

The Senate

---

Senate Select Committee on the  
National Broadband Network

---

Interim Report

March 2014

© Commonwealth of Australia 2014

ISBN 978-1-74229-982-2

This work is licensed under the Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Australia License.



The details of this licence are available on the Creative Commons website:  
<http://creativecommons.org/licenses/by-nc-nd/3.0/au/>.

Printed by the Senate Printing Unit, Parliament House, Canberra

# Members of the Committee

## Core members

Senator the Hon Kate Lundy, ALP, ACT (Chair)  
Senator the Hon Stephen Conroy, ALP, VIC (Chair from 6 to 20 December 2013)  
Senator Zed Seselja, LP, ACT (Deputy Chair)  
Senator Scott Ludlam, AG, WA  
Senator Anne Ruston, LP, SA  
Senator Dean Smith, LP, WA  
Senator the Hon Lin Thorp, ALP, TAS

## Substitute members

Senator Deborah O'Neill (ALP, NSW) from 13 to 19 December 2013  
Senator Deborah O'Neill (ALP, NSW) from 11 to 12 March 2014  
Senator Lee Rhiannon (AG, NSW) on 11, 12 and 28 March 2014

## Secretariat

Mr David Sullivan, Committee Secretary  
Ms Penny Bear, Research Officer  
Ms Ophelia Tynan, Administrative Officer

Senate Select Committee on the National Broadband Network  
Department of the Senate  
PO Box 6100  
Parliament House  
Canberra ACT 2600  
Australia

Phone: + 61 2 6277 3538  
Fax: + 61 2 6277 5818  
Email: [nbnsen@aph.gov.au](mailto:nbnsen@aph.gov.au)  
Internet: [www.aph.gov.au/senate\\_nbn](http://www.aph.gov.au/senate_nbn)



# Table of Contents

<b>Members of the Committee</b> .....	<b>iii</b>
<b>Executive Summary</b> .....	<b>vii</b>
<b>Chapter 1</b> .....	<b>1</b>
<b>Introduction</b> .....	<b>1</b>
Resolution of appointment .....	1
Brief history of NBN policy .....	2
Previous parliamentary committee inquiries into the NBN .....	10
Purpose of the interim report .....	11
Acknowledgements .....	12
<b>Chapter 2</b> .....	<b>13</b>
<b>Strategic Review of the NBN</b> .....	<b>13</b>
Background.....	13
Committee analysis – Revised Outlook and Radical Redesign .....	20
Committee Analysis – Multi Technology Mix.....	68
Concluding Remarks and Recommendations—Strategic Review .....	95
<b>Chapter 3</b> .....	<b>99</b>
<b>Review Processes and NBN Co Governance and Culture</b> .....	<b>99</b>
Background.....	99
Board appointments and selection of new management team .....	101
NBN Co culture .....	108
NBN Life To Date Capital Expenditure.....	115
Concluding Remarks and Recommendations.....	116
<b>Chapter 4</b> .....	<b>117</b>
<b>Transparency and Accountability</b> .....	<b>117</b>
Government undertakings .....	117
Public Information on the rollout .....	120
Committee Experience .....	125
Concluding remarks and recommendations .....	132
<b>Coalition Senators' Dissenting Report</b> .....	<b>135</b>

---

<b>Appendix 1</b> .....	<b>165</b>
<b>Public submissions</b> .....	<b>165</b>
<b>Appendix 2</b> .....	<b>169</b>
<b>Additional information, answers to questions on notice and correspondence,</b> .....	<b>169</b>
Additional information received.....	169
Answers to Questions on Notice .....	170
Correspondence .....	171
<b>Appendix 3</b> .....	<b>173</b>
<b>Public hearings and witnesses</b> .....	<b>173</b>
<b>Appendix 4</b> .....	<b>181</b>
Rollout Trajectories of NBN Co—17 December 2013 .....	181

# Executive Summary

## *NBN Co Strategic Review*

The Senate Select Committee on the National Broadband Network (the Committee) has issued this interim report because it has significant concerns with the accuracy and reliability of the Strategic Review.

The Committee considers that the assumptions and conclusions set out in the Strategic Review are unreliable in the case of all examined scenarios.

The Committee has found that the Revised Outlook includes financial manipulations and other irregularities, such as:

- the exclusion from the Revised Outlook of approximately \$4 billion in ‘business as usual,’ incremental architecture savings signed off by previous NBN Co management, and their characterisation as ‘radical’ for inclusion in Scenario 2 (‘Radically Redesigned FTTP’);
- an assumption of a delay in the revised deployment schedule that is at odds with NBN Co’s current run rate, reflects deliberately conservative estimates of premises passed at peak rollout, and cannot be disentangled from political control of the speed of network deployment, but has the assumed effect of stripping out \$11.6 billion in revenues and adding \$13 billion to peak funding;
- assumptions on higher unit costs for the fibre build that add \$14.4 billion in capital expenditure, but:
  - are at odds with recent evidence from NBN Co and the Department of Finance; and
  - are extrapolated out to 2024 without a single efficiency saving for three years, and only 2.5 percent in two of the remaining seven years;
- the addition of a third satellite in the Revised Outlook, without direct explanation, with launch assumed at such a time (FY2021) to include costs but exclude revenues from scenario comparisons;
- overly pessimistic revenue assumptions that:
  - do not reflect existing strong demand for NBN services, or the high data usage patterns of Australians using the NBN;
  - ignore demand for important elements of broadband quality, particularly reliability and upload speeds;
  - remove revenue benefits from the superior product set available on FTTP, compared to other technologies (up to \$3.2 billion in the ‘steady state’); and
- scenario comparisons that include costs and revenues for the Multi-Technology Mix (MTM) build at assumed completion, and costs for the

---

Revised Outlook out to 2024, but exclude revenues for the Revised Outlook beyond 2021.

The Committee considers that—without the financial manipulations evident in revenue and other assumptions—the so-called “radically redesigned” FTTP scenario represents a better estimate of the cost of the fibre build than the Revised Outlook. This is because the productivity and architecture improvements included in Scenario 2 had already been included in the September 2013 Corporate Plan, and implemented, by previous NBN Co management.

The Committee has equally strong concerns about the reliability of assumptions underpinning the MTM, the recommended option. These include:

- the financial model for the MTM was built using mostly international benchmarks and estimates, rather than field data;
- operating expenditure for the MTM is expected to be significantly higher than for a fibre network. The caretaker advice prepared by NBN Co points to the substantial costs associated with remediation and maintenance of the copper network. The committee has heard similar evidence from witnesses representing the workforce in the field. Material operational costs are also expected from NBN Co managing at least two additional fixed line networks, and the migration arrangements and IT systems that relate to them. However, the Strategic Review assumes that operating expenditure for the MTM will be similar to what is required for a new fibre build;
- the ‘limited speeds and product capabilities’ available on FTTN are expected to result in reduced revenues compared to a full fibre rollout in the fixed line footprint. Further, NBN Co will need to conduct extensive field tests before the speeds and broadband quality in the (non-FTTP) MTM fixed line footprint will be known empirically. However, the Strategic Review assumes revenues for the MTM that are similar to those for a full fibre rollout, despite the vast difference in broadband quality and product sets;
- the Strategic Review acknowledges that the MTM will need to be upgraded, but provides no costs for these flagged upgrades. The full cost of the MTM will only be known once these upgrade costs are included in the model.

NBN Co’s previous Corporate Plans have been developed over a period of many months and have been subject to independent oversight and verification. By contrast, the Strategic Review was the result of “five weeks of intensive work on the part of lots and lots of people”<sup>1</sup> and was subject to no independent external oversight.

Further, the committee rejects the rollout strategy advocated by the current Government and reflected in the MTM. In particular:

- the deployment of higher-quality broadband (FTTP) to high value suburbs, and the deployment of inferior broadband (FTTN) to low value suburbs is an inappropriate use of taxpayers’ money. As a Government Business Enterprise,

---

1 Committee Hansard, 17 December 2013, p. 38.

---

NBN Co should not have a rollout strategy that favours one suburb over another;

- the proposed Fibre on Demand product is expected to be too expensive for many residences and small businesses. This will create competitive disadvantages for individuals and small businesses outside the fibre footprint, and will entrench broadband inequality in Australia.

The Committee considers these rollout strategies reflect a fundamental misunderstanding of broadband quality—particularly uploads—and demand for this quality and reliability in the residential and small business market. Failure to consider that broadband quality and capability goes beyond download speeds is systemic in the Strategic Review.

The Committee concludes that the Strategic Review does not comprise a sufficient information base for the NBN Co Board or the Minister to adopt an alternative deployment path for the NBN.

### **Recommendation 1**

**NBN Co should submit a revised Strategic Review that provides transparent assumptions and corrects deficiencies and distortions. The revised Strategic Review should provide details of only two scenarios:**

- **An optimised FTTP rollout that adopts the technology changes and other management initiatives outlined in Scenario 2, together with a plan to address identified industry capacity constraints; and**
- **A revised Multi-Technology Mix that is based on actual costs for FTTN and HFC derived from discussions with Telstra, Optus and vendors. This scenario should also include all costs to undertake the flagged upgrades to 100 Mbps by 2023, 250 Mbps by 2028 and 1000 Mbps by 2030.**

**The revised scenarios should include consideration of broadband quality beyond just download speeds, and the demand for attributes like upload speeds and reliability in the residential and small business market.**

**Prior to submission, the Strategic Review should be scrutinised and verified by an independent advisor engaged by the Department of Communications and the Department of Finance.**

NBN Co should be directed to continue and accelerate the FTTP roll out while further analysis is undertaken by NBN Co, the Departments and the Minister. The Committee notes that NBN Co is not able to progress the FTTP rollout at the maximum rate possible at present. This is because—under the interim Statement of Expectations—NBN Co is required to obtain approval to issue additional build instructions. This places the management of the current FTTP rollout under direct political control. The committee considers that, given the continuing review work, and the fundamental problems with the Strategic Review, NBN Co should continue the current FTTP roll out at the maximum rate possible and free from political interference.

---

## **Recommendation 2**

**NBN Co should continue and accelerate the roll out of the FTTP network while further analysis is undertaken.**

**NBN Co should be allowed to proceed free from political interference.**

### *NBN Co Governance and Review Processes*

Key appointments to the NBN Co Board and management relevant to the Strategic Review reflect to a large extent personnel named in media reports before the election. There is also clear evidence that key appointees have prior personal associations with the Minister. The Committee considers that some of the processes of recruitment for the Board and management of NBN Co have created the perception that these are political appointments for a political purpose. In reaching this conclusion, the Committee is not making any judgements about the skills and experience of any of the individuals.

A key finding of KordaMentha was that “no material issues exist within the accounts of NBN Co.” However, the Strategic Review draws radically different conclusions from the information contained in the 2013-16 Corporate Plan signed off by an independent board in June 2013.

It is not clear to the Committee how the NBN Co Board could have endorsed the Strategic Review, given its clear deficiencies. In the Committee’s view, this should be investigated to ascertain how and at what point the governance processes at NBN Co have failed under the current Government.

## **Recommendation 3**

**Governance processes between NBN Co and the Minister should be investigated to determine how a document with the deficiencies evident in the Strategic Review was produced and signed off by the NBN Co Board and the Minister.**

The committee is also uneasy at the multiple reviews of the NBN that have been announced and the very short timeframes for their completion. Noting the Committee’s findings as to the Strategic Review—and the Government intention for reviews to inform the development of NBN Co's Corporate Plan 2014-17—the committee considers that the reviews and their findings should be subject to continuing and close parliamentary scrutiny.

The committee also notes the finding of the Strategic Review that the intense politicisation of the NBN—driven principally by Coalition opposition to the project—has adversely impacted the performance of NBN Co and the efficient deployment of the network.

## **Recommendation 4**

**The Committee recommends that the Senate amend the Committee’s Terms of Reference to enable ongoing and robust Parliamentary oversight of the National Broadband Network.**

---

## ***Transparency and Accountability***

The Committee considers that transparency has decreased markedly at NBN Co since the change of government, despite undertakings prior to the election. In summary:

- there is clear evidence of community uncertainty about the rollout of the NBN. Communities are not informed when physical construction is taking place in their area, and local communities are not being advised when services are expected to become available. Further, published weekly rollout information is only a subset of what is available to NBN Co management;
- NBN Co personnel appear reluctant to be subject to Parliamentary scrutiny. On three occasions summons have been issued, and in some cases requests for specific personnel have been denied. Answers to Questions on Notice have been submitted late or not at all, are evasive, and some do not attempt to address the questions asked;
- there is evidence of a Freedom of Information request being denied for spurious reasons; and
- a request for in camera scrutiny of the unredacted Strategic Review has been denied by the Minister, despite the fact that the redacted assumptions underpin a proposed Commonwealth investment of over \$40 billion—not including required technology upgrades.

Of key concern to the committee is the uncertainty evident in the community about the rollout. The lack of consultation with local communities, and the absence of information available to these communities on the rollout, has been a key theme of submissions to the committee and evidence given at public hearings.

### **Recommendation 5**

**Shareholder Ministers and NBN Co should implement concrete measures to improve transparency and accountability. At a minimum, NBN Co should:**

**Immediately take steps to rectify community uncertainty about the rollout. NBN Co should inform communities where physical construction is taking place, and provide forecasting data on its website to advise local communities when services are expected to become available;**

**Attend all Parliamentary Committee hearings and answer questions on notice accurately and in a timely fashion, as is appropriate for a Government Business Enterprise accountable to the Australian people; and**

**Publish the full program summary report on its website, in accordance with the interim statement of expectations.**

---

# Chapter 1

## Introduction

### Resolution of appointment

1.1 On 14 November 2013, the Senate established the Select Committee on the National Broadband Network to inquire into and report on the Government's reviews of the National Broadband Network (NBN) and the governance of NBN Co, with interim reports as the committee sees fit and a final report on or before 10 June 2014.<sup>1</sup>

1.2 The committee's terms of reference identify the following areas of inquiry:

- the establishment of the Government's strategic review of the NBN including:
  - the adequacy of the terms of reference,
  - the selection of personnel and expert advisers to the review,
  - the data provided to the strategic review, in particular, any variation between that data and data used by NBN Co in preparing its annual report and corporate plan, and
  - the impact of the strategic review on the operational effectiveness of NBN Co;
- the outcome of the strategic review of the NBN, including:
  - the extent to which the review fulfilled its terms of reference,
  - the reliability of assumptions made in the review, including, inter alia, the cost of alternative network equipment, the revenues of NBN Co under alternative scenarios, construction requirements and access to Telstra's copper network,
  - the implications of any alternatives considered for the long-term structure of the industry, in particular, the structural separation of access networks from retail operations, and
  - any other matters arising from the strategic review;
- the establishment and findings of the Government's cost benefit analysis;
- the conduct and findings of the Government survey of the availability of broadband in Australia; and
- any related matter.

---

1 Parliament of the Commonwealth of Australia, *Journals Of The Senate*, No. 3 (Thursday, 14 November 2013), p. 133.

## Brief history of NBN policy

1.3 On 7 April 2009, the Rudd Government announced the establishment of NBN Co to 'design, build and operate a new super-fast National Broadband Network'.<sup>2</sup> The NBN would:

- 'connect [with 90 per cent coverage] homes, schools and workplaces with Fibre-to-the-Premise (FTTP), providing broadband services ... in urban and regional towns with speeds of up to 100 Megabits per second (Mbps) - 100 times faster than those currently used by most people – extending to towns with a population of around 1,000 or more people' (later increased to 93 per cent)
- use next generation wireless and satellite technologies that will be able to deliver 12 Mbps or more to 'remote and regional areas
- 'provide fibre optic transmission links connecting cities, major regional centres and rural towns
- be Australia's first national wholesale-only, open access broadband network
- be built and operated on a commercial basis by a company established at arm's length from Government involving private sector investment
- be expected to be rolled-out, simultaneously, in metropolitan, regional, and rural areas.'<sup>3</sup>

1.4 The NBN was initially proposed as a joint partnership between Government and the private sector. During 2008, the former Minister, Senator the Hon Stephen Conroy, convened a panel of experts to evaluate proposals from the private sector.<sup>4</sup> The expert panel was chaired by the former Secretary of the Department, Ms Patricia Scott. The other members of the panel were: Dr Ken Henry AC, (Treasury Secretary); Reg Coutts (Professor Emeritus of Communications at the University of Adelaide); John Wylie (CEO of Lazard Carnegie Wylie); Rod Tucker (Laureate Professor at the University of Melbourne); Tony Mitchell (Allphones Chairman); and Tony Shaw (former Chairman of the Australian Communications Authority).

1.5 On 26 November 2008, the Commonwealth received Proposals from six proponents: Acacia Australia Pty Ltd, Axia Netmedia Corporation, Optus Network Investments Pty Ltd, the Crown in the Right of Tasmania, Telstra Corporation Ltd and TransACT Capital Communications Pty Ltd. On 13 December 2008, the Panel met and considered the future of the Telstra Proposal. After considering legal and probity

---

2 Hon Kevin Rudd MP, Prime Minister and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, Media Release, "New Broadband Network," (7 April 2009).

3 Joint Committee on the National Broadband Network, Rollout of the National Broadband Network – First Report (31 August 2011), pp. 2-3.

4 Senator the Hon Stephen Conroy, Media Release, "Government announces Panel of Experts to assess National Broadband Network proposals," (11 March 2008).

---

advice, the expert panel and the Commonwealth concluded that the Telstra Proposal had not met the conditions of participation for the RFP and Telstra's Proposal was excluded from further consideration in the RFP process.<sup>5</sup>

1.6 In its report to Government, the expert panel advised that:

All Proposals were to some extent underdeveloped. No Proposal, for example, provided a fully developed project plan. None of the national Proposals was sufficiently well developed to present a value-for-money outcome.<sup>6</sup>

1.7 The expert panel also advised:

The Proposals have also demonstrated that rolling out a single fibre-to-the-node (FTTN) network is unlikely to provide an efficient upgrade path to fibre-to-the-premises (FTTP).<sup>7</sup>

1.8 This advice was in part informed by a concurrent review by the Australian Competition and Consumer Commission (ACCC) of the types of rollout proposed for the NBN. However, the expert panel also formed its own view that FTTN was not a cost effective path to FTTP.<sup>8</sup> The expert panel concluded:

The Panel can see a way forward to achieve the outcomes sought by the Government and has provided that advice in confidence to the Government because of the commercial sensitivities arising.<sup>9</sup>

1.9 Following receipt of this advice, the Minister met with Prime Minister Rudd on 21 January 2009 to seek approval to bring an alternative plan to Cabinet.<sup>10</sup> The

---

5 'Extract From The Evaluation Report For The Request For Proposals To Roll-Out And Operate A National Broadband Network For Australia' (20 January 2009), at: [http://www.archive.dbcde.gov.au/2013/september/national\\_broadband\\_network/extract\\_from\\_evaluation\\_report/extract\\_from\\_the\\_evaluation\\_report2.pdf](http://www.archive.dbcde.gov.au/2013/september/national_broadband_network/extract_from_evaluation_report/extract_from_the_evaluation_report2.pdf)

6 'Extract From The Evaluation Report For The Request For Proposals To Roll-Out And Operate A National Broadband Network For Australia' (20 January 2009), at: [http://www.archive.dbcde.gov.au/2013/september/national\\_broadband\\_network/extract\\_from\\_evaluation\\_report/extract\\_from\\_the\\_evaluation\\_report2.pdf](http://www.archive.dbcde.gov.au/2013/september/national_broadband_network/extract_from_evaluation_report/extract_from_the_evaluation_report2.pdf)

7 'Extract From The Evaluation Report For The Request For Proposals To Roll-Out And Operate A National Broadband Network For Australia' (20 January 2009), at: [http://www.archive.dbcde.gov.au/2013/september/national\\_broadband\\_network/extract\\_from\\_evaluation\\_report/extract\\_from\\_the\\_evaluation\\_report2.pdf](http://www.archive.dbcde.gov.au/2013/september/national_broadband_network/extract_from_evaluation_report/extract_from_the_evaluation_report2.pdf)

8 Kathryn Edwards, "Expert panel member defends NBN tender process," *Computerworld* (4 February 2010), at: [http://www.computerworld.com.au/article/335122/expert\\_panel\\_member\\_defends\\_nbn\\_tender\\_process/](http://www.computerworld.com.au/article/335122/expert_panel_member_defends_nbn_tender_process/)

9 'Extract From The Evaluation Report For The Request For Proposals To Roll-Out And Operate A National Broadband Network For Australia' (20 January 2009).

Strategic Priorities and Budget Committee of Cabinet considered the NBN policy on a number of occasions between 29 January and 6 April 2009. Cabinet formally considered the NBN policy on 7 April 2009.<sup>11</sup> The Government also received advice from other Government agencies and the external advisers engaged by the Department on costing alternative proposals.<sup>12</sup>

1.10 In announcing the new National Broadband Network proposal in April 2009, the Prime Minister, Finance Minister and Minister for Broadband, Communications and the Digital Economy stated that:

The Panel of Experts has encouraged the Government to invest in optical fibre technology, supplemented by next-generation wireless and satellite technologies. The Australian Competition and Consumer Commission has also endorsed the use of FTTP as a superior technology to Fibre to the Node.<sup>13</sup>

1.11 Work to begin implementation of the NBN began shortly after the announcement. The Government announced that it would:

- commission an implementation study to determine operating arrangements, detailed network design, methods to attract investment and provide procurement opportunities for business
- fast-track negotiations and arrangements to begin a FTTP and wireless network rollout in Tasmania (which would commence in July 2009)
- commence rollout of fibre optic transmission links between cities, major regional centres and rural towns to address ‘blackspots’
- take steps to ‘progress legislative changes’ to govern NBN Co and facilitate NBN rollout including in new (or Greenfield) developments (from 1 July 2010)
- make an initial investment of \$4.7 billion in the NBN

---

10 The process by which the Minister met with and briefed the Prime Minister was detailed by Senator Conroy at Budget Estimates in May 2009 (Senate Budget Estimates Hansard, 26 May 2009, p. 93). The expert panel report was received in a week the Prime Minister had decided to deliver a major speech in every mainland capital as part of maintaining public confidence in the face of the Global Financial Crisis (see James Button, *Speechless: A Year in My Father’s Business* (Melbourne University Press, 2012).

11 Answer to Questions on Notice, Budget Estimates 2009, No.5.

12 Estimates Hansard, May 2009, pp. 97-98.

13 Hon Kevin Rudd MP, Prime Minister and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, Media Release, “New Broadband Network,” (7 April 2009).

- 
- commence consultation on required amendment to the telecommunications regulatory regime.<sup>14</sup>

1.12 The Implementation Study was delivered to Government on 5 March 2010 and was released on 6 May 2010<sup>15</sup> Key findings and recommendations from the Implementation Study included:

- The NBN will deliver world class broadband infrastructure to all Australians;
- The \$43 billion total capital cost of the NBN is a conservative estimate and there are opportunities to significantly reduce the build cost;
- The peak investment required by Government is estimated at \$26 billion by the end of year 7, of which \$18.3 billion will be required over the next four years;
- Government should retain full ownership of the NBN until the roll out is complete to ensure that its policy objectives are met – including its competition objectives;
- The fibre component of the NBN should be extended from 90 to 93 per cent and cover the 1.3 million new premises expected to be built by 2017-18;
- Entry level wholesale prices on the fibre should be set at around \$30-35 per month for basic broadband 20Mbps plus voice service, to drive affordable retail prices and better value for money for consumers compared to what is available today;
- Fibre to the premise is widely accepted as the optimal future proof technology with wireless broadband a complementary rather than a substitute technology;
- Next generation wireless and satellite services will deliver peak speeds of at least 12 Mbps (and much higher for many wireless users). Satellite services will deliver average data rates which are more than 20 times higher than most users of these technologies experience today and much higher than average DSL usage today;
- NBN Co can build a strong and financially viable business case with the Study estimating it will be earnings positive by year six and able to pay significant distributions on its equity following completion of the rollout; and

---

14 Hon Kevin Rudd MP, Prime Minister and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, Media Release, “New Broadband Network,” (7 April 2009).

15 The Hon Lindsay Tanner MP, Minister for Finance and Deregulation and Senator the Hon Stephen Conroy Minister for Broadband, Communications and the Digital Economy, Joint Media Release ‘Landmark Study confirms NBN vision is achievable and affordable’ (6 May 2010).

- The Government can expect a return on its equity investment sufficient to fully cover its cost of funds.

1.13 NBN Co delivered its Corporate Plan 2011-13 on 8 November 2010.<sup>16</sup> The Corporate Plan was released publicly on 20 December of that year, together with the Government Statement of Expectations.<sup>17</sup> The Government Statement of Expectations also constituted the Government response to the Implementation Study.<sup>18</sup>

1.14 The Corporate Plan and the Government Statement of Expectations (20 December 2010) reflected the Government's changes to its expectations for the NBN since the Implementation Study:

- increasing the FTTP coverage of the NBN by the end of the rollout period from 90 per cent of premises to 93 per cent of premises
- requesting NBN Co to 'build the wireless network that will deliver fixed wireless services, delivering peak speeds of at least 12 Mbps to premises in the 94 to 97 percentile of premises.'
- an expectation of NBN Co 'to maximise the use of existing infrastructure where it is efficient and economic to do so in the delivery of the fixed wireless network.'<sup>19</sup>

1.15 In August 2012, NBN Co released its second Corporate Plan (2012-15).<sup>20</sup> The Corporate Plan noted that concluding the Definitive Agreements with Telstra had taken nine months longer than foreshadowed in the previous Corporate Plan. The Corporate Plan defined the Commencement Date as "7 March 2012, being the date that the Telstra Definitive Agreements became wholly unconditional." As a consequence the NBN is now two years into the build program for the FTTP rollout.

1.16 The Corporate Plan confirmed:

- The NBN is a sound investment that will pay its own way and generate a 7% return for the taxpayer

---

16 Available at: <http://www.nbnco.com.au/assets/documents/nbn-co-3-year-gbe-corporate-plan-final-17-dec-10.pdf>

17 The Hon Julia Gillard MP, Prime Minister; The Hon Wayne Swan MP, Treasurer; Senator The Hon Penny Wong, Minister for Finance and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, Media Release, 'Government releases NBN Co Corporate plan,' (20 December 2010).

18 The Hon Julia Gillard MP, Prime Minister; The Hon Wayne Swan MP, Treasurer; Senator The Hon Penny Wong, Minister for Finance and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy 'NBN Rollout: Statement of Expectations' Media Release 20 December 2010.

19 Joint Committee on the National Broadband Network, 'Rollout of the National Broadband Network – First Report,' (31 August 2011), p. 5.

