



Hope.
Reward.
Opportunity.

**THE COALITION'S PLAN FOR
FAST BROADBAND AND
AN AFFORDABLE NBN**

APRIL 2013



The Coalition will deliver fast, affordable and reliable broadband to all Australians.

We will complete the National Broadband Network as quickly and cost-effectively as possible, using a mix of technologies that will provide high speeds at a reasonable cost.

Our goal is for every household and business to have access to broadband with a download data rate of between 25 and 100 megabits per second by late 2016. Downloads average less than five megabits per second at present.¹

Suburbs, regions, towns and business districts with the poorest services and greatest need for upgrades will receive first priority.

Key prices for a Coalition NBN will be capped nationally, ensuring Australians in metropolitan and regional areas alike can obtain services at fair prices.

By contrast, under Labor's NBN wholesale charges per user will triple by 2021.²

To put further downward pressure on prices, the Coalition will unshackle the competitive telecom market that Labor tried to stamp out, and reduce the cost of the NBN to prudent levels.

To ensure accountability we will require NBN Co (the government-controlled company building the network) to release more information more often to the taxpayers paying its bills.

We will resolve the greatest failure of current broadband policies: the up to two million households and businesses across Australia that cannot get basic fixed broadband after more than five years of Labor government.

Broadband infrastructure is necessary for our digital future, but on its own it is not sufficient. Businesses, governments and communities must be creative and energetic in finding areas where the NBN opens the way for new, better, less costly or more convenient services and amenities. This will ensure the nation makes the most of the economic opportunities provided by very fast broadband.

¹ Actual download rates in Australia average 4.3 megabits per second. Akamai Technologies, 'State of the Internet,' Q3, 2012. Advertised download rates average 9 megabits per second across broadband users according to the Australian Bureau of Statistics (using a weighted average of range midpoints). ABS 8153.0, 'Internet Activity, Australia,' Jun 2012.

² NBN Co, 2012-2015 Corporate Plan, p.69 and 72. Page 69 of NBN's Corporate Plan displays a graph showing a steep rise in the monthly 'ARPU' (average revenue per user) NBN Co expects to collect. NBN Co's financial projections on page 72 show wholesale charges per user increasing from \$22/month in 2011-12 to \$62/month in 2020-21.

THE ISSUE

The Coalition believes all Australians should have access to fast and affordable broadband. We recognise the benefits that fast broadband provides to households and businesses and its value (along with other information and communication technologies) in fostering productivity and innovation.

Broadband and the Internet are essential services

The Internet's pervasive presence in our economy and daily lives has transformed broadband into an essential service.³ In 2012 four out of five Australians aged 14 years and over used the Internet at least monthly, while three out of five (or almost 11 million of us) relied on it many times each day.⁴

To unlock the benefits of the digital economy, access to broadband must be universal, so people in rural or remote areas are not disadvantaged. Broadband must be affordable, so those on lower incomes are not caught on the wrong side of a digital divide. At present this is not the case. Up to two million Australian households and businesses don't have adequate fixed broadband – they can't access a service or it is too slow and unreliable for basic tasks such as streaming a short video or working from home.⁵

Labor's National Broadband Network is failing

Both Labor and the Coalition agree that universal, affordable and fast broadband is critical to our future. But Labor has proved incapable of delivering this policy objective in a timely fashion or at a reasonable cost.

In April 2007 Kevin Rudd promised voters a National Broadband Network supported by \$4.7 billion of public funding to be completed in 2013. Five years later Labor policy is lurching from one disaster to the next. Better broadband has been provided to only a handful of those in most need despite \$7.5 billion scheduled to be provided to NBN Co by June 2013.⁶ The NBN fibre network was available at just 72,600 premises and in use at only 10,400 by December 2012.⁷ Bluntly, NBN Co has failed against every single benchmark it set for itself.

Labor's NBN is inching forward so slowly there is no chance it can be completed in its current form by Labor's deadline of 2021. Instead, under Labor millions of Australians would be left waiting a decade or more for better broadband. The public funding required would blow out beyond NBN Co's claim of \$44 billion – more realistic analysis indicates funding would exceed \$90 billion, as detailed in the background papers released with this policy.

Prices, on the other hand, are not inching forward – they are poised to increase in leaps and bounds.

Under Labor's current policies, wholesale user charges per month will, on average, increase almost three-fold over the next nine years – a steeper rise than electricity bills over the past nine years. Adjusted for inflation, user charges will more than double.⁸

³ The share of Australian households with home Internet access increased from 67 per cent in 2007-08 to 79 per cent in 2010-11. ABS 8146.0: 'Household Use of Information Technology, Australia, 2010-11,' Dec 2011.

⁴ Roy Morgan data reports that in June 2012 14.3 million (77 per cent) of Australians aged 14+ accessed the Internet over the month, while 10.8 million (62 per cent) used it more than once per day. Roy Morgan Single Source, June 2012, cited in the Australian Communications and Media Authority: 'ACMA 2011-12 Communications Report,' p. 57.

⁵ McKinsey and KPMG for the Department of Broadband, Communications and the Digital Economy: 'Implementation Study for the National Broadband Network,' March 2010, p. 190 and p. 282. The Study identified 1.2 million 'pair gain' or 'RIM' lines where xDSL was unavailable and 0.4 million premises served by exchanges where xDSL equipment had not been installed. Many other households and businesses can get ADSL in theory, but are too far from the exchange, have broadband limited by line-specific factors, or can't get service because of port or space constraints at the exchange.

