

Hawker Britton

Government Relations Strategy

The National Broadband Network

July 2014

On 7 April 2009 the former Labor Government announced that it would establish a company, NBN Co, that would invest up to \$36 billion over the following eight years to build and operate a wholesale-only, open access National Broadband Network (NBN). This represented the largest infrastructure project ever to be undertaken in Australia.

Following the change of government at the 2013 Federal election, the Coalition commissioned a business review of the NBN (the 'Strategic Review'), which considered all operations with respect to the NBN, including NBN Co's management of the project, to provide an update of the rollout's progress and alternate models that may be implemented.

The Coalition has since outlined key changes to the business model of the NBN, moving from a wholesale infrastructure model to a market-driven approach. The NBN will also be moving from a Fibre-to-the-Premises (**FTTP**) model to a multi-technology mix (**MTM**) model. This will change the speed of the Network and the method by which it is rolled out.

The Coalition Government has also appointed Dr Ziggy Switkowski as Chairman of NBN Co, three new Non Executive Directors and a new CEO, Mr Bill Morrow.

The Hawker Britton Brief on Labor's National Broadband Network is available [here](#).

The Strategic Review is available [here](#).

The revised Statement of Expectations for NBN Co is available [here](#).

NBN Co.....	2
Board	2
Business model	3
Key documents	3
Infrastructure.....	4
Comparison of Fibre-to-the-Premises (FTTP) and Fibre-to-the-Node (FTTN).....	5
Ongoing developments.....	6
NBN rollout	6
Revised Statement of Expectations	7
A new corporate plan	7
New contracts.....	8
Regulatory impacts	8



NBN Co

NBN Co is a wholly-owned Commonwealth company that has been prescribed as a Government Business Enterprise (GBE) and is represented by 'Shareholder Ministers'— the Minister for Communications and the Minister for Finance.

NBN Co must remain in full Commonwealth ownership until the Communications Minister declares that the National Broadband Network is built and fully operational. A sale of NBN Co can only occur after a Productivity Commission inquiry into the NBN regulatory framework has been considered by a Parliamentary Joint Committee.

The NBN Co website is available [here](#).

Board

On 23 September 2013, following a request from Minister for Communications the Hon Malcolm Turnbull MP, the NBN Board resigned.

On 3 October 2013 Mr Turnbull announced the appointment of Dr Ziggy Switkowski as Executive Chairman of NBN Co. Dr Switkowski became Non Executive Chairman on 2 April 2014 when Mr Bill Morrow commenced his appointment.

On 11 November 2013, Mr Turnbull announced the appointment of three new non-executive directors: Mr Patrick Flannigan, Mr Simon Hackett and Mr Justin Milne. Dr Kerry Schott and Ms Alison Lansley were reappointed and continue to serve on the Board.

Mr Jean-Baptiste Rousselot and Mr Greg Adcock were also appointed to the positions of Head of Strategy and Transformation and Chief Operating Officer (COO) respectively.

On 12 December 2013 Mr Turnbull announced the appointment of Mr Bill Morrow as CEO of NBN Co. Mr Morrow's appointment took effect on 2 April 2014 and will expire on 1 April 2017.

NBN Co Board members

Dr Ziggy Switkowski	Non Executive Chairman
Mr Patrick Flannigan	Non Executive Director
Mr Simon Hackett	Non Executive Director
Ms Alison Lansley	Non Executive Director
Mr Justin Milne	Non Executive Director
Dr Kerry Schott	Non Executive Director
Mr Bill Morrow	Chief Executive Officer



Business model

The former Labor Government formed NBN Co to build and operate the network on a wholesale basis. NBN Co would sell a tiered range of broadband products to Retail Service Providers (RSPs), who in turn would offer products to consumers.

Following completion, the NBN Co was to be privatised. As part of the process, the Federal Government secured an agreement with Telstra to decommission its extensive ageing copper network and for NBN Co to use its infrastructure and to separate its retail and wholesale arms, allowing it to transfer wholesale customers to the NBN.