20 NBN Co Corporate Plan 2012-15, 8 August 2012, available at: <http://www.nbnco.com.au/assets/documents/nbn-co-corporate-plan-6-aug-2012.pdf>

- 
- The Government is on track to meet its target of having work for 758,000 fibre premises commenced or completed by the end of 2012
  - Wholesale broadband prices are projected to fall over time in both real and nominal terms
  - The capital cost of the NBN build has increased by 3.9%, but remains significantly less than the \$43 billion originally announced
  - The construction time for the NBN has only been extended by six months, despite a nine month delay in the completion of the Telstra deal.<sup>21</sup>

1.17 In March 2013 NBN Co announced that the failure of its contractors to mobilise resources necessitated a downward revision of its June 2013 forecasts.<sup>22</sup> In May 2013 Telstra put a temporary stop on remediation work while asbestos handling practices were reviewed.<sup>23</sup> In August 2013 Telstra announced the recommencement of pit remediation.<sup>24</sup>

1.18 In an address to TelSsoc on 2 December 2013, Mike Quigley summarised the achievements of the company to date:

- Building from scratch a company of close to 3,000 people with all of the processes and systems needed;
- Launching a successful Interim Satellite service;
- Building a Long Term Satellite solution that is on schedule and on budget for services beginning in mid-2015;
- Rolling out a Fixed Wireless network;
- Building a Transit Network to support all access technologies, which is on budget and on schedule for completion by 2015;
- The Development of OSS/BSS systems that have been proven to function at scale together with the establishment of a National Test Facility and a Network Operations Centre;
- The successful development and launch of a suite of Products covered by Wholesale Broadband Agreements (WBAs). And hopefully, any day now, the finalisation of a 27-year SAU [now accepted by the ACCC];
- Building of a Greenfields fibre capability that can complete more than 30 new development sites a week, anywhere in the country;

---

21 Senator the Hon Penny Wong, Minister for Finance and Deregulation and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, Media Release, “NBN Co Corporate Plan 2012-2015 released” (8 August 2012).

22 NBN Co, Media Release, “NBN Co updates short-term fibre rollout timeline” (21 March 2013).

23 Telstra, Media Release, “New initiatives to strengthen asbestos management” (30 May 2013).

24 Telstra, Media Release, “Retrained field force to begin Telstra pit remediation works” (5 August 2013).

- Building a Customer Connect capability that has now connected more than 100,000 end users and which is rapidly getting on top of the MDU connections and growing the ability to cope with the exceptionally high take-up rates that were being experienced;
- And finally, a growing capability to build the LN/DN component of the Brownfields network at a cost that preserves the integrity of NBN Co's financial plan.<sup>25</sup>

1.19 In his Australian Computer Society Telecoms Address on 11 October 2013, Senator Conroy summarised the reasons why the former Government conceived the National Broadband Network. An abridged version is provided here:<sup>26</sup>

The digital age is upon us, but the realisation of the opportunities it presents is really just beginning. We started on realising it on day one by creating the Department of Broadband, Communications and the Digital Economy. Labor's policy on broadband formed in Opposition was an essential part of this name change, so was the wider agenda. So as well as focussing on broadband we started a national discussion about the digital economy.

Over the last four years we released three major reports;

- Australia's Digital Economy: Future Directions in 2009;
- the National Digital Economy Strategy in 2011, and
- Advancing Australia as a Digital Economy earlier this year.

These reports were dismissed by Malcolm Turnbull as justifying the NBN by "framing it as a pre-requisite for global digital greatness."

This is the Coalition's fundamental error—they don't understand that we are building the NBN because of the promise of the digital economy. We are not talking about the digital economy to justify the infrastructure investment. Labor made the decision to invest in broadband because of its importance to our economic and social future.

The Coalition response to our initial broadband policy was to assert that the private sector would build broadband for our cities. The Coalition only has a broadband plan because, as Peter Reith identified, the failure to have a credible broadband policy cost them the 2010 election.

Labor's approach to the Digital Economy actually focussed on three areas—providing the physical infrastructure, developing services and building national capability.

Labor's commitment to build a new national broadband infrastructure was forged in Opposition. Three factors resulted in the need to move from the initial plan to build Fibre to the Node and instead build Fibre to the Home.

---

25 Mike Quigley 'Reflections on starting-up a Public Infrastructure Project,' Address to TelSoc (2 December 2013).

26 Senator the Hon Stephen Conroy, ACS Telecoms Address (11 October 2013). Video available at: <http://www.acs.org.au/news-and-media/news-and-media-releases/2013/acs-telecoms-address-now-available-to-view>

---

The first was the resistance of Telstra to structural reform. This resistance led them to submit only a brief non-compliant tender response and they were excluded from the process. The second was the impact of the Global Financial Crisis on alternative bidder's ability to raise capital. But thirdly, and most significantly, the Expert Panel advised the government that FttN was not a cost effective path to a full fibre network.

At the heart of our approach were two fundamental principles.

The first was to fix the industry structure and get sustainable retail competition.

The second principle was to make sure that we make an investment in long term infrastructure, not a stop-gap.

The starting point for Labor's policy was to ask what infrastructure you need to empower the digital age. The starting point should not be identifying the cheapest interim step to get you through the next five years.

1.20 On 7 September 2013, the Coalition formed Government. Since being sworn in, the Minister for Communications, the Hon Malcolm Turnbull MP has announced five reviews into the NBN, including:

- The Strategic Review
- An Independent Cost Benefit Analysis and Regulatory Review
- The Broadband Quality and Availability study
- An NBN Governance Review
- An Independent Audit of the NBN Public Policy Process.

1.21 The Strategic Review also flagged a sixth review focussing on the fixed wireless and satellite programs, which will "consider strategic options available to NBN Co to cost effectively provide coverage to areas outside the fixed footprint, as well as considering the optimal model to provide this coverage."<sup>27</sup> The committee understands that this review will be completed in March and will be examined by the committee in subsequent hearings.<sup>28</sup>

1.22 On 24 September 2013, NBN Co shareholder Ministers, the Minister for Communications and the Minister for Finance, provided NBN Co with an interim Statement of Expectations for the transition period.<sup>29</sup> The interim Statement of Expectations directed NBN Co to:

- avoid service disruption for consumers, minimise impact on the construction industry, and achieve less costly and speedier rollout objectives

---

27 Strategic Review, p. 119.

28 Committee Hansard, Additional Estimates 2014, p. 32.

29 The Hon Malcolm Turnbull MP, Minister for Communications and Senator the Hon Mathias Cormann, Minister for Finance, Media Release, "Implementing the Coalition's Broadband Policy" (24 September 2013).

- continue to provide services including interim satellite services, and deployment of fibre to new development areas
- commence preparation of the 2014-17 Corporate Plan
- increase transparency and accountability of NBN Co and its activities; and
- assist with the conduct of other reviews—specifically requests for information from the Department of Communications regarding the broadband quality and availability review.<sup>30</sup>

1.23 The interim Statement of Expectations also instructed NBN Co to “continue existing construction where build instructions had been issued.” Further build or remediation instructions “should not ordinarily be issued pending further analysis and discussion.” It also advised that: “management of existing design work should occur so as to optimise value in the context of the Government’s policy for a flexible architecture.” The Committee has considered NBN Co’s application of this instruction as part of this report.

1.24 The interim Statement of Expectations indicates that it provides guidance only, and that NBN Co should consult with the Government for any matters not covered by its advice.<sup>31</sup>

### **Previous parliamentary committee inquiries into the NBN**

1.25 Since the announcement of the termination of the Request For Proposals process—and its replacement with a government-owned company to build the NBN—four parliamentary committees have inquired into various aspects of the project:

- The Senate Select Committee on the National Broadband Network (established 25 June 2008; terms of appointment revised by the Senate on 14 May 2009; final report tabled 17 June 2010);<sup>32</sup>
- House of Representatives Standing Committee on Infrastructure and Communications ('Inquiry into the role and potential of the National Broadband Network', report tabled 25 August 2011);<sup>33</sup>
- The Joint Committee on the National Broadband Network (established March 2011; five reports tabled between March 2012 and August 2013;<sup>34</sup> dissolved when the 43rd Parliament was prorogued on 5 August 2013); and

---

30 Interim Statement of Expectations, pp. 1-2, available at:  
[http://www.communications.gov.au/broadband/national\\_broadband\\_network](http://www.communications.gov.au/broadband/national_broadband_network)

31 Interim Statement of Expectations, p. 2, available at:  
[http://www.communications.gov.au/broadband/national\\_broadband\\_network](http://www.communications.gov.au/broadband/national_broadband_network)

32 Reports available here:  
[http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Former\\_Committees/broadband/index](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Former_Committees/broadband/index)

33 Report available here:  
[http://www.aph.gov.au/parliamentary\\_business/committees/house\\_of\\_representatives\\_committees?url=ic/nbn/report.htm](http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=ic/nbn/report.htm)

- 
- The Senate Standing Committee on Environment and Communications (formerly Senate Standing Committee on Environment, Communications and the Arts) examined various pieces of legislation relating to the NBN. The relevant department and NBN Co were questioned during estimates hearings.

### **Purpose of the interim report**

1.26 This first interim report provides an overview and analysis of the Strategic Review based on evidence received by the committee to date. The Committee has issued this interim report because it has significant concerns with the reliability of the Strategic Review.

1.27 The report focuses on three key aspects of Government policy on the NBN:

- the Strategic Review of the NBN carried out by NBN Co over a five week period in 2013 (Chapter 2);
- governance arrangements for NBN Co in the context of the Strategic Review (Chapter 3); and
- transparency and accountability issues surrounding Government policy and the current NBN rollout (Chapter 4).

1.28 The Committee acknowledges that a number of Questions on Notice and Questions in Writing to NBN Co remain unanswered at the time of writing. The Committee cannot be held hostage to long delays by NBN Co and the Minister in responding to these questions. Further comments on the issue of responsiveness are made in Chapter 4.

1.29 The Committee will pursue further lines of inquiry before presenting its final report to the Senate. A list of submissions to the inquiry and the public hearings held to date can be found in Appendix 1 and 2 respectively. The committee will have more to say in Chapter 4 about the conduct of some of the hearings, and the attendance or otherwise of witnesses in response to certain orders of the committee.

1.30 The findings of the Strategic Review will be incorporated into NBN Co's 2014-17 Corporate Plan. The Strategic Review advised that the Corporate Plan was scheduled to be provided to the Government in the first half of 2014, and that the Strategic Review had been prepared to assist the Government formulate policy and inform decisions on the Statement of Expectations for NBN Co.<sup>35</sup> NBN Co has since indicated an intention to lodge a 2014-15 "budget" before June and a full Corporate Plan in the second half of the year.<sup>36</sup> The revised timing will enable the plan to incorporate the findings of the cost-benefit analysis and the broadband quality project.

---

34 Reports available here:  
[http://www.aph.gov.au/parliamentary\\_business/committees/house\\_of\\_representatives\\_committees?url=jcnbn/reports.htm](http://www.aph.gov.au/parliamentary_business/committees/house_of_representatives_committees?url=jcnbn/reports.htm)

35 Strategic Review, p. 9.

36 NBN Co, Transcript of Half Yearly Results Briefing, (21 February 2014), at:  
<http://www.nbnco.com.au/content/dam/nbnco/images/media-images/Transcript-Half-Year-Results.pdf>

It will also enable the Corporate Plan to be more fully informed about the real costs of any change in strategy.

1.31 The Strategic Review is the first of the planned Government reviews to have been completed. *The Broadband Availability and Quality Report* was released on 20 February 2014 (noting that NBN Co was provided with early data for consideration in the Strategic Review),<sup>37</sup> but the Committee has not yet completed its investigation. Similarly, the terms of reference and panel of experts for the *Independent cost-benefit analysis and review of regulation* were announced on 12 December, and on 13 February 2014 the expert panel released a *Regulatory Issues Framing Paper*. However, until the review progresses further and the committee has the opportunity to seek submissions and call relevant witnesses, few conclusions can be drawn. Subsequent review processes are ongoing and will be examined in turn.

### **Acknowledgements**

1.32 The committee thanks all those who have assisted with the inquiry to date, including those who have appeared at hearings and made submissions.

---

37 Committee Hansard, 17 December 2013, p. 48.

# Chapter 2

## Strategic Review of the NBN

### Background

#### *Purpose of the Strategic Review*

2.1 While in opposition, Mr Turnbull made frequent claims that the Coalition broadband policy could be implemented for a third to a quarter the cost of the NBN. For example:

FTTN in Europe and North America has been described to me by those actually building new generation networks as costing between one third and one quarter of FTTP. Given our relatively high labour costs and the fact that FTTN's main virtue is that it reduces the civil works which is mostly labour, the difference in Australia is likely to be even higher.<sup>1</sup>

2.2 And:

Why can we do it cheaper? Fibre to the node, around the world, costs between 1/4 and 1/3 of fibre to the premises. That is the experience in North America and Europe. And in Australia with very high labour costs the differential would likely be even more.<sup>2</sup>

2.3 Minister Turnbull also repeatedly asserted that the “real” cost of the NBN would be different to the figures in NBN Co’s Corporate Plan. For example, he told Tony Jones on *Lateline* in February 2013:<sup>3</sup>

We're going to do a couple of things. We will do a rigorous cost/benefit and have a rigorous cost/benefit analysis done, but very quickly we will ensure that we get a fully transparent and accurate assessment of what it is really going to cost both in terms of dollars and time to complete the project on the basis of the Government's strategy and then what it will cost in terms of dollars and time to complete it on a variation along the lines we've been proposing and we'll get that up very quickly.

2.4 Launching the Coalition policy on 9 April 2013, Mr Turnbull quantified the expected saving, saying:<sup>4</sup>

---

1 The Hon Malcolm Turnbull MP, “At the Risk of Repetition - Delimiter’s Questions,” (30 November 2012), at: <http://www.malcolmturnbull.com.au/media/at-the-risk-of-repetition-delimiters-questions>

2 The Hon Malcolm Turnbull MP, “Why the Coalition’s NBN plan is superior - and why it will be better for the bush too,” (23 July 2012), at: <http://www.malcolmturnbull.com.au/media/why-the-coalitions-nbn-plan-is-superior-and-why-it-will-be-better-for-the-b>

3 Lateline, “Interview with Malcolm Turnbull,” (14 February 2013), at: <http://www.abc.net.au/lateline/content/2013/s3690871.htm>

4 Joint Press Conference, The Hon. Tony Abbott MP and The Hon. Malcolm Turnbull MP (9 April 2013), at: <http://mt.tbone.com.au/homepage-issues/launch-of-coalition-broadband-policy-transcript-of-tony-abbott-and-malcolm-turnbull-press-conference/#sthash.f5XcBUpn.dpuf>

We wouldn't have gone about this this way and there will be billions of dollars that Labor has wasted that we cannot recover but we will save many billions of dollars, at least \$60 billion, by taking the approach we have described in this policy.

2.5 The Coalition's Broadband Policy included a table labelled "The Choice at a Glance":<sup>5</sup>

THE CHOICE AT A GLANCE	COALITION NBN	LABOR NBN
Scheduled construction period <sup>17</sup>	2014-2019	promised: 2009-2021 likely: 2009-2025
Capital expenditure <sup>18</sup>	\$20.4 billion	promised: \$37.4 billion likely: \$71 billion
Required funding <sup>19</sup>	\$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 <sup>20</sup>	12 mbps	12 mbps
2021 estimated wholesale price/month	\$38	\$62
2021 estimated retail price/month <sup>21</sup>	\$66	\$90
Competition in infrastructure?	Yes	No
Disruption at user premises?	No	Yes
Prices can be less than price cap?	Yes	No

2.6 The table asserted the likely required funding for the existing NBN was \$94 billion, while estimating required funding for the Coalition plan as \$29.5 billion. This inflated estimate for the NBN was achieved by making four assumptions: that real Average Revenue Per User (ARPU) would not grow as forecast; that the number of "mobile only" households would be higher than forecast; that costs would be higher than forecast; and that construction would take longer than forecast.<sup>6</sup>

5 Liberal Party, 'The Coalition's Plan for Fast Broadband and an Affordable NBN,' (April 2013).

6 Liberal Party, 'The Coalition's Plan for Fast Broadband and an Affordable NBN - Background Papers' (April 2013), pp. 21-29.

2.7 At a hearing of the Joint Committee on the National Broadband Network on 19 April 2013, executives from NBN Co demonstrated that the assumptions underpinning the Coalition's \$94 billion claim were false.<sup>7</sup> In particular, they demonstrated that actual costs for the fibre build were falling and that all other costs were within budget. They also demonstrated that the calculation of ARPU increase used by the Coalition was wrong. Finally they noted that the effect of a delay in the rollout would result in a decrease in peak funding, not an increase.

2.8 However, notwithstanding the falsehoods in the Coalition policy, the Committee notes that the peak funding amount of the proposed Coalition plan—\$29.5 billion—is approximately “a third” of the inflated \$94 billion cost of the NBN, in accordance with previous statements made by Minister Turnbull. This would not have been the case, of course, had the proposed Coalition peak funding amount of \$29.5 billion been compared to the \$44 billion peak funding figure in NBN Co's 2012-15 Corporate Plan, which—as outlined below—was signed off by the NBN Co Board and independently reviewed by KPMG.

2.9 As mentioned in Chapter 1, the Strategic Review was one of the commitments made in the Coalition's Broadband Policy taken to the 2013 election. In announcing the terms of reference of the review the Minister said:

Labor's made shocking mistakes. There are billions of dollars that Labor has wasted that we will never be able to recover. This has been a shockingly misconceived exercise...wasteful exercise in public policy. We are endeavouring to recover value for it and get the job completed as quickly and cost-effectively as we can. So we need to know, what is the state of the project right now, accurately...<sup>8</sup>

2.10 A draft of the Strategic Review was provided to Government on 2 December 2013.<sup>9</sup> Following board approval, a final report was provided to the Minister for Communications and the Minister for Finance on 12 December 2013. This final report was released in a heavily redacted form when it was tabled by the Minister for Communications on the same day.<sup>10</sup>

2.11 Prior to its publication, two comments about the potential conclusions of the Strategic Review were made publicly: the first by former NBN Co board member Brad Orgill, and the second by former NBN Co CEO and Executive Director Mike Quigley.

---

7 JCNBN Hansard , 19 April 2013. Presentation available at: <http://www.nbnco.com.au/about-us/media/news/report-to-parliamentary-joint-committee.html>

8 The Hon Malcolm Turnbull MP, Minister for Communications, Doorstop Interview (3 October 2013), at: <http://www.malcolmturnbull.com.au/media/announcement-of-new-nbn-board-and-launch-of-nbn-strategic-review>

9 Department of Communications, “National Broadband Network,” at: [http://www.communications.gov.au/broadband/national\\_broadband\\_network](http://www.communications.gov.au/broadband/national_broadband_network)

10 NBN Co, *Strategic Review* (December 2013), available here: <http://www2.nbnco.com.au/about-us/media/news/strategic-review.html/>

2.12 In a column in the Australian Financial Review on 4 October 2013, Mr Orgill said:

Selective data, conservative assumptions and extrapolations out to 2021 could be formulated to argue why the NBN might have comprehensively blown out its costs and not achieved its objective. It would be a continuation of the Coalition's attacks from opposition on NBN management and the board including threatening a Royal Commission of Inquiry.

2.13 On 2 December 2013, in an address to TelSoc, Mr. Quigley said:

Rates to build the fibre network based on the existing design and architecture were rising. But those rate increases would not have produced a cost increase because we had identified and validated, network and design changes that would have offset those increases. Which is why I find it incomprehensible to hear the suggestion that the increases in LN/DN rates should be built into the forward projections and cost reductions that have already been identified, should not be. Unless, of course, your objective is to try to confirm a pre-conceived position.

### ***Key findings of the Strategic Review – Revised Outlook***

2.14 The Strategic Review provided a detailed review of the costs and deployment timing of the existing deployment model for the NBN (called the Revised Outlook). The Revised Outlook asserted that:

- The fibre rollout project will take three years longer to complete than indicated in the Corporate Plan, with a revised end date of June 2024;
- The Revised Outlook for brownfields Premises Passed at June 2014 is 357,000 compared to 1,129,000 in the Corporate Plan;
- Delays in deployment and take-up, lower ARPU and higher levels of non-subscription result in ~\$13-14 billion less Revenue to FY21;
- The Capital Expenditure required will increase from \$37.4 billion to \$55.9 billion;
- The peak funding requirement will be \$72.6 billion peaking in FY24 which is \$28.5 billion higher than the Corporate Plan (\$44.1 billion); and
- The Independent Assessment concluded that it is highly unlikely, in the absence of a government guarantee, that debt funding will be available from a third party financier in the near to mid-term.

2.15 As will be demonstrated below, these assertions were arrived at by the use of variants of the same assumptions used by the Coalition in its April 2013 \$94 billion claim: higher unit costs, rollout delays, lower growth in ARPU and fewer premises connected.

2.16 The Strategic Review makes five key findings in relation to the performance to date of NBN Co. These are:<sup>11</sup>

- From a forensic perspective, the Independent Assessment found that no material issues exist within the accounts of NBN Co;
- The Independent Assessment concluded that, although the Corporate Plan is based on detailed and quantitative analysis, it is “extremely optimistic” and very unlikely to be achieved;
- At 30 September 2013, the rollout of the brownfields FTTP network was 48 percent behind the planned Premises Passed in the Corporate Plan, with only 227,483 Premises Passed at that date. Of these premises only 153,977 are serviceable by NBN Co. The greenfields and Fixed Wireless rollouts are also behind Corporate Plan;
- Total Expenditure to 30 June 2013 was 26 percent under the Corporate Plan at that date. Whilst this is an under-spend relative to the Corporate Plan, it is significantly ahead of the expenditure which would have been required in the Corporate Plan to reach the levels of actual rollout achieved; and
- The Independent Assessment found that NBN Co has attracted a committed, motivated, and generally capable group of people who want to do important, meaningful work. It concluded that the culture and leadership of the organisation are widely seen to be a major problem, and that the organisation is currently carrying a level of overhead and headcount predicated on the achievement of the Corporate Plan, which is in excess of current requirements.

2.17 As noted above, the Strategic Review found the Corporate Plan 2012-15 was based on detailed and quantitative analysis. At the hearing of 17 December, Mr Korda provided an explanation for the difference between the Corporate Plan 2012-15 and the Revised Outlook:<sup>12</sup>

**CHAIR:** Can I confirm that the independent assessment found that the revised outlook analysis is based on a revised and more realistic review. Could you explain to me what that means.

**Mr Korda:** What we found in the corporate plan—I will tie this together—was that, as BCG said, the revenue forecasts were optimistic. I think deployment was optimistic. I think the level of overheads was optimistic. The capex was optimistic. So what you get—I think we said—is a very extremely optimistic corporate plan. We have reviewed each of those line items based on the facts and have taken a realistic and more prudent view of where we are at.

2.18 The Strategic Review also considered five alternative scenarios. These are:

- Scenario 2 – Radically Redesigned FTTP

---

11 Strategic Review, p. 35.

12 Committee Hansard, 17 December 2013, p. 62.

- Scenario 3 – FTTN short loop, FTTB large MDUs
- Scenario 4 – HFC in HFC footprint
- Scenario 5 – FTTN & HFC
- Scenario 6 – Optimised Multi-Technology Mix

2.19 The Section 2.3 assesses the recommended option, the “Optimised Multi Technology Mix.” However, as will be detailed below, scenarios utilising FTTN and HFC depend on assumptions about possible outcomes of negotiations for access to infrastructure and the state of that infrastructure. The assumptions underpinning these scenarios are not as robust as the data available for the all-FTTP scenarios (Scenarios 1 and 2).

### ***Conduct and methodology***

2.20 The terms of reference of the Strategic Review required NBN Co to report on:

- The progress and cost of the rollout and NBN Co’s financial and operational status;
- The estimated time and cost to complete the NBN under a fibre-to-the-premises (FTTP) model (i.e. Government policy prior to 7 September 2013);
- The estimated cost and time to complete the NBN if variations were made to the current plan such as increased use of fibre-to-the-node (FTTN) in established (brownfield) areas;
- The economic viability of NBN Co under alternative strategies;
- The implications of capital costs and principles of cost recovery on wholesale and consumer prices under existing and alternative strategies;
- Recommendations for organisation restructuring, any amendments to the construction model and a revised NBN Co strategy to achieve Government policy objectives; and
- Any other matters the Chair deems relevant to the strategic consideration of NBN Co’s present situation and future prospects.<sup>13</sup>

2.21 NBN Co tendered for advisory firms to contribute to the Strategic Review. Three firms were appointed on 25 October: Deloitte, KordaMentha and the Boston Consulting Group (BCG). Each performed a different function as part of the review process.<sup>14</sup> KordaMentha contributed to the analysis of the NBN operational and financial performance; BCG reviewed the timing, financials and product offers under alternative models; and Deloitte provided governance and program management

---

13 The Hon Malcolm Turnbull, Minister for Communications ‘Dr Ziggy Switkowski Appointed Executive Chair of NBN Co Strategic Review of NBN Project to Commence’ Media Release (3 October 2013); Strategic Review, p. 9.

14 Strategic Review, p. 10.

office services to ensure the Strategic Review met the parameters and deadline for submission set by the Government.

2.22 At the committee's public hearing in Sydney on 17 December 2013, it was revealed that the total cost of preparing the strategic review was in the order of \$8 million. This included the cost of the consultancies and NBN Co's internal resources.<sup>15</sup> It was also explained that BCG rather than KordaMentha was used for the revenue estimates “given their international experience.” NBN Co could not provide any specific expertise BCG had in relation to Australian revenue modelling.

2.23 The strategic review process was led by NBN Co's Head of Strategy and Transformation, Mr JB Rousselot, and a 'cross-divisional team of internal employees' working closely with the external consultants on the review.<sup>16</sup> NBN Co executives told the committee that approximately 25 people were involved in the review on a dedicated basis, led by Mr Tim Ebbeck, chief commercial officer at NBN Co. During the course of the review, 280 workshops were held involving different groups from within NBN Co.<sup>17</sup>

2.24 During the Supplementary Estimates hearing in November 2013, Dr Switkowski summarised the approach to be used by the strategic review:

The way this review is structured is that there are two substantial parts, one headed by KordaMentha, which is a forensic analysis of the costs of NBN Co. to date and expectations of a business-as-usual scenario and associated costs; then there is another analysis, which will be informed by BCG, as to the costs and execution issues of an alternative technology path. BCG is commissioned to do a complete analysis of the technical challenges of rollouts around Australia, identifying options that extend from fibre to the premises, fibre to the node, fixed wireless satellite, HFC and 4G wireless. That will all come together and be integrated by the third of the advisory firms, Deloitte, and will then constitute the report that the board will present to the minister.<sup>18</sup>

2.25 For the Revised Outlook, KordaMentha undertook the review of costs and rollout timeframes, while BCG undertook the review of revenue. At the Committee hearing on 17 December, NBN Co explained that this decision was made because the revenue assumptions would be common across all scenarios:

**CHAIR:** For the independent assessment, why was KordaMentha used for the costs, but BCG for the revenue? There seems to be a split in the way it was designed and I am interested in the thinking behind it.

**Mr Rousselot:** The revenue forecast we had to do was going to be applied to all scenarios going forward—so, not only the revised forecasts but also all the other scenarios we are going to have. That is why we had to have

---

15 Committee Hansard, 17 December 2013, p. 59.

16 Strategic Review, p. 10.

17 Committee Hansard, 11 December 2013, pp. 7-8.

18 Committee Hansard, Supplementary Estimates, November 2013, p. 123.

one of the two companies produce the revenue forecast. We selected BCG to do so, given their international experience. The costs of the revised outlook were only relevant to the revised outlook, and that is why those were done by KordaMentha.<sup>19</sup>

2.26 At a doorstep on the day the Strategic Review was announced, the Minister made it very clear the review was to be “owned” by the board and management:<sup>20</sup>

That is the most urgent priority, and the reason that we've asked the board to do it, or the company to do it, and of course it will be substantially a new board, and there will be a lot of new management there as well no doubt, is that we want the company to own it. You see, in the past, this project has been riddled with politics, and the company has been under pressure to deliver numbers and answers and documents that met the political priority of the previous government.

What I have said to the company is I just want the plain unvarnished facts. We do not want spin. We do not want the company to tell us what they think we might want to hear. We want to know what the real facts are. And then armed with those facts, then we can make decisions about the future of the project and Australians will see the actual factual context in which we're making them. That is terrifically important.

