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Committee Secretary
Senate Standing Committee on Environment and Communications
PO Box 6100
Parliament House
Canberra ACT 2600
24th February 2011

NBN Co and NBN Access Bills

ATUG is pleased to make a submission to the Committee on this package of legislation which provides a transparent governance and accountability framework for NBN Co in the NBN Companies Bill, and a clear and certain basis in the NBN Co Access Bill for access arrangements which will underpin the development of the Layer 2 and Layer 3 Wholesale markets to support effective retail competition and better outcomes for end users. ATUG's comments are highlighted in our summaries of the two Bills.

ATUG makes this submission on the basis of 30 years experience in arguing for effective competition in telecommunications markets because it drives better outcomes for end users. Failure in telecommunications markets since the 1990's has led to under-achievement by the sector in the fixed-line market, most recently in the deployment of advanced broadband services.

The core issues that the Government's National Broadband Policy addresses are:

- Misaligned incentives when a company is both a wholesaler and retailer
- Upgrading Australia's national copper network in order to supply next generation broadband services
- Ineffective competition and poor outcomes for end users – choice, innovation, service performance.

The legislation before the Committee is designed to implement Government policies designed to address these market failures. It is important that these policy objectives are before the Committee and ATUG has used them in providing our comments on key aspects of the draft legislation, in particular the Prime Minister's commitments to Regional Australia and the Government's Statement of Expectations.

In addition, statements by NBN Co through its Corporate Plan need to be taken into account in determining NBN Co's likely approach to policy implementation.

ATUG would be pleased to assist the Committee in its further deliberations

Yours sincerely,

Rosemary Sinclair
Managing Director
Australian Telecommunications Users Group (ATUG)



**NBN Companies Bill
Senate Inquiry**

February 2011

ATUG Summary – NBN Companies Bill and Explanatory Memorandum

The Bills ensure that NBN Co will remain true to its wholesale-only mandate and deliver open and equivalent access to retail providers...a platform for retail-level competition to flourish.

ATUG: prefers further opening of the market to new entrants and supports the sale of Wholesale (Layer 2 bitstream services) to any customer who wishes to buy such services. ATUG does not support limiting potential customers of the NBN to those who supply services to the general public as we feel this will reduce the emergence of specialist service providers who may otherwise emerge to provide services in the mining sector, health sector, energy sector and the like. The purpose of the NBN is to address market failure and to do so “in the long-term interests of end users” – this can best be achieved by providing maximum choice to end users who wish to access wholesale services directly.

ATUG: provides comments on the Companies legislation based on the Government’s Statement of Expectations for NBN Co (ATUG Summary Attachment 1) which the Government describes as:

- The SOE is the **Government’s response to the NBN Implementation Study**
- It provides **direction to the Company**
- It **informs the community** of the Government’s position on a range of issues

The NBN Companies Bill:

- Regulatory framework for the ownership and operations of NBN Co
- Arrangements for the eventual sale of the Commonwealth’s stake in NBN Co

Definition of NBN Co

Fundamental to the operation of the regime is the definition of an NBN corporation.

An NBN corporation is defined in Schedule 1 as:

- NBN Co;
- NBN Tasmania; and
- a company over which NBN Co is in a position to exercise control

Definition of national broadband network:

national broadband network means a national telecommunications network for the high-speed carriage of communications, where an NBN corporation has been, is, or is to be, involved in the creation or development of the network. To avoid doubt, it is immaterial whether the creation or development of the network is, to any extent, attributable to:

- (a) the acquisition of assets that were used, or for use, in connection with another telecommunications network; or
- (b) the obtaining of access to assets that are also used, or for use, in connection with another telecommunications network.

There are seven parts to the Companies Bill.

Part 1 comprises the preliminary sections, including commencement, objects and definitions.

3 Objects:

- (1) To provide a regulatory framework for NBN corporations that promotes the long-term interests of end-users of carriage services or of services provided by means of carriage services...

ATUG: supports the clear statement of this objective as the best way to avoid unintended monopoly behavior by NBN Co. The objective has to be monitored by Parliament through reporting processes and through the Joint Committee set up to oversee the roll-out of the NBN network

every six months as well as the Standing Committee on Infrastructure and Communications. Decisions taken by NBN Co which impact on market outcomes should be subject to review as to whether they are in the long-term interests of end users. For example, decisions to set criteria for accrediting RSPs so they can become customers of NBN Co should be subject to such review.

(2) The other objects of this Act, when read together with Part XIC of the *Competition and Consumer Act 2010*, are as follows:

- (a) to ensure that the supply of an eligible service by an NBN corporation is on a wholesale basis;
- (b) to ensure that an NBN corporation does not supply a content service;
- (c) to ensure that an NBN corporation does not supply a non-communications service;
- (d) to ensure that an NBN corporation does not supply goods that are not for use in connection with the supply of an eligible service by the NBN corporation;
- (e) to restrict the investment activities of NBN corporations;
- (f) to provide a framework for the functional separation of NBN corporations;
- (g) to provide a framework for the divestiture of assets of NBN corporations;
- (h) to ensure that an NBN corporation provides open access to eligible services on a non-discriminatory basis.

Part 2 deals with the **operations of NBN Co and any NBN corporations**, including provisions relating to NBN Co's wholesale-only nature, the functional separation of NBN corporations and the divestiture of assets by NBN corporations.

Simplified Outline:

- An NBN corporation must not supply an eligible service to another person unless the other person is:
 - a carrier; or
 - a service provider.

ATUG: supports the exemptions for utilities.

ATUG: would have preferred NBN Co to have the option to sell NBN Wholesale Services (Layer 2 bitstream services and other services as NBN Co decides to provide) to anyone who wishes to buy them. ATUG is concerned that limiting the “eligible buyers” to those providing “services to the public” will discourage specialist network providers who will be servicing a sector rather than “members of the public”.

ATUG only accepts the current limitation *provided* the power remains for the Minister to direct NBN Co to sell such services or the ACCC declares such services in the case of market failure. The development of the L3 wholesale market is yet to happen and the interaction between NBN Co “on boarding” requirements, capital requirements to participate as a L3 wholesaler and the unregulated nature of this intermediary wholesale market mean ATUG would prefer to see the ACCC with a requirement to monitor the development of this market, to review outcomes and to advise the Minister within 18 months of NBN commencing to offer services to RSPs at First Release sites.

- An NBN corporation must not supply:
 - a content service; or
 - a non-communications service; or
 - goods that are not for use in connection with the supply by an NBN corporation of an eligible service.

- An NBN corporation may be required to prepare, and comply with, a functional separation undertaking.
- The Communications Minister may give directions about the divestiture of assets of an NBN corporation.
- A condition of a carrier licence held by an NBN corporation may require the NBN corporation to supply a specified carriage service.
- A condition of a carrier licence held by an NBN corporation may prohibit the NBN corporation from supplying a specified carriage service.
- Under provisions called the Commonwealth ownership provisions, the Commonwealth must retain ownership of NBN Co.
- The Commonwealth ownership provisions cease to have effect after the following events have occurred:
 - the Communications Minister has declared that, in his or her opinion, the national broadband network should be treated as built and fully operational;
 - the Productivity Minister has caused to be tabled in both Houses of Parliament a report of an inquiry by the Productivity Commission;
 - the Parliamentary Joint Committee on the Ownership of NBN Co has examined the
 - Productivity Commission's report;
 - the Finance Minister has declared that, in his or her opinion, conditions are suitable for the entering into and carrying out of an NBN Co sale scheme, and the declaration has taken effect.
- NBN Co must take all reasonable steps to ensure that an unacceptable private ownership or control situation does not exist in relation to NBN Co.

Part 3 deals with the ownership and control of NBN Co and sets out Commonwealth ownership provisions and arrangements for terminating those provisions and introducing an NBN Co sale scheme. It also establishes a head of power for the Governor-General to make regulations concerning private ownership and control of NBN Co.

Part 4 deals with the reporting obligations that will fall upon NBN Co during any period when the Commonwealth commences to sell down its stake in the company. These obligations will end when the Commonwealth no longer controls NBN Co.

Part 5 sets out an anti-avoidance obligation to ensure that NBN Co continues to meet its obligations.

Part 6 sets out powers for the Federal Court to grant injunctions in relation to contraventions of the Act.

Part 7 sets out miscellaneous provisions, including provisions to establish that NBN Co is not a public authority and NBN Co (and any NBN corporations) are not subject to the *Public Works Committee Act 1969*.

Schedule 1 – NBN corporations

Schedule 2 – Parliamentary Joint Committee on the Ownership of NBN Co

Reference Documents

- **Explanatory Memorandum**
 - NBN Companies Bill 2010 Outline pg 1 - 8
 - NBN Companies Bill clause by clause analysis pg 64 -120
- **NBN Companies Bill, 2010**
 - NBN Companies Bill 2010 Contents - pg (i)-(v)
 - Clauses pg 1 – 87



**NBN Access Arrangements Bill
Senate Inquiry**

February 2011

NBN Access Bill and Explanatory Memorandum Regulation Impact Statement Analysis

The Bills ensure that NBN Co will remain true to its wholesale-only mandate and deliver open and equivalent access to retail providers...a platform for retail-level competition to flourish

The NBN Access Bill:

- Amends the CCA and the Tel Act to introduce new access, transparency and non-discrimination obligations relating to the supply of wholesale services by NBN Co Limited.
- It also extends technical and open access obligations to owners of other superfast networks.

