

Dissenting Report by Coalition Members and Senators

1 SUMMARY

The Joint Committee's fifth half-yearly review of the National Broadband Network has again resulted in a report on the rollout from the Government and a separate dissenting report from the Coalition. This was also the outcome from the fourth half-yearly review.

Given the contentious nature of the debate over the NBN and approaching Federal Election this is not unexpected. Yet in some ways the facts on the NBN are clearer (and more sobering) now than they have ever previously been:

- The fibre rollout is well behind schedule. The original NBN Co 2011-2013 Corporate Plan estimated fibre would be available at 950,000 brownfields and 319,000 greenfields premises by June 2013. In reality the NBN's fibre network had passed 71,000 brownfields and 32,000 greenfields premises by May.
- Similarly, estimates of usage are similarly below forecasts. The number of premises with active service over NBN fibre by June will be a tenth or less of the number projected in 2010.
- NBN's fixed wireless network is also behind schedule, while the interim satellite service (the most successful part of the NBN so far) will run out of capacity for new users some time in 2014.
- NBN Co's relationships with key contractors are in disarray, while its design and oversight of the rollout have been undermined by poor

geospatial data, skills shortages and its inability to measure and continuously refine and improve the building process.

- NBN Co itself continues to burn through cash and spend lavishly on headcount, despite its failures in rolling out the network and revenue generation. By June close to \$5 billion will have been invested and billions more accumulated in liabilities.
- The governance and management of NBN Co has recently become a matter of legitimate public speculation, with Senator Conroy doing little to inspire confidence or quash rumours by refusing to allow NBN Co's CEO to respond to questions on the matter.
- Finally, several recent incidents involving the handling of asbestos unearthed during the rollout have underlined how dangerous the work of rolling out an NBN can be, and the paramount importance of complying with all occupational health and safety rules.

For anyone wondering if Labor still sees the NBN as a policy it can deliver as promised, the recent 2013-14 Budget confirmed it cannot. In the Budget the Government slashed funding for the NBN by \$3.5 billion (or 20 per cent) over 2012-13 to 2014-15 compared to the investment for those years estimated in the October MYEFO, which reflected the revised NBN Co 2012-2015 Corporate Plan.¹

The Budget cuts are "a consequence of delay". They guarantee the implausible targets in the 2012-2015 Corporate Plan won't be reached – the rollout is years behind, and there isn't enough money.

While much of the information summarized in this report is disappointing, in that it recounts missed milestones, wasted taxpayers' funds and poorly executed policy, this does not discredit the concept of a National Broadband Network – only the manner in which the Government has so ineptly implemented it.

2 NBN ROLLOUT – TARGETS

2.1 Brownfields Fibre Falling Further Behind Schedule

The NBN has failed to meet every significant operational target it has set itself since its inception in 2009, and regrettably the latest six months of the rollout did not improve its record. The largest gaps between projected achievement and

¹ Australian Treasury (2013) 2013-14 Budget Paper No 1, p 7-12.

actual performance have been in the rollout of the fibre network to 10 million households and businesses in brownfield (established) areas.

In its original NBN Co 2011-2013 Corporate Plan, released in December 2010, NBN Co estimated it would pass 950,000 brownfields premises by the end of June 2013.²

In August 2012 the revised NBN Co 2012-2015 Corporate Plant slashed the target to 286,000.³ In March 2013 the target was again reduced to between 155,000 and 175,000 premises.⁴ And as of mid-May, NBN Co's fibre network had passed 71,000 brownfield homes.⁵

Key issues holding back the brownfield rollout include:

- Inaccurate geospatial address data, which has complicated design.
- Designs incompatible with efficient construction practices.
- A schedule NBN Co and its contractors have unable to meet.
- Construction prices insufficient for NBN Co's contractors to operate profitably.
- Shortages of skilled workers such as fibre splicers.
- Inadequate investment in measuring and improving productivity and quality.
- Failure to secure access to electricity poles to deploy fibre aerially.

The results have been so underwhelming that in the Northern Territory the NBN Co has dismissed its contractors and taken direct control of construction.

NBN Co continues to fall woefully short of the capabilities upon which its business plan depend. The original 2011-2013 Corporate Plan estimated the company would be passing 5200 houses with fibre each working day by March this year.⁶ And even the revised 2012-2015 Corporate Plan set a target for the 2013-14 financial year of running fibre past 1028 brownfields premises each day.⁷

In reality, over the half-year to December 2012, NBN Co passed 137 brownfield premises each working day. So far in 2013 it has passed 353 premises per working

⁴ NBN Co (2013) "NBN Co Updates Short Term Fibre Rollout Timeline," 21 March 2013, online at: <u>http://www.nbnco.com.au/about-us/media/news/nbn-co-updates-short-term-fibre-rollout-timeline.html</u>.

² NBN Co (2010) "NBN Co 2011-2013 Corporate Plan," p.15.

³ NBN Co (2012) "NBN Co 2012-2015 Corporate Plan," p.36.

⁵ NBN Co (2013) "Submission to the Senate Standing Committee on Environment & Communications," p.2.

⁶ NBN Co (2010) "NBN Co 2011-2013 Corporate Plan," p.77.

⁷ NBN Co (2012) "NBN Co 2012-2015 Corporate Plan," p.37.

day (with the caveat that it is far from clear all of the premises reported can actually obtain service were it to be requested).⁸

Every time NBN Co reduces or misses its rollout objectives, its management claim the company's acceleration in later years will be even steeper, to make up the shortfall. But the repeated failure to ramp toward the 'volume rollout' long promised by NBN Co's management and the Government raises questions as to whether the current approach to construction is scalable at all, much less to the levels needed to achieve the Corporate Plan.

Meanwhile NBN Co has begun using alternative avenues to boost its numbers and make up for its failure to meet construction targets.

It recently purchased FTTP assets serving 8,500 houses from the TransACT division of iiNet.⁹ Notably, NBN Co's cost per premise in the deal was about \$1050 – a fraction of the amount it has spent on its own fibre network.

NBN Co also reportedly reached a commercial agreement with Telstra to assist it with early network preparation work in five 5 Fibre Service Area Modules (FSAMs) covering 15,000 premises. This part of the building process normally takes NBN Co about five months.¹⁰

The Coalition welcomes a more pragmatic approach by NBN Co to infrastructure built by other parties. But Labor's NBN policy still centres on eventually overbuilding most existing network assets, whether capable of very fast broadband or not. And there is evidence of continuing slippage in its construction timetable, including over the past two months.