And the reason the company should undertake this is because we want them to own it. See, you can - there's any number of consulting firms you can hire, and the NBN Co's hired most of them over the last four years, but you can hire a consulting firm, they'll come in and write a report. But the directors, the executives may have no sense of ownership of it. They may - it's just something that descended from outside.

It's really important that the directors and the management own this.

## **Committee analysis – Revised Outlook and Radical Redesign**

### ***Preliminary Observations***

2.27 The committee notes the heavily redacted nature of the public version of the Strategic Review. In-depth scrutiny of the Strategic Review's findings with regards to delays in FTTP deployment (including construction delays), Fixed Wireless deployment, and financial performance (particularly Direct Operating Expenditure) is compromised by these redactions.<sup>21</sup> Of particular concern to the committee is the redacted information on cost per premises. Cost per premises is used in the Strategic Review as the key benchmark for the comparative analysis of alternative scenarios.

2.28 The Minister for Communications has refused to release to the committee (*in camera*) an unredacted copy of the Strategic Review, on the grounds of public interest

---

19 Committee Hansard, 17 December 2013, page 4.

20 The Hon Malcolm Turnbull MP, Minister for Communications, Doorstop Interview (3 October 2013).

21 Strategic Review, pp. 44-66.

---

immunity. This was set out in a letter of 17 December 2013.<sup>22</sup> However, the committee considers that the Strategic Review underpins a potential Commonwealth investment of more than \$40 billion—not including flagged technology upgrades—and should be made available to the Parliament, in accordance with the Minister’s many undertakings on transparency and accountability. This will be discussed further in Chapter 4.

2.29 The Committee notes that the Strategic Review states in its Legal Notice:

Given the required time frame for the Report’s completion, NBN Co has relied on the Experts for the matters within their scope of work and has not independently verified or audited the information presented in the Report through the work of the Experts.

2.30 The committee asked NBN Co whether the Strategic Review had been subject to the same independent scrutiny that had been applied to NBN Co’s Corporate Plans:

**CHAIR:** Thanks for that, but what I was asking you was to confirm what was in the legal notice stated in the strategic review—that it has not been independently verified or audited. I am just asking you to confirm that is what the strategic review says.

**Dr Switkowski:** You are asking about our review?

**CHAIR:** Yes, the legal notice.

**Dr Switkowski:** It has not had any further verification.<sup>23</sup>

2.31 At the public hearing on 17 December 2013, the committee put to Dr Switkowski that without the unredacted information, the committee and the public will have to take NBN Co’s word that the cost assumptions in the Strategic Review are correct:

**Senator LUDLAM:** Apart from that, I have never seen so many blacked-out rectangles on an NBN committee. It is almost as though the whole operational security mantra has been imported into telecommunications policy. I know I am being a bit tongue in cheek here, but it is a linchpin of your entire project, those numbers: the remediation costs and any operational expenses for keeping it maintained while it falls apart around you.

**Dr Switkowski:** I agree that those numbers matter. I can only give you an assurance that they have been determined to the best of our ability with considerable debate as to what the range of numbers should be to characterise those costs. They have been incorporated in our models.

**Senator LUDLAM:** So you cannot tell us what they are, but can you tell us how you arrived at them? We can ask this of Telstra in 20 minutes and they will tell us that those numbers are commercially sensitive as well, but you must have landed on a particular number or a range of numbers. How have

---

22 Available here: <http://www.aph.gov.au/DocumentStore.ashx?id=d1798ce3-ddd5-4352-a2c6-f989e6c7bfa1>

23 Committee Hansard, 17 December 2013, p.3.

you done that? Have you concluded negotiations with the companies concerned?

**Dr Switkowski:** Clearly we have not. We have barely started discussions.<sup>24</sup>

2.32 Despite the difficulties presented by the redactions, the committee notes that a number of assumptions in the Strategic Review are transparent, or can be derived from a close reading of the report. The committee has also collected substantial evidence from committee hearings and relevant secondary sources.

2.33 Section 2.2 reviews the Revised Outlook (“Scenario 1”) and the Radical Redesign (“Scenario 2”). This is because these two scenarios are both based on an FTTP rollout to the full fixed line footprint. It is also because cost savings identified in Version 13 of the Corporate Plan 2013-16 were included in the Radical Redesign scenario, and had that plan been used as the base case for the Revised Outlook a different conclusion would have been reached. This will be demonstrated below.

#### ***Base case used for the Strategic Review***

2.34 The Strategic Review notes that:<sup>25</sup>

For purposes of performance comparison, the Independent Assessment used the August 2012 NBN Co Corporate Plan (referred to as the Corporate Plan), which is the most recent Shareholder approved plan.

2.35 NBN Co released its Corporate Plan 2012-15 on 8 August 2012. This plan noted:

- Wholesale broadband prices are projected to fall over time in both real and nominal terms;
- The Internal Rate of Return (IRR) remains above 7% per annum;
- Total forecast Capital Expenditure to end of the Fibre Construction period increased by 3.9%;
- Construction Commenced or Completed for approximately 758,000 Fibre premises by December 2012; and
- Fibre Construction period extended by 6 months despite 9 month delay in Commencement Date.

2.36 The 2012-15 Corporate Plan also noted that there had been changes to the scope of work since the first Corporate Plan. This included changes to the design reflecting the Telstra definitive agreements and the Optus HFC Agreement, and decreases in construction and equipment costs referred to as “Type 2 Architecture”. These efficiencies are the principal reason capital expenditure only changed by 3.9 per cent between the 2012-15 Corporate Plan and NBN Co’s 2011-13 Corporate Plan released in December 2010.

2.37 This issue was discussed during the 11 December hearing:

---

24 Committee Hansard, 17 December 2013, p. 23.

25 Strategic Review, page 35.

**CHAIR:** In developing the 2012-15 corporate plan, NBN Co. moved to type 2 architecture. Would you explain the changes from type 1 architecture. I suspect Mr McLaren is the lucky respondent.

**Mr McLaren:** Yes, absolutely. The type 1 architecture was an initial architecture for the fibre network—this is the passive network, which we commonly also call the local and distribution network. It was an architecture we developed for our initial trials that NBN ran in five cities and commenced in 2011. It used an architecture that essentially relied on what we call stranded fibre—strands of individual fibres that are deployed and individually spliced, so quite a lot of fibre splicing has to go on. It is essentially what the Australian market had been deploying for many years and was an evolution through that. It also used quite a lot of the technology in some of our initial learnings that we had seen overseas. So it was very much an initial deployment, particularly informed by what Verizon were doing in the United States, which was very much an aerial build. We took a lot of the learnings from that company and applied it for those trials.

During that period, we had been looking at other options. We were particularly concerned by the amount of fibre splicing that would be involved with that architecture. As I said, each individual fibre had to be sliced, which was not only time consuming; it was very much a cost and resource issue in terms of getting the number of splices to be able to do it. So we were looking for ways to reduce that burden in the build. The main change with the type 2 architecture was to bring in what we call ribbon fibre. That is where we have 12 fibres in a ribbon and they are all spliced, basically simultaneously, with some new fibre-splicing machines.

**CHAIR:** There was a significant cost saving for you in that process. You said one of the reasons you looked at this was cost savings.

**Mr McLaren:** Yes cost savings, as I just mentioned, with the actual splicing itself. We have also been going—

**CHAIR:** Have you found a way to reduce the cost of the build?

**Mr McLaren:** Obviously, we were looking at all options to reduce the cost of the build through this time. The cost also came down to how we went through our procurement process at the time. Type 1 was initial work with our suppliers. We went through a more extensive procurement process for type 2 and worked with the whole market, and were able to use the savings that came to that procurement process as well.

2.38 NBN Co submitted its 2013-16 Corporate Plan to shareholder Ministers on 3 July 2013. This plan, known as “version 12,” confirmed the headline figures for the NBN as set out below, compared to the previous Corporate Plan.<sup>26</sup> Version 12 of the 2013-16 Corporate Plan was subsequently leaked to the Australian Financial Review and is available on its website.<sup>27</sup>

---

26 NBN Co, *Corporate Plan 2013-16*, p. 13.

27 Available at: [http://www.afr.com/rw/2009-2014/AFR/2013/09/24/Photos/9c50d15c-24d1-11e3-b91f-a975a1b9812d\\_NBN%20Co%202013-16%20Corporate%20Plan%20Draft.pdf](http://www.afr.com/rw/2009-2014/AFR/2013/09/24/Photos/9c50d15c-24d1-11e3-b91f-a975a1b9812d_NBN%20Co%202013-16%20Corporate%20Plan%20Draft.pdf)

## Major Operational & Financial Metrics

Major Operational and Financial Metrics	2012-15 Corporate Plan	2013-16 Corporate Plan	Change
Forecast Return (Unlevered IRR)	7.1%	7.1%	-
Capital Expenditure (Cumulative to FY2021)	\$37.4 billion	\$37.4 billion	-
Revenues (Cumulative to FY2021)	\$23.1 billion	\$21.7 billion	\$(1.4) billion
Operating Expenditure (Cumulative to FY2021)	\$26.4 billion	\$26.4 billion	-
<b>Total Peak Funding</b>			
- Peak Equity	\$30.4 billion	\$30.4 billion	-
- Peak Debt	\$13.7 billion	\$15.2 billion	+\$1.6 billion*

2.39 Prior to its submission to the previous government, the Corporate Plan 2012-15 was independently reviewed by KPMG. The 2013-16 Corporate Plan was also independently reviewed by KPMG. This was confirmed during a November hearing of the Senate Environment and Communications estimates committee. The Secretary of the Department of Communications, Mr Clarke, noted that:

The department as a matter of course commissioned analysis on corporate plans on an annual basis.<sup>28</sup>

2.40 Mr Robinson, Deputy Secretary for the Department of Communications, added that:

I think it is a matter of record that, at least for the last couple of years, we commissioned KPMG to provide advice.<sup>29</sup>

2.41 The NBN Co board also commissioned Ernst & Young to review the 2013-16 Corporate Plan. This was confirmed during the same estimates hearing:<sup>30</sup>

**Senator LUNDY:** Did you engage any advisers for the 2012 to 2016 plan?

**Mr Payne:** For the June draft of the 2013 to 2016 corporate plan the board engaged Ernst & Young to review some of the key assumptions...

**Senator LUNDY:** Did that review provide any advice that the data did not appear to be aligned with the corporate plan assumptions?

**Mr Payne:** I think, overall, it said that the experience to date supported the broad assumptions made in the corporate plan.

**Senator LUNDY:** So the Ernst & Young adviser reviewing the corporate plan for the 2013 to 2016 plan found that all the assumptions were correct.

**Mr Payne:** That was so for the key assumptions that they looked at. They did not look at everything.

28 Estimates Hansard, 19 November 2013, page 146.

29 Estimates Hansard, 19 November 2013, page 146.

30 Estimates Hansard, 19 November 2013, pp. 97-98.

**Senator LUNDY:** What did they look at? Did they look at the capital expenditure parameters?

**Mr Payne:** I do not have the report with me. They certainly looked at some of the key capital expenditure areas, some of the revenue assumptions and so on.

**Senator LUNDY:** Did that review provide any advice that the actual data did not appear to tally with the corporate plan assumptions on revenue or capital?

**Mr Payne:** No. As I said, overall it supported the assumptions. There were a couple of areas that the report called out that it was very early days and hard to draw too many conclusions from the data to date, but overall—

**Senator LUNDY:** You had an external adviser—and independent adviser—advise that the 2013 to 2016 corporate plan was consistent with the performance of the company.

**Mr Payne:** Certainly on the assumptions, yes.

**Senator LUNDY:** That was before the report was submitted to the government.

**Mr Payne:** Correct.

2.42 Version 12 of the 2013-16 Corporate Plan was received by Government while Telstra remediation was suspended due to asbestos concerns. Subsequently, NBN Co sent shareholder Ministers a letter noting that the duration of the stoppage in remediation work was more prolonged than expected and had put at risk the deployment targets in the 2013-16 Corporate Plan. Shareholder Ministers asked NBN Co to resubmit the plan to take these developments into account. NBN Co prepared a revised Corporate Plan—called ‘version 13’—which was submitted to the NBN Co Board in September 2013, after Telstra pit work had recommenced in mid-August 2013. As Mr Payne noted during the 19 November estimates hearing:

I think the board approved [version 12] for lodgement in June, so it would have gone in at the end of June to the shareholder ministers. At around that time, you may recall, there were some issues particularly around remediation ceasing, and so, I think, the company wrote to the shareholder ministers to say that the short-term targets may need to be revised because there was expected to be a prolonged cessation in remediation. So the shareholder ministers asked us to resubmit the plan with that taken into account; hence the second version in September.<sup>31</sup>

2.43 The “second version” referred to by Mr. Payne—known as ‘Version 13’—is the most recent version of the NBN Co Corporate Plan, incorporating the effects of the Telstra stop-work on remediation. NBN Co was asked about this Corporate Plan at the 11 December 2013 hearing:

---

31 Estimates Hansard, 19 November 2013, p. 109.

**CHAIR:** Mr Brown, Mr McLaren, Mr Cooney or even Mr Adcock, was a draft version 13 of NBN Co.'s 2013-16 corporate plan provided to the board for its meeting on 19 and/or 20 September?

**Mr Brown:** Each year, as required under the GBE guidelines, we submit a corporate plan.

**CHAIR:** Thanks. Now could you answer the question I asked? Was a draft version 13—1 and 3, comes after 12 and before 14—of NBN Co.'s 2013-16 corporate plan provided to the board for its meeting on 19 and/or 20 September 2013? Yes or no?

**Mr Brown:** Yes, there was a copy submitted.

**CHAIR:** Version 13?

**Mr Brown:** Can I take that on notice? I am not aware of exactly what version it was.

2.44 To date, NBN Co has not answered this question on notice. However, the committee notes that a Corporate Plan was scheduled for board consideration on 19 or 20 September 2013.

2.45 NBN Co and the Departments of Communications and Finance were asked whether a copy of this plan was submitted to shareholder departments. NBN Co gave the following evidence:<sup>32</sup>

**CHAIR:** What is the normal practice for NBN Co. communications to shareholder departments when it comes to documents that must be considered by the government?

**Mr Brown:** The normal practice is NBN would put together whatever that document is. I assume in this case we are talking about the corporate plan...normally it would go to the board and, with their agreement, it would be submitted as a draft to our shareholder ministers, consistent with the GBE guidelines.

**CHAIR:** Can you confirm that version 13 of the corporate plan was submitted to the shareholder departments via the portal prior to the considerations. That would tend to suggest that perhaps it was not, but if you could take on notice whether or not version 13 was supplied to the departments before that board meeting. Was this version of the corporate plan approved by the board on 19 or 20 September?

**Mr Brown:** I would need to take that on notice to review the minutes of that board meeting.

2.46 The committee has not received an answer to this question on notice.

2.47 The Department of Communications gave the following evidence:<sup>33</sup>

**CHAIR:** What is the normal practice for NBN Co. communications to shareholder departments? You may have heard that we had a discussion

---

32 Committee Hansard, 11 December 2013, p. 20.

33 Committee Hansard, 11 December 2013, p. 65.

earlier today about this. When it comes to documents that have to be considered by government, do these documents appear on a portal?

**Mr Clarke:** Yes. There is a secure portal arrangement to facilitate the transfer of confidential documents.

**CHAIR:** Is it the case that drafts of these documents are often provided to shareholder departments prior to board consideration to enable shareholder departments to prepare timely advice for government?

**Mr Clarke:** I can—

**CHAIR:** We both know the answer, but you need to say it on the record.

**Mr Clarke:** For board documents it is less common, but for documents that are conveyed between the parties, yes, that is a common practice.

**CHAIR:** So was the draft of version 13 of NBN Co.'s 2013-16 corporate plan submitted to shareholder departments via the portal prior to its consideration by the NBN Co. board on 19 September? It is a simple, factual question. You know it has already been asked. It should be very easy to ascertain.

**Mr Clarke:** I am not going to answer it.... I am choosing to uphold the principle that the communications that are intended between the agency through the department to the government—the nature of them; what was on the table when, which is implicit in your questioning—are a confidential matter.

2.48 The committee notes that NBN Co has yet to answer questions on notice about the status of version 13 of the Corporate Plan, and the Department of Communications has flatly refused to answer questions on whether a copy was provided to Government. The committee further notes that the Minister made reference to the content of version 13 of the Corporate Plan during the NBN Rebooted conference in November 2013:<sup>34</sup>

Shortly before the election, the NBN Co revised its June 30 2014 premises passed target down to 600,000 brownfield premises.

2.49 In his speech to TelSoc on 2 December 2013, Mr Quigley also made some observations about the content of Version 13 of the Corporate Plan:<sup>35</sup>

We did have to advise the Government in September that, the issues with the LN/DN construction combined with the remediation stoppage moved the construction end date from June 2021 to December 2021. The effect on the financials of that six month shift in the construction end date was that revenue returned to \$23Bn since there was 6 months more revenue, but Opex increased by about half a billion dollars due to the extra six months of operating costs. The Capex spend is spread across a 6 month greater period

---

34 Malcolm Turnbull, Rebooting the NBN Project - Speech to CommsDay Conference (18 November 2013), at: <http://www.malcolmtturnbull.com.au/media/rebooting-the-nbn-project-speech-to-commsday-conference>

35 Available here: [http://telsoc.org/event/national/2013-12-02/mike\\_quigley\\_reflects](http://telsoc.org/event/national/2013-12-02/mike_quigley_reflects)

which leaves the total funding and the IRR unchanged. The contingency was also unchanged.

Just to re-emphasise a previous point – our December of 2010 Corporate Plan contained a capex contingency of 10% or about \$3.6Bn, the last plan which was submitted in September retained the same level of contingency. If the Management team had any doubt about offsetting the increased LN/DN rates by the cost reductions we had planned, we would have made use of some of that contingency. We had no such doubts.

What is remarkable is how little the financials changed over the 3 years.

2.50 The most recent version of the NBN Co Corporate Plan—the most accurate “base case”—was the 2013-16 Corporate Plan (Version 13) referred to by Mr Payne in his testimony, prepared by NBN Co management and submitted to the board on 20 September 2013. Dr Switkowski was asked why version 13 was not used as the base case during the 17 December 2013 hearing:

**CHAIR:** He [Mr Robin Payne] said in evidence at estimates that the government asked that the company further review the June draft to incorporate the consequences of the delay due to remediation. Given that version 13 of the corporate plan 2013-16 was the NBN Co.'s response, why wasn't that used as the baseline?

**Dr Switkowski:** We certainly are of the view that the baseline that had to be referred to was the one that was formally in the system and approved, and that any update of the performance of NBN Co. was within the mandate of the current review, and that is what we presented in the [Strategic Review] last week.<sup>36</sup>

2.51 Subsequent to this exchange, Mr Rousselot confirmed for the committee that Versions 12 and 13 of the Corporate Plan 2013-16, as well as other documents, were made available to the Strategic Review team.<sup>37</sup>

### *Summary of findings—Base Case used for the Strategic Review*

- **In July 2013, the NBN Co board submitted to shareholder Ministers the NBN Co Corporate Plan 2013-16 (“version 12”). Former shareholder Ministers requested that “Version 12” be amended to incorporate the effects of Telstra’s stop work on remediation. NBN Co prepared a revised Corporate Plan—called ‘version 13’—which was submitted to the NBN Co Board on 19 or 20 September 2013.**
- **It is normal practice for NBN Co to provide shareholder departments with the Corporate Plan prior to Board consideration so that timely advice for government may be prepared.**

---

36 Committee Hansard, 17 December 2013, p. 4.

37 Committee Hansard, 17 December 2013, p. 4.

- **“Version 13” of NBN Co’s Corporate Plan 2013-16 represents the most recent and accurate “base case” for the NBN. Despite this, the Strategic Review used the fifteen-month old NBN Co Corporate Plan 2012-15 as the “base case.” The reason for this will be examined in the following section.**

### *Treatment of architecture changes*

2.52 In his speech to TelSoc on 2 December 2013, Mr Quigley said:

With our LN/DN rate increases, we had exactly the same situation. Increases in the LN/DN rates would be offset by other cost reductions. And I am not talking about speculative cost reductions, where you say to yourself: “oh, we need to find \$2Bn in savings, somehow”. I am talking about things that had already been identified, like smaller diameter cables that had already been designed by cable companies, reduced and more efficient testing, smaller footprint multi-ports that had already been designed, reductions in fibre counts and corrections in planning tools that allowed smaller mandrels and greater fill ratios for ducts. We called these changes our 2.x architecture. At the end of September, NBN Co was on track to implement these cost reductions, as any sensible company would.

So, let me be clear. Rates to build the fibre network based on the existing design and architecture were rising. But those rate increases would not have produced a cost increase because we had identified and validated, network and design changes that would have offset those increases. Which is why I find it incomprehensible to hear the suggestion that the increases in LN/DN rates should be built into the forward projections and cost reductions that have already been identified, should not be.

Unless, of course, your objective is to try to confirm a pre-conceived position.

2.53 On 11 December 2013, an article in the *Australian Financial Review* by Philip Coorey & James Hutchison cited an NBN Co Board paper dated 20 September 2013.<sup>38</sup> The NBN Co Board paper states:

The COO and CTO teams have undertaken a review of the current network architecture for the access fibre network with the aim of identifying and implementing a set of cost saving design and construction initiatives. Cost savings from these initiatives, together with other productivity initiatives underpin the assumed reduction in the CPP to FY18. This review incorporates a number of in-flight Project Fox initiatives and pragmatic cost saving solutions into a combined revised architecture which will be incorporated into future FSAM designs. The planned changes are as follows:

---

38 Philip Coorey & James Hutchison, “Vodafone’s Bill Morrow to head NBN,” *Australian Financial Review* (11 December 2013), at: [http://www.afr.com/p/technology/vodafone\\_bill\\_morrow\\_to\\_head\\_nbn\\_4oosSmqI8qrSPiJw1tjNYJ](http://www.afr.com/p/technology/vodafone_bill_morrow_to_head_nbn_4oosSmqI8qrSPiJw1tjNYJ)

- Reduced fibre allocation per premise
- Mandrel sizing and FOND cable diameter correction
- Introduction of small diameter fibre cables
- Removal of PON protection in certain circumstances
- Fibre testing optimisation
- Introduction of the small footprint multiport for underground build.

2.54 Further:

The proposed architecture savings and cost reduction initiatives represent a combined value of greater than \$4.5 billion, which support the assumptions in the Corporate Plan of a reduction in CPP to construct the access fibre network from \$1500 in FY14 to \$1054 by FY18. The initiatives will continue to be progressed through the COO and CTO teams with a target to finalise an implementation plan for both new and current in-flight designs by the end of September.

2.55 The cost savings identified in Mr Quigley’s speech and the 20 September NBN Co board paper—“smaller diameter cables that had already been designed by cable companies, reduced and more efficient testing, smaller footprint multi-ports that had already been designed, reductions in fibre counts and corrections in planning tools that allowed smaller mandrels and greater fill ratios for ducts”—were discussed at length during the 11 December public hearing.<sup>39</sup>

2.56 In relation to the smaller diameter cables:

**CHAIR:** Has the NBN Co. looked at introducing smaller diameter fibre cables?

**Mr McLaren:** Yes. We are working with our vendors in the fibre supply to obviously look to see improvements with smaller fibre cables.

2.57 In relation to reduced and more efficient testing:

**CHAIR:** Has NBN Co. ever looked at optimising its fibre testing?

**Mr McLaren:** Yes. As with many of these items, we are always looking to optimise our testing for anything that has a cost in the build.

2.58 In relation to smaller footprint multiports, Mr McLaren noted:

We have been working with our suppliers to introduce a smaller form. It is not so much that it is smaller, but it is more flexible and able to fit into Telstra's pits more easily. It will allow the work to proceed quickly and there will be not be so much work in remediating those pits. We have introduced that and it is already rolling out, as I understand it, in our fieldwork now, a smaller footprint multiport.

2.59 In relation to corrections in planning tools that allowed smaller mandrels and greater fill ratios for ducts:

---

39 Committee Hansard, 11 December 2013, pp. 21-30.

---

**CHAIR:** Has a mandrel size change been implemented?

**Mr McLaren:** Yes.

2.60 In relation to the reduced fibre counts in the second leg:

**CHAIR:** Has NBN Co. ever looked at reducing the fibre counts in distribution cable from 576 fibres to 433 fibres?

**Mr McLaren:** Yes, we have been investigating that opportunity. Again, it is an opportunity to have smaller diameter cables, as we talked about.

2.61 In relation to removing the second leg of a distribution loop:

**CHAIR:** Has NBN Co. ever looked at removing the second leg of a distribution loop in certain FSAMs where the effect can be managed within the terms of the WBA?

**Mr McLaren:** Yes. In some instances in the current build of our network where that second leg is very difficult and costly, we have made the decision not to build it.

2.62 In relation to the implementation of “Architecture 2.X” more generally, Mr McLaren observed:

**Mr McLaren:** 2.x is not a big bundle of change. There are incremental changes in many different parts of the network. We mentioned the small footprint multiport. We mentioned techniques, and I think you mentioned the now more efficient [mandrel]. There is testing which we use in our rodding and roping, giving us a more accurate gauge on the available duct space, and we have introduced those changes. So a number of changes are incrementally being introduced into the design process over time.

2.63 The committee notes that by end September 2013, NBN Co was in the process of implementing, or had already implemented, network changes to reflect the move to Architecture 2.x. This is confirmed by Mr McLaren’s testimony, the 20 September Board paper and Mr Quigley’s speech. These architecture changes resulted in greater than \$4.5 billion in capital expenditure savings.

2.64 However, the Strategic Review only identifies \$1 billion in cost savings, and reduces these savings by a further 50 per cent:<sup>40</sup>

The Independent Assessment notes that there are opportunities for cost reductions in the future. Some potential savings have been identified in network design and architecture, primarily in reduced equipment costs, however a business case needs to be prepared. Business cases for ~\$1 billion of potential savings have been completed and implementation of some of these improvements is underway. These could be achieved over time, but allowing for the time to introduce these concepts and other risks, it is prudent to adjust the amount by 50 percent.

2.65 This issue was raised in the 17 December 2013 public hearing:

---

40 Strategic Review, p. 63.

**CHAIR:** So to reiterate again, the strategic review ignored over \$4 billion worth of savings because there was no business case presented notwithstanding the board previously had actually had a submission put up by the company to them and an assumption has been made—which you are not able to assist us with other than saying, 'I agree with it,'—that \$500 million of the savings should be dumped—just dumped—because it is prudent.

**Mr Rousselot:** As I said, the analysis that we did of the potential savings was one that looked at it, and talked with people within the company, either in operations or in design, to understand the status of the savings that had been identified.

**CHAIR:** But as for the billion dollars, business cases had been provided for the billion dollars.

**Mr Rousselot:** I do acknowledge that that is the case, yes.

**CHAIR:** And you just halved it?

**Mr Rousselot:** We took a consideration of risk that was still attached to implementing those savings.

**CHAIR:** Mr Quigley, in his speech, seemed to predict this would happen. He said he found it incomprehensible to hear the suggestion that the increases in LNDN rates should be built into the forward projections and that cost reductions that have been already identified should not be 'unless, of course, your objective is to try and confirm a preconceived position'. It is getting pretty hard to disagree with Mr Quigley, Mr Rousselot, if you are ignoring savings deliberately and you are not applying any productivity learnings and savings across the entire project except for two years in four years time. It is getting pretty hard to disagree with Mr Quigley.

