously with the construction of other infrastructure at these sites. Thus, these areas will be NBN ready when residents move in.

Developers apply to NBN Co if:
• the development will have 100 premises or more released over a three year period;
• they have a development with less than 100 premises, NBN Co may provide infrastructure to these developments if it’s practical and economical to do so Civil works approval were received after 1 January 2011; and
• the development is within the NBN Co fibre footprint.

Developers apply to Telstra or another service provider if:
• the development will have less than 100 premises and NBN Co is not able to service the development as part of the Greenfields rollout; and
• the development is located outside of the NBN fibre footprint.

Developers with pre-existing developments:
• should contact Telstra; Telstra is responsible for providing telecommunications infrastructure and services to developments approved before 1 January 2011.

If a Council has plans for new housing developments, the Council should contact NBN Co as soon as possible and involve them in the planning and construction of the new development.

Additional Resources

<table>
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<tr>
<th>Topic</th>
<th>Information sources</th>
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</table>

4.7. Rollout program in South Australia

The rollout of the NBN network in South Australia is mapped by NBN Co and is updated monthly. The most current information is available on the NBN Co website, available at http://www.nbnco.com.au/getting-connected/service-providers/network-rollout.html.
As at March 2013, NBN Co provides a map of the fibre optic network construction in three categories:

- established services;
- areas where work has commenced;
- areas where work is planned to commenced within one year; and
- areas where work is planned to commence within three years.

The areas that are mapped by NBN Co are based on network technology and efficiency requirements and do not align with Local Government boundaries. A substantial proportion of areas are not currently covered in the map of the above four categories and beyond 2015 there is currently no information available regarding fibre network rollout.

The first Fixed Wireless Cluster for South Australia was announced in late January 2013. The Councils areas where fixed wireless internet will be available in mid 2014, subject to planning approvals, are:

- Coorong District Councils;
- District Council of Grant;
- District Council of Yankalilla;
- Kangaroo Island Council;
- Karoonda East Murray Council;
- Rural City of Mid Murray;
- Murray Bridge Council;
- Naracoorte Lucindale Council;
- Tatiara District Council; and
- Wattle Range Council.

It is important to recognise that the rollout of the NBN is expected to be completed over a ten year period. This means that some households and businesses will be waiting for the service for far longer than others. It is very likely that during this ten year period the nature and range of services that high speed broadband will offer will be well established and popular with the community.

The rollout plan is designed to build the most reliable network as efficiently as possible. Thus “queue jumping” or attempting to change the rollout plans is unlikely to be considered as they are likely to have a negative impact on the NBN project as a whole.

Although it is difficult to predict, it is likely that some residents may complain that their neighbours have access to services they do not. It is here that councils may be approached to provide a solution to this issue by residents or local businesses.

Thus, Councils should be ready to respond to such requests or complains by providing appropriate information and be able to refer the complainant to up to date information.

### Additional Resources

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information sources</th>
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</thead>
</table>
4.8. Network Extension Program

NBN Co has a network extension policy and process. The network extension program is a process created for a community, businesses or individual to fund an extension of the fibre or fixed wireless network to their premises. This gives Australian households, businesses and other premises the ability to choose, where possible, an alternative technology through which they can access the NBN. If approved, the cost of such network extensions will be paid by the community, individual or business requesting the extension. NBN Co is bound under its policy to charge and recover only “incremental costs” of the additional infrastructure work. However, given the sophisticated nature of the planning and construction of the NBN network, it is anticipated that such incremental costs will be very significant (it is a far more complex process than simply extending some wiring to another premise or building).

Realistically, a network extension funded by the consumer is thus unlikely to be viable or affordable in many circumstances.

Additional Resources

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network extension policy</td>
<td>NBN Co. (2012): Network Extension Policy:</td>
</tr>
<tr>
<td></td>
<td>NBN Co. (2012): Network Extension Policy - Fact Sheet:</td>
</tr>
<tr>
<td></td>
<td>NBN Co. (2012): Network Extension Policy:</td>
</tr>
</tbody>
</table>

4.9. Complaints

If there are problems related to NBN construction, householders and businesses should be directed to call the NBN Co Solutions Centre on 1800 687 626 or email info@nbnco.com.au.