⁸ NBN Co (2013) "NBN Co March Quarter Rollout Update," online at:

http://www.nbnco.com.au/assets/media-releases/2013/press_release_march_rollout_update_2013-15-may-2013.pdf.

⁹ Anderson, S. (2013) "iiNet Seals Multimillion-Dollar NBN Deal," *The Canberra Times*, 23 May 2013.

¹⁰ McDuling, J. (2013) "Project 45: Telstra's Secret Plan to Speed Up NBN Rollout," *The Australian Financial Review*, 28 May 2013.



In a 19 April presentation to the Joint Committee, NBN Co claimed it would pass approximately 107,000 premises in brownfield areas with fibre by the end of May.¹¹ Yet as the graphs reproduced above show, on 30 May NBN Co presented evidence at a Senate Estimates hearing suggesting it had passed 95,000 premises by the end of May – 11 per cent short of an objective articulated only a month earlier.¹²

Recommendation:

As the Coalition has repeatedly urged on previous occasions, NBN Co should undertake a rigorous analysis of the alternative options to its current FTTP model for broadband in brownfield areas, including options such as FTTN and upgrade of the existing HFC networks. The most cost-effective solution for very fast broadband will vary from area to area, but in many cases will involve re-use of existing network assets.

¹¹ NBN Co (2013) "Report to the Parliamentary Joint Committee on the National Broadband Network," 19 April 2013, p.18.

¹²NBN Co (2013) "Presentation to the Senate Standing Committee on Environment and Communications", 30 May 2013, p.2.

2.2 Greenfields Fibre Rollout Slower in 2013

Greenfields (or newly developed) areas, where the Government in 2010 appointed NBN Co provider of last resort in a manner that inflicted lasting damage on a previously competitive market served by private infrastructure builders and operators, remain problematic. There are still reports of lengthy delays, of cases where NBN Co hasn't provided fibre but won't permit developers to break contracts and seek an alternative, and of areas where responsibility for providing infrastructure is unclear.

NBN Co's key problem in greenfields has been lack of access to backhaul, since many newly built estates are distant from its transit network and 121 Points of Interconnect. Since the start of 2013 the rate at which NBN Co runs fibre past greenfields premises has plunged 81 per cent – from an average of 129 premises each working day over the six months to December 2012, to an average of 24 premises each working day this year.¹³

Since 2010 NBN Co has twice lowered its greenfields deployment targets for June 2013:

- a. December 2010, NBN Co 2011-2013 Corporate Plan: 319,000 premises passed.¹⁴
- b. August 2012, NBN Co 2012-2015 Corporate Plan: 65,000 premises passed.¹⁵
- c. March 2013, downward revision to 35-45,000 premises passed.¹⁶

For a time during the interval covered by this report it appeared even the third target might be out of reach. But documents presented in May at Senate Estimates state that greenfields premises passed with fibre increased from 27,860 premises at the end of March to about 32,000 at the end of May.¹⁷

If this accelerated rate of deployment over the past two months is maintained, NBN Co will meet the greatly reduced mid-2013 target made public in March.

¹³ NBN Co (2013) "NBN Co March Quarter Rollout Update," online at:

http://www.nbnco.com.au/assets/media-releases/2013/press_release_march_rollout_update_2013-15-may-2013.pdf.

¹⁴ NBN Co (2010) "NBN Co 2011-2013 Corporate Plan," p.15.

¹⁵ NBN Co (2012) "NBN Co 2012-2015 Corporate Plan," p.36.

¹⁶ NBN Co (2013) "NBN Co Updates Short Term Fibre Rollout Timeline," 21 March 2013, online at: <u>http://www.nbnco.com.au/about-us/media/news/nbn-co-updates-short-term-fibre-rollout-timeline.html</u>.

¹⁷ NBN Co (2013) "Presentation to the Senate Standing Committee on Environment and Communications", May 30, p.2.

One matter of concern is that in striving to do so, NBN Co has reportedly used infrastructure owned by rival companies without authorisation in an attempt to accelerate its greenfield efforts.¹⁸

Lack of accurate GNAF address data continues to add cost and complexity to the rollout. In October 2012 NBN Co CEO Mike Quigley stated: "By far the worst, most inaccurate, most difficult in terms of addresses is new developments – greenfields. You can imagine why: sometimes they are lots...they have got different names...the names change."¹⁹

Head of NBN Co's greenfields rollout Katerina Stapleton confirmed backhaul remains a key constraint in a recent interview with *IT News*: "Connecting new developments is a particularly challenge in areas where NBN Co hasn't got an existing network to connect premises to, and the rollout relies on a number of critical factors such as access to pit and pipe infrastructure in which to install."²⁰

Recommendation:

The NBN urgently seek the increased involvement of the private sector in greenfields areas, preferably as a source of capital for construction and ownership/operation of wholesale open access networks in these areas as well as of construction expertise.

2.3 NBN Failing to Connect Multi Dwelling Units

In May 2011, the NBN Co put out a request for proposals for MDU cablers. The RFP stated the NBN was looking for companies to carry out "installing fibre cabling and equipment within common areas of existing MDUs using pre-supplied detailed designs and bills of material".²¹

As of December 2012, the NBN had still not signed contracts to connect MDUs in Queensland, Western Australia, South Australia and the Northern Territory. This failure should be considered alongside the broader failures of the greenfields rollout in WA, SA and the NT in particular, where NBN Co has had to dump its rollout partner.

The NBN noted in its 2012-2015 Corporate Plan that difficulty connecting MDUs had led to increased capital costs: "NBN Co's experience in initial deployment

¹⁸ Hutchinson, J. (2013) "NBN Co Accused of Domaging Rivals' Pipelines", in *The Australian Financial Review*, January 9.

¹⁹ Hansard (2012) "Hearing of the Joint Parliamentary Committee on the NBN", 20 October 2012, p.4. ²⁰ Crozier, R. (2013) "NBN Co Responds to Fibre Delay Analysis", in *IT News*, 7 March 2013, available online here: <u>http://www.itnews.com.au/News/335603,nbn-co-responds-to-fibre-delays-analysis.aspx/0</u>.