**Mr Rousselot:** The level of prudence that we have applied to this particular scenario we have applied to the other scenarios.

2.66 A number of the cost savings identified above appear in the Strategic Review in Scenario 2 ('Radically Redesigned FTTP'). For example, the Strategic Review provides that scenario 2 includes:<sup>41</sup>

Cost-efficient architecture and materials (a saving of [redacted] per premises passed) including reducing from 3 to 1.2 fibres per premises, increased use of aerial deployment, removal of PON protection, using smaller diameter fibre cables, use of gel-free cables and eliminating the battery back-up for the NTD.

2.67 The committee has put several questions in writing to NBN Co requesting information about why these \$4.5 billion in cost savings were excluded from the Revised Outlook, and instead included in the 'Radical Redesign'. In response to a question in writing asking about the \$4.5 billion in cost savings identified in the 20 September NBN Co board paper, NBN Co replied:

---

41 Strategic Review, p. 85.

---

As stated at the Senate Committee hearing on 17 December 2013, many working documents including these Board papers were made available to the expert advisers. The advisers have formed the view that some elements of the savings proposed may be realised in a scenario where current FTTP practices are reviewed and optimised significantly – e.g. a “radically redesigned FTTP rollout”.<sup>42</sup>

2.68 Similarly, the Strategic Review characterises the “radically redesigned” scenario as follows:<sup>43</sup>

Based on overseas experience, it is possible to radically redesign the NBN Co FTTP deployment to reduce the Cost Per Premises. The changes to deployment include changes in the delivery model, which in turn result in labour productivity improvements, different and more cost-efficient architecture and materials, and cost-efficient construction techniques. This radically redesigned FTTP deployment is estimated to cost [redacted] build Capital Expenditure per brownfield premises passed, representing savings of [redacted] per premises passed versus the Revised Outlook.

2.69 In an answer to another question on notice, NBN Co stated that:<sup>44</sup>

The Revised Outlook considered the operational and financial position of the company based on the continuation of current rollout plans. As highlighted in paragraph 3.2.8, these potential efficiencies may be realisable through a step-change and transformation of the organisation.

2.70 And:

Scenario 2, Radically Redesigned FTTP contemplates NBN Co making significant changes to its FTTP deployment approach to improve NBN Co’s productivity and construction techniques. Within this scenario, it is expected that these “radical” changes will increase rollout speed and decrease costs.<sup>45</sup>

2.71 The committee notes that the architecture changes (2.X) resulting in these cost savings were characterised by NBN Co’s Chief Technology Officer, Mr McLaren, as ‘incremental’ improvements that did not represent ‘a big bundle of change.’ Mr Quigley similarly characterised these improvements as business as usual: “at the end of September, NBN Co was on track to implement these cost reductions, as any sensible company would.”

2.72 However, when asked about why these savings were not incorporated into the Revised Outlook, NBN Co characterises them as ‘radical’ and ‘significant’ and requiring a ‘step-change and transformation of the organisation.’

2.73 The Committee considers that the Revised Outlook and the Radical Redesign scenarios make different assumptions about the future trends for cost per premise

---

42 Answer to Questions on Notice, 17 December 2013 Hearing, No. 35.

43 Strategic Review, p. 14.

44 Answer to Questions on Notice, 17 December 2013 Hearing, No. 32.

45 Answer to Questions on Notice, 17 December 2013 Hearing, Nos. 36 and 37.

passed for FTTP. In fact, the so-called “radically redesigned” FTTP scenario represents a better estimate of the costs that would be incurred by an active and interested management than the Revised Outlook. This is supported by the fact that many of the savings based on Architecture 2.x had already been incorporated by previous NBN Co management into the September 2013 Corporate Plan (Version 13).

2.74 The committee considers that the implementation of these architecture changes was business as usual for NBN Co, and the exclusion of the associated savings from capital expenditure assumptions distorts the outcome of the Revised Outlook. The committee also notes that had the Strategic Review used Version 13 of the NBN Co Corporate Plan as the ‘base case’ for the Revised Outlook, the Revised Outlook would have arrived at a different outcome.

#### *Summary—Treatment of architecture changes*

- **By end-September 2013, NBN Co had implemented, or was in the process of implementing, a number of incremental changes to the fibre rollout known as Architecture 2.x. Combined, these changes represented \$4.5 billion in capital expenditure savings.**
- **Version 13 of NBN Co’s Corporate Plan 2013-16, prepared for Board consideration on 20 September 2013, incorporated these architecture changes and the associated savings to capital expenditure. It also incorporated changes to the deployment schedule from Telstra’s stop-work on remediation. Version 13 is the most recent and accurate NBN Co Corporate Plan.**
- **Despite this, the Strategic Review used NBN Co’s fifteen-month old 2012-15 Corporate Plan as the ‘base case’ for the Strategic Review. Only \$500 million of the architecture savings were included in the Revised Outlook—the bulk of these savings were incorporated into Scenario 2 rather than the Revised Outlook. This was justified by characterising the changes as ‘radical’ rather than incremental.**
- **The committee considers that the implementation of these architecture changes was business as usual for NBN Co, and the exclusion of the associated savings from capital expenditure assumptions distorts the outcome of the Revised Outlook by bolstering costs.**

#### *Assumption of brownfield delays*

2.75 The Revised Outlook has factored in a delayed roll out schedule compared to the 2012-15 Corporate Plan. This is set out in Exhibits 2-10 and 2-11:

## Deployment Schedule—Corporate Plan

Exhibit 2-10: Network deployment rollout timetable – Corporate Plan

Corporate Plan - Rollout Timetable														
Premises Passed Cumulative ('000s)	Jun-11	Jun-12	Jun-13	Jun-14	Jun-15	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Jun-21	Jun-22	Jun-23	Jun-24
Brownfields	18	29	286	1,129	2,499	3,862	5,168	6,423	7,610	8,879	10,091	10,091	10,091	10,091
Greenfields	-	10	55	178	413	763	1,111	1,415	1,673	1,904	2,111	2,295	2,477	2,659
Fixed Wireless	-	9	70	124	225	369	374	379	385	391	396	401	405	410
Satellite	165	165	250	250	527	539	547	555	563	571	578	585	592	599
<b>Total<sup>44</sup></b>	<b>183</b>	<b>213</b>	<b>661</b>	<b>1,681</b>	<b>3,664</b>	<b>5,532</b>	<b>7,200</b>	<b>8,772</b>	<b>10,230</b>	<b>11,744</b>	<b>13,176</b>	<b>13,372</b>	<b>13,566</b>	<b>13,759</b>

## Deployment Schedule—Revised Outlook

Exhibit 2-11: Network deployment rollout timetable – Revised Outlook

Revised Outlook Rollout Timetable														
Premises Passed Cumulative ('000s)	Jun-11	Jun-12	Jun-13	Jun-14	Jun-15	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Jun-21	Jun-22	Jun-23	Jun-24
Brownfields	18	29	163	357	857	1,727	2,727	3,927	5,127	6,327	7,427	8,477	9,477	10,091
Greenfields	-	4	44	110	192	285	414	564	742	967	1,240	1,581	1,893	2,111
Fixed Wireless	-	1	28	122	260	354	431	508	554	554	554	554	554	554
Satellite	48	48	48	48	48	206	206	206	206	206	306	306	306	306
<b>Total</b>	<b>66</b>	<b>82</b>	<b>283</b>	<b>637</b>	<b>1,357</b>	<b>2,572</b>	<b>3,778</b>	<b>5,205</b>	<b>6,629</b>	<b>8,054</b>	<b>9,527</b>	<b>10,918</b>	<b>12,230</b>	<b>13,062</b>

2.76 Some general observations justifying this assumption are set out in the Strategic Review, although many of these are redacted.<sup>46</sup> These include: “[redacted]; the complexity of the interfaces between NBN Co and the Delivery Partners, the uniqueness of an infrastructure build of this scale and nature in Australia, and the lack of deep project management resources, particularly as the volumes have increased; delays in dealing with Telstra [redacted]; ineffective collaboration between NBN Co and its Delivery Partners in resolving contract, design and construction issues; and disproportionate focus on workforce size and Premises Passed as key drivers of behaviour rather than Premises Activated driven by more effective design and collaboration.”

2.77 Version 12 of the 2013-16 Corporate Plan targeted 850,000 brownfields premises passed by 30 June 2014.<sup>47</sup> As set out above, this deployment profile was questioned by previous shareholder Ministers, and the company was asked to develop a new Corporate Plan taking into account the Telstra stop work on pit remediation. NBN Co did so, but the September plan (“version 13”) has not been made public.

<sup>46</sup> Strategic Review, p. 44.

<sup>47</sup> NBN Co, *2013-16 Corporate Plan*, p. 105.

However, as noted above, the Minister made reference to the 30 June 2014 brownfields target in version 13 of the Corporate Plan during the NBN Rebooted conference in November 2013:

Shortly before the election, the NBN Co revised its June 30 2014 premises passed target down to 600,000 brownfield premises.

2.78 In his speech of 2 December 2013, Mr Quigley noted that the effect of the revised 30 June 2014 target was to shift the construction end date by six months:

We did have to advise the Government in September that, the issues with the LN/DN construction combined with the remediation stoppage moved the construction end date from June 2021 to December 2021.

2.79 As of 24 August 2013, build contract instructions had been issued for 512,818 brownfields premises.<sup>48</sup> The issue of build contract instructions for the fibre network commences what is referred to in the Strategic Review as the “construction phase.”<sup>49</sup> The Strategic Review found that:

The construction phase is being completed in an average of approximately 216 days (7.1. months), which is in line with the Corporate Plan.<sup>50</sup>

2.80 On this basis, by mid-March 2014 (216 days after 24 August 2013), NBN Co was on track to pass approximately 512,000 premises. This is consistent with a 30 June 2014 target of 600,000 premises passed.

2.81 The interim Statement of Expectations was issued by shareholder Ministers to NBN Co on 24 September 2013.<sup>51</sup> Among other things, it states that:

In regard to rollout in brownfield areas, NBN Co should continue existing construction where build instructions have been issued to delivery partners. Any further build or remediation instructions should not ordinarily be issued pending further analysis and discussion. Management of existing design work should occur so as to optimise value in the context of the Government’s policy for a flexible architecture.

2.82 In other words, permission must be sought from the Minister before build contract instructions can be issued to delivery partners. The practical reality of this constraint was illustrated by Dr Switkowski at the 17 December committee hearing:

In fact, we have spent time in recent weeks petitioning the government, as we must, to continue to authorise us to go as fast as we possibly can and not be required to keep checking in with the department or whatever with numbers.<sup>52</sup>

---

48 NBN Co, *Program Summary Report* (24 August 2013).

49 Strategic Review, p. 48.

50 Strategic Review, p. 48.

51 Available at:

[http://www.communications.gov.au/\\_data/assets/pdf\\_file/0004/186115/130924\\_NBN\\_Co.pdf](http://www.communications.gov.au/_data/assets/pdf_file/0004/186115/130924_NBN_Co.pdf)

52 Committee Hansard, 17 December 2013, p. 57.

2.83 The Strategic Review began its work in October/November 2013. In November 2013, when visiting Blacktown with Dr Switkowski, the Minister said:

[NBN Co has] issued design instructions for more premises, twice as many premises to be passed by June 30 next year, as the NBN Co has passed to date.<sup>53</sup>

2.84 This statement was later clarified by Josh Taylor of ZDNet:

Turnbull's office clarified that the NBN will have passed 450,000 brownfields premise[s] by the end of June. The NBN has currently passed 237,324 brownfields premises, with 164,501 able to order a service.<sup>54</sup>

2.85 The Strategic Review assumes that only 357,000 premises will be passed by June 2014. This delay, in tandem with workfront assumptions, is then extrapolated across the entire build, pushing the rollout completion date to 2024. According to the Strategic Review, this reduces revenues by approximately \$11.6 billion, increases operating expenditure by \$5.4 billion, increases interest payments by \$7.5 billion and, ultimately, increases the assumed peak funding amount for the fibre rollout by approximately \$13 billion. This issue was discussed during the 17 December hearing:

**Mr Rousselot:** The slower rollout is indeed driving the bulk of the reduction in revenue for the period FY 2011 to FY 2021, which is the number you are referring to. The slower rollout, however, is not based on my assumptions; it is based on the actual track record that we have and the review that has been done since then by KordaMentha, supported by the newly appointed operations team of NBN Co...

**CHAIR:** ...But this is an assessment that has been done, based on assumptions about a whole range of things—and we are going to get to them. I just want to make it so we are all going to be talking about the same thing. You say 'the vast bulk', I say that it is more than \$11.6 billion, but \$11.6 billion is the figure characterised by you, or by the strategic review, as the hit on the revenue base of NBN Co. by the decision—the assumption, the forecast—that you will extend by three years. That is just a fact.

**Mr Rousselot:** If I may, because we look back to FY 2012 plan, there are in fact actuals that cover the period between FY 2012 and now. So this is not an assumption; it is a fact. Yes, there are assumptions being made in terms of from now onwards. So it is a mix of the fact and the track record that we have achieved between when the plan was published and today, and then a forecast made for the period going forward.

**CHAIR:** I note that the strategic review assumes that government equity does not change in the revised outlook. Is that correct?

**Mr Rousselot:** Yes, that is the assumption we have worked under.

---

53 Video is available here: <http://www.youtube.com/watch?v=7k9Ivsd39yI>

54 Josh Taylor, "We will pass more by NBN fibre than Labor did: Turnbull," *ZDNet* (8 November 2013), at: <http://www.zdnet.com/au/we-will-pass-more-by-nbn-fibre-than-labor-did-turnbull-7000022966/>

**CHAIR:** So, under your decision to incorporate all of these in the review, this decision to delay the completion date by three years halves the revenues to 2021, and what that means is that NBN Co. has to get more money from private debt markets. Is that right?

**Mr Rousselot:** Again, you have mentioned 'my decisions'. It is not my decision. It is a forecast that we have made based on the actuals and assumptions that have been made going forward. And, yes, you are correct; this is the impact on the revenue.

**CHAIR:** Thank you. And more money is needed from the private debt markets because of this assumption that you have made. I am not trying to split hairs. You keep changing between 'decisions', 'assumptions', 'forecasts', 'advice'; I do not mind which of them you pick. This is your document, Mr Rousselot—that has been extensively explained to us by Dr Switkowski—so you cannot keep trying to blame other people. Your name is on it.

**Mr Rousselot:** I am not blaming other people. I am just stating the fact that, to build the numbers that you are looking at, we have actuals to date and we have forecasts going forward; and your point on the debt is we have assumed, when we look at the revised outlook, that the current funding arrangement with the government would apply, which is a maximum equity contribution of \$30.1 billion, \$30.5 billion, and any fund that is required in addition, given the re-forecast that is made based on actuals and a revised forecast, we have assumed to be funded through debt.

**CHAIR:** Okay. So the extra interest that NBN Co. has to pay up until 2024, from 2021 to 2024, in this situation is \$7.5 billion, according to your chart on page 38?

**Mr Rousselot:** I think that is correct.

**CHAIR:** So your costs are up by \$7.5 billion because of the decision. Your revenue is down by \$11.5 billion because of your assumption, decision, interpretation, whatever. So what happens to opex if the rollout is slowed by three years?

**Mr Rousselot:** I believe that the opex vary little during the period. I think the biggest changes—

**CHAIR:** On page 38 it suggests that it increases by \$5.4 billion—that is a lot by my standards; it might be a little by yours.

**Mr Rousselot:** I understand why you have that. Certain payments that are made that are in fact more representative of the rollout are treated as opex, and I think that is why you have a difference in that number. I will have to check...

**CHAIR:** ...So where we are is that by slowing the rollout by three years you have added a lazy \$13 billion to peak funding—it is just mathematics; it is just that that is what happens?

**Mr Rousselot:** That is the result of the forecast that we have made, yes.

2.86 The 357,000 target was discussed at both the 17 December 2013 hearing of the committee, and the 25 February hearing of the Senate Estimates committee.<sup>55</sup> During the 17 December hearing, graphs were presented which demonstrated the various rollout trajectories of NBN Co (see Appendix 4).<sup>56</sup> Also during this hearing, it was demonstrated that NBN Co was tracking at approximately 5,000 premises per week—considerably in excess of what was required to reach the 357,000 target. In response, Dr Switkowski said:

This to me illustrates one of the big problems around the commentary with respect to NBN. You, from the outside, have taken a bunch of numbers and challenged our ability to make forecasts when we have all of the data and we understand what is happening out in the field. How does that work? For example, you cannot take 5,000 homes passed per month and not allow for the fact that from the middle of December to the middle of January the industry shuts down. There is 20,000 off your number to start off with. You have got to get down to that level of analysis to form a forward view. What we will not do is come up with numbers that are excessively optimistic, which I assert has characterised previous forecasts. To have people from outside the organisation attempt to reinterpret our forecasts is ludicrous.

2.87 During the 25 February hearing of the Senate Estimates committee, Dr Switkowski confirmed that NBN Co's weekly average was between 4,500 and 5,000 premises per week.<sup>57</sup> He also confirmed Mr Adcock's comment at NBN Co's half yearly results briefing that NBN Co expected this number to be 6,000 premises per week by 30 June 2014—once again, substantially in excess of what was required to reach a target of 357,000:

**Senator CONROY:** Do you recall the graphs of the various rollout trajectories for NBN Co. that I showed you at the December hearing of the Senate select committee?

**Dr Switkowski:** Generally.

**Senator CONROY:** During that discussion I noted that NBN Co. was passing, on average, about 5,000 premises per week. I also noted that if NBN Co. plateaued at its current level of activity NBN Co. would easily pass more than 400,000 premises by 30 June 2014. I do recall, Dr Switkowski, you took a very dim view of this 5,000 average, given that it included downtime over the Christmas break. What is NBN Co's current weekly average?

**Dr Switkowski:** Somewhere between 4,500 and 5,000 premises passed.

**Senator CONROY:** I also note that Mr Adcock said last night that NBN Co. expects to be doing 6,000 premises by 30 June. Is that correct?

---

55 Committee Hansard, 17 December 2013, pp. 7-12; Committee Hansard, Additional Estimates, 25 February 2014, pp. 36-38.

56 Note: the “build instructions issued” gradient on the following graph was plotted assuming 512,000 premises would be reached by 30 June 2014 rather than mid-March 2014.

57 Committee Hansard, Additional Estimates, 25 February 2014, p. 37.

**Dr Switkowski:** That was the statement that was made, yes.

Senator CONROY: I have been doing some maths of my own. NBN Co's weekly average for brownfield premises—and I think you are roughly indicating this—passed over the past 17 weeks is about the 4,500. If you exclude the two weeks Christmas shutdown where contractors appear to have down[ed] tools, it comes to 5,078, between, as you said, 4,500 and 5,000. If you extrapolate 5,000 premises, which is less than your own chief operating officer is indicating, to 30 June, and there is no Christmas shut down between now and 30 June—that is right, isn't it?

**Dr Switkowski:** Just Easter.

**Senator CONROY:** You are having an Easter shutdown as well?

**Dr Switkowski:** I am just reflecting how the industry operates.

**Senator CONROY:** Fantastic. NBN Co. gets to slightly more than 400,000 premises. Even if you take the 4,500 weekly average and assume a steady linear growth to Mr Adcock's 6,000 per week by 30 June, NBN Co. will still pass more than 400,000 brownfield premises by 30 June. Without you having done the maths and hoping that I am not seriously misleading you at the desk, does that sound about right?

**Dr Switkowski:** Your algebra is certainly right.

2.88 The Strategic Review also makes assumptions about the daily run rate (premises passed per day at the peak of the rollout). The medium term outlook factored in the extension of the design to delivery schedule to 15 months.<sup>58</sup> This was projected to be brought back into the original 12 month schedule in two years.<sup>59</sup> This revision includes an escalation of the daily roll out rate to a peak of 4,800 premises passed, compared to Corporate Plan peaks of more than 5,400 per day for the brownfields deployment.<sup>60</sup> The Revised Outlook's only basis for the lower peak rate is a comment that:

Based on workforce modelling previously undertaken by NBN Co, and the Independent Assessment, it is not anticipated that construction field labour is a limiting factor in the FTTP deployment. The biggest constraint to the network rollout is the availability of network designers, senior and experienced project managers, in-field supervisors and project control staff to provide leadership and oversee program delivery....

This constraint allows a maximum of 200-300 concurrent workfronts (for example, an FSAM, a set of nodes or HFC in-fill areas) and dictates the highest practical deployment speed achievable.

2.89 The Strategic Review did not address the question of what strategies could be employed to lift this constraint (e.g. training, additional contract resource from Telstra). Nor did the Strategic Review acknowledge that many construction projects in

---

58 Strategic Review, p. 47.

59 Answer to Question on Notice, 17 December 2013, No. 15.

60 Strategic Review, page 48; NBN Co, *2012-15 Corporate Plan*, p. 37.

---

other sectors are approaching completion, releasing additional project management resources. Rather, productivity improvements were “assumed out” of the Revised Outlook and “assumed in” to the Radically Redesigned FTTP. As NBN Co noted in answer to a question in writing:

Scenario 2, Radically Redesigned FTTP contemplates NBN Co making significant changes to its FTTP deployment approach to improve NBN Co’s productivity and construction techniques. Within this scenario, it is expected that these “radical” changes will increase rollout speed and decrease costs.<sup>61</sup>

2.90 The Committee also notes the testimony of NBN Co’s Chief Financial Officer, at the JCNBN hearing on 19 April 2013. When asked the financial impact of extending the rollout, Mr Payne replied:<sup>62</sup>

The biggest impact of a one- or two-year delay will not have much impact on the internal rate of return. With a two-year delay we would probably still expect to see an internal rate of return of around seven per cent. Where it does have a big impact is on the peak funding requirement. Under the existing plan, we have a peak funding requirement of just over \$44 billion. If we extended the rollout, it would reduce that peak funding requirement because we are spending capex after a time when we have gone to cash flow positive. That would come down by \$2 billion or \$3 billion.

2.91 This evidence demonstrates that, by itself, a deployment delay does not necessarily produce an increase in peak funding. The delay must work in tandem with an assumption that shifts the timing of when NBN Co becomes cash flow positive. Put another way, if revenues are not assumed away (beyond 2021) from the delayed deployment schedule, then according to Mr Payne’s testimony the result of assumptions of delay in the brownfields deployment schedule would be a *decrease* in peak funding.

2.92 NBN Co was asked in writing following the 17 December public hearing to reconcile Mr Payne’s comment with the conclusion of the Strategic Review. At the time of writing the question is unanswered.

2.93 The committee has serious concerns with the delayed deployment forecast of the brownfields fibre build in the Revised Outlook. The June 2014 target of 357,000 premises passed by June 2014 is at odds with NBN Co’s weekly average, statements made by the Minister before the Strategic Review concluded its work, and NBN Co’s own statements at its half yearly results briefing. Furthermore, the committee notes that NBN Co’s fibre deployment speed is conditional upon the political control evident in the interim statement of expectations.

2.94 The revised deployment schedule—and the assumption that \$11.6 billion in revenues will be foregone as a result—has another consequence in the Strategic Review. Revenues for the full fibre rollout are stripped out of scenario comparisons,

---

61 Answer to Questions on Notice, 17 December 2013 Hearing, No. 36.

62 JCNBN Hansard, 19 April 2013, p. 15.

while the full assumed costs are included. This is visible in the table comparing the financial outcomes of the scenarios (Exhibit 4-6, reproduced below). This table includes revenues to FY2021 (when scenario 6 is assumed to be complete) but capital expenditure to 2024 (when the Revised Outlook assumes that the full fibre rollout will be complete). Incidentally, this is true of delay assumptions for all network elements in the Revised Outlook (more on this below). The committee also notes that the revenues excluded from the Revised Outlook in Exhibit 4-6 are the three years when the Revised Outlook assumes revenues will be the highest—\$15 billion over FY2022, FY2023 and FY2024.<sup>63</sup>

### Exhibit 4-6 (Strategic Review)

Exhibit 4-6: Financial outcomes (rounded), including Fixed Wireless, Satellite and greenfields (1)

Financial outcomes for Scenarios 1-6						
	Scenario 1: Revised Outlook	Scenario 2: Radically Redesigned FTTP	Scenario 3: FTTN short loop, FTTB large MDUs	Scenario 4: HFC in HFC footprint	Scenario 5: FTTN & HFC (no demobilisation)	Scenario 6: Optimised Multi- Technology Mix
Date of first positive free cashflow (2)	FY25 - ~FY40	FY25-27	FY24-25	FY22	FY22	FY22
<b>Cumulative FY11-21</b>						
Revenue (3)	\$10bn	\$9bn	\$11bn	\$16bn	\$16bn	\$18bn
Opex	\$23bn	\$23bn	\$24bn	\$26bn	\$27bn	\$27bn
Capex	\$43bn	\$35bn	\$36bn	\$36bn	\$29bn	\$30bn
Peak funding (equity and debt) (4)	~\$73bn	~\$64bn	~\$59bn	~\$51bn	~\$43bn	~\$41bn
Peak funding (all equity)	~\$63bn	~\$54bn	~\$52bn	~\$47bn	~\$40bn	~\$39bn
<b>Cumulative Capex FY11-24 (Incl. replacement capex)</b>	\$56bn	\$44bn	\$43bn	\$40bn	\$34bn	\$33bn
<b>Steady state financial performance (FY28)</b>						
Revenue	\$6.6-7.5bn	\$6.6-7.5bn	\$6.5-7.4bn	\$6.4-7.4bn	\$6.2-7.0bn	\$6.3-7.2bn
Opex	\$2.4bn	\$2.4bn	\$2.5bn	\$2.5bn	\$2.6bn	\$2.6bn
EBITDA	\$4.1-5.1bn	\$4.1-5.1bn	\$4.0-4.9bn	\$3.9-4.8bn	\$3.6-4.4bn	\$3.7-4.6bn
Capex	\$1.9bn	\$1.1bn	\$1.1bn	\$1.1bn	\$1.0bn	\$1.0bn
IRR (FY10-40) – Revenue Trajectory A*	2.5%	4.0%	4.1%	4.7%	4.9%	5.3%
IRR (FY10-40) – Revenue Trajectory B*	n/a	1.7%	1.9%	2.5%	2.6%	3.1%

2.95 The committee considers that the 30 June 2014 target—and the revised deployment schedule—has been “lowballed” to achieve political objectives. This includes setting a target so low that NBN Co could not fail to meet it—and in fact would have to reduce its weekly run rate to avoid exceeding it. It also provides support for the claimed three year rollout extension, which is assumed to reduce revenues by approximately \$11.6 billion, increase operating expenditure by \$5.4 billion, increase interest payments by \$7.5 billion and, ultimately, increase the assumed peak funding amount in the Revised Outlook by approximately \$13 billion. The committee also notes that a ‘lowball’ target also provides a platform for NBN Co

63 Strategic Review, Exhibit 2-21, p. 56.

---

and Government to trumpet exceeding this target in July 2014. As Dr Switkowski noted at the February estimates hearing:

I hope to be in front of the committee after June explaining how we did better than the early forecasts.<sup>64</sup>

*Summary—Assumption of brownfield delays*

- **The Revised Outlook assumes that NBN Co will pass 357,000 brownfields premises by 30 June 2014, compared to 600,000 in the Corporate Plan (version 13). This assumption—in concert with conservative estimates of premises passed at peak rollout—is reflected in the revised deployment schedule, which assumes the fibre network will not be complete until 2024.**
- **The 30 June 2014 target is at odds with NBN Co’s current run rate, the number of build instructions issued by NBN Co by August 2013, and the Strategic Review’s own finding that the construction phase is being completed in line with Corporate Plan timing assumptions. The committee notes also that NBN Co’s speed of fibre deployment has been brought under direct political control. These factors cast doubt on the revised deployment schedule in the Revised Outlook, and the assumed consequences of this assumption.**
- **The committee considers that the 30 June 2014 target has been “lowballed” to achieve political objectives. This includes setting a target so low that NBN Co could not fail to meet it. It also provides support for the claimed three year rollout extension, which delivers the following financial impacts:**
  - **revenues are decreased by approximately \$11.6 billion;**
  - **operating expenditure is increased by \$5.4 billion;**
  - **interest payments are increased by \$7.5 billion; and**
  - **the assumed peak funding amount is increased by approximately \$13 billion.**

---

64 Committee Hansard, Additional Estimates, 25 February 2014, p. 37.

---

***Cost per premises assumptions – brownfields***<sup>65</sup>

2.96 NBN Co's Chief Financial Officer gave the following evidence at the November hearing of the Senate Environment and Communications Estimates Committee in relation to the cost per premises passed of the NBN fibre build:<sup>66</sup>

**Senator LUNDY:** I understand that in April NBN Co. advised the Joint Committee on the NBN that the current cost of building the local network and distribution network falls between \$1,100 and \$1,400 per premise. Is that correct?