If residents or businesses have problems relating to their phone or broadband services, they need to contact their Telephone and Internet Service Provider as the NBN Co does not have a direct relationship with the consumers of services it is a wholesale provider to the telecommunications service providers.

If parties are unhappy about the service or response from the provider about a complaint, consumers can be directed to the Telecommunication Ombudsman on 1800 062 058. However, the first point of contact for households and businesses regarding enquiries or complaints should be their Telephone and Internet Service Provider.

Local councils should consider providing contact information on their websites so that residents and businesses can more easily find information sources and assistance.

<table>
<thead>
<tr>
<th>Complaint Type</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>NBN Construction</td>
<td>NBN Co Solutions Centre on 1800 687 626 or email <a href="mailto:info@nbnco.com.au">info@nbnco.com.au</a>.</td>
</tr>
<tr>
<td>Quality of Internet/Phone Service</td>
<td>Contact your Telephone and Internet Service Provider.</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>To complain about your TISP</td>
<td>If you are unsatisfied with the response from your TISP, contact the Telecommunication Ombudsman on 1800 062 058.</td>
</tr>
</tbody>
</table>
5. The Digital Economy

The digital economy is a term to describe the global network of social and economic activities that are enabled by communication and information technology such as the internet and broadband services. The NBN is expected to support benefits in terms of jobs, employment, health, education, the environment, social inclusion and recreation.

5.1. The National Digital Economy Strategy (NDES)

The NDES is a vision for Australia to realise the benefits of the NBN and become a leading digital economy by 2020. It outlines how Australia can boost its social well-being, productivity and global competitiveness using the NBN.

The NDES has eight goals:
1. increase online participation by households;
2. increase online engagement by business and not for profit organisations;
3. improve environmental management;
4. improve health and aged care services;
5. expand online education;
6. improve Government service delivery;
7. increase digital engagement in regional Australia; and
8. increase teleworking (where workers can be productive off-site or at home).

Additional Information

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information sources</th>
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</table>

5.2. Regional Digital Economy Strategies

Many Councils have developed, or are considering, a Digital Economy Strategy as part of the Council’s long term strategy, with particular reference to economic development.

This can be used as an instrument to identify and communicate the opportunities of the NBN for the community, both residential and business. It can be an important part of the process of engaging the local community in the benefits of the NBN.

Any strategy should be aligned with the existing long term strategies and reflect the unique nature of the industry and residential demographics of the region.

There are examples of such strategies that can be useful to review in considering your council’s economic response to the NBN opportunities. Two examples that demonstrate variation as to how Councils can engage with the NBN are provided below.

**Future Prospect- Digital Economy Strategy, Local community Engagement 2009-2012**

The City of Prospect has developed a comprehensive set of integrated strategies to fully realise the benefits of the NBN for their communities. The vision sees the internet as transforming the world in a new paradigm of ‘live local, act global’. The City sees its role as ‘ensuring the transformation to a truly digital age is inclusive, sustainable and equitable’.

**City of Broken Hill - Far West NSW digital economy strategy**
The City of Broken Hill has participated in developing a strategy as part of the Far West New South Wales region. It identifies high speed broadband as a means of developing mining, creative and tourism industries as well as improving education and health services to their remote communities. The City has developed a concise and practical ‘current state and future vision’ that identifies how government can use the internet effectively with both short term and long term actions and commitments.


The NBN Co Community Account Manager is available to facilitate development of a Digital Economy Strategy, and/or access to existing strategies nationally.

**5.3. Funding and Program Initiatives – South Australia**
NBN Co as Government Business Enterprise does not provide funding for NBN-related initiatives or projects. It works in collaboration through facilitation and in-kind support, driving awareness, understanding and ultimately activations on the network.