²¹ http://www.nbnco.com.au/working-for-us/tenders/a092-rfp-mdu-cabling-contractors.html.

sites has highlighted the challenges for connecting premises in MDUs and additional costs have therefore been embedded in the 2012-15 Corporate Plan."²²

Mr Mike Quigley stated in a public hearing NBN Co is blending the costs of connecting SDUs and MDUs:

"I now turn the page to the next part, which is the next biggest component, which is the \$9.8 billion of the customer connect. That is the bit that goes from the multiport, the connection in the street, into the home. It is comprised of two parts: the drop and then the in-premises activity. We did a number of initial sites – several thousand – on a different model and the cost of those was \$2,400. We got some learnings from that, we changed the model and now we are proceeding into volume. That is, once again, several thousand. This is a blend, by the way, of SDUs and MDUs – single dwelling units and multi-dwelling units. The volume actuals we are getting are around \$1,100, which is in fact right on our corporate plan estimate of \$1,100."²³

Given that any joint figures on cost would be heavily skewed towards the average cost of connecting SDUs due to the extremely low number of completed MDU connections, this is likely to provide a misleading picture of the true costs of connecting MDUs.

Tellingly NBN Co offered no evidence to support its assertion that MDU connections are costing on average around \$1,100.

It is also of concern that NBN Co, despite being aware of technological options that could reduce the cost of the rollout, such as VDSL, has not undertaken any assessment of their potential:

Mr TURNBULL: You have had briefings, no doubt, from Mr Quigley's former colleagues at Alcatel about the performance of VDSL vectoring?

Mr McLaren: Yes, we have absolutely discussed with our vendors what experience they have around the world.

Mr TURNBULL: Mr Quigley, have you done any analysis of what cost savings would be available on your plan – the current plan – if that were undertaken?

Mr Quigley: Sorry? If what -

²² NBN Co, (2012), "Corporate Plan, 2012-15", p.14.

²³ JCNBN Public Hearing Hansard, 19 April 2013, p.7.

Mr TURNBULL: If you were to do a portion of the brownfields rollout with what is called fibre to the node – but we are talking about a vectored VDSL solution.

Mr Quigley: No, we have not.24

The NBN implementation study found that MDUs account for 34 per cent of premises in Australia.²⁵ There are 431,000 buildings with 2 to 5 premises, accounting for a total of 1.135m premises. There are 119,000 buildings with 5 to 25 premises, accounting for a total of 1.268m premises. And there are 20,000 buildings with 25 or more premises, accounting for a total of 1.211m premises.

It is a great concern that so little progress has been made on connecting such properties and so little information is available on the cost of doing so.

Recommendations:

The NBN publish a register of all MDUs it has reported as 'passed' by the network but in reality unable to connect to it, along with the timetable and nature of any proposed solutions, to allow residents and body corporates to see when services will become available.

If premises in an MDU cannot use the network, they be excluded from reported 'premises passed'.

The NBN immediately investigate international experience connecting premises in MDUs using existing internal wiring, including lines suitable for VDSL Vectoring.

The Shareholder Ministers' Statement of Expectations to the NBN Co be amended so NBN Co is no longer expected to terminate fibre at each premises in an MDU.

2.4 Fixed Wireless Rollout Also Behind Schedule

The *Australian Financial Review*²⁶ on 5 June reported that even in the best case scenario, the NBN Co wireless network will cover just 31,291 premises by the end of June. This represents only 45 per cent of the 70,000 target.

Reasons reportedly given by the Minister for this failure include unexpectedly high levels of community objections during planning processes and the presence of large trees in the fixed-wireless footprint.

²⁴ JCNBN Public Hearing Hansard, 19 April 2013, p.19.

²⁵ McKinsey, (2009), "NBN Implementation Study", p.79.

²⁶ Ramli D., & Tadros, (2013), "More Delays for NBN As Wireless Rollout Falters", in *The Australian Financial Review*, June 5.

The Minister also pinned responsibility for the delays on the technology chosen by the Government for the wireless rollout, saying it could not penetrate trees and dense foliage in the same way as mobile phone signals can.²⁷

At least one industry expert, Ovum's David Kennedy, has publicly questioned the Government's choice of technology for the NBN wireless rollout:

Mr. Kennedy: "They've got a high-frequency spectrum, which is more susceptible to interference and it's a line-of-sight technology so if there's a tree in the way it's going to interfere. Using something like 700Mhz spectrum [most of which the government auctioned off in May] would definitely be better but it's very expensive. They've clearly over-estimated the number of homes they can connect with the network architecture they've agreed on."²⁸

Most people would not regard the presence of tall trees and dense foliage in rural Australia as unexpected, but it appears that NBN Co did not adequately consider the potential for trees to affect the wireless rollout.

NBN CTO Gary McLaren's evidence to the Senate Environment and Communications Committee on 30 May 2013 is that NBN Co underestimated the impact of vegetation on the wireless rollout:

Mr. McLaren: "We have always expected there will be some areas, mainly due to vegetation — trees and the like — that will cause those installations to not be able to pass through that qualification step and we will have some that we will not be able to fulfil.

"We are seeing those being slightly higher than we would have originally expected. We believe that could be because a lot of our services are currently in the Ballarat region, which is a region in Victoria on the Great Dividing Range. It is heavily forested and we are dealing with quite a lot of forest and vegetation. That means that we are having to take that order and park it for our satellite service, when it is available, to be able to deliver those services."²⁹

The impact of these delays is twofold. First, families and businesses waiting for the NBN wireless service will be waiting even longer. Second, demand for NBN satellite services may be larger than expected. As a result, it may be necessary for

²⁷ Ramli, D., & McDuling, J., (2013), "Trees and Councils Slowing NBN Wireless Rollout, Says Conroy", in *The Australian Financial Review*, June 5.

²⁸ Ramli D., & Tadros, (2013), "More Delays for NBN As Wireless Rollout Falters", in *The Australian Financial Review*, June 5.

²⁹ Hansard, (2013), "Senate Economics and Communications Committee Hansard". 30 May.

NBN Co to update its demand estimates for the long term satellite service, and consequently update cost estimates and rollout timeframes.

Recommendation:

NBN Co provide JCNBN with an updated estimate of the total number of premises in the final NBN wireless footprint and an updated estimate of the total cost of the long-term satellite solution in light of any alterations to the final wireless footprint.

3 NBN ROLLOUT – OPERATIONAL ISSUES

3.1 Engagement with Civil Contractors

The very disappointing performance of civil works contractors against mutually agreed rollout objectives, and NBN Co's apparently free-wheeling approach to advance payments to contractors are both matters of concern for Coalition Members and Senators.