⁶ Investment in NBN Co will reach \$7.5 billion by June 2013 according to the Mid-Year Economic and Fiscal Outlook 2012-13, p. 285.

⁷ NBN Co, Media Release, 29 Jan 2013, Available: <http://www.nbnco.com.au/about-us/media/media-releases.html?cid=pub:media::men:med-rel>

⁸ NBN Co, 2012-2015 Corporate Plan, p. 69 and p. 72. Pages 69 and 72 of NBN's Corporate Plan show monthly 'ARPU' (average revenue per user) rising from \$22/month in 2011-12 to \$62/month in 2020-21.

NBN Co's eroding credibility

It is increasingly obvious that claims the NBN rollout is on track, that taxpayers will receive a 'fair' return on funds invested, and that NBN Co is commercially viable in its current form are not credible.

Far from earning the seven per cent claimed by Labor, the available information suggests the NBN will never earn a positive return if completed according to the currently proposed plan.

The unraveling of NBN Co's credibility began with release of the revised NBN Co 2012-2015 Corporate Plan in August 2012. While Labor and NBN Co tried to pin the blame for delays on Telstra and the ACCC, there was clearly more to the story. The Plan included a series of massive revisions to rollout and revenue targets in the original NBN Co 2011-2013 Corporate Plan released just 20 months earlier in December 2010:

| NBN CO: Diminished expectations | 2011-2013 Plan | 2012-2015 Plan | |
|--|-----------------------|-----------------------|-------------|
| <i>Release Date</i> | <i>Dec 2010</i> | <i>Aug 2012</i> | |
| Revenue (July 2010 to June 2013) | \$205 million | \$20 million | -90% |
| 'Indirect' OPEX (July 2010 to June 2013) | \$771 million | \$1480 million | +92% |
| Fibre premises passed (June 2013) | 1,268,000 | 341,000 | -73% |
| Fibre premises with service (June 2013) | 511,000 | 54,000 | -89% |
| Takeup where NBN available (June 2013) | 33% | 14% | -58% |
| All premises with service (June 2013) | 566,000 | 92,000 | -84% |

In truth, the only area where NBN Co exceeded expectations in its first four years of operation was in its 'indirect' expenses – its spending on salaries and benefits, consultants, lawyers, office space, corporate travel and advertising. These costs have consistently been about twice as much as originally forecast and in 2013 remain so given NBN Co's 2,300 staff.

In March 2013, NBN Co admitted that even the targets in its revised Corporate Plan were out of reach.

By the middle of 2013, just a few months before the next Federal election, it looks as though NBN Co will have spent four years and billions of dollars running fibre to about one in 50 of the 12.2 million premises its fibre was promised to reach.

Does demand for bandwidth require switching to fibre?

It must be stressed, however, that Labor's NBN was not a response to an illusory bandwidth crunch. The impending bandwidth crunch is real, even if Labor's policy response has turned out to be inadequate.

Indeed, as video comes to dominate the Internet, demand for bandwidth is surging. Whether it's watching movies or TV, a business conference call, a Skype chat with family abroad, a streamed sporting event, a medical consultation, or a clip on YouTube, video is testing the limits of current connections, and sparking discussion over how to respond.

If vastly more bandwidth is needed there is no question that optical fibre offers the greatest capacity.

But do consumers really need the data transfer rates only fibre can provide, or typically use applications that need such bandwidth? And even if they do, are they willing to pay more for it?

Around the world there is no evidence consumers are willing to pay higher charges for 100 megabits per second – and no mainstream applications other than streaming video that utilise such bandwidth. According to Rupert Wood of Analysys Mason: “There is no clear demand for very high fixed-line bandwidth if a premium has to be paid. Consumers are more willing to focus their telecoms budgets on mobile devices and services.”⁹

Replacing copper with fibre that runs to every premise, known as fibre to the premises, or FTTP, is very expensive: in the established areas where most Australians live, it costs several thousand dollars per home or business. Does this investment represent value for money for taxpayers, or the best use of scarce resources?

This is really the crux of the broadband debate in Australia and elsewhere:

- Can rising demand for bandwidth, accompanied by limited willingness to pay more, be met by leveraging existing infrastructure and modest investment to push fibre further into the network and closer to end users? or;
- Has legacy infrastructure such as Telstra's copper network reached a point where it is unable to support the bandwidth needed by users and must be built over? If so, who is going to pay the very hefty price for this?

Labor's choice: The most expensive NBN in the world

In April 2009, Labor chose its side in this debate. It committed taxpayers to a more ambitious and costly broadband plan than any other in the world.¹⁰ NBN Co was created as a taxpayer-owned monopoly with a mandate to replace Telstra's copper with fibre (and achieve a competition policy objective: the separation of Telstra's network from its retail business).

This decision was made in haste with scarcely any analysis of alternative options and with no attempt to measure its costs or benefits.

The Coalition's alternative: Choose the most cost-effective technology

Broadband policy should be about efficiently meeting community needs, not advocating for a particular technology. Networks should be upgraded in the most cost-effective way using the best-matched technology. This will vary from place to place. Existing infrastructure almost always has a vital role to play.