ATUG: provides comments on the Access Bill based on the NBN Co's Corporate Plan outline of its business intentions. An ATUG summary is at Attachment 2.

ATUG: provides comments without the Telstra – NBN – Government agreement being concluded and details published.

ATUG: is it important that this legislation is amending the Competition and Consumer Act and the Telecommunications Act. Both these Acts have as a central policy objective for telecommunications, the Long-term interests of End Users. This is an important safeguard against potential monopoly practices by NBN Co and against the "investment for its own-sake arguments" from some sector players. The long-term interests of end users (CCA 2010 at s152AB) require consideration of the following objectives:

- the objective of promoting competition in markets for listed services;
- the objective of achieving any-to-any connectivity in relation to carriage services that involve communication between end-users;
- the objective of encouraging the economically efficient use of, and the economically efficient investment in.....infrastructure

ATUG: supports the measures in the Bill but has some concerns about the potential impact of NBN Co operational decisions on the policy intent of the legislation e.g., if NBN Co required RSPs to be of a certain size this may create a class of "Aggregator Companies" who would not be subject to the NBN Access Bill but which would in essence be providing NBN Access services to smaller RSPs; Would the Prime Minister's undertaking on a "Uniform National Wholesale Price" be undermined by such a practice? Would the end users of those smaller RSPs find higher prices because of Aggregator Company margins? Will the Aggregator Market be competitive or a duopoly? Will the Aggregator Market support customer switching from carrier to carrier i.e., any-to-any connectivity as required by the CCA.

ATUG: supports the extension of technical and open access obligations to owners of other superfast networks to ensure that all Australians experience, at a minimum, NBN-grade choice of multiple services and multiple service providers. ATUG welcomes private sector investment in infrastructure provision as long as such investment provides better options for end users than Government policy requires. Experience with some existing fibre providers is that customer choice has been limited.

The Access Bill also follows reforms proposed under the CCS Bill to the telecommunications competition regime. The CCS Bill is intended to reform the access regime in Part XIC of the CCA to reduce delays and opportunities for gaming and provide upfront certainty on access prices and terms and conditions. NBN Co will be subject to this reformed access regime, but with additional measures being introduced by the Access Bill to reflect the unique wholesale-only nature of the company.

Supply of Services by NBN Co

The Access Bill sets out three mechanisms, which need not be mutually exclusive, under which NBN Co provides services:

- NBN Co can choose to provide services and publish a Standard Form of Access Agreement (SFAA) in relation to a service, or give an SAU (Special Access Undertaking) to the ACCC in relation to the provision of access to a service;
- if the Minister makes a condition of NBN Co's carrier licence that it must supply a specified eligible service that NBN Co is not currently supplying, NBN Co must give an SAU or formulate an SFAA in relation to that service; and the ACCC may, under proposed subsection 152AL(8A), declare a service that NBN Co has not indicated it will supply, but which it is capable of supplying and
- the ACCC considers, after consultation, would be in the long-term interests of end-users to supply.

ATUG: supports the three mechanisms on the basis that we are not sure how the Wholesale Market will develop. It may be that only a few Aggregators enter and dominate this market. These Aggregators may also have retail operations. If so, ATUG is concerned that their incentives may not be strong to provide wholesale services on equivalent price and non-price terms and conditions, with respect to their own retail operations. ATUG is prepared to "wait and see" how this new wholesale market develops but wants the safeguard protections in place in case they are needed – the Ministerial direction and the ACCC decision after consultation.

As a result, the terms and conditions for access to all services offered by NBN Co will be published.

ATUG: supports transparency for NBN Co as the best means to ensure monopoly power is managed. Transparency will also be the best measure to deal with dominance e.g., through discriminatory volume discounting.

The Access Bill proposes to establish two categories of SAOs:

- category A SAOs, applicable to access providers other than NBN Co; and
- category B SAOs, applicable specifically to NBN Co.

There are three category B SAOs under the Access Bill:

- The first guarantees supply of declared services, subject to the standard exemptions (for example, in relation to creditworthiness or security) already in the CCA.
- The second guarantees interconnection of facilities to the NBN.
- The third ensures that, if NBN Co supplies a declared service by means of conditional-access customer equipment (such as, for example, an optical network termination unit to control access), then NBN Co must enable an access seeker to access that equipment.

Non-discrimination and transparency

As a basic principle, NBN Co must not discriminate between access seekers. However, NBN Co will be permitted to negotiate with individual access seekers to vary the terms and conditions set out in an SFAA, SAU or an access determination, but only under clearly specified criteria and subject to ACCC oversight. Criteria:

- Failure to comply
- Grounds specified by the ACCC
- Aids efficiency

Given that differentiation of standard price terms can aid efficiency, the Access Bill does not prohibit volume discounts. However, recognising the concerns of smaller players, the Access Bill provides that, should NBN Co choose to offer volume discounts, it would not be able to do so unless proposed volume discounting arrangements are consistent with those set out in a SAU that has been approved by the ACCC and is in operation. This should provide industry with certainty that volume discounts are in the long-term interests of end-users.

ATUG's view is that NBN economies of scale should be captured by NBN Co and reflected in the uniform national wholesale price. Efficiencies that come from the internal operations of RSPs should be reflected in their retail prices. Innovations that drive value at the RSP should be reflected in their retail prices. End users understood the Prime Minister's position to be 'Uniform National Wholesale Price' and expect that this policy intent is reflected in both legislation and practice in the industry. This policy statement is attached to this submission. Any discounting in the interests of efficiency should only be permitted after review by the ACCC on a specific case by case basis.

Level playing field arrangements

...where other providers rolled out superfast networks in advance of the NBN, these would not deliver consumers in those areas the same benefits as the NBN. Moreover, by cherry-picking high-value markets such providers could undermine NBN Co's ability to deliver the Government's policy objectives for the NBN nationally. The Implementation Study therefore recommended that the Government look at measures to provide a more level playing field for all superfast broadband networks (recommendations 73 and 74).

In this context, the Access Bill seeks to amend the Tel Act to place specific technical and open access requirements on carriers who build or upgrade **fixed-line** superfast access networks after 25 November 2010, the date of the Access Bill's introduction into the Parliament.

There are three main parts to these arrangements:

- First, provision is made to simplify the making of industry codes and standards under Part 6 of the Tel Act in relation to fibre infrastructure and services.
- Second, where a telecommunications network (other than the NBN) comes into existence or is altered or upgraded, **after 25 November 2010**, to supply or be capable of supplying a superfast carriage service to customers, **other than individual government or corporate end-users**, that network must offer a Layer 2 bitstream service. This rule would apply to any type of fixed line network, whether it be FTTP, hybrid fibre-coaxial (HFC) or fibre-to-the node (FTTN).
- Third, the Layer 2 bitstream service that would have to be made available on these new or upgraded designated superfast telecommunications networks would be **subject to access rules** based on those applying to services supplied by NBN Co.

In summary, these requirements will mean that mass market fixed-line access networks which supply superfast carriage services with a download transmission speed normally of more than 25 Mbps, must offer a Layer 2 bitstream service. The supply of this service is then subject to the key access, non-discrimination and transparency obligations set out in the Access Bill. Furthermore, once the appropriate codes and standards are in place, carriers will be required to build and operate FTTP networks so they are consistent with NBN technical specifications.

Together these amendments should ensure that end-users have access to the same high-quality superfast broadband services, regardless of the network provider, and assist the NBN in meeting its objectives nationally by ensuring it operates on a more level regulatory playing field.

ATUG: supports these provisions. The National Broadband Policy is a policy that applies equally to all Australians. ATUG welcomes private sector investment in mass-market high-speed fibre networks within the NBN policy framework – open access, non-discrimination, transparency, technical standards. All end users will be expecting to get the benefits of the Government's policy for high-speed fibre broadband – expanded choice of multiple services and multiple service providers. Non-NBN Co fibre will not be "competitive infrastructure" from an end-users perspective as no other fibre will exist.

Reference Documents

- **Explanatory Memorandum**
 - NBN Co Bill Outline pg 1-8
 - NBN Access Bill 2010 Outline pg 9 – 14
 - Financial Impact Statement pg 14
 - Regulatory Impact Statement pg 14
 - NBN Co Bill clause by clause analysis pg 64 -120
 - NBN Access Bill clause by clause analysis pg 121 – 180
- **NBN Companies Bill, 2010**
 - Contents - pg (i)-(v)
 - Clauses pg 1 – 87
- **NBN – Access Arrangements Bill, 2010**
 - Contents (i)
 - Clauses pg 1-69

Regulation Impact Statement pg14

Statement 1 - Entities to which NBN Co's wholesale-only obligations apply

The issue examined in this Regulation Impact Statement (RIS) is whether NBN Co should be permitted to invest in corporations and divest itself of shares in subsidiaries, and if so, what measures should be in place (if any) to ensure it meets its wholesale-only obligations.