Clearly NBN Co's engagement with the civil contractors ultimately responsible for the bulk of actual construction is one of the most pivotal parts of the project, given the construction model chosen. Crucial aspects include negotiating prices and terms both sides can live with; ensuring transparency and accountability in both directions; ensuring occupational health and safety standards are enforced; designing incentives that align contractor and NBN Co interests, and devising a system of measurement and monitoring to benchmark performance, reduce waste and continuously improve work processes.

From the outset NBN Co's cost expectations appear to have been unrealistic, leading to its extraordinary allegations of price fixing and price gouging by contractors in April 2011, and making pricing the key issue to the detriment of other considerations.

Yet having driven down prices to levels where contractors were unprofitable, NBN Co was willing to spend freely to attempt to accelerate the rollout.

Up to the end of February 2013, around 55 per cent of money paid to contractors for committed work was in the form of prepayments for workforce mobilisation and other pre-deployment activities.³⁰ Some \$140 million was paid out, including

³⁰ Bingemann, M. (2013) "Firms Paid \$140m in Cash Advances to Speed Up NBN," *The Australian*, 2 March 2013.

Contractor	Pre-Payments	Contractor	Target (June 2013)	Planned (Feb 2013)
Silcar	\$52.4 million	Silcar	140,184	70,518
Transfield	\$20.8million	Transfield	30,019	23,398
Syntheo	\$50.9 million	Syntheo	47,000	12,219
Visionstream	\$12.6 million	Visionstream	23,174	14,449

\$51 million to a contractor that after 20 months had not delivered a single premise passed by fibre.

According to media reports, by February 2013 huge shortfalls against the NBN Co's deployment targets were apparent for all of its major contractors. As the table shows, by the end of February the prime contractors on average only were planning to achieve 50 per cent of their June 2013 targets.³¹

Unacceptably poor performance from Syntheo resulted in the Northern Territory rollout being reassigned to the direct oversight of NBN Co.

Senator Stephen Conroy has conceded only a very small fraction of the \$50.9 million paid to Syntheo in pre-payments had been recovered by the NBN Co.

Senator Conroy: "The taking back of the Northern Territory allows them to continue to roll out and to overcome the challenges, which have been significant, of some of our largest construction companies in the country. Syntheo, for those who are not familiar with it, is a joint venture between Service Stream and Lend Lease, two of our biggest construction companies, and they have been having some difficulties. We are receiving back the mobilisation payment in the Northern Territory. I think it is around \$2½ million. We have made it a condition that that money be returned when we took back that project."³²

Given the disastrous economics of ongoing participation in the NBN for several of the contractors, the risks they were being asked to bear, and the increasingly fractious relationships between contractors and NBN Co, the predictable result was a wave of departures of high level executives close to the NBN project.

³¹ McDuling, .J, Ramli, D. & Hutchinson J (2013) "NBN At War With Contractors," *The Australian Financial Review*, 2 April 2013.

³² Senate Hansard (2013) March 21, p. 2367.

Silcar CEO Peter Lamell left the company in May 2013,³³ Service Stream managing director Graeme Sumner left the company in April 2013,³⁴ and Service Stream executive general manager Stephen Ellich left in May 2013.³⁵ As discussed in another part of this report, there was a similarly high turnover of construction-related executives at NBN Co.

Viewed in their totality, the NBN Co's relationships with its civil contractors have been a notable area of lack of success for the organization. This has been a significant contributor to poor NBN outcomes.

Recommendation:

The NBN urgently seek expert advice on implementing an appropriate system for benchmarking, learning from, refining, standardising and continuously improving the work flows and work processes used in the rollout.

3.2 Handling of Asbestos Risk

At the time of writing this report, it appears that there has been substantial mismanagement of asbestos risk in the NBN rollout. Asbestos containing material (ACM) was extensively used in Telstra pits for many years. As part of works being conducted to roll out fibre around the country, significant work is occurring in large numbers of Telstra pits.

There have been numerous reported instances of ACM being removed, and handled, as part of this work, without appropriate safety protocols being followed. Concerns have been reported in relation to sites in East Perth, Victoria Park and Canning Vale in Western Australia; ³⁶ Penrith in New South Wales;³⁷ Mackay in central Queensland and Banyo in suburban Brisbane;³⁸ Launceston in Tasmania;³⁹ and Ballarat in Victoria.⁴⁰

The Minister for Employment and Workplace Relations, Hon Bill Shorten MP, has informed Parliament that wrote to Telstra in 2009 raising concerns about asbestos safety issues in Telstra's network.⁴¹ It is surprising therefore that subsequent to that time management of the asbestos risk does not appear to have been afforded sufficiently high priority, even though government was aware of the contract

³³ Klan, A. (2013) "Peter Lamell, CEO of Trouble Prone NBN Contractor Silcar, Quits," *The Australian*, 7 May 2013.

³⁴ Bingemann, M. (2013) "Service Stream's Graeme Sumner, From NBN Project Partner, Quits," *The Australian*, 8 Apr 2013.

³⁵ Jacob, P. (2013) "Families Facing NBN Asbestos Nightmare," *The Daily Telegraph*, 30 May 2013.

³⁶ 'NBN rollout hit by two more claims', West Australian, 5/6/13, p 5.

³⁷ 'Penrith set to remove contaminated soils', *Sydney Morning Herald*, 4/6/13, p 11.

³⁸ 'A lot of people use this street', *The Australian*, 4/6/13, p 1.

³⁹ 'Contractor denies delay of NBN rollout', *The Australian*, 4/6/13, p 4.

⁴⁰ 'Telstra takes scandal on the chin – for now', Australian Financial Review, 4/6/13, p 8.

⁴¹ Hansard, 3 June 2013, p 47.

entered into between Telstra and NBN Co in 2011 which required Telstra to conduct very substantial work in its network to facilitate the NBN rollout.

Coalition members and senators note that the Communications, Electrical and Plumbing Union has expressed serious concern over this matter, reportedly accusing Telstra and NBN Co of 'systemic failures' in safety training for remediation work in pits and pipes.⁴²

Coalition members and senators note with concern that answers to Committee Members at the 19 April hearing suggested that NBN's senior management did not regard the asbestos issue as being particularly significant.

Mr FLETCHER: I have one last question. NBN Co. put out a tender in September, and one of the matters it provided for was toxic waste and asbestos removal. Is that related to asbestos in Telstra pits? Who bears the cost of that remediation if it turns out to be different to expectations?