This is the approach adopted in virtually every other advanced economy, and is the approach that will be adopted by the Coalition if elected.

A way to reduce the expense of Labor's FTTP NBN is to extend fibre to cabinets within a few hundred metres of user premises or into the basements of apartment blocks. 'Fibre to the node,' or FTTN, increases bandwidth at manageable expense by making use of the existing copper infrastructure over the last few hundred metres before reaching the customer's premises.

⁹ Rupert Wood, 'FTTx Rollout and Capex in Developed Economies: Forecasts 2011–2016,' Analysys Mason, April 2011, p. 6.

¹⁰ OECD (2011), 'Fibre Access: Network Developments in the OECD Area,' OECD Digital Economy Papers, No. 182, OECD Publishing, pp. 17-19. Available: <http://dx.doi.org/10.1787/5kg9sqz9m1x-en>

Within a few years FTTN should support downloads exceeding 100 megabits per second over short lengths of copper. According to NBN Co's own bullish projections of user demand, such a ceiling would encompass the download speeds four fifths of NBN users are forecast to demand a decade from now.¹¹ This proves there is still plenty of scope for legacy infrastructure to play a part in providing bandwidth.

Of course fibre should generally run all the way to premises in new ('greenfield') housing estates, unless this isn't commercially feasible. In some places especially high maintenance costs may require copper to be replaced with fibre. Fibre would also typically extend to anywhere there is demand sufficient to justify it – business districts, industrial and commercial parks, schools, hospitals, medical centres and universities are just some examples.¹²

But in the established towns and suburbs where most Australians live, the expense of replacing copper with fibre is always significant – thousands of dollars per premise, and in some cases many times that. The NBN Co 2012-2015 Corporate Plan estimated investment of \$2,800 for each of the 12.2 million premises it aimed to pass with fibre, or \$4,000 for each premise with active service.¹³

Simple economic sense argues that if large and irreversible expenditures of this order can be avoided or deferred, they should be.

THE PLAN

The Coalition will deliver fast, affordable and reliable broadband years sooner than Labor. Our aim is that everyone in the nation should have access to broadband with download data rates of between 25 and 100 megabits per second by 2016, and between 50 and 100 megabits per second by the end of 2019 in 90 per cent of the fixed line footprint – although it should be noted this goal in part depends on NBN Co delivering its current satellite and fixed wireless solutions on time and on budget.

We will deliver broadband at less cost to taxpayers. A Coalition NBN will reduce the funding from taxpayers and the capital markets needed to complete the project by \$60 billion or two thirds compared to the realistic estimated cost of Labor's plan. Detailed analysis underpinning the Coalition's estimate that Labor's NBN will require more than \$90 billion in public funding, twice as much as Labor has so far admitted, is contained in the background papers released with this policy.

We will ensure areas with poorest broadband receive priority. Incredibly, Labor is allowing NBN Co to waste money building over existing fast broadband networks – even FTTP in some cases – while many communities remain without any service at all.

Finally, we will ensure that household and small business monthly bills for telephone and broadband services remain affordable. Very fast broadband that is both reliable and affordable can be extended across the nation without the alarming price hikes in prospect under Labor.

Leveraging existing infrastructure

Existing infrastructure has a vital role to play in the Coalition strategy. A Coalition NBN will make substantial use of FTTN.

¹¹ NBN Co, 2012-2015 Corporate Plan, p. 64.

¹² In truth almost all large institutions such as universities and major hospitals have been connected directly to fibre for some years, as have the vast majority of schools. This is why the Government's constant boasts in the early days of the NBN of connecting schools have been hard to provide evidence for in Parliament – the bulk of schools had fibre well before the NBN started.

¹³ NBN Co, 2012-2015 Corporate Plan, Aug 2012, p. 72. These figures represent total capital spending on fibre plus a pro-rata share of 'shared capex' from FY2011 to FY2021 (or approximately \$33.8 billion) divided by 12.2 million premises able to connect to the fibre, or 8.5 million with service.

FTTN provides higher bandwidth at manageable costs by pushing fibre deeper into the network and closer to end users, reducing the length of the copper connection to a few hundred metres.

Within a few years, FTTN should support peak downloads exceeding 100 megabits per second over short lengths of copper. FTTN costs per premise range from 20 to 33 per cent of FTTP.¹⁴ Yet to most broadband users the service provided by the two solutions will be indistinguishable because the applications they use don't need the very high speeds only FTTP can provide.

Where does fibre to the premises fit?

Fibre generally should be deployed in new ('greenfield') housing estates and wherever copper has to be replaced (unless there are particular commercial reasons not to do so). There will also be established areas where high maintenance costs or the condition of the copper renders FTTN unattractive and the best alternative is FTTP.

While there is no clear economic case or mainstream consumer demand for FTTP in most areas today, this will not necessarily remain the case. Today's applications will change and evolve, particularly with the rise of cloud services. The Coalition's policy anticipates this possibility and ensures it is planned for.

Coalition NBN rollout at completion

The table below provides a summary of the results of an NBN rolled out according to the budget and over the timeframe envisaged by the Coalition if elected to office in late 2013.