Preferred Option D - restricts NBN Co's flexibility to acquire shares in the capital of a corporation or divest itself of shares in a subsidiary to a degree, by ensuring that any subsidiary that it does not wholly own, but controls, will be subject to NBN Co's obligations.

Statement 2 – Applying and extending the obligations Under XIC

The key issue to be addressed here is why specific Standard Access Obligations (SAOs) are being created for NBN Co, and why it is not sufficient to rely on competitive markets or the existing telecommunications access regime. This Regulatory Impact Statement also addresses the equivalence obligation to be placed on NBN Co.

The Government's broad objective in telecommunications policy is to promote the long-term interests of end-users of carriage services or of services provided by means of carriage services.

The Government's objectives for access to the NBN is that carriers and service providers are granted open and equivalent access, with the terms and conditions of services subject to ACCC oversight.

Preferred Option C – Regulate access to NBN Co's services through specific amendments to the existing access regime

Option C provides for specific NBN SAOs to be incorporated into the existing access regime under Part XIC of the TPA, is the best option overall for meeting the Government's objectives. The option:

- avoids the confusion arising from different access regimes for carriage services and access to facilities;
- delivers equivalence and transparency across all NBN services, while preserving the ability for customers to negotiate away from standard terms; and
- best reflects the unique structure of the NBN company as a wholesale-only provider with a significant national access network.

Statement 3 – Enhancing the non-discrimination provisions in the NBN Access Arrangements Bill

The Government's objective is to ensure that obligations on NBN Co can effectively prohibit discrimination, while also promoting economically efficient outcomes that do not lessen competition. It also considers that industry should have certainty as to what sort of conduct is prohibited, and what sort of conduct is permitted.

It is understandable that access seekers are seeking greater clarity over what is allowable discrimination. Access seekers will be concerned that their competitors will be provided with an advantage that they themselves cannot receive. In practice, the main area of concern is in relation to volume discounting, as an access seeker which receives a discount could gain a clear competitive advantage over other firms in the sector.

This impact statement therefore considers options for providing greater certainty.

Preferred Option C requires the ACCC to publish principles on allowable discrimination, clarify discrimination in relation to creditworthiness in legislation and require the ACCC to approve volume discounts.

Option C provides greater legislative certainty in relation to creditworthiness and ensures that the ACCC will publish principles on allowable discrimination, which should signal its approach to enforcement to the market. Volume discounting would be subject to greater regulatory scrutiny and transparency, but would not be prohibited, although this could lead to slightly higher costs and some minor delays for industry. This option also provides greater commercial flexibility in relation to access agreements.

Statement 4 – Measures to provide a level playing field for the provision of super fast broadband across Australia

The key issue to be addressed in this regulation impact statement (RIS) is whether regulatory requirements are needed to ensure that the Government's policy objectives for the provision of superfast broadband in Australia are effectively delivered by NBN Co and competing providers. The particular issue of concern is whether, in the absence of such regulation, market operations may mean that NBN Co is unable to deliver on objectives related to addressing the original situation, which gave rise to its creation.

In broad terms these policy objectives can be summarised as ensuring:

- consumers have access to high-quality superfast broadband services, preferably delivered by fibre-to-the-premises (FTTP) (the '**speed and quality** objective');
- superfast broadband services are available nationally (the '**coverage** objective');
- there is national uniform wholesale pricing for such services (the '**pricing** objective'); and
- there is efficient and effective competition in the provision of superfast broadband infrastructure and services, that supports, by open and equivalent access to wholesale services on that infrastructure, a vibrant and competitive retail market (the '**competition** objective').

While other options for delivering the Government's objectives, particularly in relation to pricing, may be considered further, the measures proposed in this RIS seek to ensure that these objectives are supported by the provision of a level playing field, particularly one which prevents opportunistic cherry-picking.

The issue is essentially whether NBN Co and other providers of superfast broadband networks in Australia should operate on the same level regulatory playing field and, if so, what the rules of that playing field should be. The Government's intention for NBN Co is that it will provide national coverage of superfast broadband at uniform wholesale prices; however, the market will still be open to entry by other investors.

With the potential roll-out of multiple networks, there is a question of how to achieve outcomes for end-users which are consistent with the objectives of the NBN. To achieve this, the Government wants to ensure infrastructure that is installed provides high levels of services in terms of speed and quality and can support strong retail level competition.

Preferred Option is a combination of Options B and C:

B. Require NBN Co and other carriers installing FTTP infrastructure supply services to the public to meet the same or similar technical specifications.

C. Require NBN Co and other carriers operating superfast networks to offer wholesale services on an open and equivalent access basis.

This would result in requiring any new FTTP infrastructure to meet the technical specifications for the NBN and all superfast broadband networks providing open and equivalent access. Options B and C could also enhance NBN Co's sustainability to the extent they would mean it would be operating on a more level regulatory playing field.

Option B (mandating technical specifications for FTTP) would ensure consistent speed and quality outcomes across multiple FTTP networks and support retail competition and unbundling outcomes. Clear technical specifications could also enhance NBN Co's sustainability to the extent it would mean it would be operating on a more level regulatory playing field. However, this option could not be applied to non-FTTP superfast broadband networks. This option could reduce costs by facilitating the roll-out of the NBN nationally. By itself, however, option B would not ensure the provision of open and equivalent access or uniform pricing objectives.

Similarly Option C (mandating open and equivalent access for superfast broadband) would ensure open and equivalent access, thereby providing retail services on a competitive basis. By providing open and equivalent access generally, such obligations should also promote more efficient investment as there would be ready access to infrastructure, reducing the need for duplication. Open and equivalent access obligations could also enhance NBN Co's sustainability to the extent it would mean it would be operating on a more level regulatory playing field. This option may also reduce the cost of roll-out of the NBN, as it negates the need for NBN Co to rollout where first-mover networks are NBN consistent. This option is also considered to represent negligible cost to existing and future fibre providers.



**Summary
Statement of Expectations
November 2010**

January 2011

ATUG Summary for Directors – Statement of Expectations

The document is a letter to NBN Chairman, Harrison Young, dated 17 December. Its purpose:

- The SOE is the **Government's response to the NBN Implementation Study**
- It provides **direction to the Company**
- It **informs the community** of the Government's position on a range of issues

Government's NBN Vision and Objectives

- Deliver significant improvement in broadband service quality to all Australians
- Address lack of high-speed broadbandparticularly outside metro areas
- Reshape the telco sector
- 93% homes, schools and businesses with FTTP...speeds up to 100mbps with minimum fibre coverage obligation of 90%
- Remaining premises...combination of next-generation fixed wireless and satellite....peak speeds of at least 12 mbps
- NBN has a wholesale only, open and equivalent access mandate...at the lowest levels in the network stack...to promote retail level competition via L2 bitstream services
- A commercial entity with the ability to raise debt on its own behalf
- NBN will be a significant piece of Australian critical infrastructure...security and resilience considerations ...in design and operation of the network

Government's response to the Implementation Study

Achieving the Government's **coverage** objectives

- Fibre built in regional areas as a priority
- Community inputs and advice on regional priorities e.g., through the Regional Development Australia Committees
- NBN to provide the fixed wireless solution – using existing infrastructure where efficient...
- NBN to acquire spectrum but not to compete in auction of 700MHz spectrum
- Satellite service to prioritise remote Australia, also provide in-fill coverage
- Satellite solution to be brought forwardreplacing the ABG program
- NBN Co to advise Government of its upgrade plans
- Assets used...support an enduring, open-access network with appropriate resilience and redundancy....standards, records, overhead access...
- Coverage register to be publicly available and updated
- NBN not to inefficiently duplicate infrastructure – DBCDE process to declare premises adequately served – consultation process
- NBN is monopoly national fixed line network from POIs to premises....cross subsidise, offer a common entry level broadband price structure...for all technologies...
- New fibre networks built after 1 January 2011 for residential and small business...will need to be Layer 2 wholesale only and open-access
- NBN will retain option to overbuild
- Government will consider levy to prevent opportunistic cherry-picking
- NBN to explore ...community can fully or partially fund extension of fibre

Premises NBN Co is required to cover...