Mr Quigley: I will have to take that one on notice as well. Telstra are responsible for remediating their pits so they are fit for use, so as part of that, if Telstra is doing the work, Telstra would be responsible for that. If we were doing some work – and we obviously do some work in ducts and pits – we would obviously be responsible for it. So I cannot answer on this particular tender until I have checked on it.

Mr FLETCHER: Are you finding that asbestos is a big issue across the board?

Mr Quigley: What is your view, Ralph? I would not say it is a big issue.

Mr Steffens: No. It is present, as it would be anywhere, in any geography. But it does not seem to be a huge problem at this stage.⁴³

Coalition members and senators note the position of the Gillard Government, and of Telstra, that liability for these asbestos issues rests with Telstra. We question how this can be so in light of section 19(1) of the Work Health and Safety Act 2011 (Clth).

This section states that 'A person conducting a business or undertaking must ensure, so far as is reasonably practicable, the health and safety of...(b) workers whose activities in carrying out work are influenced or directed by the person, while the workers are at work in the business or undertaking.'

⁴² 'Union warning over asbestos in pits and pipes', *Sydney Morning Herald*, 5/6/13, p 10.

⁴³ Committee Hearing, 19 April 2013, Hansard, p 34.

This section imposes on NBN Co a duty to workers, including workers employed by Telstra or by contractors to Telstra, if their work is 'influenced or directed' by NBN Co. In view of the fact that the very purpose of the work is to allow the pits and ducts to be used as part of the national fibre rollout being conducted by NBN Co, this test would appear to be satisfied. Coalition members and senators are concerned about the potential liability to which NBN Co may be exposed as a result of this provision.

Coalition members and Senators are concerned by:

- The risk to the health and safety of workers employed by Telstra, NBN Co or their contractors, on the NBN rollout and associated work in Telstra's pits
- The risk to the health and safety of residents and passers-by
- The legal liability to which NBN Co may be exposed
- The potential delays to the rollout, and likely additional harm to NBN Co's financial position as a result
- Evidence NBN Co management may not have regarded the asbestos risk as a significant one.

Coalition Members and Senators note that a key difference between a fibre to the node (FTTN) architecture, which will be the primary approach used in brownfield areas for the NBN should the Coalition be returned to government, and the fibre to the premises (FTTP) architecture being used presently, is that FTTN involves much less extensive disturbance of the existing network and its pits and ducts.

With FTTN, there is little or no change to the network on the customer side of the node; the existing copper stays in place. Accordingly, while there will continue to be asbestos risks which will need to be managed, it is likely that under the Coalition's approach the asbestos risk will be significantly reduced because there will be much less need to disturb existing pits.

The Coalition notes that advances in equipment used by the NBN Co will also have the ability to significantly reduce the cost and health risks associated with remediating existing infrastructure. For instance, multiports that could fit in existing infrastructure could dramatically reduce the number of pits that need be removed, reducing worker exposure to potential asbestos containing material.⁴⁴

⁴⁴ McDuling, J., & Hutchinson, J., (2013), "Multiports May Make NBN Asbestos Repairs Unnecessary", in *The Australian Financial Review*, June 11.

Recommendations:

NBN Co and Telstra continue to work closely with their contractors to ensure the latter are properly trained in the safety issues surrounding asbestos and its safe handling.

3.3 Insufficient Skilled Labour

In addition to its many other problems the NBN project has been beset by problems in recruiting adequately trained workers, which has led to high fault rates and slow rollout periods.

Media reports revealed that all major contractors have had problems meeting required run rates for fibre splices to meet rollout targets. Poor quality of splicing in sites such as Crace in the ACT meant that remediation work needed to be done on 15 per cent of cables laid by contractors.⁴⁵

In evidence to the NBN Joint Committee, NBN CO Chief Operating Officer Ralph Steffens said that an inexperienced fibre splicer can result in a fourfold decrease in performance:

Mr Steffens: Where you clearly see a correlation is in the difference between experienced and unexperienced operators. The unexperienced are driving a higher degree of rework. That is to be –

Senator LUDLAM: How much?

Mr Steffens: With a very experienced operator versus an operator who has just come out of training school, there is easily a three- or four-fold difference in performance.⁴⁶

In documents released under FOI, the NBN Co revealed it has initiated a \$250,000 grant program to help up to 60 people train as fibre splicers. CEPU industrial officer Valerie Butler said of the training program: "It's unfortunate that this wasn't done two or three years ago. They should have been ready to go by the time the build ramped up and I don't believe they would have experienced some of the problems."⁴⁷

However, it is still unclear as to how many fibre splicers the NBN Co will need to train beyond the 60 already anticipated to be added through the grants program. NBN Co COO Ralph Steffens said: "The good news is that we do not need

⁴⁵ Hutchinson, J., McDuling, J., and Ramli, D. (2013) "NBN Contractors Fail to Deliver", in *The Australian Financial Review*", 2 April, p.1

⁴⁶ Hansard (2013) "Hearing of the Joint Parliamentary Committee on the NBN", 19 April, p.22.

⁴⁷ Hutchinson, J. (2013), "NBN Co To Pay for Training to Speed Rollout", in the Australian Financial Review, 12 April.

State	Req. Splices/Week	Act. Splices/Week
NSW/ACT	59,173	956
Victoria	33,128	2,160
Queensland	11,028	476
Tasmania	2,337	13
WA/SA/NT	7,160	24

thousands or tens of thousands of splicers across the network. We are talking about hundreds." $^{\prime\prime48}$

NBN Co CEO Mike Quigley also nominated fibre splicing as an area where 457 Visa workers may need to be recruited: "I do know that there have been some specialised skills that have come in from overseas. For example, ribbon splicing would be an area"⁴⁹

NBN Co has stated that it intends to double its external workforce (that is, the workforce it employs on the project via intermediary contractors) from 7,500 to 15,000 in the next financial year, presenting it with significant challenges in finding a corresponding volume of additional fibre splicers⁵⁰.

One reason why NBN Co may be struggling to recruit workers is that subcontractors are being paid up to 50 per cent less for skilled labour than on equivalent projects.⁵¹

Recommendation:

The NBN incorporate a process of explicitly mapping emergent technical needs to the skilled labour available in Australia and developing a strategy to overcome any shortages before committing to future investments or projects requiring those skills.