A unique feature of Labor's NBN was that the material infrastructure (fibre, satellite or wireless) was not provided differentially to different markets according to capacity to pay, but was provided as a universal communications infrastructure, available at standard wholesale costs and guaranteed minimum performance rates to all homes and businesses, regardless of location.

Following the 2013 Federal election, the Coalition Government announced changes to the business model for NBN Co. Under the Coalition, NBN Co will be moving from a wholesale infrastructure model to a market-driven approach, which allows for competition in the provision of fibre infrastructure.

Companies other than NBN Co (such as Optus, TPG and Telstra) will be allowed to build their own networks in competition with the NBN. Since the shift, TPG Telecom has declared that it will connect fibre optic cabling to around 500 000 apartment buildings in capital cities and Optus has flagged plans to install fibre from NBN Co's nodes to customers' homes. Telstra will also likely operate its hybrid fibre-coaxial cable in competition with the NBN, covering the rest of the most profitable bits of the capital cities.

As such, NBN Co will be competing with other companies in profitable areas, such as business districts and high-density urban areas. NBN Co will therefore be unable to use its profits from densely populated urban markets to offset the costs of delivering comparable services at equal prices to users in regional and rural areas.

The Coalition's election policy specifically allowed for differential pricing on the NBN Network. This will require [legislative change if it is to proceed](#).

Key documents

The Strategic Review of the NBN is available [here](#).

NBN Co's Weekly Progress Report is available [here](#).

NBN Co's Corporate Plan 2012-2015 is available [here](#). (NB an update will occur shortly – see p7)

NBN Co's Annual Report for 2013 is available [here](#). (PDF)

NBN Co's internal analysis of the Coalition's Broadband Policy is available [here](#). (PDF)

Infrastructure

Under Labor’s NBN, Fibre-to-the Premises (**FTTP**) broadband services was to be provided to 93 per cent of all Australian homes, schools and workplaces with speeds of up to 100 megabits per second (around 100 times faster than current speeds). The remaining seven percent were to be connected with a mixture of wireless and satellite technologies that would deliver broadband speeds of 12 megabits per second.

At the 2013 Federal election, the NBN offered speeds of up to 250 megabits per second, with speeds to increase from 2014 onwards. When rolled out, broadband speeds would potentially as high as 1 000 megabits per second—around 500 times faster than current speeds.

Following the 2013 Federal election, the Coalition Government announced substantial changes to the broadband network. The Strategic Review considered six alternative scenarios for the network, including:

- (1) continuing Labor’s FTTP policy;
- (2) a redesign of the FTTP policy;
- (3)-(5) three intermediate scenarios utilising existing network infrastructure; and
- (6) a multi-technology mix (**MTM**) model.

On 12 December 2013, the Government announced it would pursue the sixth option, a multi-technology mix (MTM). The Coalition’s NBN plan will restrain the rollout of FTTP to 26 per cent of premises. Instead, the new plan uses Fibre-to-the-Node (**FTTN**) for 44 per cent of premises and Upgraded Hybrid Fibre-Coaxial (**HFC**) cable access (the cable network used for pay-TV) for the remaining 30 per cent of premises.

The new model will provide speeds of 25 megabits per second for 43 per cent of premises by 2016. In doing so, the Strategic Review noted that under the MTM model, the Coalition’s election commitment to guarantee 25 megabits per second to 100 per cent of premises by 2016 could not be delivered.

	Labor’s NBN	Coalition’s NBN
Completion date	2024	2020
Technology used		
FTTP	100%	36%
FTTN	0%	44%
HFC	0%	30%
Premises with access to download speed on completion		
25 Mps	100%	100%
50 Mps	100%	97%
100 Mps	100%	65-75%
Cost		
Peak funding (equity)	~\$30.4bn	~\$29.5bn

Comparison of Fibre-to-the-Premises (FTTP) and Fibre-to-the-Node (FTTN)

The public debate over the NBN has focused on two different models of broadband: Fibre-to-the-Premises (FTTP) and Fibre-to-the-Node (FTTN).

FTTP can be summarised as having very high initial installation costs, but offering a more consistent outcome, higher long-term revenue, and greater spare capacity to meet future needs.