- Defined as addressable locations – Attachment A
- Non-premises – Attachment A – NBN permitted but not required to connect...connection does not count towards coverage objectives.
- Government retains option to require connection....e.g., payphones delivered under USO
- Government expects NBN to provide FTTP to multi-dwelling units...review if widespread access problems....premises can be listed as "frustrated" in the coverage register

- NBN to have regard to reasonable end user and RSP requirements when connecting eg location of NTU
- Decisions by NBN to reflect ...more than one retailer being able to provide services....not possible for interim satellite solution
- NBN ...restore sites within reasonable timeframes to condition ..before the work...remediation processes
- Government to explore practical legislative options to support the roll-out
- Government will present to COAG a proposal from streamlined planning and development processes...nationally consistent approach

Fibre in **new developments** – from 1 January 2011 to Stage 5 developments

- NBN – new broadacre developments
- NBN – infill with 100 or more premises within 36 months where NBN has not rolled out
- NBN – fibre in infill where it has rolled out, replacing Telstra as provider of last resort
- Telstra – developments of less than 100 premises (pending NBN)
- NBN – panel of providers who can install on its behalf
- Developers to provide pit and pipe at their expense; access for any non-carrier pit and pipe....
- Other than NBN built networks will need to comply with NBN tech specs
- NBN to consult with Comms alliance and the ACMA re tech specs (national standard)

Structuring the NBN in the **long-term interests of end users** and the telecommunications industry

- Government decisions on POIs and Uniform National Wholesale prices (Windsor/Oakeshott)
- Semi-distributed POI structure which extends the NBN network to meet with but not over-build competitive backhaul routes is the preferred outcome
- ACCC will use its powers to declare prices to ensure any backhaul routes do not become the new chokepoint preventing retail competition especially in regional Australia
- NBN Co will act to ensure POIs are located in accordance with competition criteria formulated by the ACCC
- NBN Co to provision infrastructure...in anticipation of multiple retail competitors
- Uniform national wholesale pricing – NBN to charge access seekers uniformly for services across its network for all technologies and for the basic service offering
- ACCC can set up-front price and non-price terms from 1 Jan 2011 for regulated transmission services...based on domestic benchmark prices for competitive routes

Ensuring the availability of **voice services** over the National Broadband Network

- In the transition to the NBN, telephony services will be available at all times.
- Copper networks carry power and allow emergency calls to be made during power outages.
- Fibre networks do not carry power. The Government will consult on the appropriate way to ensure access to battery back-up services for those who need them.
- In the interim, NBN should plan to deploy NTUs with the capacity to support a back-up battery. The cost is to be included in the network rollout.
- NBN Co should provide battery back-up with NTUs ensuring continuation of telephone capability in the event of power failure for standard, non-powered homes.
- A back to base alarm function should indicate a battery approaching the end of its life.
- End users are responsible for the maintenance and replacement of batteries.
- Wireless handsets are not powered – RSPs must provide clear information to consumers about options during power outages
- For wireless and satellite areas, USO Co will fund Telstra for 10 years to provide copper based connections from July 2012. Back-up battery will not be required.

National Broadband Network **legislative and regulatory framework**

- Structural reform of the industry is achieved by recent amendments – Telstra, competition and consumer protection.

- NBN Co Bill and NBN Access Bill are before Parliament. NBN Co to be guided by these Bills
- NBN Co will only supply services to carriers, service providers or utilities and authorities as specified.
- NBN Co will not supply content services
- NBN Co is not a Public Authority
- NBN Co may acquire other telcos

Designing the right **network and service offerings**

- Government wishes to preserve flexibility for future unbundling
- NBN will have internal accounting separation arrangements
- Government accepts GPON for Brownfields
- NBN will conduct home-run fibre trial in a new development by early 2012
- NBN (with ACCC) will report to Government on trial implications

Pricing and Services

- Affordable access to services is essential
- Pricing to drive take-up rates
- Setting wholesale prices and transparent migration incentives to drive take-up (NBN Corp Plan and Business Case)
- Providing industry standard PSTN emulation at the NTU within the fibre footprint
- Providing Layer 2 bitstream service to enable multi-operator delivery of NGN Video services to industry standard
- Government requests NBN to develop a Charter that outlines how it will conduct its affair to best meet the needs of stakeholder groups

Planning, Reporting and Performance management

- Annual Reports required against Corporate Plan and Business Plan
- Government will consult with NBN Co about the development of KPIs
- NBN Co will report to Parliament including the Joint Committee on the NBN which will oversee progress of the rollout
- Government expects NBN Co to develop a comprehensive strategy to engage with individual consumers during the rollout including handling complaints
- Annual Report details.....
- NBN Co should continue to conduct planning and execution of strategy in a publicly transparent manner

Funding and privatisation

- NBN Co will be funded with Government equity until NBN Co has sufficient cash flows to support private sector debt...
- Government equity agreement with NBN Co based on \$27.5 billion funding requirement, reviewed annually.
- During the rollout, Government will retain full ownership of NBN Co in order to achieve its policy objectives
- Privatisation will occur only after the Minister for DBCDE makes a declaration that NBN is fully built and operational, the Productivity Commission has concluded an inquiry and the Minister for Finance and Deregulation has declared conditions suitable for sale
- Ownership and control issues to be under review during the sell-down

General matters

- Government expects NBN Co to be cognisant of wider telco sector objectives – social and industry policy considerations eg location identification for Emergency Calls
- Government expects NBN as a major GBE to model a high standard of corporate citizenship
- NBN Co will actively promote opportunities ...for local SMEs. NBN Co will prepare advice on SMEs can participate in the NBN project

Conclusion

For the avoidance of doubt where any previous advice has been provided that is inconsistent with this Statement, the advice in this document prevails.



**Summary
NBN Corporate Plan
December 2010**

January 2011

Summary - NBN Corporate Plan 2011-2013, 17 December 2010

Chapter 1 – Executive Summary pg 11-27

1.2.1 Key Objectives (NBN Co understanding)

- Open-access, wholesale only, national network
- Fibre to 93%; Fixed Wireless to 4% delivering at least 12 Mbps and Satellite to 3% of premises
- NBN should offer Uniform National Wholesale Pricing from a POI to a premises on a non-discriminatory basis
- The expected rate of return should be in excess of current public debt rates

1.3 Major Issues Related to Objectives

- NBN will be the sole fixed line network from premises to POI other than existing infrastructure
- Telstra will structurally separate and migrate its customer base to the NBN
- Cherry picking will be prevented in commercially attractive areas

1.3.1 Cherry-picking

- NBN's initial focus is on regional areas
- NBN will need to cross-subsidise non-commercially viable market segments
- Plan assumes regulatory protection against opportunistic cherry-picking
- NBN retains the option to over-build
- Government will consider levy to prevent cherry-picking

1.3.2 Points of Interconnection

NBN Co Plan reflects the Government's choice of a semi-distributed POI model which applies the ACCC "competition criteria" for the location of POIs – 120 POIs

Uniform National Wholesale Pricing

NBN will implement an internal cross subsidy to provide UNWP from a POI to a premises in line with Government decision

NBN assumes ACCC will make access determinations for transmission routes and will monitor pricing and act to review exemptions if needed

1.3.3 Unbundling and Separation

NBN is not preparing for the provision of Layer 1 services, layer one unbundling, functional or structural separation

As directed by Government a trial of Home Run architecture will take place in a Greenfields site in 2010 and NBN will establish tools for accounting separation.

(Pg 26 "The plan assumes there will be no requirement to provide for Layer 1 unbundling and Home Run architecture after the Greenfields trial.")

1.4 NBN Co targets for June 2013

- Premises passed – 1,717,000 – 55% in FTTP Brownfields
- Premises with Active services 570,000 (33% of passed) – 45% FTTP Brownfields
- Full deployment of 6000 premises per day is planned for 2014 (1.5) – construction resources are a RISK; housing starts are a RISK

Exhibit 1.1: Premises Passed or Covered (incremental Year-on-Year)

	FTTP Brownfields	FTTP Greenfields Build	FTTP Greenfields BOT	Satellite First Release	Wireless	Total
June 2011	13,000	-	45,000	165,000	-	223,000
June 2012	132,000	7,000	120,000	-	14,000	273,000
June 2013	805,000	63,000	84,000	-	269,000	1,221,000
Total	950,000	70,000	249,000	165,000	283,000	1,717,000

Exhibit 1.2: Premises with Active Service (Incremental Year-on-Year)

	FTTP Brownfields	FTTP Greenfields Build	FTTP Greenfields BOT	Satellite First Release	Wireless	Total
June 2011	-	-	35,000	-	-	35,000
June 2012	5,000	5,000	92,000	13,000	1,000	116,000
June 2013	255,000	55,000	64,000	20,000	25,000	419,000
Total	260,000	60,000	191,000	33,000	26,000	570,000

A:P	27%	85%	76%	20%	9%	33%
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1.7.1 Achievability

Depends on Government policy execution and progress of negotiations with Telstra.

1.7.4 Timeline and Critical Dates – Exhibit 1.4

- April 2011 – Start End User trial
- June 2011 - Telstra Agreements completed; ABG program will cease
- Sept 2011 - Ready for first commercial service; Wireless network construction starts December 2011; interim Satellite service June 2011
- Feb 2012 - Ready for Business as Usual Roll-out
- August 2012 - Ready for Market

1.8 Part of a 30 year view and a 9.5 year deployment (Telstra deal scenario June 2011) completed by December 2020

1.8.1 and Exhibit 1.7

Selected Targets and Projections of Full Deployment Period (FY 2011 – FY 2021) including Coverage, Network Characteristics, Greenfields, Capex; Revenues; Opex; EBITDA; Leverage (debt 33% of total funding); IRR: 7.0%

1.9 Financial Forecasts

All plausible scenarios **assume NBN Co is the sole provider of fixed line network from premises to POIs.**

Exhibit 1.10 Sensitivity analysis – mid Demand; mid Construction Costs = 7% IRR

1.10 Government Policy decisions

- POIs
- UNWP
- Greenfields role
- Greenfields pits and pipes
- Home Run Greenfields trial
- Accounting separation and future structural separation
- Facilities access and Carrier powers and immunities
- Battery back-up
- Definition of premises and coverage
- Interim satellite solution
- Cherry-picking
- Trade Practices Act – semi-distributed POI model

Chapter 2 Business Environment pg 29-45

(30) NBN will provide Layer 2 wholesale services only...larger retailers are expected to acquire Layer 2 products from NBN and use their own infrastructure to provide retail services to their end users. Smaller RSPs may opt to use a Layer 3 intermediary for incremental wholesale services. The diversity of possible business models is expected to result in lower barriers to entry for RSPs and to open up competition both in the major population centres and in regional areas.