**Mr Payne:** At the time we presented that to the joint committee, that was our best estimate of the costs of completing the areas that we were building in at that time. So that was our best estimate at that point in time.

**Senator LUNDY:** Has it changed since that point in time?

**Mr Payne:** Since that point in time we have done a number of things. We have obviously started in more areas and have had some contract renegotiations. Looking today at our estimate of completion on premises we are doing now, it would be a bit higher than that.

**Senator LUNDY:** How much is a bit higher?

**Mr Payne:** I think it is between about \$1,450 and \$1,500.

2.97 On 29 November 2013, the Department of Finance was asked whether they were aware of any cost increases beyond this amount:

**Senator CONROY:** You said you were watching the testimony earlier. You would have seen Dr Switkowski claim there was a material blow-out in costs in one part of the bill. In your weekly meetings with NBN Co. are you familiar with any information to that end? And I think the gentleman behind you indicated you had a weekly meeting, Ms Mason. Mr Robinson indicated he was not at the weekly meetings, so I can only ask you.

**Ms Mason:** I am not necessarily at the weekly meetings either. I am not aware of any particular cost blow-outs.<sup>67</sup>

2.98 The 20 September NBN Co Board paper states in relation to costs per premises passed:

The assumption of \$1500 in FY14 is consistent with our July 2013 cost per premises reporting which estimates the following:

---

65 There are two key cost measures in the Local Network and Distribution Network (LNDN) in the FTTP build. These are cost per premises passed (CPPP) and cost per premises connected (CPPC). The cost per premises passed refers to the LNDN between the Fibre Access Node (FAN) to the multipoint in the pit or pole in the street outside a premises. The cost per premises connected refers to the connection from the multipoint to the customer premises equipment (Network Termination Device, or NTD) inside the premises. A description of these network elements is provided in Appendix 3.

66 Available here: <http://www.nbnco.com.au/content/dam/nbnco/media-releases/2013/report-to-parliamentary-joint-committee.pdf>

67 Committee Hansard, 29 November 2013, p. 46.

- The Estimate at Completion (EAC) for 152 FSAMs with a Fixed Price Lump Sum (FPLS) is currently tracking at \$1335 per premises
- The EAC for 50 FSAMs issued under “fast-track” construction projects is tracking at \$1487 per premises
- The impact of the Syntheo and Silcar contract changes is currently being modelled in detail, and is likely to increase costs by between \$50 and \$100 per premises across the total number of premises.

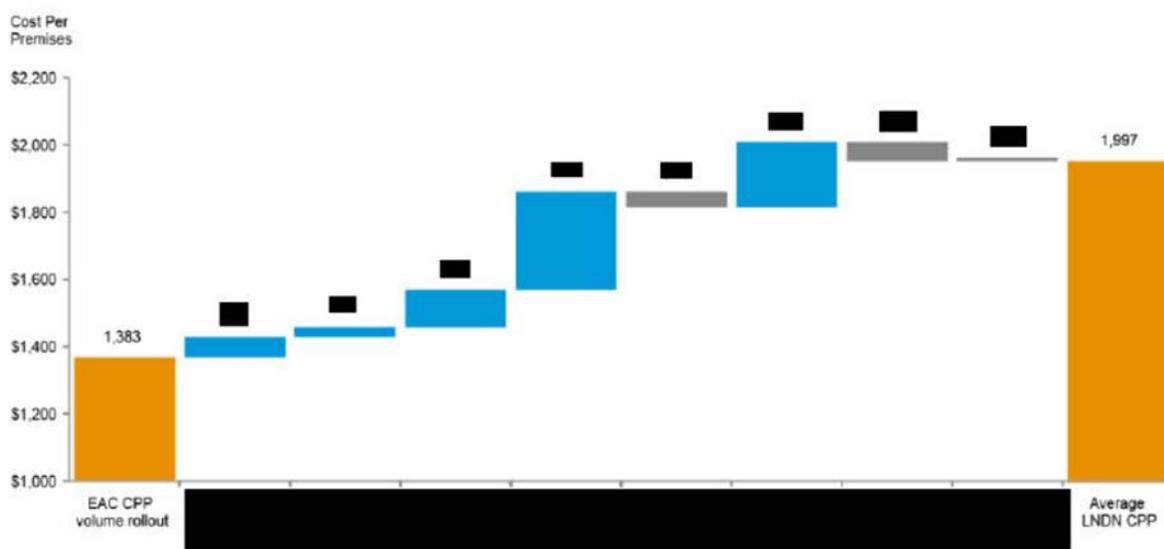
2.99 However, the Revised Outlook in the Strategic Review assumes:<sup>68</sup>

A 78 percent increase in the average Cost Per Premises for LNDN (including provision) from \$1,123 to 1,997 per premises.

2.100 Increased costs for premises passed are set out in Exhibits 2-26 and 2-27.<sup>69</sup> Although some general commentary is provided to justify these price increases (pp. 62-65), the exact unit costs and the applicable assumptions behind these increases are redacted.

### Cost per Premises Passed (Revised Outlook)

Exhibit 2-27: Revised brownfields Cost Per Premises comparison



2.101 The Strategic Review extrapolates the higher cost per premises passed assumption of \$1,997 out to the new rollout end date of 2024, without a single

<sup>68</sup> Strategic Review, p. 60.

<sup>69</sup> Strategic Review, pp. 62-64.

efficiency saving for three years, and only 2.5 percent in two of the remaining seven years.<sup>70</sup> This was established at the 17 December hearing:

**CHAIR:** Does the revised outlook assume that the \$1,997 figure is reflected all the way up until the end of the tanked rollout completion date in 2024? In other words, you have extrapolated it right through the rest of the build?

**Mr Rousselot:** I believe that it is an average, what you see there, and my understanding is that the way the hypothesis is built is that, at some point, we introduced an element of cost saving that will allow us to save money towards the outer years of the rollout.

2.102 It is an axiom of construction projects that efficiencies are gained as the construction ramps up and learnings are applied. The Strategic Review makes this point on page 78:

Costs also tend to reduce over time, due both to cost erosion and to scale and learning effects. For example, Verizon's Cost Per Premises fell from ~US\$2,600 to ~US\$1,600 between 2004 and 2006

2.103 Similarly, the 20 September NBN Co Board paper noted:

The draft Corporate Plan v13.0 assumes that the cost per premises to construct the access fibre network will reduce from \$1,500 per premises in FY14 to \$1,054 from FY18 to the end of the construction period.

2.104 Remarkably, however, in the case of the Revised Outlook, the Strategic Review states:<sup>71</sup>

It is considered likely that the Delivery Partners will become more efficient as they are provided with more consistent work flow, experience less interference in the design process, and are better managed through clearer delegated authority within NBN Co. These efficiencies are required to make the modules profitable for the Delivery Partners. Therefore, it is anticipated that any efficiency gains will primarily benefit the Delivery Partners and the revised figures have only included limited efficiency gains for NBN Co (2.5 percent per annum for FY17 and FY18 only).

2.105 In other words, the Strategic Review cedes virtually all cost savings from efficiency gains to NBN Co's delivery partners. This assumption was discussed during the 17 December 2013 hearing:<sup>72</sup>

**CHAIR:** I am just reading your figures. You keep the average of \$1,997 through almost the entire build but you give yourself an efficiency benefit only in year 2018, in four years' time. Okay. I think there is a graph about to come up from the joint parliamentary committee hearing in April which demonstrates—as you would expect and, I think, you indicate in the report—that, with all large infrastructure projects, the costs come down

---

70 Committee Hansard, 17 December 2013, p. 33.

71 Strategic Review, p. 63.

72 Committee Hansard, 17 December 2013., pp. 33-34.

---

over time as you learn and become more efficient. The strategic review makes a similar observation on page 78:

Costs also tend to reduce over time, due both to cost erosion and to scale and learning effects. For example, Verizon's Cost Per Premises fell from ~US\$2,600 to ~US\$1,600 between 2004 and 2006...

I just wanted to be clear. Verizon achieved a near 40 per cent reduction in cost per premises over two years for its fibre build, from learning and experience. In NBN Co's case, in your strategic review, in your future forecast, NBN only achieves an efficiency gain in the year 2018, four years from today. So, putting aside that you are pretending you have learnt nothing from the last three years—and even I would agree that NBN would have learnt plenty in the last three years—how can Verizon be so smart and you guys be so dumb?

**Mr Rousselot:** Those are your words. The assumptions that we built here were ones where we wanted to be prudent. If you look at our estimates at completion, currently, it is still going up. So today we are not yet capable of truly, accurately forecasting the cost that we will end up having to pay for those types of assets.

**CHAIR:** But, seriously, you have actually forecast costs still to be going up at the end of 10 years for a project that everybody else in the world has been able to get a 40 per cent saving in two years.

**Mr Rousselot:** Again, the rationale for those costs going up is not only the productivity improvements but also the effect of inflation, cost increases and things like this.

**CHAIR:** Don't Verizon have the same challenges to overcome? They didn't have inflation to overcome in the United States? I admit it has been low, but—

**Mr Rousselot:** I do not know enough about Verizon's—

**CHAIR:** So everybody else in the world can make an efficiency saving but, for the purpose of pumping up a re-baseline figure, you have no productivity gains built in—other than in two years—in four years' time.

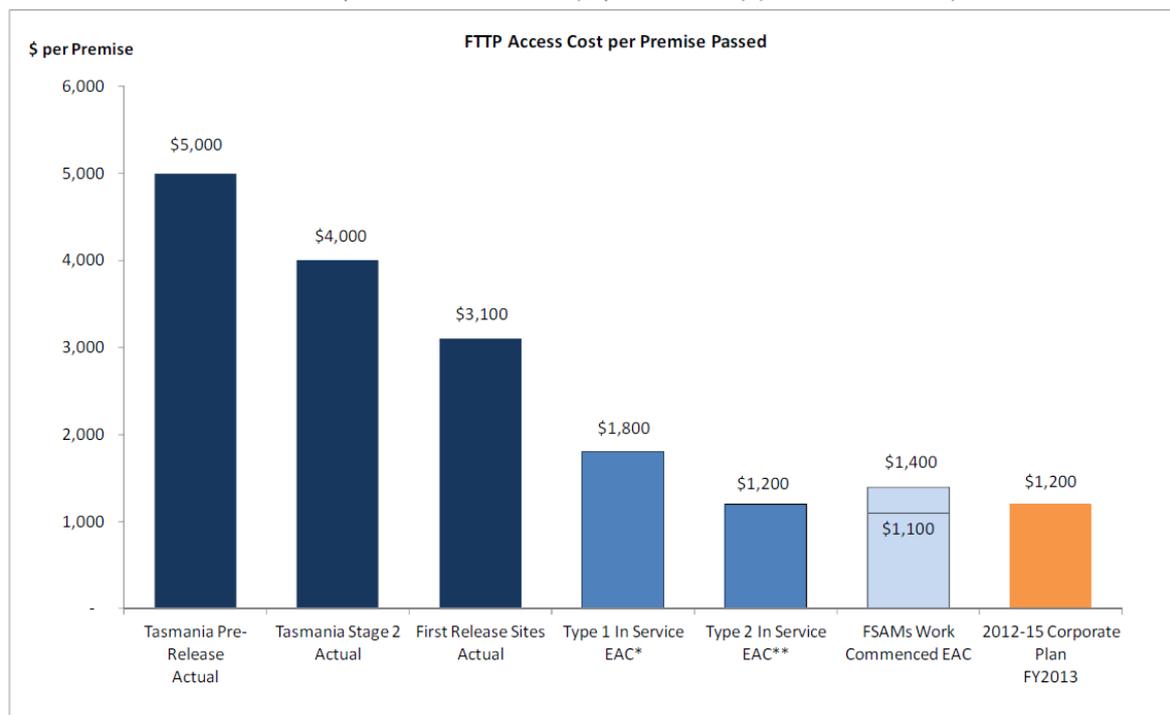
2.106 The graph referred to in the Chair's testimony was tabled at the April hearing of the JCNBN.<sup>73</sup> Reproduced below, it exhibits the efficiencies that NBN Co has already realised in the past three years of the fibre build:

---

73 See: <http://www.nbnco.com.au/content/dam/nbnco/media-releases/2013/report-to-parliamentary-joint-committee.pdf>

## NBN Co Cost Per Premises Passed (April 2013)

Exhibit 1-4: FTTP Access Cost per Premise Passed (\$ per Premise) (Nominal Dollars)



Source: NBN Co, 2012-15 Corporate Plan

Note: \* Fibre Serving Area Modules (FSAMs) in service: Estimate at Completion using Type 1 design.

\*\* FSAMs in service: Estimate at Completion using Type 2 design.

All Cost per Premise estimates are rounded to nearest \$100. Actual costs are based on information available at 31 March 2013.

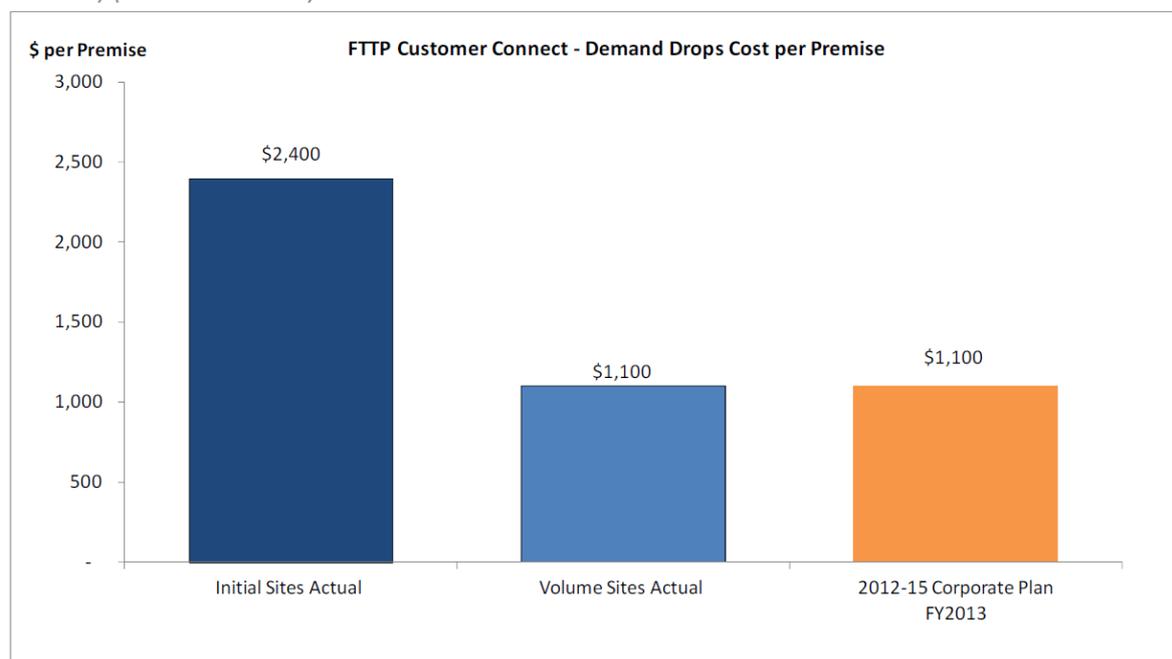
2.107 During the April 2013 JCNBN hearing, the cost per premises connected was also discussed. As set out below, NBN Co was already realising efficiencies in connecting premises. Former NBN Co CEO Mike Quigley made the point that:<sup>74</sup>

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.

74 JCNBN Hansard, 19 April 2013, page 7.

## NBN Co Cost Per Premises Connected (April 2013)

*Exhibit 1-6: FTTP Customer Connect – Demand Drops Cost per Premise Single Dwelling Units (\$ per Premise) (Nominal Dollars)*



Source: NBN Co, 2012-15 Corporate Plan

2.108 However, the Revised Outlook in the Strategic Review assumes:

A 50 percent increase in the Cost Per Premises for Connections from \$1,398 to 2,100 per premises.

2.109 Once again, the Strategic Review has extrapolated the higher cost per premises connected assumption of \$2,100 right to the end of the reforecast rollout end date in 2024, with marginal efficiencies of 2.5 per cent included for FY17 and FY18 only.<sup>75</sup> The Strategic Review states that this reflects “the intrinsic complexity of the project.”<sup>76</sup>

2.110 The Strategic Review assumes that the consequence of higher unit costs in the fibre rollout—in concert with assumptions that NBN Co will benefit from no reasonable build efficiencies over the 10 year reforecast build period—is an increase of \$14.4 billion in capital expenditure. This is visible in Exhibit 2-25 of the Strategic Review, reproduced below.

75 Strategic Review, p. 65.

76 Strategic Review, p. 65.

## Revised Capital Expenditure Assumptions—Brownfields

Exhibit 2-25: Detailed Capex comparison between the Corporate Plan and the Revised Outlook

Capital Expenditure <sup>51</sup>							
	Actual LTD Sept-13 (\$billion)	Corporate Plan			Revised Outlook		
		\$/ premises	Premises Passed ('000s)	FY21 Capex (\$billion)	\$/ premises	Premises Passed ('000s)	FY24 Capex (\$billion)
<b>FTTP</b>							
Brownfields LNDN	-	1,054	10,091	10.6	1,997	10,091	20.1
Brownfields LNDN Provision	-	70	10,091	0.7	-	-	-
<b>Total LNDN</b>	<b>0.7</b>	<b>1,123</b>	<b>10,091</b>	<b>11.3</b>	<b>1,997</b>	<b>10,091</b>	<b>20.1</b>
Brownfields Connections	0.1	1,398	7,002	9.8	2,100	7,002	14.7
Greenfields	0.3	1,591	2,111	3.4	1,591	2,111	3.4
<b>Total FTTP</b>	<b>1.1</b>			<b>24.5</b>			<b>38.2</b>
Transit/Backhaul	0.7	-	-	2.8	-	-	3
Fixed Wireless	0.3	3,291	396	1.3	■	■	■
ISS	0.1	2,117	48	0.1	2,550	48	0.1
LTSS	0.5	3,161	578	1.8	■	■	■
OSS/BSS (IT)	0.7	-	-	0.9	-	-	1.6
Common	0.3	-	-	0.7	-	-	0.7
PM & Design	-	-	-	1.2	-	-	1.7
Replacement	-	-	-	0.4	-	-	0.2
<b>Total Capex excluding Contingency</b>	<b>3.7</b>			<b>33.7</b>			<b>51</b>
Capex Contingency	-	-	-	3.6	-	-	5.0 <sup>52</sup>
<b>Total Capex</b>	<b>3.7</b>			<b>37.4</b>			<b>55.9</b>

2.111 The Strategic Review makes a number of additional capital expenditure assumptions about the brownfields fibre rollout:

- An increase in the BSS/OSS and other IT Capital Expenditure costs of \$0.7 billion;
- A \$0.5 billion increase in other Capital Expenditure as a result of increased capitalised labour over the revised deployment schedule; and
- An increase of \$1.4 billion required to maintain a 10 percent contingency.

2.112 It is not possible to assess the IT and labour capital expenditure assumptions on the information provided in the Strategic Review. However, the committee notes that the \$1.4 billion increase in contingency—to maintain the contingency at 10 percent of the total assumed capital expenditure amount—is a direct result of increasing other capital expenditure assumptions. The increased capital expenditure assumed in the long term satellite program will be examined below.

---

**Summary—Brownfields Cost per premises assumptions**

- **On 19 November 2013, NBN Co’s Chief Financial Officer Mr Robin Payne confirmed that the brownfields cost per premise was “between about \$1,450 and \$1,500.” An NBN Co Board paper dated 20 September confirmed that the brownfields cost per premise passed of \$1,500 was consistent with July 2013 Estimates at Completion. In November 2013, Department of Finance personnel indicated that they were aware of no cost increases.**
- **The Strategic Review assumes that the brownfields cost per premise passed has increased by 78 percent to \$1,997 and the brownfields cost per premise connected has increased by 50 percent to \$2,100. Unit price increases and assumptions are redacted. The Strategic Review extrapolates these assumptions out to the new forecast end date of 2024, without a single efficiency saving for three years, and only 2.5 percent in two of the remaining seven years.**
- **The Strategic Review assumes that the combined result of these assumptions is to increase capital expenditure in the Revised Outlook by \$14.4 billion.**
- **The \$1.4 billion increase to maintain a 10 per cent contingency is a direct result of other assumptions that increase capital expenditure.**

**Capital Expenditure Assumptions – Satellite**

2.113 The Revised Outlook assumes approximately \$2.4 billion additional capital expenditure for the Fixed Wireless and Long Term Satellite components of the network. This is visible by subtracting the unredacted figures from the total capital expenditure in Exhibit 2-25.<sup>77</sup> The Strategic Review notes that this is due to an assumed increase in the cost per premises for fixed wireless, and an increase in the total cost of satellite, but the amounts of these increases are redacted.<sup>78</sup>

2.114 The Revised Outlook also includes 100,000 additional premises passed in the satellite footprint than in the Corporate Plan, as of June 2021:<sup>79</sup>

---

77 Strategic Review, p. 61.

78 Strategic Review, p. 61.

79 The Strategic Review takes the novel approach of defining the premises passed by a satellite service as the number of customers that can actually be connected.

Exhibit 2-11: Network deployment rollout timetable – Revised Outlook

Revised Outlook Rollout Timetable														
Premises Passed Cumulative ('000s)	Jun-11	Jun-12	Jun-13	Jun-14	Jun-15	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Jun-21	Jun-22	Jun-23	Jun-24
Brownfields	18	29	163	357	857	1,727	2,727	3,927	5,127	6,327	7,427	8,477	9,477	10,091
Greenfields	-	4	44	110	192	285	414	564	742	967	1,240	1,581	1,893	2,111
Fixed Wireless	-	1	28	122	260	354	431	508	554	554	554	554	554	554
Satellite	48	48	48	48	48	206	206	206	206	206	306	306	306	306
Total	66	82	283	637	1,357	2,572	3,778	5,205	6,629	8,054	9,527	10,918	12,230	13,062

2.115 The Strategic Review includes no direct explanation as to the addition of this satellite. The only reference is contained on page 66:

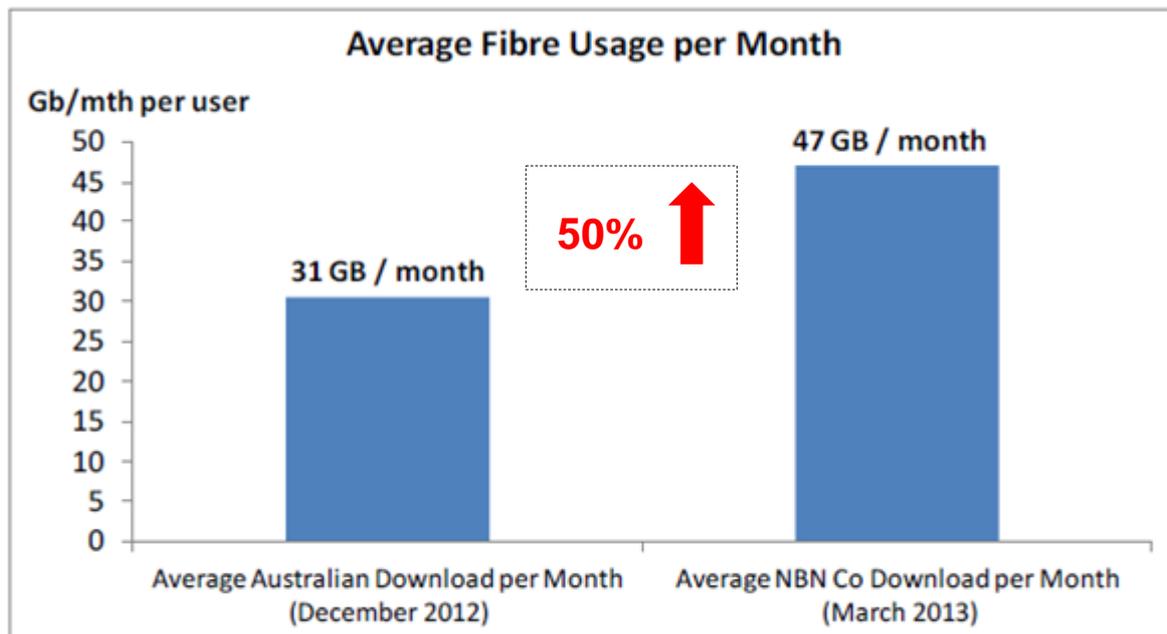
Whilst the majority of the costs of the two long term satellites are known, there are some elements that are yet to be finalised. There are also risks including the following:

- There is no clear understanding of the requirement for further capacity which may be needed if the demand for the LTSS exceeds that outlined in the Corporate Plan; and
- Further Satellite capacity may be the only viable solution if fibre and Fixed Wireless coverage is less than the 97 percent included in the Corporate Plan.

2.116 The committee does not contest that additional bandwidth will be required in the satellite footprint. This is one assumption in the Strategic Review that actually reflects the reality of broadband usage: when Australians are offered access to more bandwidth, they use it. This is visible in the experience NBN Co has had with the Interim Satellite Service, which eclipsed its subscriber cap and capacity limits earlier than expected, just as it is visible in the fibre network, where Australians with access to fibre are consuming data at rates that are approximately 50% higher than the Australian average of 31 GB/month.<sup>80</sup> The committee expects a similar result once the two long term satellites are launched in 2015 and Australians living in rural and remote parts of the country have access to high-quality broadband for the first time.

80 NBN Co, *Corporate Plan 2013-16*, p. 16.

## Data Usage on NBN Co fibre Vs Australian average



Source: ABS - 8153.0 - Internet Activity, Australia, December 2012. NBN Co Data 31 March 2013.

2.117 The third satellite was included in the Revised Outlook without direct explanation, and prior to the completion of the Fixed Wireless and Satellite Review announced in the Strategic Review. This distorts comparisons with the Corporate Plan. Once again, by assuming that the third satellite is launched and operational by FY 2021, the Strategic Review can factor in the capital expenditure of a third satellite into the Revised Outlook, but include in scenario comparisons no revenues from the additional 100,000 customers.