As can be seen, the bulk of established ('brownfields') premises are served by FTTN which accounts for more than two-thirds of the total rollout, and around 90 per cent of extension of the fixed line NBN to stand-alone dwellings between 2014 and 2019.

The roughly 10 per cent of stand-alone premises served with FTTP after 2014 are assumed to be in areas with the poorest or most maintenance-intensive copper. Overall, 'greenfields' premises account for more than 1.6 million of the 2.8 million FTTP premises in 2019. Note that the table does not assume any contribution to FTTP from co-funded fibre.

| The Coalition NBN at finish of rollout in 2019 | | |
|---|-------------------|-------------|
| Fibre to the premises (FTTP) | 2,802,000 | 22% |
| Fibre to the node (FTTN) | 8,968,000 | 71% |
| Fixed wireless | 572,000 | 4% |
| Satellite | 372,000 | 3% |
| Total premises ¹⁵ | 12,712,000 | 100% |

¹⁴ Direct accounts from carriers including AT&T, BT, Deutsche Telecom and Chorus (all of which have deployed both types of network) uniformly indicate a ratio of 3-5X between FTTN/FTTC and FTTP. This is confirmed by published analysis: WIK Consult, 'Report for the European Competitive Telecommunication Association,' 2008. WIK estimated FTTC costs were \$690 per premise in Germany and \$530 in Sweden. Costs for FTTH were over four times higher at \$3100 in Germany and 3.5 times higher at \$1900 in Sweden. Alternatively see: Analysys Mason for UK BSG (2008), 'Final Report for the BSG: The Costs of Deploying Fibre-based Next Gen Broadband Infrastructure,' 8 Sep 2008. This report estimated the gap between FTTC/VDSL2 and GPON FTTP at 4-5X in the UK. The differential is larger in markets where labour costs are higher.

¹⁵ This table assumes the number of addressable residential and commercial premises in Australia in 2019 is the same approximate number estimated by NBN Co in its 2012-2015 Corporate Plan based on GNAF data.

Revised rollout objectives for NBN Co

If elected the Coalition will ensure the NBN is completed as soon and as cost effectively as possible. A revised objective will be set: download data rates of between 25 and 100 megabits per second for the whole nation by 2016. Areas with poor service will receive priority. Regulated national wholesale prices will become price caps.

A key failing of Labor's NBN has been mishandling of new (or 'greenfield') estates and multi-dwelling units (MDUs). Private sector involvement will be encouraged in each case.

New statement of expectations

We will issue a revised statement of expectations directing NBN Co to provide broadband services with a minimum download data rate of 25 megabits per second by the end of 2016 in all areas of Australia, and 50 megabits per second by the end of 2019 in 90 per cent of the fixed line footprint. The goal assumes the current NBN Co satellite and fixed wireless networks are deployed on schedule.

The new statement of expectations will grant NBN Co's board and management flexibility and discretion in technology and network design decisions.

The statement of expectations will specify a limit on the public capital available to NBN Co. This limit will be \$29.5 billion.

NBN Co will be required to achieve these objectives while providing a positive after-inflation return on all post-election equity invested by taxpayers.

Pricing commitments

Any uniform national wholesale prices in an NBN Co undertaking accepted by the ACCC will become uniform national wholesale price caps for directly comparable products.

Network operators including NBN Co could freely offer wholesale prices for products (or product elements) that are below this cap.

In the absence of any such accepted undertaking from NBN Co to the ACCC, NBN Co will be required to reduce its product element pricing over the next 10 years to achieve an inflation-adjusted fall of 10 per cent in the combined wholesale price of two 'reference products' for end users.

These reference products will be: the entry level broadband product and the most widely purchased bundled broadband and telephony offering.

This expectation will be subsequently waived if the ACCC approves an undertaking from NBN Co including similar price controls.

Rollout priorities and duration

Within 90 days the Department of Broadband Communications and the Digital Economy, with the assistance of NBN Co and private carriers, will provide Parliament with a ranking of broadband quality and availability in all areas of Australia. This ranking will be published for comment and review and will guide prioritisation of the rollout.

We will require NBN Co to amend its rollout plan with effect from the soonest commercially feasible date to grant priority to the identified inadequately served areas.

Broadly, it is the Coalition's expectation that execution of the rollout described in this policy will take place over six years from 2013 to 2019 inclusive, and be completed in 2019.

Approximately 65 per cent of the FTTN portion of the rollout is expected to be completed in the four years to 2016-17. The remaining 35 per cent will be deployed in 2017-18 and 2018-19 and will in most cases be in areas served by HFC networks.

Satellite and fixed wireless networks

NBN Co will proceed with its existing satellite and fixed wireless networks serving the most remote seven per cent of premises. The Coalition's understanding is that there is limited or minimal scope to vary these commitments.

The Coalition has indicated an interest in seeking opportunities to allow investment in the fixed wireless network to also improve coverage or increase competition among mobile carriers in regional areas. This objective is subject to contractual constraints and discussed elsewhere in this document.

We will consider opportunities to realise value from the satellite contract by seeking private operators or owners for the NBN satellite service, if this enables price and service levels for regional consumers to be improved.

Broadband in new housing estates

Fibre will generally continue to be required in all new housing developments of 100 or more lots. We will attempt to negotiate arrangements with Telstra for fibre infrastructure in sub-100-lot developments where this is feasible and commercially viable.