Department of Broadband, Communications and the Digital Economy (DBCDE) have a number of funding initiatives, as part of their National Digital Economy Strategy. All of these funds have been allocated however, the projects, their outcomes and lessons learned are required to be shared and disseminated. With many of the successful tenderers being LGAs across the nation, there is a good source of information coming. For details visit: [http://www.dbcde.gov.au/digital_economy/programs_and_initiatives](http://www.dbcde.gov.au/digital_economy/programs_and_initiatives).

In South Australia a number of programs are being managed by the Department of Further Education, Employment, Science and Technology (DFEEST).

“Digital literacy is becoming an essential part of time saving, cost saving and socially inclusive activities such as telecommuting, remote work and study opportunities, information gathering, price / product discovery and business advertising and promotion” *(DFEEST web site)*.

There are various initiatives available to South Australian businesses to help make the most of online opportunities.

**ebizSA**
This initiative is developed to help South Australian small to medium-sized enterprises (SMEs) exploit today’s internet technologies and to use those technologies to offer better, faster, more cost-effective service, streamline their business systems and processes and enable them to compete successfully locally, nationally and internationally.

**Mega**
This is an incubator program which is open to both students and professionals. Participants work in teams to develop entrepreneurial skills and new business ideas for mobile platforms.
**ForwardIT**
This program has been designed to help people develop fundamental skills and knowledge to use the internet confidently and safely. It can help employees to develop basic skills and confidence in accessing and using the online world.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information sources</th>
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<tbody>
<tr>
<td>Programs and funding</td>
<td>DFEEST website: <a href="http://www.dfeest.sa.gov.au">www.dfeest.sa.gov.au</a></td>
</tr>
</tbody>
</table>
6. Council Actions

This section provides some brief guidance for Councils when considering their role in the NBN rollout.

6.1. Prepare early
Although the NBN rollout will take an estimated ten years, most experts and agencies are advising local Government to prepare early. It is recognised that Local Council play a vital role in the successful rollout of the NBN due to the unique role council play in our communities, including:

- providing critical information to NBN Co on the municipality;
- liaising with NBN Co regarding planning and construction to ensure minimal disruption and protection of local amenities;
- enabling communication and engagement with residents and businesses via its relationships and networks; and
- supporting local residents and business to utilise the NBN and its benefits.

As well as the above functions, councils can also plan and prepare for improvements to their own service delivery and business that can result from embracing the NBN and its capabilities.

Additional Resources

<table>
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<tr>
<th>Topic</th>
<th>Information sources</th>
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6.2. Define your role
ALGA advises that there is no one size fits all approach to Local Government involvement in the NBN rollout. Thus it is important for each Council to decide how deeply they will invest time and resources into the NBN rollout.

Time and resources dedicated to NBN initiatives should be considered an investment into the future benefits to the residents, community and business, as well improving Council services and operations directly.

To decide the level and type of involvement in the NBN rollout, an early step is to review your Councils long term strategies and policies for a range of issues to determine what is the most appropriate response for your council and how the NBN might support the achievement of objectives.

Some Councils have fully embraced the potential of the NBN and are viewing it as a transformational opportunity for their community and Council operations. Others have a more limited scope of involvement during the rollout of the NBN. It is important for each Council to decide how they will engage with this opportunity.

NBN Co recommend two key activities, which to date have proved successful in NBN preparedness and engagement between NBN Co and Councils:

1. Create an NBN Working Group or Digital Taskforce to oversee and facilitate engagement with NBN Co and drive digital agenda within Council and to the community. There is no one-size-fits-all but recommended participants include: Economic Development, Communications and/or Corporate Services, IT, Infrastructure, and Planning. Some Councils have elected to create a wider
6.3. Dealing with NBN Co

Councils that have dealt with NBN Co in early stages of the rollout have found it a positive experience. NBN Co will seek assistance from Councils to fulfil their role and each Council should plan to invest time into that assistance.