⁴⁸ Hansard (2013) "Hearing of the Joint Parliamentary Committee on the NBN", April 19, p.23

⁴⁹ Hansard (2013) "Hearing of the Senate Standing Committee on Environment and Communications", May 30, p.92

⁵⁰ NBN Co (2013) "13.3. Supplementary Submission to the Joint Committee on the NBN", June 4.

⁵¹ Hutchinson, J., & Ramli, D., (2013), "Low Pay Turns Workers Off NBN", in *The Australian Financial Review*, 25 February.

Aerial Rollout of Fibre 3.4

The NBN Co appears to be finding it impossible to meet its targets for aerial network deployments, adding to potential schedule and cost blowouts.

According to media reports, in NSW and the ACT the NBN Co 2012-2015 Corporate Plan projects than on average 239 poles a week would be made ready for aerial deployment this year, whereas actual aerial deployment is zero.⁵² Similarly in Queensland, the projected rate was 226 poles per week made ready for aerial deployment. Again, the actual rate is zero.

State	Planned Aerial/Week	Actual Aerial/Week
NSW/ACT	239	0
QLD	226	0

A source cited by the Australian Financial Review states the costs of underground deployment may be as much as four times higher than those of aerial deployment in areas without existing underground passive infrastructure. Most industry estimates put the ratio at between three and four. ⁵³

The NBN Co's stated target for aerial deployment is 25 per cent of the overall customer connection and local network.⁵⁴ The NBN Co 2011-13 Corporate Plan stated that if this ratio were lowered to 10 per cent of the deployment, the total levered funding requirement "would increase by \$1.8 billion."55

Given the NBN's failure to secure agreements with electricity distribution utilities to use their poles and existing assets to assist with aerial deployment, the Coalition believes there is a real risk that the additional billion-dollar-plus expenses referred to in the McKinsey sensitivity analysis may now be part of the central case scenario for the current NBN.

Recommendation:

If the original proportion of aerial deployment is no longer possible, adjust the Corporate Plan accordingly.

⁵⁴ NBN Co (2010) "NBN Co 2011-2013 Corporate Plan," p.47.

94

 ⁵² Ramli, D. (2013) "Broadband Rollout Stalled by Utilities," *The Australian Financial Review*, 9 Apr 2013.
⁵³ Ramli, D. (2013) "Broadband Rollout Stalled by Utilities," *The Australian Financial Review*, 9 Apr 2013.

⁵⁵ *Ibid*, p.52.

3.5 Interim Satellite Service Users Face Cap

It must be noted that customers with a satellite broadband service, either through the Australian Broadband Guarantee or the NBN ISS, do not have any other option for their broadband needs. Indeed, if a resident can access reasonable quality broadband, he/she is not eligible for the ISS.

As noted in the majority report, the 48,000 customer cap on the Interim Satellite Service is likely to be reached in 2014, at least twelve months, and possibly more than eighteen months, before the NBN Long Term Satellite Service is operational.

Once the Long Term Satellite Service is operational, it will take at least twelve months to migrate customers from the ISS to the Long Term Satellite Service, and presumably substantially longer to connect every customer requiring a satellite broadband service.

Mr McLaren gave the following evidence at the JCNBN public hearing in Sydney on 19 April 2013:

Mr. McLaren "We will still have the interim satellite in place, and there will be a migration over a period of time. It looks like it will take probably 12 to 18 months to do that migration. It is not something we can organise a workforce to do within a week or two and switch things over. It needs a customer visit. It needs to be supported through a program right across regional and rural Australia."

Based on this information, it is reasonable to conclude that customers who are excluded from accessing the ISS because of the 48,000 customer cap may be waiting more than three years for access to any form of broadband service.

There is now a substantial workforce of trained installers involved in the rollout of the NBN Interim Satellite Service. However, recruiting and training this workforce took some time, with the ISS operating on a trial basis with a monthly cap of 300 installations for several months before transitioning to a more intensive rollout.⁵⁶

The *Australian* newspaper reported on 29 October 2012 that ISS equipment installer, Skybridge, needed to double its workforce to cope with the task of installing ISS customer equipment:

"Skybridge, Australia's largest satellite broadband deployment service, responsible for providing the installation for NBN firstrelease satellite services, has doubled its workforce in the last nine

⁵⁶ <u>http://www.nbnco.com.au/about-us/media/news/remote-australians-the-priority-for-new-nbn-interim-satellite-service.html</u>.

months. The company now employs 100 people and works with more than 400 contractors around the country."57

If there is a substantial gap between the closure to new customers of the ISS and the launch of the long-term satellite service, the trained workforce of installers will be lost, and the lessons learned during the rollout of the ISS will have to be relearned. This will only further delay the provision of broadband services to consumers in rural and remote Australia who cannot afford to be without decent broadband.

Mr McLaren's evidence to the JCNBN public hearing on 19 April 2013 briefly touches on the challenges of recruiting and training the workforce for the long term satellite service rollout:

> "It looks like it will take probably 12 to 18 months to do that migration. It is not something we can organise a workforce to do within a week or two and switch things over.

Senator Conroy gave evidence to a Senate Committee that the cost of increasing the ISS cap would be prohibitive:

> "If we were to buy all the remaining capacity on IPSTAR and other satellites we could potentially increase our user numbers to about 75,000. To add about 7,000 new services the cost would be roughly \$86 million, to add 17,000 new services the cost is estimated at \$143 million and to buy all 27,000 of these services the cost is estimated at \$206 million."58

Coalition members of the Committee have spoken at length with a range of satellite industry stakeholders about the Minister's claims, and while there is no question about the availability of sufficient capacity to expand the cap, every stakeholder was of the view each of the Minister's pricing claims exceeded all reasonable pricing expectations.

Recommendation:

NBN Co re-examine all available options for increasing the ISS cap.

⁵⁷ Angel, A., (2012), "Opportunity knocks for workers in a growth industry", in *The Australian*, 29 October, available online here:

http://www.skybridge.com.au/files/121029%20Opportunity%20knocks%20for%20workers%20in%20a%20g rowth%20industry.pdf.

Senate Economics and Communications Committee Hansard. 30 May 2013, page 110:

4 NBN CO ORGANIZATIONAL ISSUES

4.1 Unstable Governance & Questions Over Board's Confidence in CEO

On March 21, Siobhan McKenna was appointed Chair of the NBN Co Board, replacing Harrison Young.

On that day, the company issued a significant write-down of its rollout forecasts – which by chance happened to become public via a press conference held during that week's Labor leadership crisis.