### *Summary—Satellite Capital Expenditure Assumptions*

- **The Revised Outlook includes an additional satellite without direct explanation.**
- **The committee does not contest that additional bandwidth will be required in the satellite footprint. This is one assumption in the Strategic Review that actually reflects the reality of broadband usage: when Australians are offered access to more bandwidth, they use it.**
- **The assumed launch of the third satellite by end-FY2021 distorts scenario comparisons by including in the Revised Outlook the capital expenditure for the satellite, but excluding revenues from additional satellite customers.**

### *Assumptions of greenfields delay*

2.118 The number of greenfields premises to be passed in the Corporate Plan is determined by assumptions of construction activity. As the Strategic Review notes:

For the first five years, the Corporate Plan has assumed that premises growth is based on the Australian Bureau of Statistics (ABS) and industry trends; thereafter it is aligned with ABS household population growth.<sup>81</sup>

2.119 As set out in Exhibit 2-10, the Corporate Plan provided for 2,111,000 greenfields premises to be passed by FY2021 and 2,659,000 greenfields premises to be passed by 2024.

### **Deployment Schedule—Corporate Plan**

Exhibit 2-10: Network deployment rollout timetable – Corporate Plan

Corporate Plan - Rollout Timetable														
Premises Passed Cumulative ('000s)	Jun-11	Jun-12	Jun-13	Jun-14	Jun-15	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Jun-21	Jun-22	Jun-23	Jun-24
Brownfields	18	29	286	1,129	2,499	3,862	5,168	6,423	7,610	8,879	10,091	10,091	10,091	10,091
Greenfields	-	10	55	178	413	763	1,111	1,415	1,673	1,904	2,111	2,295	2,477	2,659
Fixed Wireless	-	9	70	124	225	369	374	379	385	391	396	401	405	410
Satellite	165	165	250	250	527	539	547	555	563	571	578	585	592	599
<b>Total<sup>44</sup></b>	<b>183</b>	<b>213</b>	<b>661</b>	<b>1,681</b>	<b>3,664</b>	<b>5,532</b>	<b>7,200</b>	<b>8,772</b>	<b>10,230</b>	<b>11,744</b>	<b>13,176</b>	<b>13,372</b>	<b>13,566</b>	<b>13,759</b>

2.120 Exhibit 2-11 provides the same detail for the Revised Outlook. The revised deployment schedule for greenfields assumes that:

- 871,000 greenfields premises will be delayed until after FY2021; and
- 548,000 fewer greenfields premises will be passed in FY2024 under the Revised Outlook than under the Corporate Plan.

81 Strategic Review, p. 49.

## Revised Greenfields Deployment Schedule (Strategic Review)

Exhibit 2-11: Network deployment rollout timetable – Revised Outlook

Revised Outlook Rollout Timetable														
Premises Passed Cumulative ('000s)	Jun-11	Jun-12	Jun-13	Jun-14	Jun-15	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Jun-21	Jun-22	Jun-23	Jun-24
Brownfields	18	29	163	357	857	1,727	2,727	3,927	5,127	6,327	7,427	8,477	9,477	10,091
Greenfields	-	4	44	110	192	285	414	564	742	967	1,240	1,581	1,893	2,111
Fixed Wireless	-	1	28	122	260	354	431	508	554	554	554	554	554	554
Satellite	48	48	48	48	48	206	206	206	206	206	306	306	306	306
<b>Total</b>	<b>66</b>	<b>82</b>	<b>283</b>	<b>637</b>	<b>1,357</b>	<b>2,572</b>	<b>3,778</b>	<b>5,205</b>	<b>6,629</b>	<b>8,054</b>	<b>9,527</b>	<b>10,918</b>	<b>12,230</b>	<b>13,062</b>

2.121 This assumption of delay in the greenfields rollout produces the same effect in Exhibit 4-6 as it does for other network elements: costs for passing and connecting 871,000 greenfields premises are included in the Revised Outlook for scenario comparisons, but revenues from the additional connections are not.

2.122 Mr Rousselot was asked about this issue at the hearing on 17 December 2013. He replied:

I believe that what it considers is the delay in the rollout, which is impacting both the brownfield and the greenfield sites, and therefore pushes out the date at which we are able to pass these greenfield sites.<sup>82</sup>

2.123 This answer reflects a misunderstanding of the project. The number of greenfields premises to be passed is determined principally by construction activity, not deployment speed.

2.124 The Strategic Review explains that the delayed greenfields rollout schedule is due in part to the revised brownfields schedule.<sup>83</sup> This is because new developments of less than 100 lots are only completed by NBN Co if they are in-fill.<sup>84</sup> An answer to a question on notice also states:<sup>85</sup>

A further discount to the deployment rate was applied to the “new developments” figures to reflect that applications made to date have been lower than forecast. It also reflects a higher than anticipated proportion of ‘new developments’ being ‘in-fill’ rather than greenfield developments with more than 100 dwellings. A reduction was made to 2.111 million premises to reflect a proportion of the ‘non-residential/business GNAFs’ included in the original Corporate Plan figure of 2.659 million premises.

2.125 While the issue of in-fill could explain the difference between the greenfields premises passed at Corporate Plan completion in FY2021 (2,111,000), and the

82 Committee Hansard, 17 December 2013, p. 53.

83 Committee Hansard, 17 December 2013, p. 53.

84 Committee Hansard, 17 December 2013, p. 53.

85 Answer to Questions on Notice, 17 December 2013 Hearing, No. 16.

Revised Outlook expectation in 2021 (1,240,000), it does not explain the difference in the number of fixed line premises in 2024 between the Corporate Plan and the Revised Outlook.

2.126 The committee remains concerned about this issue. In an answer to another question on notice, NBN Co noted that “the Revised Outlook forecast for greenfields was used for all Scenarios, including the MTM.”<sup>86</sup> As noted above, greenfields deployment is based on assumptions about premises growth, assumptions which are based on ABS data. The MTM scenario assumes that by the end of the rollout in CY2020, 1,089,000 greenfields premises will be passed in the fixed line footprint.<sup>87</sup> This is a difference of nearly one million premises compared to the Corporate Plan. This can be seen in Exhibit 4-2, which demonstrates that by CY2020 there are 11.18 million premises in the fixed line footprint—the corresponding number in the 2012-15 Corporate Plan (by FY2021) is 12.2 million premises.<sup>88</sup> However, NBN Co does not indicate in the Strategic Review—or in answers to questions put in writing—that it has significantly revised its forecasts for the number of premises that will be constructed by CY2020. The committee will continue to seek clarification from NBN Co on this issue.

---

86 Answers to Questions on Notice, 17 December 2013 Hearing, No. 47.

87 Answers to Questions on Notice, 17 December 2013 Hearing, No. 47.

88 NBN Co, *2012-15 Corporate Plan*, p. 72 (Exhibit 9-2).

## MTM rollout at assumed completion

Exhibit 4-2: Optimised Multi-Technology Mix rollout

Optimised multi-technology mix rollout						
Technology	End of CY16			End of rollout (CY20)		
	Premises ('000s)	% of all premises	% of all premises in relevant footprint	Premises ('000s)	% of all premises	% of all premises in relevant footprint
FTTP	1,330	12%	13%	2,890	24%	26%
FTTN	550	5%	5%	3,620	30%	32%
FTTdp/B	-	-	-	1,380	11%	12%
HFC	2,610	23%	25%	3,270	28%	30%
Not passed	5,980	53%	57%	-	-	-
<b>Total fixed line footprint</b>	<b>10,480</b>	<b>93%</b>	<b>100%</b>	<b>11,180</b>	<b>93%</b>	<b>100%</b>
FTTN (remote footprint)	-	-	-	100	1%	10%
Fixed Wireless	450	4%	57%	430	3%	53%
Satellite	340	3%	43%	320	3%	37%
<b>Total remote footprint</b>	<b>790</b>	<b>7%</b>	<b>100%</b>	<b>850</b>	<b>7%</b>	<b>100%</b>
<b>Total (Australia)</b>	<b>11,270</b>	<b>100%</b>		<b>12,030</b>	<b>100%</b>	

### Summary—Assumption of greenfield delays

- **The Revised Outlook assumes that approximately 871,000 greenfields premises will be passed by NBN Co after FY2021.**
- **This has the effect of including the costs for the 871,000 greenfields premises passed between FY2021 and FY2024 in scenario comparisons, but none of the revenues.**
- **The committee will seek further clarification from NBN Co on the accuracy of the greenfields deployment schedule assumed in the Revised Outlook and alternative scenarios.**

### Revenue assumptions

2.127 Section 2.5.1 of the Strategic Review outlines revised revenue assumptions. As stated above, these revenue assumptions were prepared by BCG for application across all scenarios. The Strategic Review notes that the Corporate Plan forecast cumulative revenue of \$23.1 billion from FY11-21. It further notes that the two primary drivers of revenue are the number of connected premises (pace of network deployment) and end-customer choice on speed and data usage.

2.128 The Revised Outlook makes a number of assumptions which trim revenue growth for FTTP. These will be analysed shortly. However, as noted above, the key

assumption made in the Strategic Review to strip out FTTP revenue prior to FY2021 is the delayed deployment schedule. The Strategic Review states:

As outlined in the Network deployment Revised Outlook, deployment will take approximately three years longer than indicated in the Corporate Plan. This delay will reduce the cumulative Revenue from FY11- 21 by ~\$11.6 billion (falling from ~\$23.1 billion to ~\$11.5 billion). Other factors as set out below will reduce cumulative Revenue by a further ~\$1.8-2.1 billion to FY21, resulting in total cumulative Revenue for FY11-21 of ~\$9.4-9.7 billion.<sup>89</sup>

2.129 The “other factors” noted in this passage—responsible for a reduction of approximately \$2 billion in the Revised Outlook to FY2021—include a greater rate of decline in residential ARPU than is included in the Corporate Plan; fewer residential premises connecting to the NBN; lower average prices for business premises; lower revenue from the Government sector (it is argued that these premises are included in the business segment); and reduced revenue from lower take-up and prices for the multicast service.<sup>90</sup>

2.130 The Strategic Review also states:<sup>91</sup>

During the period to FY21, the impact of the rollout delay is significantly greater than the impact of changes to ARPU and other factors. However, post FY21 the revised assumptions (particularly in relation to residential ARPU growth), will have a significant impact on Revenue because of lower ARPU and lower long-term growth forecast.

2.131 In other words, when deployment delays are washed out of the model, the “other factors”—which include reduced revenue assumptions for residential and business customers than set out in the Corporate Plan—are the reason the Revised Outlook assumes significantly reduced revenues for the FTTP build compared to the Corporate Plan. This is visible in the ‘steady state’ comparison provided in Exhibit 4-6, which assumes that in FY2028 NBN Co revenues are between \$6.6 and \$7.5 billion—up to \$3.2 billion, or 32 percent, less than assumed in the 2012-15 Corporate Plan.

2.132 The initial prices to be charged for NBN Co wholesale products were detailed in the Corporate Plan, as was the expectation that the wholesale prices would decline in real and nominal terms.<sup>92</sup> The maximum price that can be charged by NBN Co is covered by the Special Access Undertaking which has been accepted by the ACCC.

---

89 Strategic Review, p. 58.

90 Strategic Review, pp. 58-59.

91 Strategic Review, p. 59.

## Exhibit 4-6 (Strategic Review)

Exhibit 4-6: Financial outcomes (rounded), including Fixed Wireless, Satellite and greenfields (1)

Financial outcomes for Scenarios 1-6						
	Scenario 1: Revised Outlook	Scenario 2: Radically Redesigned FTTP	Scenario 3: FTTN short loop, FTTB large MDUs	Scenario 4: HFC in HFC footprint	Scenario 5: FTTN & HFC (no demobilisation)	Scenario 6: Optimised Multi- Technology Mix
Date of first positive free cashflow (2)	FY25 - ~FY40	FY25-27	FY24-25	FY22	FY22	FY22
<b>Cumulative FY11-21</b>						
Revenue (3)	\$10bn	\$9bn	\$11bn	\$16bn	\$16bn	\$18bn
Opex	\$23bn	\$23bn	\$24bn	\$26bn	\$27bn	\$27bn
Capex	\$43bn	\$35bn	\$36bn	\$36bn	\$29bn	\$30bn
Peak funding (equity and debt) (4)	~\$73bn	~\$64bn	~\$59bn	~\$51bn	~\$43bn	~\$41bn
Peak funding (all equity)	~\$63bn	~\$54bn	~\$52bn	~\$47bn	~\$40bn	~\$39bn
Cumulative Capex FY11-24 (Incl. replacement capex)	\$56bn	\$44bn	\$43bn	\$40bn	\$34bn	\$33bn
<b>Steady state financial performance (FY28)</b>						
Revenue	\$6.6-7.5bn	\$6.6-7.5bn	\$6.5-7.4bn	\$6.4-7.4bn	\$6.2-7.0bn	\$6.3-7.2bn
Opex	\$2.4bn	\$2.4bn	\$2.5bn	\$2.5bn	\$2.6bn	\$2.6bn
EBITDA	\$4.1-5.1bn	\$4.1-5.1bn	\$4.0-4.9bn	\$3.9-4.8bn	\$3.6-4.4bn	\$3.7-4.6bn
Capex	\$1.9bn	\$1.1bn	\$1.1bn	\$1.1bn	\$1.0bn	\$1.0bn
IRR (FY10-40) – Revenue Trajectory A*	2.5%	4.0%	4.1%	4.7%	4.9%	5.3%
IRR (FY10-40) – Revenue Trajectory B*	n/a	1.7%	1.9%	2.5%	2.6%	3.1%

## Exhibit 8-1 (NBN Co Corporate Plan 2012-15)

Exhibit 8-1: Revenue Plan – Forecast Summary

Revenue													
June YE	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2028	FY2040
<b>Premises Passed or Covered ('000s Premises)</b>													
FTTP Premises	18	39	341	1,307	2,912	4,625	6,279	7,838	9,283	10,783	12,202	13,467	15,435
Fixed Wireless & Satellite Premise	165	174	320	374	752	907	921	934	948	961	974	1,055	1,181
<b>Total Premises Passed</b>	<b>183</b>	<b>213</b>	<b>661</b>	<b>1,681</b>	<b>3,664</b>	<b>5,532</b>	<b>7,200</b>	<b>8,772</b>	<b>10,230</b>	<b>11,744</b>	<b>13,176</b>	<b>14,522</b>	<b>16,616</b>
<b>Premises Connected ('000s Premises)</b>													
FTTP Premises	1	4	54	487	1,515	3,036	4,341	5,594	6,695	7,607	8,513	10,010	11,464
Fixed Wireless & Satellite Premise	0	10	38	64	100	145	161	191	206	219	232	303	399
<b>Total Premises Connected</b>	<b>1</b>	<b>14</b>	<b>92</b>	<b>551</b>	<b>1,615</b>	<b>3,181</b>	<b>4,502</b>	<b>5,785</b>	<b>6,901</b>	<b>7,827</b>	<b>8,745</b>	<b>10,313</b>	<b>11,863</b>
<b>Gross Revenue (\$M)</b>	<b>-</b>	<b>2</b>	<b>18</b>	<b>120</b>	<b>529</b>	<b>1,346</b>	<b>2,281</b>	<b>3,221</b>	<b>4,200</b>	<b>5,167</b>	<b>6,175</b>	<b>9,769</b>	<b>14,597</b>

Source: NBN Co

2.133 The committee has already examined the basis for the assumed delay in the deployment schedule, and the revenue consequences of that assumption. There are three key reasons why the committee considers that the revenue assumptions underpinning the 'other factors' are overly pessimistic for the full fibre build:

- Existing take up and usage of NBN Co fibre products compares favourably to Corporate Plan assumptions;

- The Strategic Review does not consider at any point the value of, or high demand for, uploads for small business customers. Failure to consider broadband quality beyond download speeds is a systemic fault in the Strategic Review; and
- A ‘steady state’ comparison of a full FTTP build exhibits a marginal difference in revenues to the MTM, despite the vast difference in product sets. This will be examined in section 3.3, below.

2.134 Before going to these points, the committee notes that some of the “other factors” reflect current Government policy and have been “imported” into the Revised Outlook. For example, one factor—which assumes a revenue reduction of \$200 to \$300 million by FY2021, and presumably more after FY2021—is in part due to an assumption of infrastructure-based competition in MDUs, which was not countenanced in the NBN Co Corporate Plan or the policy platform of the previous government.<sup>93</sup> Another—that “more of the business market will be serviced by third-party fibre providers than is assumed in the Corporate Plan”—was a risk identified in NBN Co’s advice to Government during the caretaker period when discussing the lower revenue potential of FTTN:<sup>94</sup>

Lack of product enhancements designed for the business market (TC-2, TC-3, etc) will curtail the revenue in this segment, and may result in business customers sourcing connectivity from 3<sup>rd</sup> party networks rather than utilise a restricted FTTN service or pay for a NBN Co fibre on demand link.

2.135 The initial prices to be charged for NBN Co wholesale products were detailed in the Corporate Plan, as was the expectation that the wholesale prices would decline in real and nominal terms.<sup>95</sup> The maximum price that can be charged by NBN Co is covered by the Special Access Undertaking which has been accepted by the ACCC.<sup>96</sup>

2.136 The 2012-15 Corporate Plan also provides an extensive comparison of retail pricing on the NBN and comparisons to plans already in the market. These demonstrate the prices are broadly comparable with ADSL prices.<sup>97</sup> There are a range of plans at the 12/1 mbps tier currently available on the NBN starting from \$29.95 a month with no additional line rental—Skymesh and Harbour ISP are two examples. Prices for 100mbps products are also broadly comparable to existing ADSL and HFC prices—for example, Exetel currently offers a 100/40mbps service, with 100GB of

---

93 Strategic Review, p. 58.

94 Strategic Review, p. 59; NBN Co Caretaker Advice, p. 118. The Caretaker Advice is discussed at length below.

95 NBN Co, *Corporate Plan 2012-15*, Section 8.2.6.

96 ACCC ‘Final decision on the SAU lodged by NBN Co on 19 November 2013’ (13 December 2013).

97 NBN Co, *Corporate Plan 2012-15*, Exhibits 7-8, 7-9 and 7-10.

data, for \$69.95 a month.<sup>98</sup> Similarly, iinet offers a 100/40mbps service, with 200GB of data, for \$79.95 a month.<sup>99</sup>

2.137 Exhibit 2-23 of the Strategic Review demonstrates that the current take-up of higher speed tiers is ahead of Corporate Plan expectations:

### Exhibit 2-23

Exhibit 2-23: Take-up rate of NBN Co services relative to Corporate Plan

Take-up rate relative to Corporate Plan: brownfields and greenfields				
	Actual (Sept-13)		Corporate Plan	
	All active FSAMs <sup>2</sup> of 291,030	All FSAMs active before 31 December 2012 <sup>2</sup>	Corporate Plan to Sept-13	Corporate Plan for 2016
Overall take-up rate of premises <sup>1</sup>	19%	42%	20%	66%
Mix of speed plans of those taking up services				
12/1Mbps plan	45%	49%	49%	42%
25/5-10Mbps plan	27%	23%	28%	26%
50/20Mbps plan	5%	4%	5%	5%
100/40Mbps plan	23%	24%	18%	23%
250/100Mbps plan	n/a	n/a	n/a	4%

2.138 Similar evidence was presented by NBN Co during its half yearly results briefing on 21 February 2014:<sup>100</sup>

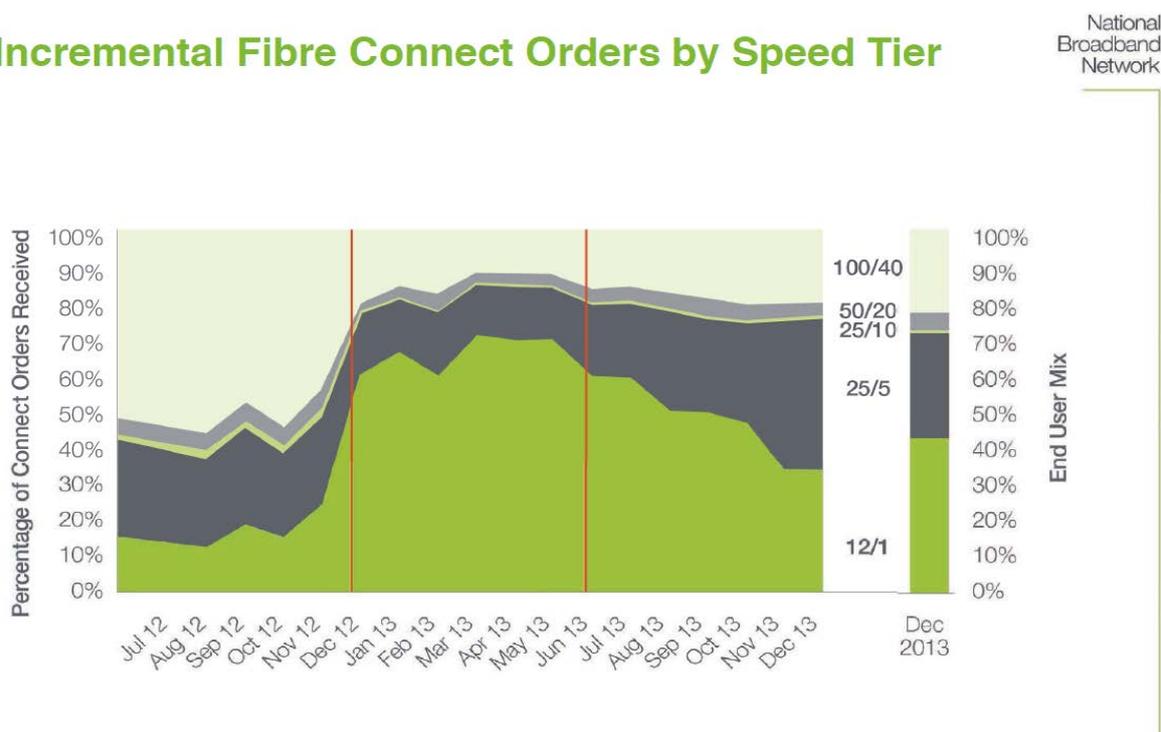
98 See: [http://www.exetel.com.au/resi\\_nbn.php](http://www.exetel.com.au/resi_nbn.php)

99 See: <https://www.iinet.net.au/internet/broadband/nbn/plans>

100 NBN Co, Half Yearly Results Briefing, p. 13, at: <http://www2.nbnco.com.au/content/dam/nbnco/documents/Half-Year-Results-Presentation-PDF.pdf>

## AVC Profile

### Incremental Fibre Connect Orders by Speed Tier



2.139 The committee also notes the following testimony on fibre take up rates from the May 2013 Senate Estimates hearing:<sup>101</sup>

**CHAIR:** How does this [take up] compare internationally?

**Mr Quigley:** From all the benchmark we have seen this is really quite dramatic. Mr Steffens came across from BT, so he knows the European scene reasonably well. How would you describe it?

**Mr Steffens:** We continue to benchmark financially on a regular basis. We met with a colleague only last week from the supply side who is talking to many operators across the world. Fifteen per cent is often seen as a very good take-up, and we are substantially above that.

**Senator Conroy:** I think the NBN executives are being far too bashful. I should add to the answer substantially. The take-up rate for fibre connected for 12 months or more is about 35 per cent. For areas connected for six months or more it is around 30 per cent. Compare this to, say, ADSL when it was introduced in 2006, where the ABS found that 28 per cent of households had broadband six years after its introduction. In other words, NBN Co. has achieved with fibre in six months what it took six years to do with ADSL and HFC.

101 Committee Hansard, Budget Estimates 2013, p. 152.

---

2.140 The submission to the Committee by iiNet contained examples of small businesses utilising the higher speed services.<sup>102</sup> This submission emphasised the importance of uploads, one of the key advantages of FTTP over FTTN:

The performance of data uploading features strongly in a variety of case studies of iiNet small business customers, attached below. In all cases, upload performance is the key to their purchasing decision. Nowhere in the strategic review is there any consideration of upload performance to the small business sector of the economy, or at all. Any business utilizing broadband will confirm that upload performance is ‘mission critical’ and yet little attention has been given to this issue, which is strategically important to the Australian digital economy.

2.141 A number of small businesses provided similar testimony to the committee. For example, during the 11 March hearing, Mr Edgar Adams, Editor of the Central Coast Business Review, noted:<sup>103</sup>

Also, if I just may mention, we are not just talking about downloading. It is the uploading that is the big issue in the case of a lot of the businesses. It took an hour last week for my magazine to be uploaded, at 50 megabits, to the printer.

2.142 Similarly, Ms Michelle Allen, CEO of a small business called Webstuff.biz, noted:<sup>104</sup>

As a company that is employing people under 30—we employ six and my company is growing but the internet is holding us back. One of things we also do with a lot of our clients is encourage our Central Coast clients to market outside the Central Coast—that is, selling products online. These clients are all having problems and a lot of our clients have to get us files by post or USB. They drive their files to our office, and this happens on a weekly basis, because we have a massive client list. It is very difficult as a business to be innovative and we are encouraged to be—for example, last year I came up with an innovative idea to create a software package for cafes so they can order lunches and things online. We made this 3D model and, when we started looking at the feasibility to roll this product out, we realised that no-one would be able to render the 3D models of the food online because of the internet connections.

2.143 Ms Allen continued:<sup>105</sup>

I have got a client who has got a rocking horse business and he creates the most amazing world-class rocking horses that are hand carved. He ships these things and 95 per cent are sent out of the Central Coast. It is a small

---

102 iiNet submission (Sub. 11), available at: [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/National\\_Broadband\\_Net\\_work/NBN/Submissions](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/National_Broadband_Net_work/NBN/Submissions)

103 Committee Hansard, 11 March 2014, p. 7.

104 Committee Hansard, 11 March 2014, p. 12.

105 Committee Hansard, 11 March 2014, p. 12.

work-at-home business but he has got to send really large photos to his potential customers. He has to bank up his emails and send them out at night time because he is in Matcham, which is not far from Erina, and the internet connection is slow. His productivity is slow, and this is just money that should be in our region.

2.144 Councillor Hillary Morris of Gosford City Council noted that this problem is not isolated to Australians running small businesses from home; it extends to employees of larger companies who work from home:<sup>106</sup>

I know of a woman who works for an international company that is based in California. There are 50 employees who all work from home; she is a translator and works on translating brochures, information, pamphlets et cetera for many organisations. The company has people in Europe, Thailand, the Philippines, India and America, and she works from a home office in Tascott. She has two wireless modems and mobile phone hotspots that she has to implement to download and upload her work, and often, when she is having videoconferencing or is trying to download files to be able to quote on work, she experiences a meltdown and cannot download her information or, if she does download it, it takes a long time.

2.145 During the 11 March committee hearing, a local year 11 student, Mr Nick Patsianas, asked the committee if he could have the opportunity to speak about this issue.<sup>107</sup> He noted the importance of uploads to education outside the classroom:

Video is the next thing. In school we learn in a classroom, but we also learn out of the classroom, and video is a great way of doing that. At our school, we are looking into a video platform to directly tie video from the internet to our learning. There is a guy on YouTube I know, he goes by the name of Eddie Wu, and he records all his lessons—every single lesson. I am not sure if he has access to the NBN or not, but uploading every single lesson he records would take a very long time on an ADSL connection. But, if he is on the NBN, he would be able to do that easily. Heaps of students watch him. I watch him; he has helped me so much.