Private infrastructure builders which construct fibre infrastructure in new estates that meet NBN specified standards will be given an option of transferring them to NBN Co at an agreed fixed price.

Private builders/operators of fibre networks in new estates will be offered a financial incentive that reflects any net cost savings that their investment generates for NBN Co, provided such networks meet NBN specified standards and their owners make them available to access seekers on non-discriminatory terms at wholesale prices for reference products no higher than NBN Co's wholesale price caps (or similar price commitments agreed by NBN Co and the ACCC).

Broadband in multi-dwelling units (MDUs)

Very fast broadband can be delivered to individual units within an MDU by terminating the fibre in the basement or telecom room and then using existing copper or cable networks in the building to reach each premise. Where feasible this is how the NBN will be delivered.¹⁶ Building owners will of course always have the option of fibre connected to every premise if they pay for this themselves.

Competition

Competitive and free markets have driven innovation and cost reductions in telecommunications since the early 1990s. The Coalition will remove or waive impediments to infrastructure competition introduced to provide a monopoly to Labor's NBN, and investigate opportunities to invigorate and enhance competition among retail service providers (where hopes that monopoly infrastructure would enable a dynamic retail market have so far been unfulfilled).

Structural separation

We will continue to operate the NBN as a national wholesale-only layer-2 bitstream access network available to all access seekers on transparent and non-discriminatory terms. We will impose similar obligations on any future owner(s) of the NBN network.

Retail service providers would not control the provision of services delivered over the NBN.

Where the NBN is rolled out using FTTN, existing communications services at a given node will cut over to NBN Co control on the same date.

Completion of the NBN will implement the structural separation of Telstra.

We will prohibit NBN Co from supplying services to end users and impose similar restrictions on any future owner(s) of the NBN network.

Retail services competition

Under our plan, NBN Co will offer retail service providers the same 121 points of interconnect as specified under the current NBN.

Retail service providers may face integration costs to obtain access to customers via networks under dispersed ownership unless there are common interfaces and standards. We will request the Communications Alliance (working with NBN Co and private operators) to set standardised interfaces and processes for retail service provider requirements such as ordering, provisioning, billing, and other management or reporting needs.

Infrastructure competition

Under our plan, regulatory impediments to the construction and operation of non-NBN access networks will be removed.

The owners/operators of new high speed broadband access networks will, however, be required to make them available to access seekers on non-discriminatory terms at wholesale prices for reference products equivalent to NBN Co's wholesale price caps (or similar price commitments agreed by NBN Co and the ACCC).

¹⁶ This is the standard approach to connecting apartment in MDUs in a number of countries including Korea and Japan where very fast broadband deployment is far more widespread than in Australia.

Under the existing contracts between NBN Co on the one hand and Telstra and Optus on the other, the two carriers' HFC networks cannot carry either broadband or voice services to any premise once it is connected to the NBN. The NBN Co has made substantial financial commitments in return for this thoroughly anti-competitive arrangement. Subject to an equitable re-negotiation of these provisions satisfactory to NBN Co and the Government, our goal would be to remove any contractual impediments to the use of existing HFC networks for broadband and voice. A key consideration in such negotiations will be ensuring open access to networks and scope for enhanced competition in the relevant areas.

Fibre on demand, co-funded fibre and future fibre upgrades

The Coalition acknowledges that some users may want higher speeds than can be provided over FTTN before any evidence of such needs in the broader market. Likewise, FTTP in some circumstances may be seen by other tiers of government, infrastructure operators or private investors as economically attractive or commercially attractive. Finally, market needs will clearly evolve over time and eventually may require further upgrade of the network where fibre has not been extended to user premises.

Reflecting these three possibilities, the Coalition policy provides for: individuals to obtain fibre on a user-pays basis where feasible; external public or private investors to propose and co-fund FTTP rollouts if they are willing to put forward 50 per cent of the needed funding; and an explicit future upgrade path to be incorporated into all non-FTTP NBN Co fixed line construction.

Fibre on demand

NBN Co will provide for fibre on demand at individual premises as soon as possible where fibre does not extend to the premise and this is technically feasible and commercially viable.

Any contractual arrangements regarding any aspect of fibre on demand between an end user and a retail service provider and/or NBN Co must include terms to allow other retail service providers to take over the service, subject to the legitimate commercial interests of the initial retail service providers being respected. NBN Co is responsible for provision of fibre on demand and will retain ownership of the fibre.

Co-funded fibre

State or local governments, utilities or investors may have interest in ownership and funding of fibre rollouts in certain areas for a number of reasons: in response to user requests (or users committing to particular services); to leverage replacement or deployment of other infrastructure; because FTTP is seen as meeting a policy objective; or on a commercial basis. NBN Co will report to an incoming Coalition government within 180 days on the economic and operational feasibility of co-funded FTTP deployment.

Fibre co-funders will provide at least 50 per cent net (incremental) funding for the proposal. Any other financial or ownership arrangements would be a matter for negotiation between NBN Co and a co-funder(s) but must be consistent with NBN Co's wholesale open-access obligations.

NBN Co may refuse any co-funded proposal that is commercially or operationally infeasible, provided a written explanation is provided to the originator and NBN Co shareholder Ministers.

Co-funded fibre upgrades must not interfere with NBN Co's priority rollout to under-served areas.