As the time for the NBN rollout in your region approaches, it is recommended that you make contact with NBN Co. They are able to provide a large amount of information, keep your Council up to date on latest development and work co-operatively with you to ensure the rollout works smoothly in your area.

Your first point of contact and ongoing strategic engagement point is the Community Account Manager for SA / WA, Chris Gregory.

Christopher Gregory
Community Account Manager SA / WA
Corporate Affairs
P +61 8 8193 3608 | M +61 (0) 400 697 928 | E chrisgregory@nbnco.com.au
Community Infoline: 1800 687 626
Level 2, 31 - 33 Richmond Road, Keswick SA 5035

This position works strategically with Councils providing a direct line of engagement for CEO, Mayor, Elected Member and Executive Staff. They also facilitate engagement with NBN Co business units during various stages of the rollout, planning and design, construction and operations (business as usual).

The position drives local awareness and information campaigns, and acts as the State’s Media Spokesperson, and is the key escalation point for both issues and opportunities.

6.4. Planning Implications

To date, Councils who have worked with NBN Co in South Australia indicate that planning issues have not been difficult to manage with the NBN rollout thus far. NBN Co and its contractors have worked closely with Councils and been open and responsive with any available information.

Australia wide, NBN Co will install an estimated 181,000 kms of optical fibre cable and 57,000 kms of transit fibre to provide 13 million premises with high speed broad-band coverage.

To install the NBN network, NBN Co will require:

- a site for a fibre access node. This has already been defined and agreed through the NBN Co / Telstra Definitive Agreement, with nodes located in existing Telstra facilities;
- a site fibre distribution hub for every 300 premises (these are about the size of a small bar fridge). There are approximately 16 of these ‘street cabinets’ per fibre build module, with each fibre build module incorporating approximately 3,000 premises;
- design optimal mix of underground and overhead cabling; and
- understand a region’s heritage and environmental sites and local planning codes.
NBN Co will require a significant amount of information from Local Councils when planning the rollout. They have identified the following as critical information:

- heritage and environmentally significant zones;
- local planning codes, zoning maps and development application procedures;
- locations existing ducts and shared trench arrangements;
- planned development sites (greenfield sites);
- overhead and underground power infrastructure;
- Council sites that could be used by NBN Co; and
- locations of Government owned land, education, health and Government facilities.

The NBN rollout is covered under the framework of the Telecommunications Act 1997 and the Telecommunications (low impact facilities) Determination 1997. These provide immunities that make a range of telecommunication facilities exempt from some local planning regulations, except where the heritage and environmental issues are concerned. However, not all NBN installations will be low impact.

Wherever practicable, NBN Co and its contractors will utilise existing infrastructure to minimise impact and cost.

### 6.5. Council Civil Works

When planning to undertake civil works (such as road repairs or construction, footpath improvement), the Council should notify NBN Co as with the reasoning above, NBN Co may wish to participate in the works to install NBN network infrastructure, such as fibre optic cable, for future rollout plans in that area. This would minimise disruption and save time when the NBN rollout commences in that area in the future.

NBN Co seek an ongoing notification process, including sharing of forward capital works programs.

#### Additional Resources

<table>
<thead>
<tr>
<th>Topic</th>
<th>Information sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning and development</td>
<td>Australian Local Government Association; NBN Co. (June 2012):</td>
</tr>
<tr>
<td></td>
<td>Best Practice Guide for Councils when Initially Dealing with NBN Co.</td>
</tr>
</tbody>
</table>

### 6.6. Communications and Development

Local Councils are in an ideal position to work with NBN Co to engage their communities and be a key point of communication regarding the NBN and its benefits. However, Councils need to plan and decide what role they will play and what resources they will dedicate to this role.

Federal funding for early NBN sites has been fully allocated, designed to assist Local Councils in their role to increase technology literacy and usage of the NBN. However, such funding and programs may not be available for future NBN sites.

NBN Co through the Community Account Manager SA/WA has a defined but flexible Communications and Engagement Plan.