(35) The progressive trend in market pricing towards charging for access supports the Company's business models which treats voice as but one of the services provided over modern communications networks. ...the overall spend on fixed services has been trending upwards and is expected to continue to do so while the breadth of services able to be provided increases...mobile broadband is expected to continue to grow in the medium term...much of mobile broadband is expected to be complementary to fixed line services and over time it is expected that consumers demand for higher speed will translate into a greater dependence on FTTP infrastructure for new applications and services...broadband ARPU has continued to show growth driven by increasing usage...ahead of inflation at about 3% pa since FY 2007 (Exhibit 2.9)

Exhibit 2.13 Demand for bandwidth will continue to grow

(39) NBN Co will initially offer an entry level service of 12 Mbps with incremental tiers up to a max of 1000Mbps for standard GPON consumer services.

(40) Approximately 63% of premises served by ADSL2+ are more than 2 kilometres from the exchange ...NBN Co's FTTP entry level service will be superior to existing average ADSL2+ services for many consumers at today's speeds.

(41) Traffic on the NBN may slow due to contention because of the limited Connectivity Virtual Capacity (CVC) capacity purchased by the RSP.

Chapter 3 - Key Assumptions pg 45-52 (Exhibits attached)

- Key Assumptions – Environment, Exhibit 3.1 pg 45
- Key Assumptions – Product, Pricing and Revenue, Exhibit 3.2 pg 48
- Key Assumptions – Network Features, Exhibit 3.3 pg 49

Chapter 4 – NBN Co Formation and Corporate Structure pg 53- 59

Chapter 5 – Network Design and Testing pg 61- 75

The overarching requirement is to design a network that meets the following objectives:

- Minimises cost for 93% and Last 7% coverage objectives;
- Delivers the NBN Co product requirements;
- Meets the network availability criteria required for NBN Co's service level agreements;
- Ensures network asset lifecycles meet minimum objectives;
- Maximises re-use of existing infrastructure; and
- Provides a clear path for technology upgrade and 'future proofing'.

- FTTP footprint (63)

The FTTP footprint has been determined as follows:

- i. All communities with greater than 1,000 premises (determined by G-NAF data) were mapped, and then remote communities (i.e. those requiring extensive transit backhaul) were backed out, to provide the minimum FTTP coverage of 90%;
- ii. Transit backhaul routes required to service this FTTP footprint and 8 satellite earth stations were then plotted, and any communities with greater than 1,000 premises excluded under i. along these routes were added back in, resulting in 90.8% FTTP coverage;
- iii. All additional communities with over 1,000 premises were then added back in, together with the additional transit backhaul needed to serve these communities, resulting in 91.4% FTTP coverage; and
- iv. All communities with greater than 500 premises that are passed by the transit backhaul routes resulting from i-iii were added in, resulting in 92.3% FTTP coverage.¹⁸

- 5.4 First Release Sites Map and Characteristics (68)

- Townsville
- Armidale
- Minnamurra
- Brunswick
- Tasmania
- Willunga

- 5.6 Last 7% (69)

- Deployment Strategy for Wireless – first commercial service May 2012
- Satellite First Release 6Mbps peak download; Average Bust Hour throughput up to 30Kbps – a substantial improvement on ABG services, commercial services from 1 July 2011
- Long-term satellite solution (2014/15) is 12Mbps peak download and ABHT of 300Kbps for up to 200,000 users; NBN will not be required to deliver basic voice services to end users, USO Co will do this.

- 5.8 Battery back-up (74)
 - The Battery back-up solution will allow the end user to receive NTU based telephony services for up to 5 hours
- 5.9 and Exhibit 5.11 GPON Evolution Roadmap (75)

At Layer 1, NBN Co is deploying ITU-T rated optical fibres. NBN is dimensioning cables with sufficient fibre count to ensure the Company can support both i) any future sub-division of premises and ii) adoption of alternate FTTP architectures as these emerge.

Chapter 6 Network Construction pg 77- 83

- Exhibit 6.1 (77) Deployment Schedule to FY2021 – Fibre premises passed 12.2 million; Fibre premises connected 8.3 million; Wireless and Satellite passed 974k premises; Connected premises 229k

Exhibit 6.1: Deployment Schedule to FY2021

Deployment Schedule to FY2021											
June YE (Premises)	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
Fibre Premises Passed ('000s)	58	316	1,268	2,711	4,173	5,647	7,116	8,564	9,989	11,403	12,202
Fibre Premises Passed Daily Run Rate (250 Working Days / Year)	0	1	4	6	6	6	6	6	6	6	3
Fibre Premises Connected ('000s)	35	137	511	1,589	2,616	3,679	4,712	5,708	6,672	7,623	8,320
Fibre Premises Connected Daily Run Rate (250 Working Days / Year)	0	0	1	4	4	4	4	4	4	4	3
Wireless & Satellite Premises Covered ('000s)	165	179	447	545	770	813	858	904	950	962	974
Wireless & Satellite Premises Connected ('000s)	0	13	55	102	151	165	181	198	215	222	229
Total Premises Connected - All Platforms	35	150	566	1,691	2,767	3,845	4,893	5,905	6,887	7,845	8,549

- 6.3 Assumptions: Telstra infrastructure available for use; 25% aerial infrastructure (78)
- 6.5 Geographic coverage principles – 16 Roll-out regions; concurrent deployment; regional areas as a priority (79)

Chapter 7 Commercial Operations pg 85 – 89

- 7.1 Promotion of fibre-based services (85)
Consumers base their decisions primarily on applications and services

Development of applications and Layer 3 services are outside NBN Co's remit but are major drivers forusage of the NBN.

To ensure fibre offers services beyond current user experience, NBN Co will focus on four areas: (85)

- IPTV
- Unique content and applications
- Improved access to offshore content
- Encourage new RSPs
- 7.1.4 Ensure smooth migration (86)
- 7.2 Network Operations and Maintenance (87)

Specialist teams will support design and activation of non-standard services for businesses and MDUs

- 7.2.4 Provision (88)

More complex products for business and MDUs....

Chapter 8 Product Definition and Pricing pg 91 – 107

- 8.1 Product set based on core concepts...(91)
 - Benchmarking of current market wholesale pricing with the objective of providing value to End-Users that is equal to or better than what is currently available in the wholesale market today...
 - Provide UNWP across fibre, wireless and satellite technologies...
- 8.2 Product Summary (91)

The NBN Co product set will be offered as follows:

- A uniform product construct across fibre, wireless and satellite. Featuring the same four product components across each access network and based on the technology – agnostic Ethernet bitstream framework;
- A 12 Megabits per second downstream and a 1 Megabits per second upstream entry-level offer across all three access technologies for the same price; and
- A Fibre Access Service with committed speed options of up to 100 Megabits per second and peak speed options of up to 1 Gigabits per second.

Access Virtual Circuit (92) – bandwidth allocated to an end user premises
 Connectivity Virtual Circuit (92) – capacity required for each Connectivity
 Serving area to aggregate AVCs to the POI.

Additional features such as CIR, improved service levels, protected infrastructure and specialist video features are able to selected as additional options.

Initial satellite product (93) – 6Mbps down and 1Mbps upstream.

8.2.1 ...four traffic classes....

Exhibit 8.2: Overview of the NBN Co Product Traffic Classes

Traffic Class	Application Category	Example Usage
1	Real-Time / Mission-Critical	Voice Control
2	Interactive	Interactive Streaming & Real-Time Video
3	Transactional	Business Virtual Private Network Access
4	Best-Effort	Internet

8.3 Fibre Product (93)

<i>Exhibit 8.4: PIR Speeds Available on Fibre</i>		<i>Exhibit 8.5: Traffic Classes Available on the Fibre Access Circuit</i>	
Downstream (PIR Mbps)	Upstream (PIR Mbps)	Traffic Class	Symmetrical CIR (Mbps)
12	1	1	Initial 150Kbps, then 0.5, 1, 2 and 5Mbps
25	5	2	Starting at 5Mbps, then 10, 20 30 and 40 Mbps
25	10	3	Starting at 10Mbps, then 20, 40 and 100 Mbps
50	20	4	See PIR table to the left
100	40		
250	100		
500	200		
1,000	400		

8.4 Wireless Product (95)

<i>Exhibit 8.7: Traffic Class 4 Peak Information Rate Speeds Available on Wireless</i>		<i>Exhibit 8.8: Traffic Classes Available on the Wireless Access Circuit</i>	
Downstream (PIR Mbps)	Upstream (PIR Mbps)	Traffic Class	Upstream and/or Downstream CIR (Mbps)
12*	1*	1	Limited to 150kbps
		4	See PIR table to the left

8.5 Satellite Product (96)

<i>Exhibit 8.10: Traffic Class 4 Available on Satellite and Associated Access Circuit Pricing</i>		<i>Exhibit 8.11: Traffic Classes Available on the Satellite Access Circuit²³</i>	
Downstream (PIR Mbps)	Upstream (PIR Mbps)	Traffic Class	Upstream and/or Downstream CIR (Mbps)
12	1	1	Up to 150 Kbps to support Voice
		4	See PIR table to the left

• 8.6 Product Development and Product Roadmap (97)

(98) ...an independent third party ...will work to identify what new and improved applications and services can be expected in areas such as health, education, transport, power supply, social infrastructure, community services, government services, research and development and entertainment ...enhancements will be based on the level of benefit derived by the sector or the country as a whole rather than on the potential for NBN co to derive greater financial benefits....