NBN Co is responsible for operating and managing co-funded parts of the network.

Future upgrade path

Where NBN Co extends fibre beyond an exchange but not to user premises (i.e. deploys FTTN) it will be required to plan and build in readiness for future upgrades that take fibre further into the field. All FTTN designs must be upgradeable.

NBN Co's contractual commitment and reporting

The Coalition has not had access to the contracts entered into by NBN Co but our intention is to honour the contractual commitments to suppliers and other partners including Telstra, appropriately entered into by NBN Co.

The Coalition reserves the right to review and seek to vary any of those contracts in light of the Coalition's broadband policy and in order to protect the interests of taxpayers. However the Minister will seek to do so on the basis that in net terms across all variations and any associated transactions or arrangements between the parties, Telstra shareholders are kept whole.

NBN Co's contractual commitments

NBN Co will publish on its website, subject to confidentiality, all contractual commitments with the same transparency and thoroughness as is required of Government departments.

NBN Co and Telstra

We may seek to negotiate variations to commitments to provide efficiencies, allow the NBN to be more quickly deployed or otherwise create benefit.

NBN Co will seek permanent access to Telstra's copper between premises and concentration points such as pillars, cabinets or exchanges. Telstra has publicly stated the copper has minimal economic value, leading us to anticipate cost-effective access will be attainable.

NBN Co reporting and disclosure

NBN Co will report to Parliament on rollout and end user take-up on a monthly basis. NBN Co will also make this data available each week on the NBN Co website.

NBN Co will report to Parliament on its financial performance on a quarterly basis.

Review of NBN strategy/policy process and NBN governance/industry matters

The Australian people deserve the facts about Labor's NBN and its lessons for the public policy process should be studied to help avert similar episodes in the future. NBN Co must also be scrutinised, both to ensure it can be repurposed as a vehicle for a more rational policy and to learn from any past missteps. If elected the Coalition will initiate three reviews, each with a specific focus and reporting horizon.

NBN Co strategic review

This review will be a rapid but rigorous business review of NBN Co's rollout progress and costs, structure, internal capabilities, commercial prospects and strategic options. This review will report back to the Government within 60 days on the following:

- The progress and cost of the rollout, and NBN Co's financial and operational status.
- The estimated cost and time to complete the FTTP NBN under existing policies.
- The estimated cost and time to complete the NBN if variations are made to the current plan, such as FTTN in established (brownfield) areas as proposed by the Coalition.
- The economic viability of NBN Co under alternative strategies.
- The implications of capital costs and principles of cost recovery for wholesale and consumer prices under the existing and alternative strategies.
- Recommendations for organisational restructuring and a revised NBN Co strategy to achieve the Coalition's policy objectives.

Independent audit into broadband policy and NBN Co's governance

This review will be a separate independent audit to examine the public policy process which led to the NBN and NBN Co's governance. It will have the objective of ensuring policy process or governance lessons arising from recent broadband policy are captured and made public. The independent audit will have terms of reference that include the following:

- The advice and processes which led to NBN Co's establishment.
- The origin and basis for its mandate to run FTTP to 93 per cent of Australians.
- Why no cost benefit analysis or alternative form of objective or independent review of this decision was undertaken.
- NBN Co's governance, management and the accountability of its board and officers, from its inception to any change of government.
- Whether accurate and timely information about NBN outcomes has been provided at all times to Parliament and taxpayers.

Independent cost-benefit analysis and review of regulation

This review will analyse the economic and social costs and benefits (including both direct and indirect effects) arising from the availability of broadband of differing properties via various technologies, and to make recommendations on the role of government support and a number of other longer-term industry matters. The study (which will be conducted at arms-length from any previous NBN activities) will report within six months on these questions:

- What is the direct and indirect value, in economic and social terms, of increased broadband speeds, and to what extent should broadband be supported by government?
- Given the Coalition's overarching policy objectives, what are the optimal long-term ownership and regulatory arrangements for NBN Co?
- How should the activities of NBN Co be constrained given its mandate to efficiently build, operate and maintain a wholesale-only access network?
- How should NBN Co's capital investment, products and pricing be reviewed and regulated?
- Are NBN Co's products structured to promote efficiency, consumer choice and competition?

Wireless broadband and regional mobile services

Compared to the mess Labor's policies have created in the fixed line telecommunications market, the wireless market is in reasonably good shape. But the needs of regional Australians have been neglected with the Government's obsessive focus on the fixed-line NBN. In considering any way to leverage the NBN to improve mobile services, the Coalition will be mindful of competition policy objectives as well as lower costs.

NBN Co's fixed wireless network

Wherever possible, the Coalition will ensure that NBN Co assets such as towers or backhaul will be made available to carriers to facilitate improved services.

The Coalition will be mindful of competition as well as broadband policy objectives in considering opportunities to alter the fixed wireless rollout.

The Coalition welcomes proposals from interested parties (including existing carriers and network or infrastructure operators) regarding contractually feasible adjustments to the fixed wireless rollout which: improve the quality/coverage of mobile services in regional areas; increase competition and choice for regional mobile consumers; reduce the net cost of the fixed wireless network; or address 'black spots'.

Mobile black spots

The Coalition will seek a report from NBN Co management of any opportunities to leverage the fixed and wireless rollouts to address 'black spots' or extend highway mobile coverage.