This includes required Public Information Migration marketing campaigns, and broader Local Area Marketing Campaign plans.
Examples of this engagement include:
1. **construction activity**: newspaper adverts and premises direct mail;
2. **Ready For Service**: when a fibre and/or fixed wireless area is complete and ready for connections, NBN Co deliver:
   a. print, radio and digital announcements;
   b. shopping centre kiosk (information booth);
   c. static and mobile billboard advertising;
   d. appropriate PR event (e.g. photo opportunity);
3. **Public Information Migration**:
   a. direct mail campaigns advising premises that NBN is now available, and their options; and
   b. direct mail campaigns advising premises that NBN is now available and that in 18 months time copper services (voice; data) will be decommissioned.

Further engagement activities are determined through collaborative engagement between Council and NBN Co Community Account Manager, responding to and proactively engaging in local sector information and awareness activities.

### Additional Resources

<table>
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<th>Topic</th>
<th>Information sources</th>
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<tbody>
<tr>
<td><strong>Community engagement</strong></td>
<td>Australian Local Government Association; NBN Co. (June 2012): Best Practice Guide for Councils when Initially Dealing with NBN Co.</td>
</tr>
</tbody>
</table>

### 6.7. Digital Economy Strategy

Many Councils have developed, or are considering, a Digital Economy Strategy as part of the Council’s long term strategy, with particular reference to economic development.

This can be used as an instrument to identify and communicate the opportunities of the NBN for the community, both residential and business. It can be an important part of the process of engaging the local community in the benefits of the NBN. Any strategy should be aligned with the existing long term strategies and reflect the unique nature of the industry and residential demographics of the region.

In South Australia, Councils involved in the early stages of NBN have received funding for projects to enable their communities to realise the opportunities the NBN provides. Some of these have included the development of a Digital Economy Strategy for their region. These early stage strategies can be useful to review in considering your Council’s economic response to the NBN opportunities.

### Additional Resources

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6.8. Funding and Support
There are programs that are designed to help increase on-line literacy and engagement in and usage of the NBN. These programs are focussed on the earlier established sites and areas. Councils that are not early NBN rollout sites should not rely on funding from such programs. However, the programs are designed to enable all Councils to learn from the experiences of the early rollout areas.

Support can be gathered through a number of sources:
1. NBN Co Community Account Manager;
2. SA Government ForwardIT initiative;
3. Federal Government Cyber Safety and Awareness resources; and

6.9. Delivery of Council Services
Local Government has the opportunity to leverage the benefits of the NBN to improve its own service delivery. This could range from simply using the internet as a communication means with rate payers, to promoting your region, to more complex service delivery.

It is anticipated that high speed broadband and the internet will significantly transform how Councils conduct their business. Just as the internet and mobile phone technology has radically changed how we communicate, purchase goods and research information, so the NBN will provide an opportunity for Governments to transform how it provides services and information.

To make the optimum use of these opportunities, Councils will innovate their service delivery and create new ideas and initiatives. It is likely that investment in and information about such opportunities and changes will be shared, at least to some extent, between Local Government organisations.

Given the above, it is worthwhile:
• firstly, working within your own Council to start thinking about and planning opportunities that the NBN can provide; and
• secondly, keep in contact with the Local Government Association SA and Australian Local government Association, other neighbouring Councils and keep checking the NBN Co website regularly for ideas and information.

Federal Government NDES initiatives include a Digital Local Government pilot program. This is designed to pilot how Councils will utilise high speed broadband and to share the lessons learned.

In South Australia the following Councils secured funding for this initiative:
1. City of Onkaparinga;
2. City of Tea Tree Gully;
3. Adelaide Hills District Council; and
4. City of Salisbury.