8.6.1 Criteria for developing product roadmap (99)...

2. Initial products selected are those which drive maximum take-up of NBN Co offerings by Access Seekers and End Users

Product Release 1 – High Speed broadband and telephony
 Product Release 2 – Emerging Entertainment Capability
 Product Release 3 – High Speed Business Services
 Product Release 4 – High Speed Enterprise Services
 Product Release 5 – Enhanced Capability for Mission Critical Sites

- 8.7 Pricing (100)

The goals of NBN Co pricing:

- Value that is equal or better than what is available in the wholesale market today
- Fostering early migration
- Being simple and easy to understand
- Providing uniform national wholesale pricing across all three delivery technologies

Access Virtual Circuit pricing (100)

Exhibit 8.13 (101)

Exhibit 8.13: Traffic Class 4 AVC PIR Charges (including UNI) (\$/month per service) (excluding GST)

Downstream / (PIR Mbps)	Upstream / (PIR Mbps)	Fibre	Wireless	Satellite
12	1	\$24*	\$24	\$24
25	5	\$27	-	-
25	10	\$30	-	-
50	20	\$34	-	-
100	40	\$38	-	-
250	100	\$70	-	-
500	200	\$100	-	-
1000	400	\$150	-	-

(101) Overtime NBN Co expects the cost of higher speed tiers to be reduced in nominal terms (Exhibit 8.14) as the speed in Mbps averaged across all network users increases...

(101) In addition with every Traffic Class 4 AVC Access Seekers will have the option on the Fibre Access Service to acquire additional capacity at Traffic Class 1, 2, and 3...This is expected to be used by business End-Users (102). The initial CIR price scale is at Exhibit 8.15(102) ACV CIR Charges - Traffic Class 1&2&3:

Exhibit 8.15: AVC CIR Charges - Traffic Class 1 & 2 & 3 (\$/month) (Excluding GST)

Traffic Class_1- Committed Information Rates	
Symmetrical Speeds (Mbps)	Monthly Recurring Charge
0.15	\$10
0.5	\$34
1.0	\$66
2.0	\$134
5.0	\$334
Traffic Class_2 Committed Information Rate	
Symmetrical Speed (Mbps)	Monthly Recurring Charges
5	\$32
10	\$64
20	\$128
30	\$192
40	\$256
Traffic Class_3 Committed Information Rate	
Symmetrical Speed (Mbps)	Monthly Recurring Charges*
10	\$48
20	\$96
40	\$192
100	\$380

Connectivity Virtual Circuit pricing (103)

The CVC is priced initially at \$20 per Mbps adding less than \$1 per average end user for a 12/1 Mbps service with current average data usage..

Expectation that price will decline to \$8.75 FY2010 to FY 2025 (CAGR-6.2%). This price decline is based on expectations of increased usage and will be adjusted on a yearly basis to reflect take-up rates, average speed increases and usage increases

The balance between AVC and CVC pricing has been designed to enable NBN Co to drive and benefit from substantial increased usage in the future...AVC low to encourage consumers UP the speed tiers...relying on CVC revenues to drive ARPU growth

8.7.3 NNI Port Charges (103)

Exhibit 8.17: NNI Port Charges (Excluding GST)

	Speed	Range	Non Recurring Charge	Monthly Recurring Charge
Short Haul	1Gbps	1000BaseLX – 10 Km range	\$1,000	\$200
	10Gbps	10GBaseLR – 10 Km range	\$7,000	\$500
Long Haul	1Gbps	1000BaseZX – 40 Km range	\$5,000	\$400
	10Gbps	10GBaseER – 40 Km range	\$35,000	\$1,000

8.7.4 Multicast pricing (104)

8.8 Comparison with existing wholesale market pricing (104)

- NBN Co provides higher speeds, more consistently and with better upload speed
- Exhibit 8.18 (105) NBN Co plans show that **Access Seekers moving to NBN Co fibre could offer lower prices than are currently in the market for similar speed and download products....**

8.10 Special Access Undertaking with the ACCC (106)

Will cover key price and product aspects of access to NBN Co's fibre, wireless and satellite networks as well as a milted range of non-price terms and conditions.

NBN Co is also developing a Wholesale Broadband Agreement...will constitute NBN Co's Standard Form of Access Agreement for purposes of Part XIC of the TPA, effectively declaring all of NBN Co's products and services(106)

The ACCC is required to assess the SAU against the "reasonableness criteria"....(107)

Chapter 9 Revenue Forecasts pg 109-132

(109) Option A (1): Balanced revenues from access and usage – UPPER boundary
Option A (2) : Balanced revenues from access and usage – LOWER boundary

Exhibit 9.1: Option A (1) and Option A (2) Major Assumptions

Variable	Assumption ²⁵
Opening Premises (FY2010)	Business 1.3 million. Residential 9.6 million.
Premises Growth	1.6% p.a. (average FY2010 to FY2025). 1.4% p.a. (average (FY2010 to FY2040).
Premises Covered by Fibre	93% at end of NBN roll-out
Vacant/ Unconnected Premises	12.4% (at FY2025).
Existing Third Party Networks	4.6% (at FY2025).
Residential Wireless-Only Homes	13% currently increasing to 16.3% by FY2025 and 16.4% by FY2040. (Equivalent to Wireless-only premises at 13% ²⁶ of total premises (residential and business) by FY2025).
Existing Copper Network	Progressively decommissioned during NBN roll-out (refer Telstra Financial Heads of Agreement).
Telstra HFC Network	Progressively deactivated during NBN rollout for IP-based services, voice services, broadband services or services

Variable	Assumption ²⁵
	requiring a return path transmission from the End-User (refer Telstra Financial Heads of Agreement).
Uniform Wholesale National Pricing	Uniform wholesale access pricing irrespective of the delivery platforms and across geographies for the entry level offering. ²⁷ No charge for transit backhaul (from the premise to the Point of Interconnect (Pol)).
Points of Interconnect	120 semi-distributed Pols.

Option A (1) (110)

Option A (1) Upper boundary scenario – by the end of the 3-year Corporate Plan, NBN CO will have \$160million in annual revenues with 566,000 connections across all platforms and an ARPU of \$34

(Connection numbers at Exhibit 6.1 (77)

AVC (PIR) and CVC contribute 50% and 30% respectively by FY2025..to balance revenues between speed (AVC) and usage (CVC). **The construct of charging for CVC capacity is the principal mechanism by which NBN co can benefit from the expected future growth in broadband data usage.**

Note 27 (110) UNWP does not include backhaul costs....

Exhibit 9.3 pg 111 Fibre Revenue Components

Option A (1) ARPU reflects;

- Initial prices
- Average speed per user (AVC revenues)
- Average data usage per user (CVC revenues)
- Decline in prices over time (nominal decline yoy as function of demand growth)

(111) Option A (2) Lower boundary scenario

By the end of the 3-year Corporate Plan, NBN Co will have \$154 million in annual revenues (FY 2013) with 566,000 connections...and a blended ARPU of \$33.

(112) AVC and CVC revenues are 55% and 26% by FY 2025

(113) 9.2 Foundations of NBN Co's revenue model pg 113

- Addressable market (114) – 9.6 million homes, 1.3 million businesses + 177K new premises pa
- Product and Price (118- - residential and business markets are different; (118) residential market is 76% of FTTP revenues by 2025; 52% of residential users are expected to be on 12/1Mbps service in 2012; (119) Business Market requires guaranteed performance and quality of service (CIR) which will be 51% of business market revenues;
- Take-up of basic services(115-117) – primarily driven by the Telstra deal; NBN assumes 13% wireless only premises (9.4.2); third party fibre 4.6% premises;

- Speed/usage profiles (120-130)– data usage June 2010 (121); NBN Usage projections conservative (127); NBN Speed projections conservative (128) ; increasing speeds are significant for driving up usage, ARPU and revenue (128); NBN Co projection is lower than recent past;
- Revenues - (132) Forecast Risks

NBN Co Broadband Use Case Studies (129)

Development of applications and layer 3 services that will encourage the need for speed and a higher use of the Internet by End Users is outside NBN Co's remit of activities; however, these will be major drivers for End User up-selling and the future usage of the NBN

9.7 (131) Wireless and Satellite Revenues

NBN Co has estimated a penetration rate of less than 40% in the last 7% of the market:

- Wireless 139,000 premises by FY2025
- Satellite 120,000 premises by FY 2025

Brownfield premises passed (Exhibit 9.9) (115)

Exhibit 9.9: Brownfields FTTP Deployment Coverage Schedule

Coverage											
June YE	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021
Brownfields Premises Passed (%)	0%	1%	9%	21%	34%	46%	58%	70%	82%	94%	100%

98. Risks of Revenue Forecasts (132)

Level of demand in speed and usage

The rate at which end users are willing to consumer bandwidth hungry products and applications may slow over time and/or end users stop moving through the tiers because of price and speed inertia.