In subsequent media interviews, Ms McKenna said the reduced forecasts caused her to 'take a much tougher approach to management' and highlighted what she felt was a lack of accountability among senior management.

She said: "The role of a board is to ensure management takes appropriate accountability for whatever the nature of the business is. Since I have become chairman, I have reinforced with management their accountability to the board."⁵⁹

Ms McKenna claimed a prerequisite for her acceptance of the role of Chair was that Senator Conroy no longer be allowed to communicate directly with NBN Co chief executive Mike Quigley.

Senator Stephen Conroy sought to downplay the story, stating: "I have regular contact with Mike Quigley, as needed, and I speak with many other members of staff."⁶⁰

Ms McKenna has apparently established a regular weekly meeting with Mr Quigley, significantly increasing the CEO's level of reporting and accountability to the board. She has also engaged in regular meetings with NBN Co executives both one and two layers below Mr Quigley, and met with numerous NBN Co suppliers, contractors, partners and customers.

According to both media reports and private information received from NBN Co sources, during the second and third weeks of May Ms McKenna approached other members of the NBN Co Board to test their support for terminating CEO Mike Quigley.⁶¹ According to most versions of events, she was successful in

⁵⁹ Kitney, D. (2013) "Siobhan McKenna Rolling Out A Revolution at the NBN", *The Australian*, 27 April 2013.

⁶⁰ Hutchinson, J. & Murphy, J. (2013) "Conroy Denies NBN Direct Contact Ban", *The Australian Financial Review*, 2 May 2013.

⁶¹ McDuling, J. (2013) "McKenna in Push To Replace NBN Chief Mike Quigley", *The Australian Financial Review*, May 30.

obtaining the support of a majority of the Board for this step, but was not able to secure the agreement of Senator Conroy.

At an Estimates hearing in May, Senator Stephen Conroy refused to permit CEO Mike Quigley to answer straightforward questions about his accountability to the board, and whether he still enjoys the confidence of the board:

Senator BIRMINGHAM: How has the board, since Ms McKenna became chair, reinforced to management their accountability to the board? Have there been any particular changes in the way management is expected to present their accountability to the board under Ms McKenna?

Senator Conroy: I am happy to take on notice -

Senator BIRMINGHAM: Why won't you let Mr Quigley actually answer that?

Senator Conroy: I am sorry. If you want to ask about the board, you are asking me.

Senator BIRMINGHAM: No, this is a management question, Minister.

Senator Conroy: It is not.

Senator BIRMINGHAM: It is a management question.

Senator Conroy: I have said I am happy to take that on notice.

Senator BIRMINGHAM: Why won't you let Mr Quigley speak for himself?

Senator Conroy: You are asking board related questions.62

It is no doubt in Labor's political interests for Senator Conroy to prevent Mr Quigley, who has day to day control of the largest taxpayer-funded project in Australia's history, from providing some transparency about the current state of relations between himself and the Board.

The Coalition Members and Senators on the Joint Committee contend that this is not, however, in the national interest. Nor, more generally, is it in the national interest for the Shareholder Ministers, Board or senior executives of a public corporation owned by Australian taxpayers and charged with spending \$50 billion or more of Australian taxpayers' funds to misrepresent the way in which it is being managed. There is an urgent need for greater transparency about these issues at NBN Co.

⁶² Hansard (2013) "Hearing of Senate Standing Committee on Environment & Communications", 30 May 2013, p.101.

Recommendation:

The NBN's Shareholder Ministers provide a public indication of whether Mr Quigley, Ms McKenaa or both will stay on at NBN Co if Labor is re-elected.

4.2 Soaring Headcount & Executive Turnover

Coalition Members on the Committee note that NBN staff numbers and costs continue to rise strongly, even though the rollout is running well behind plan. The rapid turnover of personnel at the Board and senior executive level also continues to be a matter of concern.

According to answers to questions put on notice at a recent Senate Estimates Committee hearing, at the end of February NBN Co had 2477 employees, of which 2352 were permanent staff.⁶³

This represents an increase of nearly 50 per cent on staff numbers in June 2012, when they stood at 1674 (of whom 1620 were permanent staff).⁶⁴

Coalition Members and Senators note that employee related costs are projected to be \$3.8 billion of the total estimated operating expenditure to FY2021 of \$26.4 billion.⁶⁵ Year-to-date staff costs as of May 30 were \$295 million.⁶⁶

This is a significant driver of NBN Co's expenses, and it is vital that it be managed as cost-effectively as possible. We are concerned that NBN Co's staff management practices are not as cost-effective as those of comparable private sector companies.

Evidence includes headcount continuing to grow rapidly; NBN Co offering salaries which are very high compared to norms in the Australian telecommunications industry; and the high rate of churn of staff.

Coalition Members and Senators are equally concerned at the rate of turnover among the directors and senior executives of NBN Co:

 Since October 2009, 14 senior executives and 55 executive-level employees have left the company, according to a response to an Estimates question on notice.⁶⁷

⁶³ Senate Standing Committee on Environment and Communications, Answers to Senate Estimates Questions on Notice, Additional Estimates Hearings February 2013, Broadband, Communications and the Digital Economy Portfolio, NBN Co Limited, Question No. 284.

⁶⁴ NBN Co (2012) "NBN Co 2012-2015 Corporate Plan," p.24.

⁶⁵ NBN Co (2013) "Report to Parliamentary Joint Committee on the National Broadband Network, Financial and Rollout Data," 19 April 2013, Exhibit 2-1.

⁶⁶ Hansard (2013) "Hearing of the Senate Standing Committee on Environment and Communications", May 30, p.121.

⁶⁷ Senate Standing Committee on Environment and Communications, Answers to Senate Estimates Questions on Notice, Additional Estimates Hearings February 2013, Broadband, Communications and the Digital Economy Portfolio, NBN Co Limited, Question No: 284.

- Of nine directors appointed to the NBN Co Board in 2009, five have stepped down: Mr. Doug Campbell, Mr. Clem Dougherty, Mr. Peter Hay, Mr. Gene Tilbrook and Mr. Harrison Young.
- Of the nine executives listed in NBN Co's Annual Report as Key Management Personnel in June 2011 six have left: Mr. Patrick Flanigan, Mr. Jean-Pascal Beaufret; Ms. Christy Boyce; Mr. Steve Christian; Mr. Jim Hassell; Mr. Tim Smeallie.⁶⁸

This appears to be an unusually high level of turnover in the executive ranks, and particularly at the very top given NBN Co was originally run by a team handpicked by a CEO given a free hand by his Board and a virtually unlimited budget by his Shareholder Ministers.