2.146 At the Additional Estimates Hearing on 25 February, Dr Switkowski said:<sup>108</sup>

**Dr Switkowski:** I think if you were a small business doing software development and moving large files between locations, hundreds of megabytes per second can be very useful. For example, if you were doing special effects in 3D movies, which some enterprises in Australia do in support of Hollywood studios, they would need that kind of bandwidth and usually have options for getting it, not waiting for NBN to provide a reticulated retail network to do it. There will be others where the information is very data rich. Large quantities of MRI scans et cetera that move from point to point will require lots of bandwidth. Again, those institutions, by and large, have put in place physical infrastructure that

---

106 Committee Hansard, 11 March 2014, p. 5.

107 Committee Hansard, 11 March 2014, p. 40.

108 Committee Hansard, Additional Estimates 2014, pp. 65-66.

provides it today, as do universities. I think the difficulty is that there are applications and organisations that use lots of bandwidth, including big businesses. They have made their own provision, as they always do. In terms of the retail and domestic market, it really is hard in any practical sense to describe the activities of a family, even with hyperactive teenagers, that would get anywhere near 100 megabytes per second any time soon.

2.147 As set out above, in the Half Yearly Results briefing NBN Co provided data that showed over 20 percent of NBN Co's fibre customers select a 100 Mbps service. This trend has been visible for many years. Despite this, the CEO of NBN Co continues to assert that Australian households—which include multiple small businesses, people who work for large businesses but work from home, and students who require video to continue their education outside the classroom—have no use for this service. Moreover, the CEO of NBN Co continues to focus only on download speeds as key measure of broadband quality. The same narrow focus is evident in the Strategic Review.

2.148 NBN Co was asked questions in writing to justify the revenue assumptions set out in the Strategic Review.<sup>109</sup> At the time of writing answers to these questions had not been provided. The significance of these factors to the NBN Co business model was canvassed during the public hearing on 28 November 2013.<sup>110</sup> The Committee also asked NBN Co for financial scenarios that included the impact of the three factors—reduced unit revenue, increased costs and a longer deployment period—if each was conducted separately. NBN Co has replied:

The information referred to above was not prepared in these terms at the time of the Strategic Review and is not available.<sup>111</sup>

#### *Summary—Revenue Assumptions (Revised Outlook)*

- **The committee considers that the revenue assumptions in the Revised Outlook are overly pessimistic.**
- **These revenue assumptions do not reflect existing take up and usage of NBN Co fibre products. These assumptions also ignore demand for broadband quality, and particularly uploads, in the residential and small business market. The committee notes that failure to consider broadband quality beyond download speeds is a systemic fault in the Strategic Review.**

---

109 Questions in writing are available on the Committee website at: [http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/National\\_Broadband\\_Network/NBN/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/National_Broadband_Network/NBN/Additional_Documents)

110 Committee Hansard, 28 November 2013, pp. 2-4.

111 Answer to Questions on Notice, 17 December Hearing, No. 28.

- **The committee considers that these assumptions remove revenue benefits from the superior product set available on FTTP, compared to other technologies.**

### *Assumptions of price increases*

2.149 Section 4.4.3 of the Strategic Review sets out an ‘illustrative’ analysis of retail and wholesale pricing. This section states that in order to achieve an internal rate of return (IRR) of 7.1% for the Revised Outlook, prices would need to increase by 50-80 percent. This is then converted to a retail price increase of \$27-\$43 per month:<sup>112</sup>

The required minimum price increase to deliver a 7.1 percent IRR are also illustrated with the impact on a 50/20Mbps service, assuming a current cost to consumers of ~\$75-95 per month. The prices here are used for illustrative purposes only.

- The Revised Outlook would requires [sic] price increases of 50-80 percent (e.g. \$27-43 more per month for a 50/20 Mbps service on top of the illustrative ~\$75-95 today).

2.150 The committee notes that the price increases are hypothesised on recovering an inflated peak funding amount (approximately \$73 billion) that is based on the assumptions detailed above—deployment delays and revenue consequences, a third satellite, inflated capital expenditure with no build efficiencies, et cetera. The committee also notes that these hypothetical price increases are based in part on assumptions of ARPU declines in the Revised Outlook.<sup>113</sup>

2.151 The committee also notes that the ‘illustrative’ examples provided are based upon a 50/20Mbps service. The selection of this speed tier to illustrate these hypothetical price increases is odd. In statements to Parliament, the Minister has characterised this service as representative of a ‘typical household.’ For example, on 12 December 2013, the Minister said that the Strategic Review confirms that:

Costs are so high that they will add \$43 per month to a typical household’s broadband bill.<sup>114</sup>

2.152 Putting to one side the fact that the Minister has quoted the highest end of the hypothetical range (\$27-\$43), as set out above, the 50/20mbps plan is chosen by only 5 percent of retail customers. The committee is also reminded of Mr Abbott’s statement at the launch of the Coalition broadband policy that:

We are absolutely confident that 25 megs is going to be enough, more than enough, for the average household.<sup>115</sup>

---

112 Strategic Review, pp. 68-69.

113 Strategic Review, p. 58.

114 House of Representatives Hansard, 12 December 2013.

115 Joint Press Conference, The Hon. Tony Abbott MP and The Hon. Malcolm Turnbull MP (9 April 2013), at: <http://mt.tbone.com.au/homepage-issues/launch-of-coalition-broadband-policy-transcript-of-tony-abbott-and-malcolm-turnbull-press-conference/#sthash.f5XcBUpn.dpuf>

<b>Summary of findings—Revised Outlook</b> <b>The Revised Outlook:</b>	<b>Effect on NBN financials</b> <b>(to new forecast end date)</b>
<ul style="list-style-type: none"> <li>excludes ‘business as usual’ architecture savings signed off by previous NBN Co management, and characterises them as ‘radical’ for inclusion in Scenario 2</li> </ul>	<b>CapEx + ~\$4 billion</b>
<ul style="list-style-type: none"> <li>assumes a delay in the revised deployment schedule that is at odds with NBN Co’s current run rate, reflects deliberately conservative estimates of premises passed at peak rollout, and cannot be disentangled from political control of the speed of network deployment</li> </ul>	<b>OpEx + ~\$5.4 billion</b> <b>Interest + ~\$7.5 billion</b> <b>Revenues – ~\$11.6 billion</b> ..... <b>Peak funding + ~\$13 billion</b>
<ul style="list-style-type: none"> <li>includes assumptions on (redacted) higher unit costs for the fibre build that are at odds with recent evidence from NBN Co and the Department of Finance, and are extrapolated out to 2024 without a single efficiency saving for three years, and only 2.5 percent in two of the remaining seven years</li> </ul>	<b>CapEx + ~\$14.4 billion</b>
<ul style="list-style-type: none"> <li>includes a third satellite without direct explanation, with launch assumed at such a time (FY2021) to include costs but exclude revenues from scenario comparisons</li> </ul>	<b>CapEx + ~\$?</b>
<ul style="list-style-type: none"> <li>makes overly pessimistic revenue assumptions that do not reflect existing strong demand for NBN services, or the high data usage patterns of Australians using the NBN; ignore demand for important elements of broadband quality, particularly reliability and upload speeds; and remove revenue benefits from the superior product set available on FTTP, compared to other technologies</li> </ul>	<b>Revenues – ~\$2 billion</b>

The Strategic Review also includes apples-and-oranges scenario comparisons that include costs and revenues for the MTM build at assumed completion, and costs for the Revised Outlook out to 2024, but exclude revenues for the Revised Outlook beyond 2021.

## Committee Analysis – Multi Technology Mix

### Overview

2.153 The Strategic Review was required to consider alternatives to the current FTTP model to fulfil the requirements of three parts of the terms of reference, being:

- The estimated cost and time to complete the NBN if variations were made to the current plan such as increased use of fibre-to-the-node (FTTN) in established (brownfield) areas
- The economic viability of NBN Co under alternative strategies
- The implications of capital costs and principles of cost recovery on wholesale and consumer prices under existing and alternative strategies<sup>116</sup>

2.154 In examining alternative strategies for the NBN, the review undertook a comparative evaluation of a number of scenarios. Four scenarios were considered as alternatives to a full FTTP roll out in the fixed line footprint. These are:

- Scenario 3: FTTN short loop/FTTB large MDUs;
- Scenario 4: HFC in HFC footprint;
- Scenario 5: FTTN and HFC (no demobilisation); and
- Scenario 6: Optimised Multi-Technology Mix.<sup>117</sup>

2.155 The Strategic Review provided a summary of Scenario 6, the Optimised Multi-Technology Mix (MTM) approach:

There are many ways for NBN Co to deliver a multi-technology approach. In this scenario, NBN Co selects which technologies will be rolled out on an area-by-area basis, in a way that minimises peak funding and maximises long term economics, while delivering 50Mbps to a significant proportion (~90 percent) of the fixed line footprint by end of CY19 (covering all areas, both broadband-served and –underserved). The technology selection by area takes into account:

- The earliest available technology that provides a certain speed for that area;
- The relative cost position (build Capital Expenditure, ongoing Capital Expenditure and
- Operating Expenditure) of the various technologies;
- The constructability in relation to neighbouring areas;
- The implications on future revenue realisation; and
- The potential future upgrade path.<sup>118</sup>

---

116 Strategic Review, p. 9.

117 Strategic Review, p. 15.

118 Strategic Review, p. 15.

2.156 The Strategic Review recommended scenario six as the preferred scenario, explaining:

NBN Co recommends that it develops an optimised multi-technology approach to rolling out the NBN that balances fast deployment of 50Mbps broadband with better economics, to the highest number of Australians.<sup>119</sup>

A further argument the review advanced in favour of the optimised multi-technology mix approach is that it would provide NBN with:

...the flexibility to adapt over time. It allows NBN Co to adjust its technology mix dynamically to leverage future technological improvements across all types of networks (copper, fibre and HFC) and to reflect changes in customer demands.<sup>120</sup>

2.157 The committee reiterates its concerns about the heavily redacted nature of the public version of the Strategic Review. As noted, the Strategic Review underpins a potential Commonwealth investment of more than \$40 billion—not including flagged technology upgrades—and should be made available to the Parliament, in accordance with the Minister’s many undertakings on transparency and accountability. During the public hearing on 17 December 2013, the committee put to Dr Switkowski the stark difference between the Strategic Review and committee experience in previous Parliaments:

**Senator LUDLAM:** But we are being asked to accept the entire basis for this project being financially and commercially viable on the basis of a couple of blacked-out rectangles.

**Dr Switkowski:** Might I say that this is a step ahead of anything else you might have been asked to comment upon.

**Senator LUDLAM:** No, it is not. I have been working on these committees for five years now and we have been provided with full financials to the company, apart from one period where the background material for the expert panel was not provided to anybody, including the Senate, in 2009.

**Dr Switkowski:** I stand corrected.<sup>121</sup>

2.158 This section considers the detail of the MTM approach, including an evaluation of the assumptions therein. The assertions regarding cost of upgrades and the related methodology issues will also be examined. First, however, the Committee notes that NBN Co provided detailed analysis of the implementation of the Coalition broadband policy during the caretaker period. The following section analyses the circumstances leading to the provision of this advice.

---

119 Strategic Review, p. 18.

120 Strategic Review, p. 19.

121 Committee Hansard, 17 December 2013, p. 23.

**Caretaker advice**

2.159 At the public hearing on 11 December 2013, the Secretary of the Department of Communications, Mr Drew Clarke, explained the process for the preparation of briefing material for a returning Government or an incoming Government:<sup>122</sup>

**Mr Clarke:** Once the official caretaker period commences, the department starts preparing what is colloquially known as the 'red book' and the 'blue book', the two incoming government briefs for the alternative election outcomes. Given that we had in front of us at that time an extensive policy statement by the then opposition, we requested advice from the company on issues that would need to be considered, should the company find itself in a position of having to implement that policy. So we wrote, we asked questions and we received documents, and the department incorporated the advice that it received, looked at it, made judgements and incorporated that advice in our preparation of the incoming government brief—the blue book in this case.

2.160 Further information about the “advice from the company on issues that would need to be considered, should the company find itself in a position of having to implement that policy” was outlined during the same hearing:

**Senator SMITH:** I want to go back the question that I was asking before. What date did the letter come from the department to NBN Co. requesting material to support it in its preparation of the blue book or the red book?

**Mr Cooney:** I will have to take the exact date on notice. It was shortly into the caretaker period.

2.161 The answer to this question on notice stated that:<sup>123</sup>

The request from the department was dated 5 August 2013.

2.162 Mr Cooney confirmed at the 11 December hearing that NBN Co did not commence the preparation of the caretaker advice until 6 August 2013:

**Senator SMITH:** So despite the fact that the election for a long time was going to be held on 14 September, NBN Co. did not do any work or prepare any materials for a request that you knew would come from the department to prepare material for a blue or red book?

**Mr Cooney:** No. We began the process that you are talking about on the day after we received that request. Individual people were aware of different options and were looking into those just as part of working within the industry, true. But any preparation in response to the request from DBCDE came after that.

2.163 An answer to a question on notice described the nature of the written advice that NBN Co supplied to the Department of Communications during the caretaker period.<sup>124</sup> This document states:

---

122 Committee Hansard, 11 December 2013, p. 3.

123 Answer to Questions on Notice, 11 December 2013, No 1.

At the commencement of the caretaker period on 5 August 2013, DBCDE requested that NBN Co provide information on a series of topics. This information was provided progressively to DBCDE from 14 August 2013. Following this, the dispersed information that had already been provided progressively to DBCDE was collated into one Board paper for presentation to the Board at its meeting on September 20, 2013.

2.164 On 29 November 2013, a document obtained by Fairfax described as “NBN Co’s internal analysis for the incoming Abbott government” was cited in an article in the Sydney Morning Herald called “Confidential briefing: NBN unlikely to meet Coalition's deadline.”<sup>125</sup> The full document was later published on the Delimiter website.<sup>126</sup> The document is 163 pages long, exhibits “FOUO: Board” in the footer, and contains NBN Co’s full analysis of the issues involved with implementation of the Coalition broadband policy. On page 56 it states:

This Information Paper has been prepared at the request of the Shareholder Departments for their Incoming Government Briefs (IGBs).

2.165 The committee considers that this document (or collection of documents) is NBN Co’s input into the ‘blue book’ developed by NBN Co and “provided progressively to DBCDE from 14 August 2013.”

2.166 In an interview on Channel 9 on 29 November 2013, Minister Turnbull stated in relation to the leaked document that:

What they’ve got is, they’ve got a document which was prepared at the Labor Government’s request more than six months ago by the NBN Co management....this document is A: out of date, B: it is defending a failed project. It has no credibility, absolutely none.<sup>127</sup>

2.167 The Committee understands that the Delimiter website invited Turnbull to retract his comment on national television that the document had been created six months ago for the Labor Government. The website reports that “Turnbull’s spokesperson has not responded to a request for the Minister to retract the comment.”<sup>128</sup>

2.168 As the Department of Communications has refused access to the Incoming Government Brief, and the Minister has not accepted invitations to provide it himself, the Committee is unable to ascertain how much of the NBN Co advice was included

124 Answer to Questions on Notice, 29 November 2013, No 14.

125 David Braue, “Confidential briefing: NBN unlikely to meet Coalition's deadline,” *Sydney Morning Herald* (29 November 2013), at: <http://www.smh.com.au/it-pro/government-it/confidential-briefing-nbn-unlikely-to-meet-coalitions-deadline-20131128-hv3tp.html>

126 Available here: <http://delimiter.com.au/nbndocs/Assessment%20of%20Coalition%20Policy.pdf>

127 Video available here: <http://www.youtube.com/watch?v=UgNyQjp9Xto>

128 Renai LeMay, “NBN Co internal FTTN analysis: Turnbull refuses to retract inaccurate claim,” *Delimiter* (4 December 2013), at: <http://delimiter.com.au/2013/12/04/nbn-co-internal-fttn-analysis-turnbull-refuses-retract-inaccurate-claim/>

in the Incoming Government Brief.<sup>129</sup> However, noting the importance of the National Broadband Network within the communications portfolio, and the serious issues with implementing a key Coalition policy identified in the NBN Co caretaker advice, it is the Committee's view that the Departments of Communications and Finance had a clear duty to include in the Incoming Government Brief all substantial information contained in the caretaker advice from NBN Co dealing with the implementation of the Coalition broadband policy.

### *Summary of findings—Caretaker Advice*

- **On 5 August 2013, the Department of Communications wrote to NBN Co requesting advice from the company on issues that would need to be considered to implement the Coalition broadband policy. NBN Co commenced developing this material on 6 August 2013, and provided its advice progressively to the Department from 14 August 2013.**
- **NBN Co's advice to the Department was later collated into one Board paper for consideration on 20 September 2013. The collated advice from NBN Co to the Department was leaked in November 2013, and is available on the Fairfax and Delimiter websites.**
- **The committee considers that all substantial information from this advice dealing with the issues/problems of implementing the Coalition broadband policy was included in the Incoming Government Brief.**

### *Methodology*

2.169 A significant deficiency in the comparative evaluation used in the Strategic Review is a primary focus on cost per premises. The Strategic Review notes that:

The key measure of rollout cost is Cost Per Premises. This is not a tightly defined measure, however, international benchmarks provide useful comparisons for consideration by NBN Co.<sup>130</sup>

2.170 To the extent that service capability was considered, the Strategic Review only focussed on download speeds. Other characteristics of broadband quality—such as latency and jitter—were not considered. In particular, the Strategic Review is silent on the upload speeds of alternative technologies. As noted above, this is systemic fault in the Strategic Review. As iinet noted in its submission:<sup>131</sup>

---

129 Renai Lemay 'Turnbull Blue Book application fails' *Delimiter* (10 February 2014), at: <http://delimiter.com.au/2014/02/10/turnbull-blue-book-access-application-fails/>; The Hon Malcolm Turnbull MP, Minister for Communications, House of Representatives Hansard, 18 November 2013.

130 Strategic Review pp. 13-14.

131 Iinet submission (Sub. 11), p. 3.

The performance of data uploading features strongly in a variety of case studies of iiNet small business customers, attached below. In all cases, upload performance is the key to their purchasing decision. Nowhere in the strategic review is there any consideration of upload performance to the small business sector of the economy, or at all. Any business utilizing broadband will confirm that upload performance is 'mission critical' and yet little attention has been given to this issue, which is strategically important to the Australian digital economy.

Businesses considering on-line services or applications are hampered by the ability of their target market (consumers) to access those services, if their broadband performance is limited. Without an addressable market, Australian on-line service development will progress slowly.

The importance of broadband performance to both sides of the on-line, supply and demand dynamic is ignored in the strategic review, just as it has been in the political debate, over recent years.

Almost all discussion has been centred on download speeds for domestic broadband users – the demand-side. This is why the arguments over the comparative download speeds of competing technologies has absolutely failed the Australian community. Without a supply-side review, focused on service creation and delivery, Australian consumers will have little reason to acquire high performance services.

2.171 The committee also has concerns with elements of the MTM approach which reflect incumbent rollout strategies. For example, the Strategic Review states that FTTP should be built in brownfields areas:

where it is the most economical choice: either because of high revenue potential (especially in business areas) or because of the high cost associated with deploying FTTN/dp.<sup>132</sup>

2.172 Similarly, the Strategic Review assumes that:

FTTN is concentrated in areas with relatively short-loop lengths and (relative to FTTP) lower revenue potential.<sup>133</sup>

2.173 The MTM openly advocates deploying higher quality technologies (FTTP) in areas with high revenue potential and cheaper technologies in areas with lower revenue potential.

2.174 The committee rejects a strategy that tailors deployment technologies on the basis of the socioeconomic profile of a rollout area. This is appropriately the prerogative of private enterprise, and reflects to a large extent the existing distribution of privately-funded broadband infrastructure in Australia. It is not an appropriate rollout strategy for a taxpayer-owned company charged with correcting market imbalances by providing high-quality broadband to all Australians.

2.175 A similar approach is evident in the Fibre on Demand product expected to be offered on the MTM. The Strategic Review is mostly silent on this product—noting only that there are policy issues to be resolved. However, the potential pricing of this product—which uses taxpayer investment to subsidise the fibre link from the Fibre

---

132 Strategic Review, p. 97.

133 Strategic Review, p. 97.

Access Node (FAN) to the FTTN Node—was discussed as the 12 March public hearing:<sup>134</sup>

**Senator CONROY:** Are you aware that Openreach has recently increased the prices for fibre on demand in the UK? From 1 May this year it will cost somewhere between A\$4,100 and A\$13,200 in the first year to buy this service, not including usage. Are you aware of those—

**Dr Switkowski:** I had not heard the details—

**Senator CONROY:** Let me take you through it so that you are fully aware. Mr Turnbull keeps telling you to look at BT. For a premise less than 200 metres from the node it will cost 300 pounds—that is about A\$550—for the upgrade, plus 750 pounds or A\$1,380 to connect, plus 1,188 pounds or about A\$2,200 for the annual rental charge. That is for 200 metres. For a premise two kilometres from the node it is 6,000 pounds or about A\$11,000 for the upgrade, plus 750 pounds to connect, which is A\$1,300, and 1,188 pounds or A\$2,200 for the annual rental charge.

2.176 Dr Switkowski noted subsequently:

I think BT Openreach is not a bad reference point for much of what we are thinking about.

2.177 One of the contributors to the Central Coast Broadband Alliance submission, Ms Da Costa, noted that:<sup>135</sup>

Large business can afford the cost of connecting from the node, but small business - where most Australians are employed - cannot.

2.178 This issue was discussed further at the 11 March committee hearing:<sup>136</sup>

**Senator CONROY:** Gosford have got it for free but you guys may have to pay thousands and thousands of dollars just to get it connected. Is that fair? Can you afford that sort of impost?

**Dr da Costa:** I do not think businesses can. As the executive officer of the chamber of commerce, I am chasing people who are struggling to pay their chamber of commerce membership fees—and that is a few hundred dollars, not thousands of dollars to connect. So I think it is an equity issue. If some businesses get cheap infrastructure and, because of the toss of a coin, others simply have an inequitable access and an extra business cost, that is not a level playing field in the business world. What we are after is a level playing field. We are after a level playing field that increases productivity, increases employment and, with respect to Austen, as a regional area within Australia, we want to have more capacity for people to work here, closer to home. I have spent several years commuting four hours a day to Sydney. If you have staff who do not have to spend four hours a day commuting, they are happier. Happier staff are more productive staff. A work-life balance is

---

134 Committee Hansard, 12 March 2014, p. 23.

135 Central Coast Broadband Alliance Submission (Sub. 6).

136 Committee Hansard, 11 March 2014, p. 14.

not just a feel good thing; it is a true business decision. What will happen to Erina is that people will try to cram into Gosford and that will overload the infrastructure system there. We want to spread out the business community on the Central Coast and we need equality of access to infrastructure.

2.179 As set out above, demand for broadband quality—and particularly upload speed—is visible in the residential market as well as the business market. This reflects rising average data usage trends, but also small businesses in residential premises, Australians working for large businesses from home, and the increasing bandwidth demands of health and education services being delivered to—and from—the home. This demand is evident before other factors—such as entertainment—are taken into account. The MTM, however, reflects the views of the CEO of NBN Co that these bandwidth demands are limited to businesses which will make ‘their own provision, as they always do.’<sup>137</sup>

2.180 The committee considers that access to high quality broadband—and particularly the upload speeds made available over FTTP—will be rendered prohibitive to many Australian households and small businesses by the user-pays approach advocated by the current Government, and reflected in the MTM. This will entrench widespread inequality in access to infrastructure for Australian households and small businesses.

### *Summary—MTM Methodology*

- **The MTM advocates deploying higher quality technologies (FTTP) in areas with high revenue potential, and cheaper technologies in areas with lower revenue potential. This is not an appropriate rollout strategy for a taxpayer-owned company charged with correcting market imbalances by providing high-quality broadband to all Australians.**
- **Failure to consider broadband quality beyond download speeds is a systemic fault in the Strategic Review. This manifests itself in the methodology evident in the MTM.**
- **The proposed Fibre on Demand product—based on BT Openreach prices—will be too expensive for many small businesses and will entrench widespread inequality in access to infrastructure for Australian households and small businesses.**

### *MTM Assumptions*

2.181 The financial model for the MTM was built using primarily international benchmarks and estimates, rather than empirical field data. Key parameters for implementation of the MTM model include:

- The cost, if any, to acquire Telstra’s copper from pillars to premises;

---

137 Committee Hansard, Additional Estimates 2014, p. 66.

- The cost of building or acquiring IT systems to manage the copper assets;
- The cost of remediating the copper assets including removal of bridge taps and rectification of poorly maintained joints;
- The cost of maintaining the copper network;
- The cost, if any, of acquiring the HFC networks;
- The cost of integrating the HFC networks into the transit architecture of NBN Co;
- The cost of maintaining the HFC;
- The cost to upgrade the HFC to increase upload speeds and reduce contention on download speeds;
- The cost to add an additional 700,000 premises to the HFC networks; and
- The cost of connecting HFC to MDUs.

The FTTN deployment recommended by NBN Co requires access to the Telstra's copper customer access network (CAN). The caretaker advice developed by NBN Co on the state of the copper plant made the following points in regard to network remediation and maintenance of the CAN:<sup>138</sup>

---

138 NBN Co, Caretaker Advice, p. 101.

### Network remediation

In order to rollout a VDSL2 network and achieve minimum targets speeds of 25 Mbps by 2016 and upgrading to 50 Mbps for 90% of the fixed line footprint<sup>139</sup> (as per the Coalition policy), significant network remediation will need to occur in the copper plant including:

- The replacement or repair of **low quality copper** lines, caused for example by poor joints. The extent of low quality lines in the copper plant is unknown.
- The removal of "**bridge taps**" that cause impedance mismatches and reduce the performance of VDSL2 to levels comparable with ADSL. Bridge taps may be used to provide telecommunications services to 4.5% of Australia<sup>20</sup>.
- The upgrade of the copper network where "**pair gain**" copper-sharing technologies are used to extend the distance and efficiency of copper networks. These networks are not compatible with VDSL2 and will act as blockers for deployment. Upgrades could be performed through the rollout of FTTP technology or through upgrading the copper and using FTTN technologies. The most appropriate upgrade technology will depend on the size of the area requiring an upgrade (see [Technology Upgrade Paths for FTTN](#)). Pair gain systems may be used to provide telecommunications services to 4.5% of Australia.
- The upgrade of the network where **line conditioning** equipment is used, such as loading coils and digital repeaters. This equipment is not compatible with VDSL2 and will act as blockers for deployment. Line conditioning equipment may be used to provide telecommunications services to 3% of Australia.
- The removal of sources of **interference** that may significantly impact the performance of VDSL2 in some locations and on some copper lines.

Once the network is remediated, ongoing maintenance of the copper network will require different field workforce, systems and processes compared to fibre maintenance. This is likely to increase OPEX costs. For example, based on Telstra's 2012 Annual Report, the Telstra Operations business unit spent \$3.75 billion in FY12, of which an estimated \$1 billion per annum is on the operations and maintenance of the copper network (noting that this amount is subject to due diligence with Telstra).

2.182 The caretaker advice further noted:<sup>139</sup>

#### Remediation

The extent of remediation that is required to meet an FTTN speed target of 50Mbps is unknown in the Australian environment. As a result the expected cost for copper remediation will be very difficult to estimate (by either NBN Co or Telstra). The degree to which Telstra can be required or incentivised to upgrade the copper network to overcome many of these limitations is uncertain. As a result network remediation costs will be a large uncertainty in any business model or commercial deal. The allocation of this risk will be difficult to negotiate.

2.183 The caretaker advice was corroborated by a number of witnesses who gave testimony to the Committee, including the Communications Electrical and Plumbing Union (CEPU), the Electrical Trades Union (ETU) and Central Coast Telecommunications Services (CCTS). Each of these witnesses represented workforces with direct experience of the copper plant in the field.