FTTN has a faster and cheaper installation, generates revenue sooner, but provides slower speeds and has higher ongoing maintenance costs. FTTN is network specific, and cannot be reused in a hypothetical future FTTP network. As such, FTTN will be more expensive to upgrade as demand grows.

Fibre-to-the-Premises	Fibre-to-the-Node
Technology	
<ul style="list-style-type: none"> Optical fibre is installed directly to houses, apartment buildings and businesses to provide high speed internet access. The fibre is connected to a fibre access node (FAN)—similar to a telephone exchange—which can service many suburbs 	<ul style="list-style-type: none"> Optical fibre is installed to a local junction box (node) in a neighbourhood which is then connected back to the nearest FAN. From the node, technologies such as asymmetric digital subscriber line (ADSL) and very-high-bitrate digital subscriber line (VDSL) are used to deliver data to premises.
Speeds	
<ul style="list-style-type: none"> By December 2013, NBN speeds had reached up to 100 Mbps, with 250 Mbps available on demand. Speeds of up to 1 000 Mbps (500 times faster than current internet speeds) were to be made available on demand from 2014. 	<ul style="list-style-type: none"> FTTN network speeds are dependent on the distance from their premises to the node, and the copper quality. Under perfect conditions using VDSL, theoretical speeds of up to 200 Mbps are achievable but these speeds rapidly drop off the further premises are from the node (1km distance from the node reduces potential maximum speeds to 30 Mbps)
Risks	
<ul style="list-style-type: none"> A drawback of a FTTP system can be the reliance on conduits to connect fibre optic cables. The cables need to be drawn through existing conduit or laid in new trenches to each premise in the coverage area. When copper pipes are removed and fibre is laid there is the potential for asbestos to be discovered. While this risk is also present for the installation of 	<ul style="list-style-type: none"> The effectiveness of an Australian FTTN network is dependent on the physical state of the copper network and its ability to handle the large data throughput of the fastest copper-based broadband technologies. Factors impacting the copper network include varying copper loop lengths, quality of lines, the quality of in-home wiring, interference from external sources and spectral compatibility issues.

<p>nodes for an FTTN network, it is greater when all copper wiring is decommissioned as is the case in FTTP.</p>	<ul style="list-style-type: none"> NBN Co's Assessment of the Coalition's Broadband Policy has also concluded that the Australian copper network cannot guarantee speeds of 50 Mbps.
<p>Cost</p>	
<ul style="list-style-type: none"> Significant capital costs are incurred in a FTTP model because fibre needs to be rolled out to every premise. Although the initial capital costs are higher, FTTP networks benefit from much lower operating and maintenance costs compared to FTTN networks. Labour costs are also high under FTTP. The Strategic Review found that the biggest constraint to FTTP network rollout is the cost and availability of network designers, senior and experienced project managers, in-field supervisors and project control staff to oversee program delivery. 	<ul style="list-style-type: none"> FTTN incurs lower capital costs (as it uses existing technology) but incurs substantially higher maintenance costs. The Strategic Review estimated that annual maintenance and operating costs for FTTN were between \$600 million and \$900 million per year, around \$4 billion higher than FTTP over ten years. Operating costs for FTTN are estimated to be between \$35 and \$55 per premises per year compared to \$9 per premises per year for FTTP.
<p>Revenue</p>	
<ul style="list-style-type: none"> The uniqueness of an infrastructure build of this scale may lead to delays in deployment, construction and take-up, and in turn revenue. Over time, increased need for and usage of broadband services in response to improved technological capacity are likely to lead to higher revenue. 	<ul style="list-style-type: none"> Although revenue is likely to be generated earlier under a FTTN model, the slower speed limits the potential revenue from charging users higher rates 'super fast' speed (such as 1 Gbps) available under FTTP. Infrastructure and competition, in particular cherry-picking of high-value customers represents a substantial risk to NBN Co's revenue base.

Ongoing developments

NBN rollout

NBN Co has signalled it will continue to deploy FTTP through 2014 in order to 'maintain momentum' and provide transparency to its delivery partners. At the same time, NBN Co will commence the next level of planning and evaluation of different ways to operationalise the Coalition's MTM model. This will require considerable work by technology and by geography.