As mitigation, **NBN Co has the flexibility to regularly monitor and adjust the rate at which nominal prices are reduced in order to maintain the revenues in case of lower volumes of demand.**

Chapter 10 Financial Forecasts pg 133-137

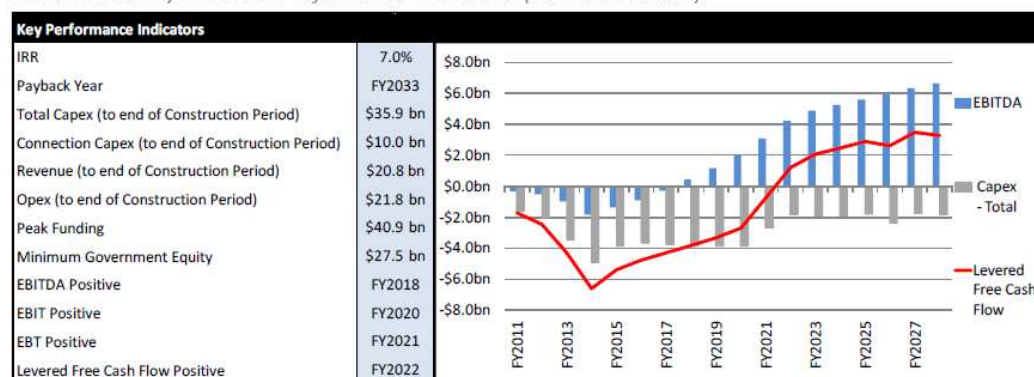
30 year timeframe used for calculations

Critical Dates (133)

- 2011-2013 Corporate Plan
- 2021 End of construction
- 2023 Beginning of established Network Operations Phase
- 2028 Long-term Steady State
- 2040 End of 30 year business model

Exhibit 10.1 Key Financial Indicators (134)

Exhibit 10.1: Key Financial Performance Indicators (Nominal Dollars)



(134) Project internal rate of return is 7.04% which is above the current 5 year Government bond rate of 5.38% in November 2010.

(134) Deployment profile assumes 100% of premises will be covered by 2021

(135)

- FTTP GPON – 181K km of fibre
- 25% premises aerial (31K km)
- Transit backhaul – 57K km

(135) Capex - \$35.9bn will deliver 100% premises passed and 65% connected by 2021

(135) Opex – Exhibit 10.6

(135) By end FY2013 there are significant operating costs relating to the agreement with Telstra.

(136) Working Capital - Average \$110million 2011-2013 and \$(54) m from 2014-2021

(136) FY 2011 Budget Exhibit 10.7 and 10.8

- Capex \$1561m
- Opex \$309m

Chapter 11 - Funding NBN Co (139-144)

- \$8,363million for July 2010 to June 2013
- Debt funding will be 33% of the total funding to FY2021
- Significant proportion of debt will be overseas sourced
- Cost of capital – 10-11% over the life of the project

Chapter - 12 Risk Management (145-149)

Risk Management system (145)

Revenue Risks (148)

- Speed and Usage
- Wireless substitution
- Cherry picking
- Uniform National Wholesale Pricing impacts

Mitigation:

- **Telstra agreements**
- Not attempting to match low-end products
- Supporting video based application development
- Passing of effective cherry picking protections
- Backhaul limitations: ACCC to intervene if necessary

Glossary (151-159)

Attachment – NBN Co Corporate Plan Key Assumptions

Exhibit 3.1: Key Assumptions - Environment

Environment	Key Assumptions
Coverage	<p>NBN Co will cover all premises within Australia, of which:</p> <ul style="list-style-type: none"> ▪ 93% will be covered by FTTTP; and ▪ 4% will be covered by Wireless and 3% by Satellite.
Uniform National Wholesale Pricing (UNWP)	The Plan assumes uniform wholesale pricing from premises to Point of Interconnect (PoI), irrespective of the delivery platforms and across geographies for the entry level offering. ¹⁶
Regulatory Approval for SAU	The Plan assumes ACCC approval of a Special Access Undertaking as described in Section 8.10, <i>Special Access Undertaking with the ACCC</i> .
Wholesale Only	The Plan assumes no retail revenue.
Greenfields (New Real Estate Developments)	<p>The Plan assumes that NBN Co will service over time 100% of the new real estate developments (in this Plan called: Greenfields developments) in Australia by the end of the rollout.</p> <p>The Plan assumes developers will be required to provide pit, pipe and conduit lead-in at no cost to NBN Co.</p> <p>94% of premises growth (Greenfields) are within FTTTP footprint, the remaining 6% are assumed to be serviced by Wireless or Satellite.</p> <p>In the Fibre footprint, 60% of Greenfields are Infills within the existing Brownfields FTTTP footprint, 40% are Broadacre premises.</p> <p>For the purpose of the modelling, 50% of new developments are assumed to</p>

Environment	Key Assumptions
	<p>require additional investment in Local and Distribution network infrastructure.</p> <p>The role of NBN Co in new developments will be to install fibre at the development phase for all premises in NBN Co's footprint in:</p> <ul style="list-style-type: none"> ▪ All Broadacre developments; ▪ All Infill developments where it has fibre that is ready for service and capable of connection; and ▪ Newly approved infill developments in which 100 or more premises are built within a 36-month period, in areas where NBN Co has not yet rolled out its network. <p>NBN Co's responsibilities will be in relation to developments which receive Stage 5 development approval from 1 January 2011 (relating to civil works) after that date and for which three months' notice has been given (by the developer to NBN Co). NBN Co will be responsible for the installation of fibre infrastructure in the developments including transit backhaul to a Point of Interconnect (Pol).</p> <p>Telstra will be responsible for developments of less than 100 premises, pending NBN Co being ready to provide a fibre service in that area that is capable of connection to the premises.</p> <p>NBN Co intends to contract with third parties chosen through a procurement process to deliver FTTP solutions in all Broadacre developments and Infill developments involving more than 100 premises.</p> <p>NBN Co will be able to generate revenue from these Build-Operate-Transfer (BOT) networks as soon as the transfer payment is made and will count them as 'BOT' activations.</p> <p>NBN Co assumes that the Government will enact legislation as described in the policy announcement of 9 December 2010 in relation to the provision of infrastructure by developers, and for access to that infrastructure.</p> <p>Any failure to pass the legislation would add significant costs to the NBN build. NBN Co has planned to deploy to a total of 70,000 Build Greenfields premises in the years up to FY2013 (out of which 60,000 are forecast to be connected). These 'Build' premises are considered part of the Greenfields roll-out carried out by NBN Co. 'BOT' premises are the remainder of the Greenfields premises for which NBN Co will sub-contract third party fibre providers to build the network on NBN Co's behalf.</p>
USO Co	<p>The Plan assumes Telstra will continue its Universal Service Obligations (USO) for voice telephony services until premises (within the Fibre footprint) are disconnected from the copper network in accordance with the Financial Heads of</p>

Environment	Key Assumptions
	<p>Agreement. NBN Co assumes that it will be required to connect and provide services to USO payphones but has not yet made any specific provision for the cost of doing so.</p> <p>For premises outside the Fibre footprint, the Plan assumes USO Co will be established by July 2012 and will assume responsibility for the USO from July 2014, through entering into contractual agreements with Telstra for a 10-year period beyond July 2012. This will include providing basic voice services in areas provisioned by NBN Co's wireless and satellite services.</p>
Powers and Immunities	<p>The Plan assumes that NBN Co will be granted adequate powers and immunities, including to allow the Company to maximise aerial deployment coverage and minimise the roll-out timetable.</p> <p>Without such changes the Plan is impacted by the requirement to achieve development approvals from local authorities, negotiate access arrangements with utilities, particularly power utilities, and deal with all of the regulatory requirements around land access that may otherwise apply.</p> <p>NBN Co has begun a parallel mitigation strategy involving discussions with each power utility on mainland Australia (including commercial negotiations with the five covering the First Release Sites). NBN Co has also begun an engagement strategy with each State and Territory to develop regulatory and policy solutions to complement Commonwealth powers and immunities legislation.</p>
Home Run Architecture	<p>Government has determined that NBN Co should conduct a trial in a new development, by early 2012.</p> <p>The Plan assumes NBN Co is not required to deploy Home Run architecture and NBN Co has not made any preparations to do so (other than conduct the trial required in a new development).</p> <p>Implementing a home-run network has very significant cost implications, including due to the requirement for significantly larger amounts of fibre cabling and the physical space required in various network elements.</p>
Future Possible Structural Separation and Layer 1 Unbundling	<p>The Plan assumes NBN Co is not required to unbundle and offer Layer 1 products and has not made any preparations to this effect.</p> <p>While the NBN Companies Bill contains a regime for the possible future functional separation of NBN Co, this Plan assumes NBN Co is not required to undertake such separation, or structural separation.</p> <p>This is due to the current lack of clarity on the form and timing of any separation.</p> <p>For the purposes of this Plan, and as directed by Government, it is assumed that NBN Co will implement an accounting separation methodology covering its assets and costs, but not revenues, which will be developed in consultation with the ACCC.</p>