In recent months NBN Co has also lost a startling number of its most senior construction and project management staff given this constitutes its core activity in the near-term, including:

- Head of Construction, Dan Fleming.⁶⁹
- Head of Fixed Wireless Rollout, Joe Prelc.⁷⁰
- General Manager of Marketing, John Casey.⁷¹
- Head of Quality & Efficiency Paul Takac.⁷²
- Executive General Manager of Construction, Health & Safety, Paul Donker.
- Executive General Manager of Construction Program Management, Stephen Butler.

Coalition Members and Senators have sought further information about the level of redundancy payments to departing senior executives and executive level employees. Disappointingly, NBN Co has refused to provide this information to the Parliament and the Australian taxpayers who bear financial responsibility for the project.73

⁶⁸ NBN Co (2011) Annual Report 2010-11, p.37.

⁶⁹ Bingemann, M. (2013) "Targets in Focus as NBN Co Loses Construction Chief", in *The Australian*, January 16.

⁷⁰ McDuling, J. & Hutchinson, J. (2013) "NBN Co Wireless Project Manager Quits", in *The Australian* Financial Review, 10 May.

⁷¹ Ramli, D. & Hutchinson, J. (2013) "Marketing Chief Latest to Quit NBN Co", in *The Australian Financial* Review, May 1.

⁷² Bingemann, M., & Hepworth, A. (2013) "Liberals Put NBN Chief Mike Quigley on Notice", in the

Australian, June 1. ⁷³ Senate Standing Committee on Environment and Communications (2013) "Answers to Senate Estimates Questions on Notice, Additional Estimates Hearings February 2013, Broadband, Communications and the Digital Economy Portfolio, NBN Co Limited, Question No: 284," answers to Questions 5-7.

Recommendation:

NBN Co commit to reducing its indirect opex overheads by 20 per cent over the next two years.

4.3 NBN & DBCDE Spending on Ads Without Regard to Effectiveness

In May 2013 estimates, the DBCDE claimed its overall marketing spend for the NBN for 2012-13 would be \$24.9 million.⁷⁴

This expenditure is in addition to \$29 million previously spent on NBN related advertising.

The Department remains unable to identify the benefits of this advertising campaign and the metrics against which outcomes are measured. When questioned on the findings of an interim report into the effectiveness of the advertising campaign Minister Conroy indicated that document is protected by cabinet confidence and therefore he nor the department are able to discuss its contents:

Senator BIRMINGHAM: And what did that evaluation find?

Senator Conroy: This material goes to cabinet.

Senator BIRMINGHAM: The evaluation report of the first stage of the NBN campaign is a cabinet document?

Mr Robinson: It is.

Senator BIRMINGHAM: It is amazing the things you will take to cabinet to claim confidentiality over them.⁷⁵

NBN expects to spend an additional \$11.9 million on 'Communication and marketing campaigns' in 2012-13 which comes on top of \$11.226 million in 2011-12.^{76 77}

The Coalition has identified a number of concerns about the conduct and content of NBN advertising undertaken to date, including:

Promotional material was published in regions not included in stage one of the rollout, creating confusion over when the NBN will be available.⁷⁸

⁷⁴ Estimates, May 20, pp.65.

⁷⁵ Estimates, May 30, p. 66.

⁷⁶ NBN Co Annual Report, 2011-12, p.79.

⁷⁷ NBN Co, (2013), "Answers to Questions on Notice, Public Hearing 30 October 2012", Question 370.

⁷⁸ See Dissenting Report by Coalition Members and Senators, available online here, p.137.

Much of the material created a false impression that many services and applications that are of public benefit can only be delivered on a fibre-to-the-premise network.⁷⁹

There was insufficient focus on pressing public interest issues, such as the decommissioning of the copper network, risks posed by asbestos and the lack of RSPs offering services over the NBN's Uni-V ports.

Recommendations:

The NBN Co and the DBCDE need to measure the effectiveness of their overall advertising and marketing spending, to justify any ongoing increases.

The NBN Co and the DBCDE immediately release any reports on the effectiveness of NBN related advertising campaigns.

4.4 Indirect Operating Expenses

NBN Co is expecting \$18 million in revenue from selling telecommunications services for the 2012-13 financial year. Until now it has earned much more from bank interest than broadband.

Yet indirecting operating expenses (opex) have increased dramatically from original forecasts – they are estimated to be twice as high over the decade-long network build than in the original NBN Co 2011-2013 Corporate Plan released in late 2010.

Similarly the NBN's indirect operating expenses over the three years to June 2013 – money spent on staff, travel and other expenses not directly related to building or operating the network – are set to be twice as high as estimated three years ago in the original Corporate Plan.

Indirect opex over the three years will be \$1.48 billion, compared to the original estimate of \$771 million and estimated revenues over the same period of just \$20 million.

Individual expense items also appear excessive compared to the meager revenue NBN Co is pulling in. Some notable indirect operating expense items in the first seven months of fiscal 2012-13 include:

⁷⁹ For instance, the 'Connecting Australia' newspaper published by the DBCDE. See Turnbull, M., (2012), "The NBN Supports Newspapers. As for the Public Interest..." available online here.

Expense Category Year-to-Date (Jan 2013)			
Consultancies	\$22 million		
Legal Costs	\$11 million		
Education Expenses	\$3 million		
Taxis	\$1 million		
Electricity	\$7 million		
Rent	\$14 million		

Total rent for the NBN Co at its various locations now exceeds \$14 million annually.

Rent for each location is outlined below:

Address	Rent/Year
15 National Cct Barton	104,244
88 Walker St Nth Sydney	495,992
100 Arthur St North Sydney	6,142,730
360 Elizabeth St Melbourne	4,334,322
39 Murray St, Hobart	51,188
535 Bourke St Melbourne	1,060,008
213 Miller St Nth Sydney	697,453
45 Cameron St Launceston	54,659
77 Pacific Hwy Sydney	281,994

54 Victoria St Hobart	72,450
50 Miller St Nth Sydney	928,981
Total	\$14.244 m

Recommendation:

NBN Co commit to reducing its indirect opex overheads by 20 per cent over the next two years.

Hon Malcolm Turnbull MP Member for Wentworth on behalf of the Coalition Members of the Joint Committee on the National Broadband Network