Revised Statement of Expectations

On 8 April 2014 The Communications Minister and Finance Minister provided a revised Statement of Expectations for NBN Co, which formally tasked NBN Co with transitioning the NBN rollout from a FTTP model to a MTM model.

The Government also outlined its broadband policy objectives, which include the following:

- NBN Co will determine which technologies are utilised on an area-by-area basis so as to minimise peak funding, optimise economic returns and enhance the Company's viability;
- NBN Co must provide a minimum 25Mbps download speed (and a proportionate upload speed) to all premises, and at least 50Mbps to 90 per cent of fixed line premises as soon as possible;
- NBN Co will prioritise 'underserved' areas identified in the 'Broadband Availability and Quality Report' published by the Department of Communications in February 2014;
- NBN Co will integrate the existing HFC networks into the rollout (where feasible and economically beneficial) for wholesale-only, open access operation; and
- NBN Co will be assigned Proportionate responsibility for the quality, consistency and continuity of service experienced by Retail Service Providers and their end users.

The Statement also declared that the delivery of a MTM model and the Government's broadband policy objectives must be achieved within the constraints of a public equity capital limit of \$29.5 billion specified in its funding agreement with the Commonwealth.

The revised Statement of Expectations is available [here](#).

A new corporate plan

NBN Co will also develop a new Corporate Plan to reflect the revised Statement of Expectations by mid 2015. The new Corporate Plan will need to include revised revenue and cost expectations for the MTM approach, and a revised funding strategy.

The revised Statement of Expectations released in April 2014 also required that the new Plan include specific treatment of policy issues that influence the cost, delivery and performance of a multi-technology NBN, including:

- pricing and take-up;
- rollout scheduling and prioritisation of poorly served areas;
- qualification, financing, installation and maintenance of customer premises equipment;
- battery backup;
- delivery of voice services;
- customer migration and decommissioning of infrastructure;
- migration of services; and
- future upgrade paths.

The current Corporate Plan covering 2012–2015, released in August 2012, is available [here](#).



Prior to the election, the NBN Co had developed a draft corporate plan, a copy of which is available [here](#).

New contracts

Pursuant to the revised Statement of Expectations, NBN Co was required to vary the former Telstra DAs/the Optus HFC Agreement. These agreements will continue to underpin the infrastructure of the NBN and as such are critical to the success of the program.

On 26 June 2014, Communications Minister the Hon Malcolm Turnbull MP announced that NBN Co and Telstra had reached agreement on an expanded trial program to plan, design and construct FTTN broadband to about 200 000 homes and businesses. NBN Co's contract with Telstra focuses the initial rollout of FTTN on areas categorised as 'underserved' in the Government's MyBroadband broadband quality study.

The limited deployment of FTTN is an important step in allowing NBN Co to determine how a MTM rollout will change its construction and service provisioning operations and represents an interim step while NBN Co, Telstra and the Government finalise changes to the existing Definitive Agreements covering Telstra's participation in the NBN.

The Communications Minister also confirmed that Telstra, the NBN Co and the Government are advanced in negotiating changes to the Definitive Agreements. It is anticipated that these changes will include arrangements for the NBN Co to gain access to Telstra's existing local access network.

The Communications Minister's press release is available [here](#).

Regulatory impacts

As a result of the revised Statement of Expectations, there are likely to be a number of regulatory impacts, including:

- ACCC approval for any amendments to the Telstra DAs and the Optus HFC Agreement;
- ACCC approval in respect of any appropriate variations to the SAU;
- legislative and regulatory changes to provide powers to NBN Co, for example, with respect to Body Corporates, MDU access, and utility infrastructure access;
- changes to the LIFD regime to enable the efficient rollout of the NBN;
- potential revision to a number of Ministerial directions and policy; and
- revision to a number of new and existing Communication Alliance and ACMA codes and standards.

Future Issues

A Panel of Experts appointed by the Government is conducting an independent cost-benefit analysis of broadband (including direct and indirect economic or social costs and benefits) and a review of long-term regulatory arrangements governing NBN Co. The Panel will report to Government in mid-2014.



Further reading

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