Additional Resources

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<tr>
<th>Topic</th>
<th>Information sources</th>
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## 7. Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>High speed broadband</strong></td>
<td>The term broadband refers to a range of technologies, all of which provide higher data rate access to the Internet.</td>
</tr>
<tr>
<td><strong>Internet</strong></td>
<td>The Internet is a global system of interconnected computer networks serving billions of users worldwide. Millions of private, business, and government networks are linked by a range of electronic, wireless and optical technologies. The Internet carries an extensive range of information resources and services, such as World Wide Web (WWW) and the infrastructure to support email.</td>
</tr>
<tr>
<td><strong>NBN</strong></td>
<td>The National Broadband Network (NBN) will an infrastructure network that will deliver high speed broadband to 100% of Australia using three technologies: fibre optic cable, fixed wireless and satellite.</td>
</tr>
<tr>
<td><strong>NBN Co</strong></td>
<td>NBN Co Limited is wholly owned by the Commonwealth Government. It was formed to provide a high speed, integrated national broadband service. Its role is to install the network infrastructure and provide wholesale services to Telephone and Internet Service Providers.</td>
</tr>
<tr>
<td><strong>Digital economy</strong></td>
<td>The digital economy is a term to describe the global network of social and economic activities that are enabled by communication and information technology such as the internet and broadband services.</td>
</tr>
<tr>
<td><strong>Telephone and Internet Service Providers or TISPs</strong></td>
<td>Telephone and Internet Service Providers are telecommunications businesses that will provide telephone, internet and other services to households and businesses utilising the NBN platform. They will use and pay for the use of the NBN infrastructure and include this whole cost in the price they charge their customers. Examples of TISPs are Telstra and Optus.</td>
</tr>
<tr>
<td><strong>Fibre Optical cable</strong></td>
<td>An optical fibre cable contains one or more optical fibres coated with plastic layers and contained in a protective tube. It has the capacity to carry a large volume of data and voice transmissions simultaneously.</td>
</tr>
<tr>
<td><strong>Fixed wireless</strong></td>
<td>Fixed wireless broadband provides a broadband connection over the air from a radio network base station to a transmitter which is typically attached to the outside of the premises.</td>
</tr>
<tr>
<td><strong>Interim satellite services or ISS</strong></td>
<td>The ISS has been established to provide NBN access to eligible remote premises until 2015 when NBN Co will deploy its own satellites to provide NBN access and services.</td>
</tr>
<tr>
<td><strong>Greenfield sites or ready estates</strong></td>
<td>This term is used to refer to housing developments planned or under construction that will have the NBN infrastructure installed as part of its construction. For reasons of efficiency and practicality, the installation will occur simultaneously with the construction of other infrastructure at these sites.</td>
</tr>
<tr>
<td><strong>Fibre distribution hub</strong></td>
<td>A metal box (about the size of a bar fridge) that is placed on the footpath for every 200 or so houses in an area. Each one contains the optic fibre splitters that connect to the fibre network.</td>
</tr>
<tr>
<td><strong>Points of interconnect or POI</strong></td>
<td>POIs are the exchanges where the NBN hands over internet traffic to your telephone and internet providers' own networks.</td>
</tr>
<tr>
<td><strong>Fibre access nodes</strong></td>
<td>A facility that houses the active equipment providing services to a Fibre Serving Area (FSA).</td>
</tr>
<tr>
<td>Term</td>
<td>Description</td>
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<tr>
<td>Fibre Serving Area or FSA</td>
<td>FSA is the area where a section of the NBN is being built and can be a few towns or part of a suburb, depending on the differing geography or landscape. The FSA can be made up of up to 12 modules (Fibre Serving Area Modules or FSAMs) with each module consisting of around 3,000 premises.</td>
</tr>
</tbody>
</table>
8. Resources

8.1. NBN Co
NBN Co. (2012) Nation Building Infrastructure:

NBN Co. Frequently Asked Questions About NBN Co. And the NBN:


NBN Co. (2012) Telephone and Internet Service Provider Fact Sheet: 1800 881 816


NBN Co. (2012) Preparing for the NBN- Fibre Optic Connections:

NBN Co. (2012): Preparing for the NBN- Fixed Wireless Connections:


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