As a general principle any NBN Co assets deployed for this purpose will be available to any carrier as open access shared infrastructure.

THE CHOICE

Both Labor and the Coalition agree on the value of universal fast broadband to households, businesses, the economy and for government service delivery. But Labor has proved unable to deliver these benefits in a timely or affordable manner.

On the contrary, Labor's current NBN is among the slowest and most expensive possible solutions to the question of how to upgrade infrastructure.

Labor's re-establishment of a public monopoly in a crucial sector of the economy, and its archaic refusal to weigh options, costs and benefits, or seek genuinely expert advice, demonstrate disdain for the proven policy principles of the past 30 years.

The Coalition, in contrast, will restore the lessons of the reform era to prominence. These include the value of rigorous analysis; the need for transparency in accounting for the costs and outcomes of policies; and the importance of competition.

THE CHOICE AT A GLANCE

| | COALITION NBN | LABOR NBN |
|---|--|--|
| Scheduled construction period ¹⁷ | 2014-2019 | promised: 2009-2021 likely: 2009-2025 |
| Capital expenditure ¹⁸ | \$20.4 billion | promised: \$37.4 billion likely: \$71 billion |
| Required funding ¹⁹ | \$29.5 billion | promised: \$44.1 billion likely: \$94 billion |
| Download rates | 25-100 mbps by end of 2016 50-100 mbps by end of 2019 | 25-100 mbps by end of 2021 |
| Plan chosen by most users in 2021 ²⁰ | 12 mbps | 12 mbps |
| 2021 estimated wholesale price/month | \$38 | \$62 |
| 2021 estimated retail price/month ²¹ | \$66 | \$90 |
| Competition in infrastructure? | Yes | No |
| Disruption at user premises? | No | Yes |
| Prices can be less than price cap? | Yes | No |

¹⁷ In the first three lines of this table, the first data point provided for Labor's NBN is the Government's current estimate. The second figure is the Coalition's estimate of realistic schedule and costs. The basis for the latter is set out in this policy's background papers.

¹⁸ Capital expenditure is money spent on fixed assets such as equipment, structures or buildings.

¹⁹ Required funding is the money a new project or company needs to raise (as equity or debt) to reach a point where it can sustain itself without assistance.

²⁰ NBN Co. 2012-2015 Corporate Plan, p 64.

²¹ These estimates of retail prices for an average broadband/voice bundle assume that in 2020-21, the dollar margin between wholesale access prices and retail broadband prices is about \$28 – the approximate current figure. NBN Co does not have control over retail prices under either party's policy – these are set by the market. It should be noted that under both scenarios, average retail plans in 2021 will include more (additional services, higher speeds, larger data quotas) than current retail offers.

The table is a simplified comparison of the Coalition's approach to the NBN with that of Labor. The completion dates, capital expenditure and public funds required for Labor's NBN are stated as both the Government's claimed figures and the more realistic estimates provided in this policy as detailed in the associated background papers. The table underlines several important advantages for the Coalition plan including the following:

- The Coalition policy rollout will be completed sooner.
- The Coalition policy requires much less capital expenditure and much less public funding. Wholesale and retail prices are both significantly lower under the Coalition than Labor.
- In 2021, when Labor's NBN will supposedly be completed, the broadband plans chosen by the largest group of users (according to NBN Co's modeling) will offer download data rates of 12 Mbps – well within the capacity of both networks.²²
- The Coalition policy delivers greater flexibility in two key areas: competition is permitted between networks (such as NBN Co's NBN and Telstra's HFC), helping keep prices down; and wholesale prices can be less than the uniform national wholesale price (UNWP) set by the ACCC for Labor's NBN (which will be a price cap approved by the ACCC in the case of a Coalition NBN).

Project budget and scope

From its inception to the increasingly clear recent signs that the rollout is on the verge of stalling, Labor's NBN has turned into a policy fiasco and a colossal failure of execution:

- In April 2007 Kevin Rudd and Stephen Conroy promised an NBN built in partnership with private carriers that would cost taxpayers \$4.7 billion and be finished by 2013. In November 2007 that commitment helped Labor win the Federal election.
- Almost six years later, the NBN budget has blown out at least 10-fold according to Labor's own estimates. NBN Co is now forecast by Labor to require at least \$44 billion of capital to finish its network and become financially self-supporting and more realistically will need twice that amount.

Rollout targets

The NBN's rollout and customer targets have been repeatedly missed and slashed:

- In December 2010, Julia Gillard promised that by June 2013 the NBN's fibre network would be available to 1.3 million premises and in service at more than half a million.
- In August 2012 the number of households forecast to be using the fibre by June 2013 was abruptly slashed to 54,000 – a tenth of the previous target.
- In January 2013 it was revealed that at the end of December 2012 only 10,400 households were using the fibre. Halfway through the 2012-13 financial year NBN Co had achieved less than a fifth of its already vastly reduced objective.
- After five years of Labor government, at the end of 2012 the fibre network had passed only 72,000 of the 12.2 million premises it aims to service by 2021.

These failures in execution partly reflect Labor's hasty and ill-informed policy process and some poor decisions at NBN Co. But they also are a function of the colossal and unchecked ambition of Labor's plan, which in turn reflects lack of commercial experience (or any sense of what was realistically feasible) within the Government.