Environment	Key Assumptions
Cherry Picking	The Plan assumes effective protection are in place to guard against cherry picking for Greenfields development and low cost high revenue regions and the Government has indicated that it will require new fibre networks built after 2011 for residential and small business purposes to be layer 2, wholesale only and open access, NBN Co will retain the options of overbuilding infrastructure. The Government will consider the introduction of a levy if necessary to prevent opportunistic cherry picking. Testing of the impact of cherry picking has been done through a scenario of a 50% loss in Greenfields connections; refer to Section 3.2, <i>Policy Sensitivities</i> .
Backhaul Service to Mobile Base Station	The Plan assumes that NBN Co may offer carrier grade services on normal commercial terms to mobile operators in areas where NBN Co already has fibre, but will not build additional transit backhaul in areas beyond those specifically needed to service NBN Co's own requirements.
Availability of Wireless Spectrum	The Plan assumes that NBN Co will be able to secure enough spectrum to service its planned area of 4% of Australian premises covered by fixed wireless. The Plan assumes that 2.3GHz spectrum will be acquired and utilised by NBN Co, although alternative options will continue to be investigated and assessed.
HFC Networks	The Plan assumes that any Internet protocol-based services, voice services, broadband services or services requiring a return path transmission from the user will be progressively migrated from the Telstra HFC network onto the NBN Co network as the NBN is rolled out (as per the Financial Heads of Agreement).
Public Works Committee (PWC) Exemption	The Plan assumes that NBN Co's PWC exemption signed on 29 June 2010 will not be revoked at a future sitting of Parliament and/or that the exemption contained in the NBN Companies Bill will apply.
Availability of Funding	Federal Government equity is assumed to be available to cover all funding requirements until NBN Co is able to raise debt in its own right. Debt markets will provide circa 33% of funding to the end of FY2021.

Source: NBN Co

Exhibit 3.2: Key Assumptions - Product, Pricing and Revenue

Product, Pricing, Revenue	Key Assumptions
Telstra Definitive Agreements - Competitive Environment	The Plan assumes that the Telstra Definitive Agreements will be completed in accordance with the terms of the Financial Heads of Agreement and result in clarity of the decommissioning of existing networks and migration of existing Telstra End-Users onto the NBN Co platform.
Premises Definition	The Plan assumes that NBN Co will cover any building (or part of building) that meets one of the following criteria: <ul style="list-style-type: none"> Is used at an addressable location on an ongoing basis for residential, business (whether for profit or not), government, health, or educational purposes; Is defined as a school by the Department of Education, Employment, and

Product, Pricing, Revenue	Key Assumptions
	<p>Workplace Relations;</p> <ul style="list-style-type: none"> Is within a new development at an addressable location for which NBN Co is the 'wholesale provider of last resort'; or Currently has a standard telephone service or payphone activated as defined under the USO. <p>The Plan also assumes that NBN Co will be permitted to, but not required to (unless directed by Government), connect various categories of 'non-premises' such as traffic lights, ATMs etc, on a commercial basis.</p>
Multi-Dwelling Units (MDUs)	The Plan assumes that NBN Co will provide Multi-Dwelling Units (MDUs) that fall within the Fibre footprint with fibre-to-the-premise (FTTP) technology.
Premises Count and Growth	The Plan assumes opening premises count of 10.9 million in FY2010 and premises growth of 1.6% per annum (average FY2010 to FY2025).
Interim Satellite Solution	The Plan assumes that NBN Co will provide a Satellite First Release Service (SFRS), which will provide an interim solution for satellite services (ABG replacement) prior to the launch of its own satellites.
Vacant / Unconnected Premises	The Plan assumes vacant / unconnected premises of 12.4% at FY2025.
Wireless-Only Homes (Residential Market)	<p>The Plan assumes there are no wireless-only businesses.¹⁷</p> <p>The Plan assumes 13% of total residential occupied premises being wireless-only today, increasing to 16.3% by FY2025 and 16.4% by FY2040.</p> <p>In terms of total occupied premises (residential plus business), this implies 13% of total premises are wireless-only by FY2025.</p>
New Applications	The Plan assumes that new applications will fuel uptake and usage; for example, for the Education and Health sector.

Source: NBN Co

Exhibit 3.3: Key Assumptions - Network Features

Network Features	Key Assumptions
GPON	The platform for the 93% FTTP coverage will be a Gigabit Passive Optical Network (GPON) with some limited point-to-point capability for business users. A full Ethernet Point-to-Point (home run) network will not be built.
Layer 2 Bitstream	NBN Co will offer products in the Layer 2 (active) layer. Layer 1 and Layer 3 (or higher) products will not be offered, although some Layer 3 awareness (e.g. for

Network Features	Key Assumptions
	multicasting) will be included.
Telstra Definitive Agreements - Availability of Passive Infrastructure	The Plan assumes that the Telstra Definitive Agreements will be completed in accordance with the terms of the Financial Heads of Agreement for use of existing passive infrastructure (conduits acquired, ducts, exchanges and backhaul leased where fit-for-purpose).
Points of Interconnect (Pols)	<p>NBN Co will be given responsibility to design and implement a network that delivers traffic to a number of Points of Interconnection (Pol) across regional and metropolitan areas.</p> <p>The Plan assumes that the Pols will initially be located in Fibre Serving Areas (FSAs) where competitive transmission services are available (a 'semi-distributed' Pol model) at the 120 locations identified under the ACCC's guidance (see section 1.3.2, <i>Points of Interconnect (Pols)</i> above).</p> <p>NBN Co will not charge differently for interconnection at any of the designated Pols – price is distance and location independent.</p> <p>RSPs will then acquire backhaul transmission services from one of the competitive transmission providers to take the traffic from the Pol to their Point of Presence (POP), generally in a capital city.</p> <p>For the purposes of the Plan, it is also assumed that the ACCC will make access determinations (using its new powers under the CCS Bill) in respect of pricing on currently declared transmission routes (with effect from 1 January 2011), which will reduce the current disparities in metropolitan and regional transmission costs faced by RSPs from the outset of the deployment period.</p> <p>It is also assumed that the ACCC will monitor pricing on currently exempted routes and, if necessary, will act promptly to re-examine exemptions in the event that pricing on those routes is not aligned with the ACCC's access determinations for regulated routes.</p> <p>If RSPs are unable to manage differences in transmission pricing across different regions then NBN Co assumes that further steps will be taken to achieve the Government's objectives in relation to wholesale pricing.</p> <p>NBN Co also assumes that the Government will provide any protections NBN Co requires from Parts IV and XIB of the Trade Practices Act 1974 (Competition and Consumer Act) in order to implement the Government's decisions in relation to Pols and uniform national wholesale pricing.</p> <p>NBN Co is aware that Uniform National Wholesale Pricing (UNWP) entails a level of cross subsidies between technology platforms and within the FTTP platform. However, NBN Co believes that infrastructure, by its very nature, factors in an amount of cross subsidisation between different End-Users, locations and usages.</p>

Network Features	Key Assumptions
Battery Backup	<p>NBN Co will install a Power Supply Unit (PSU) including a suitable battery at End-User premises to all Fibre Network Termination Units (NTUs).</p> <p>Maintenance of the battery including replacement will be the responsibility of the End-User or RSP.</p> <p>The Battery Backup solution will deliver power to the Analogue Telephone Adapter (ATA) within the NBN Co Network Termination Unit (NTU). Devices which require local power such as cordless phones or those connected to the NTU data ports will not operate during loss of mains power as they are not protected by the Battery Backup solution.</p>
Aerial vs. Underground	Usage of underground existing infrastructure, mostly from Telstra subject to fit-for-purpose; then aerial wherever possible.
Location of NTU	The Plan assumes 50% external NTU location and 50% internal.

Prime Minister Gillard - Better NBN for Regional Australia

Announcement 10 September 2010

For the first time, broadband prices will be the same for households and businesses regardless of where they are located - in the city, in regional Australia or in more remote parts of the country.

This will be achieved by a new cross subsidy to ensure uniform national wholesale price so that regional areas can pay the same price as people in the city.

Regional areas will also be prioritised in the construction of the NBN

- Fibre will be built in regional areas as a priority
- NBN Co will bring forward the introduction of wireless services and satellite services so that regional Australia can get access to better broadband straight away