²² NBN Co, 2012-2015 Corporate Plan, p. 64.

The Coalition alternative is realistic in its scale and objectives, and its calls on public sector capabilities. It is far less of a departure from established approaches in comparable markets to broadband policy than Labor's unique NBN. It will be less prone to the huge underestimations of cost and time that have characterised Labor's NBN to date.

Prices

It is astonishing that so few households have received better broadband. But no less astonishing is that Labor approved NBN Co's revised Corporate Plan, which explicitly projects monthly revenue from each user will almost treble from an average \$22.46 in 2011-12 to \$62.11 in 2020-21.²³

This forecast of higher prices reflects NBN Co's pricing scheme for data usage, which pushes charges up rapidly even if user download volumes grow at trend rates, and may deter users from taking advantage of fibre's capabilities. The data usage charge is an attempt to somehow reconcile the cost of the NBN, the promised seven per cent return promised to taxpayers and Labor's commitment that prices for equivalent broadband plans will not be higher on the NBN.

While retail service provider margins are difficult to anticipate, it is difficult not to see this adding to Australia's unusually high current retail prices for fixed line broadband. These are already among the world's highest as a percentage of gross national income: 40 to 200 per cent above those of the UK, US, Japan, Singapore, Sweden, the Netherlands, Canada, Finland, Denmark, France, Italy and Germany (in fact most of the countries against which we like to compare ourselves, except for New Zealand).²⁴

If rapid increases in wholesale charges per user under a Labor NBN do translate into higher retail access prices it is plausible to envisage many lower income households being locked out of the economic and social opportunities provided by broadband because of higher prices.

Aggressive price increases may undermine the policy objective of universal availability, and reduce scope for governments to take advantage of the efficiency of online delivery. Many of the 400,000 consumers still on dial-up are on lower incomes and may balk at higher prices under the NBN.

The Coalition policy will avert the need for rises of this magnitude in wholesale revenue per user. We have predicated our business case for a revamped NBN on average wholesale fixed line revenues per user growing no faster than the economy. In other words it will remain stable as a share of the consumer's wallet.

Competition or monopoly?

A final defect in the Labor policy is its systematic dismantling of competing fixed networks, to ensure NBN Co is able to secure virtually all fixed line revenue and exercise any resultant market power to help recover its uplifted costs from retail service providers and users as needed (as hinted in its Special Access Undertaking to the ACCC).

Under Labor, when the NBN is rolled out, Telstra's copper and Optus's HFC cables (if present) will be shut down. Telstra's HFC (if present) may carry Foxtel but not broadband or voice. Australia is unique in the world in deliberately stamping out competition between fixed line networks.

²³ Average revenue per user (ARPU) per month is a commonly used price metric in the telecommunications industry. The figures cited for NBN Co reflect the financial data on p. 72 of its 2012-2015 Corporate Plan. Note that total revenues for each year have been divided by average (not year-end) users for the year. This offers a more realistic ARPU during periods of rapid customer acquisition.

²⁴ The annual cost of the International Telecommunications Union's fixed line broadband basket (a standard basket of services and usage) calculated as a percentage of Gross National Income (GNI) in 2011 was 1.5 per cent in Australia. This compares to 0.5 per cent of GNI in the UK, 0.6 per cent in the US, 0.7 per cent in Japan and Norway, 0.8 per cent in Singapore, Sweden, the Netherlands and Canada, 0.9 per cent in Finland, Denmark, France and Italy, and 1.1 per cent of GNI in Germany. International Telecommunications Union, 'Measuring the Information Society', Geneva 2012, p. 88.

The contrast with Coalition policy could not be clearer. Subject to negotiation with their owners, we will remove impediments to use of the HFC networks, and we will allow non-NBN operators to enter the fixed line market (subject to offering their networks to access seekers on equivalent terms).

Over time, the Coalition will look to privatise a completed NBN Co given our longstanding view that telecommunications providers should not be government-owned. We note that the Labor Party also is committed to privatising the NBN once it is completed.

COSTINGS

The Coalition is not privy to NBN Co's contractual arrangements and NBN Co has significantly revised its rollout and financial forecasts on multiple occasions since 2010. The Coalition's statements on costs are prepared in good faith, but conditional on full disclosure of NBN Co's contractual obligations and finances, and the release of reliable Budget figures in the Pre-Election Economic and Fiscal Outlook (PEFO).

Overview of Coalition NBN

The Coalition's broadband policy will deliver fast affordable broadband at less cost to taxpayers.

The Coalition will spend \$20.4 billion on capital expenditure to build its alternative NBN. This is 45 per cent less than the claimed minimum \$37.4 billion for Labor's NBN and 71 per cent less than the more realistic estimate of \$71 billion detailed in the background papers released with this policy.

The total funding required for the Coalition's NBN is \$29.5 billion. This is 33 per cent less than the claimed \$44.1 billion for Labor's NBN and 69 per cent less than the more realistic estimate of \$94 billion detailed in the background papers released with this policy.

As with Labor's NBN, the difference between the capital expenditure required to construct the network (\$20.4 billion) and required funding for the Coalition's NBN (\$29.5 billion) reflects costs from operating losses and contractual arrangements already entered into by NBN Co.