2.184 Mr Shane Murphy of the CEPU stated during the 28 November hearing that:<sup>140</sup>

Telstra fieldworkers and contractors who we represent have been regularly reporting to the union for many years now the exact state of the Telstra

<sup>139</sup> NBN Co, Caretaker Advice, p. 43.

<sup>140</sup> Committee Hansard, 28 November 2013, p. 44.

copper network right across the country. Workers' frustrations have boiled over as Telstra has driven a culture of quantity over quality. Since the privatisation of Telstra, maintenance budgets have been continually slashed year in year out, thousands of skilled workers have been made redundant and the end-result is that we are left with plastic bag joint and ring bark cable right across the nation.

Telstra has been consistently pushing workers to simply get the customer services up and running, bandaiding the network and moving the employee or contractor quickly onto the next job. This has resulted in thousands upon thousands of plastic bags and ring bark cables lying bare in the pits and manholes across the country in every major city and regional and remote country town. In every street or road in this country where there is a Telstra pit or manhole, it will either have a plastic bag joint or a ring bark cable lying bare in the pit.

I will bring you one example. Just at the weekend in Sydney I happened to be travelling through a fairly highly-populated area in north-western Sydney along Parsonage Road at Castle Hill past a number of businesses and residential customers. I noticed that there was Telstra worker from Victoria working in Sydney due to the number of customers off the air up there and I stopped to have a quick chat. In the space of 300 metres of this road at Castle Hill where the Victorian linesman was working, in five different pits were three plastic bags and two ring bark cables. This was all in the space of about 200 or 300 metres—and we did not walk the whole street. Some of those photos are provided for the committee today.

This provides the committee with a sample of just how bad it is out there, and Telstra relies upon statistics to continually hide the real problem of how bad the Telstra copper network is. The union relies upon actual evidence provided by workers such as CNI reports, photographs and videos taken by workers at the jobsites around the country. The union currently has a collection of thousands of photos and videos showing the true state of the Telstra copper network. These have been collected now for some time and the collection is still growing by the day. Today the CEPU provides this committee with a good sample of photos recently taken on a job by Telstra fieldworkers across various states and territories, and I will come to this slideshow shortly.

2.185 As noted, the CEPU provided an extensive range of pictures of the copper plant during this hearing, taken by technicians working in the field. These are available on the committee website.<sup>141</sup> A selection of these photographs is reproduced below.

---

141 See:

[http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/National\\_Broadband\\_Network/NBN/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/National_Broadband_Network/NBN/Additional_Documents)



2.186 The CEPU was also asked how widespread these conditions were in the copper network:<sup>142</sup>

**Senator LUDLAM:** Would you want to hazard a guess as to what proportion of the pits are in that kind of condition? Parts of this network are decades old.

**Mr Murphy:** I would say 75 to 80 per cent of the network is in that condition.

---

142 Committee Hansard, 28 November 2013, p. 48.

2.187 At the committee hearing in Perth on 29 January 2014, CEPU representatives showed the committee similar photos demonstrating the problems with the Telstra copper network, including some of the more innovative solutions which had been used by technicians:



2.188 Similarly, at the committee's 4 February 2014 public hearing in Hobart, union representatives supplied evidence demonstrating the degradation in parts of the Telstra copper network in Tasmania:



2.189 Mr Richter, from Central Coast Telecommunications Services (CCTS), provided the following comments at the 11 March hearing about the copper network in general and in the Central Coast in particular:<sup>143</sup>

**Mr Richter:** As you know, the copper network is in a fairly sad state. It obviously needs this remediation work from Telstra for it to achieve what the fibre to the node needs to do. That is why they are going through and remaking the joints so you have that continuity. There is a lot of bad network out there, there is no question about that.

**Senator O'NEILL:** When you say 'out there' do you mean on the Central Coast?

**Mr Richter:** The Central Coast is particularly bad, probably one of the worst. It is just the nature of the beast—it is an old area.

2.190 Telstra representatives denied claims put to the committee by the CEPU that the network was in poor repair. Further, from the outset, the new management of NBN Co was publicly sanguine about the state of the copper network, despite being in negotiations with Telstra to acquire it. At the 19 November estimates hearing, Dr Switkowski stated:<sup>144</sup>

**Dr Switkowski:** ...as best as I can tell, the copper network continues to perform robustly and, without knowing the numbers, Telstra must have millions of broadband customers using ADSL on copper delivering speeds of up to—I do not know—10 megabits per second. Yes, there are pair gain systems in the network and they are an issue—a relatively small proportion of the 10 million plus lines. So this suggests to me that the network is still robust and the concerns that are expressed about the network maybe not being the basis for the next generation broadband platform, I think, are misinformed.

**Senator LUNDY:** That is certainly what Telstra are saying in their advocacy at the conference that has been going on for the last couple of days. They are talking up their copper network like never before...given that they are currently in negotiations with NBN Co. about accessing it. I guess we would expect that from Telstra; I must say I did not expect it from you.

2.191 Similarly, at the 29 November hearing of the committee:<sup>145</sup>

**Senator LUDLAM:** If you did not see the testimony, I will not labour the point, but it will definitely be worth you reviewing it, given that you are about to take over responsibility for the network. I do not think it is at all a safe assumption that those recommendations were adhered to. In fact, since privatisation it appears that maintenance of the copper network is in substantial disrepair.

---

143 Committee Hansard, 11 March 2014, p. 62.

144 Committee Hansard, Supplementary Estimates 2013, pp. 103-04.

145 Committee Hansard, 29 November, pp. 23-24

**Dr Switkowski:** Senator Ludlam, but is it not the case—and here I ask the question without knowing what could possibly be the answer—in the last few years there are millions of ADSL customers and services in Australia. If I had to hazard a guess, there would be five million or six million running over the copper network, delivering speeds in the several- to 10-megabit-per-second range, with customer satisfaction and customer problem report levels at what would be called normal levels that have not moved around a lot since probably the end of my tenure at Telstra. That leads me to conclude that the network is in reasonable condition. Also I have learnt since Senate estimates, as I have talked to people in the industry, that work continues around trying to establish the condition of the copper network around the country, and various RSPs have in the past worked together to determine initially generally a heat map of the performance of the copper network and then specifically down to individual lines what the fault rates are in order to perhaps better guides Telstra in their remediation plans. So I am sort of encouraged by that level of attention to the performance of the network and presume it can be sustained at a sufficiently good quality to take us to the next level with VDSL.

2.192 At Supplementary Estimates in November 2013, Dr Switkowski advised that no assessment of the state of the Telstra network had been done prior to the Strategic Review beginning work:<sup>146</sup>

**Senator LUNDY:** In that work have you ever assessed in what percentage of cases the copper network would not be suitable for fibre to the node?

**Dr Switkowski:** It is a question in front of us. We have most recently started the process of working with Telstra on a pilot approach that will give us more information about fibre to the node on the copper network and how to scale it. That may well reveal whether there are unanticipated issues with the network.

**Senator LUNDY:** I will come to that, but you did not actually answer my question which was: have you done any assessment prior to the considerations of the strategic review?

**Dr Switkowski:** No, not that I am aware of.

2.193 The Strategic Review provides redacted assumptions about the extent and cost of remediation that will be required to ready the copper customer access network (CAN) for VDSL deployment.<sup>147</sup> Without these figures, it is of course not possible for the committee to evaluate the appropriateness of these assumptions. However, the committee notes that the figures provided are no more than estimates. This is confirmed by the Strategic Review:<sup>148</sup>

The Strategic Review did not have access to detailed or specific data on the quality of Telstra's copper network, so field tests and detailed network

---

146 Committee Hansard, Supplementary Estimates 2013, p. 102.

147 Strategic Review, pp. 86-87.

148 Strategic Review, pp. 86.

inventory data will be needed to make an accurate estimate of remediation costs as a next step beyond this Review.

2.194 The committee notes that some of the assumptions that are transparent in the Strategic Review are problematic and, in some cases, not supported by other evidence. For example, the Strategic Review states:<sup>149</sup>

Experts and experience at ‘VDSL operators’ BT and KPN indicate that little to no remediation has been necessary in high-speed VDSL deployments including vectoring deployments. Their experience indicates that if analogue voice works satisfactorily, VDSL will also work satisfactorily in most cases, as the analogue voice signal is more sensitive to noise and poor copper quality than digitised signals such as VDSL.

2.195 The only stated evidence for this claim is unsourced, anecdotal comments from BT and KPN. This was reinforced by an answer to a question in writing which noted that:

Information from BT and KPN was supplied in confidence. Both operators stated remediation was almost never required, but quantitative evidence was not released.<sup>150</sup>

2.196 By contrast, the ACMA provided the following evidence on this issue in response to a Question on Notice:<sup>151</sup>

Copper twisted pair cables which are intended for telephony services operate optimally at lower frequencies and experience greater signal loss as frequencies increase....Voice services (300Hz to 3400Hz) are low in frequency, compared to ADSL2+ services (25kHz to 2.2MHz), and VDSL2 (138kHz to 30MHz) are higher again. For a given thickness and length of copper, services using higher frequency signals will experience greater degradation compared to lower frequency signals.

2.197 It also appears that NBN Co has no information on high frequency fault rates, which explains why the Strategic Review is silent on this matter. In an answer to a question on notice, NBN Co said:<sup>152</sup>

NBN Co does not have any information on the fault rates from “high frequency interference” on Telstra’s copper network. Telstra would be best placed to answer this question.

2.198 The caretaker advice prepared by NBN Co points to the substantial costs associated with remediation and maintenance of the copper network, and the consequent increases in operating expenditure. The committee has heard similar evidence from witnesses representing the workforce in the field. The committee notes that the FTTN footprint proposed in the MTM (approximately 41 percent) is smaller

---

149 Strategic Review, pp. 86.

150 Answer to Question on Notice, 17 December 2013, No. 39.

151 Answer to Questions on Notice, 28 November 2013, No.7).

152 Answer to Question on Notice, Supplementary Estimates 2013, No. 182.

than the footprint proposed in the Coalition policy (approximately 71 percent). This would affect the quantum of increased operating expenditure, but not the key point of the caretaker advice: operating expenditure for the MTM will be significantly higher than for a new fibre build.

2.199 Exhibit 4-6 sets out the difference in operating expenditure between the Revised Outlook and the MTM (see below). The \$2.4 billion operating expenditure for the full fibre build in Exhibit 4-6 is the same amount assumed in the NBN Co 2012-15 Corporate Plan. However, the Strategic Review assumes operating expenditures for the MTM that are only marginally higher—\$200 million more in FY2028.

## Operating Expenditure in the ‘Steady State’

Exhibit 4-6: Financial outcomes (rounded), including Fixed Wireless, Satellite and greenfields (1)

Financial outcomes for Scenarios 1-6						
	Scenario 1: Revised Outlook	Scenario 2: Radically Redesigned FTTP	Scenario 3: FTTN short loop, FTTB large MDUs	Scenario 4: HFC in HFC footprint	Scenario 5: FTTN & HFC (no demobilisation)	Scenario 6: Optimised Multi- Technology Mix
Date of first positive free cashflow (2)	FY25 - ~FY40	FY25-27	FY24-25	FY22	FY22	FY22
<b>Cumulative FY11-21</b>						
Revenue (3)	\$10bn	\$9bn	\$11bn	\$16bn	\$16bn	\$18bn
Opex	\$23bn	\$23bn	\$24bn	\$26bn	\$27bn	\$27bn
Capex	\$43bn	\$35bn	\$36bn	\$36bn	\$29bn	\$30bn
Peak funding (equity and debt) (4)	~\$73bn	~\$64bn	~\$59bn	~\$51bn	~\$43bn	~\$41bn
Peak funding (all equity)	~\$63bn	~\$54bn	~\$52bn	~\$47bn	~\$40bn	~\$39bn
Cumulative Capex FY11-24 (Incl. replacement capex)	\$56bn	\$44bn	\$43bn	\$40bn	\$34bn	\$33bn
<b>Steady state financial performance (FY28)</b>						
Revenue	\$6.6-7.5bn	\$6.6-7.5bn	\$6.5-7.4bn	\$6.4-7.4bn	\$6.2-7.0bn	\$6.3-7.2bn
Opex	\$2.4bn	\$2.4bn	\$2.5bn	\$2.5bn	\$2.6bn	\$2.6bn
EBITDA	\$4.1-5.1bn	\$4.1-5.1bn	\$4.0-4.9bn	\$3.9-4.8bn	\$3.6-4.4bn	\$3.7-4.6bn
Capex	\$1.9bn	\$1.1bn	\$1.1bn	\$1.1bn	\$1.0bn	\$1.0bn
IRR (FY10-40) – Revenue Trajectory A*	2.5%	4.0%	4.1%	4.7%	4.9%	5.3%
IRR (FY10-40) – Revenue Trajectory B*	n/a	1.7%	1.9%	2.5%	2.6%	3.1%

## Operating Expenditure in the Corporate Plan

Exhibit 9-2: Forecast Summary Financials (Nominal Dollars)

Summary Financials															
June YE	Total (FY2011 to Dec 2020)	Total (FY2011 to FY2021)	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2028	FY2040
Total Premises Passed - Fibre ('000s)	11,492	12,202	18	39	341	1,307	2,912	4,625	6,279	7,838	9,283	10,783	12,202	13,467	15,435
Total Connected - Fibre ('000s)	8,060	8,513	1	4	54	487	1,515	3,036	4,341	5,594	6,695	7,607	8,513	10,010	11,464
Premises Covered - Fixed Wireless & Satellite ('000s)	968	974	165	174	320	374	752	907	921	934	948	961	974	1,055	1,181
Total Connected - Fixed Wireless & Satellite ('000s)	226	232	0	10	38	64	100	145	161	191	206	219	232	303	399
Total Connected ('000s)	8,286	8,745	1	14	92	551	1,615	3,181	4,502	5,785	6,901	7,827	8,745	10,313	11,863
Total Revenue	19,970	23,058	-	2	18	120	529	1,346	2,281	3,221	4,200	5,167	6,175	9,769	14,597
Total Operating Expenditure	(24,819)	(26,394)	(337)	(521)	(1,093)	(1,777)	(2,903)	(3,628)	(3,394)	(3,351)	(3,201)	(3,037)	(3,151)	(2,437)	(3,351)
EBITDA	(4,849)	(3,337)	(337)	(519)	(1,076)	(1,657)	(2,375)	(2,282)	(1,113)	(130)	999	2,130	3,024	7,332	11,246
EBITDA Margin	(24)%	(14)%	NM	NM	NM	NM	(449)%	(170)%	(49)%	(4)%	24%	41%	49%	75%	77%
EBIT	(13,328)	(12,650)	(356)	(589)	(1,328)	(2,070)	(3,015)	(3,190)	(2,224)	(1,410)	(415)	591	1,355	5,544	9,499
Net Cash Interest (Funding Costs)	(2,099)	(2,580)	33	60	55	72	83	(1)	(176)	(344)	(615)	(786)	(961)	(188)	1,215
EBT	(15,427)	(15,230)	(323)	(529)	(1,273)	(1,998)	(2,932)	(3,191)	(2,400)	(1,754)	(1,030)	(194)	394	5,356	10,715
Total Capital Expenditure	(35,681)	(37,358)	(463)	(888)	(3,191)	(3,946)	(5,016)	(4,920)	(4,224)	(3,986)	(3,760)	(3,610)	(3,355)	(1,536)	(2,939)
Movement in Working Capital	(30)	(80)	38	193	495	241	98	(251)	(284)	(311)	(103)	(94)	(99)	(90)	(61)
Cash Tax	-	-	-	-	-	-	-	-	-	-	-	-	-	(1,607)	(3,214)
Levered Free Cash Flow	(42,659)	(43,354)	(729)	(1,155)	(3,717)	(5,290)	(7,211)	(7,454)	(5,797)	(4,772)	(3,479)	(2,360)	(1,391)	3,911	6,248
Government Funding	1,362	2,832	7,504	13,623	20,287	25,047	28,949	30,400	30,400	30,400	30,400	30,400	30,400	19,297	-
Debt Funding	-	-	-	-	-	523	2,008	3,816	6,619	10,023	12,267	13,653	1,678	-	-
Total Funding	-	-	1,362	2,832	7,504	13,623	20,810	27,055	32,765	37,019	40,423	42,667	44,053	20,975	-
Debt / EBITDA	0.0 x	0.0 x	0.0 x	0.0 x	0.0 x	(0.2)x	(0.9)x	(3.4)x	(50.9)x	10.0 x	5.8 x	4.5 x	0.2 x	0.0 x	NM
Debt / Total Funding	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	7.4%	11.6%	17.9%	24.8%	28.8%	31.0%	8.0%	-	-

### Summary—MTM Assumptions

- The financial model for the MTM was built using primarily international benchmarks and estimates, rather than empirical field data.
- The caretaker advice prepared by NBN Co points to the substantial costs associated with remediation and maintenance of the copper network. The committee has heard similar evidence from witnesses representing the workforce in the field.
- Operating expenditure is expected to be significantly higher for the MTM than for a new fibre network. However, the Strategic Review assumes that operating expenditure for the MTM will be similar to what is required for a new fibre build.

### Revenue Assumptions

2.200 The caretaker advice provided evidence on the sort of “field tests” that would be required to adequately assess the quality of broadband that would be achievable over the copper plant:

In addition to the factors mentioned above, experience from today's copper network shows that the peak speeds achievable can change over time as the environmental and interference conditions change. As a result, it may not be possible to offer the same products to all end users: for example some end users may be able to access faster speeds compared to other end users.

In order to estimate achievable VDSL2 bit rates for premises across Australia, access to Telstra's cable plant records and fault records would be needed. However, it is likely that the copper plant will need to be assessed on a line-by-line basis as the network is rolled out.

2.201 This was corroborated by Mr Adcock at the 19 November estimates hearing.<sup>153</sup>

**Senator LUNDY:** I understand from presentations by Alcatel Lucent that deployment of VDSL requires every copper pair to be tested. I understand that that testing has to be done at the pillar location and will need to be done before there is a decision to use the copper. Is that your understanding of it? I know the copper varies enormously in quality and in its configuration, but is NBN Co. going to insist on getting a status report on those copper pairs before it commits to a costing around a fibre-to-the-node network?...

**Mr Adcock:** The current thinking is that there would be testing done. Whether it informs the strategic review or whether the strategic review makes some assumptions to then be tested, I think, is the way that I would frame it at this point. It is an unknown. But your point about testing the copper pair for VDSL is valid.

2.202 In a submission to the committee, well-known blogger and the creator of the independent rollout tracker myNBN.info site, jxeeno, expressed his concern with the MTM approach, arguing that it will limit network capability based on locality.<sup>154</sup> He explained that the FTTN/dp/B and the HFC networks have problems which mean that network speeds cannot be guaranteed. For example, the FTTN/dp/B network, relying as it does on the existing Telstra copper network, is highly susceptible to environmental factors such as water ingress and signal interference.<sup>155</sup>

2.203 Similar evidence was given by Shane Murphy of the CEPU at the 28 November hearing.<sup>156</sup>

It does not matter what state—whether it is Perth, Sydney, Adelaide or Melbourne. Look at the spike immediately after a drop of rain comes along or there has been a bit of rain and then there is a bit of humid weather, because we are at that time of year now. If you check the ACMA report, you will see the spike automatically go bang. For example, Sydney alone had two or three days of rain. Yes, it was heavy at times. It was not consistently heavy all day, but there were some heavy showers. There were definitely some storms. Normally Sydney runs at 2,000 or 2,500 [services down]. It was actually at 14,000 last week. It is now at 10,000, and climbing again by the day. That gives you an example of just how bad it is. It is okay for Mr Switkowski to say, yes, they see a spike in calls when there is a bit of rain around. The proof is in the pudding of why exactly that is occurring. It is because the copper can no longer withstand the water.

2.204 As noted above, the ‘steady state’ comparison of a full FTTP build with the MTM contained in Exhibit 4-6 exhibits a marginal difference in revenues to the MTM. Although the Strategic Review discusses ‘illustrative’ upgrade paths and

---

153 Committee Hansard, Supplementary Estimates 2013, p. 104.

154 Submission 12, p. 4.

155 Submission 12, p. 4.

156 Committee Hansard, 28 November 2013, p. 48.

'hypothetical' upgrade timing, no upgrade costs for the MTM are included in the financial metrics set out in Exhibit 4-6.<sup>157</sup>

### Exhibit 4-6 (Strategic Review)

Exhibit 4-6: Financial outcomes (rounded), including Fixed Wireless, Satellite and greenfields (1)

Financial outcomes for Scenarios 1-6						
	Scenario 1: Revised Outlook	Scenario 2: Radically Redesigned FTTP	Scenario 3: FTTN short loop, FTTB large MDUs	Scenario 4: HFC in HFC footprint	Scenario 5: FTTN & HFC (no demobilisation)	Scenario 6: Optimised Multi- Technology Mix
Date of first positive free cashflow (2)	FY25 - ~FY40	FY25-27	FY24-25	FY22	FY22	FY22
Cumulative FY11-21						
Revenue (3)	\$10bn	\$9bn	\$11bn	\$16bn	\$16bn	\$18bn
Opex	\$23bn	\$23bn	\$24bn	\$26bn	\$27bn	\$27bn
Capex	\$43bn	\$35bn	\$36bn	\$36bn	\$29bn	\$30bn
Peak funding (equity and debt) (4)	~\$73bn	~\$64bn	~\$59bn	~\$51bn	~\$43bn	~\$41bn
Peak funding (all equity)	~\$63bn	~\$54bn	~\$52bn	~\$47bn	~\$40bn	~\$39bn
Cumulative Capex FY11-24 (Incl. replacement capex)	\$56bn	\$44bn	\$43bn	\$40bn	\$34bn	\$33bn
Steady state financial performance (FY28)						
Revenue	\$6.6-7.5bn	\$6.6-7.5bn	\$6.5-7.4bn	\$6.4-7.4bn	\$6.2-7.0bn	\$6.3-7.2bn
Opex	\$2.4bn	\$2.4bn	\$2.5bn	\$2.5bn	\$2.6bn	\$2.6bn
EBITDA	\$4.1-5.1bn	\$4.1-5.1bn	\$4.0-4.9bn	\$3.9-4.8bn	\$3.6-4.4bn	\$3.7-4.6bn
Capex	\$1.9bn	\$1.1bn	\$1.1bn	\$1.1bn	\$1.0bn	\$1.0bn
IRR (FY10-40) – Revenue Trajectory A*	2.5%	4.0%	4.1%	4.7%	4.9%	5.3%
IRR (FY10-40) – Revenue Trajectory B*	n/a	1.7%	1.9%	2.5%	2.6%	3.1%

2.205 In the caretaker advice, NBN Co assessed the impact on product offerings that would result from a move to an alternative FTTN architecture.<sup>158</sup> The advice states:

157 Strategic Review, p. 102.

158 NBN Co Caretaker Advice, p. 118.

### *Product capabilities*

Relative to FTTP-based services, prices for FTTN services would likely to be lower. This would reflect their limited speeds and product capabilities. Accordingly revenue from a FTTN product set is likely to be constrained.

- If, as noted above, pricing is limited to the \$24 and \$27 tiers, ARPU from the AVC component (assuming NBN Co's existing fibre AVC mix) would fall ~10%.
- If an "Open FTTN" tier was available at >\$27, and this was selected by the current proportion of users on tiers above 25/5, AVC ARPU would fall ~2% (again based on the current fibre AVC mix).
- Further, NBN Co may have limited opportunity to grow ARPU due to the lack of faster speed tiers to which customers could migrate over time.
- Lack of product enhancements designed for the business market (TC-2, TC-3, etc) will curtail the revenue in this segment, and may result in business customers sourcing connectivity from 3<sup>rd</sup> party networks rather than utilise a restricted FTTN service or pay for a NBN Co fibre on demand link.
- Revenue from multicast may be constrained due to the diminished end-user value proposition.

2.206 NBN Co assessed that these impacts could reduce NBN Co revenue by as much as 30 percent:<sup>159</sup>

Revenue Scenarios (\$m)	FY21 Corporate Plan (v12.0-Aug12)	FTTN Case - High	Impact %	FTTN Case - Low	Impact %
AVC + UNI	\$3,238	\$2,961	-9%	\$2,840	-12%
CVC	\$1,582	\$1,424	-10%	\$1,186	-25%
Business (TC-1, TC-2 and TC-3)	\$745	\$0	-100%	\$0	-100%
Multicast	\$475	\$238	-50%	\$119	-75%
<b>Total NBN Revenue</b>	<b>\$6,250</b>	<b>\$4,833</b>	<b>-23%</b>	<b>\$4,477</b>	<b>-30%</b>

2.207 The caretaker advice based its financial analysis on the broadband policy the Coalition took to the election. The committee notes that this policy assumed a much larger FTTN footprint than assumed in the Strategic Review (approximately 71 percent of premises in the policy compared to approximately 41 percent in the Strategic Review). This would affect the quantum of the revenue declines, but not the key point made in the caretaker advice: that the 'limited speeds and product capabilities' available on FTTN would result in reduced revenues compared to a full fibre rollout in the fixed line footprint.

2.208 In this context, the committee notes statements made by the CEO of NBN Co in regard to 'guaranteed' access speeds for end-users. Media reports have noted that the Minister for Communications promised prior to the federal election minimum download speeds of 25 Mbps by 2016.<sup>160</sup> The Department of Communications states the Government's aim in relation to the NBN is:

<sup>159</sup> NBN Co Caretaker Advice, p. 119.

<sup>160</sup> Josh Taylor, "No guarantees on NBN download speeds: Switkowski," (17 December 2013), at: <http://www.zdnet.com/au/no-guarantees-on-nbn-download-speeds-switkowski-7000024364/>

...that all households and businesses should have access to broadband with download data rates of between 25 and 100 megabits per second (Mbps). At the completion of the rollout, the Government expects download data rates between 50 and 100 Mbps to be available to at least ninety per cent of Australians in the fixed line footprint.<sup>161</sup>

2.209 However, in evidence to the committee at the public hearing on 17 December 2013, Dr Switkowski refused to make any guarantee about minimum download speeds delivered by the MTM approach:<sup>162</sup>

**CHAIR:** I understand the limitations of the technology you have chosen and you would be foolhardy to try and promise you can deliver on those speeds. I think you accept that.

**Dr Switkowski:** I think you are adding a colour that is not intended. The conclusions of this review are summarised in this document and they use words like 'in a certain year a certain percentage of our customers will have access to, for example, 25 megabits per second'. That is a perfectly accurate conclusion supported by very full analyses. I stand by it.

2.210 As set out in the caretaker advice and testimony from Mr Adcock, NBN Co will need to conduct extensive—line by line—field tests before the speeds and broadband quality that can be obtained in the fixed line footprint under an MTM scenario will be known. The speeds and quality that may be offered—particularly over the copper CAN—are too variable for this to be known at this point in time. Nor will the CEO of NBN Co provide any guarantees. This issue was flagged in NBN Co's caretaker advice to the Department in August 2013:<sup>163</sup>

**Consideration #6 – Further assessing scenarios around product performance (download speed, upload speed, reliability, etc ...), technology upgrades options, and their effect on the demand curves will form the basis for NBN Co's revenue modelling.**

- Significant effort should be invested in assessing how FTTN-based products could perform and what effect this may have on demand curves. Factoring in technology upgrades options, and using these to draw demand projections, will help form a view on what long-term ARPUs could be achieved.

2.211 The committee notes that the Strategic Review—in the absence of concrete performance data—assumes revenues for the MTM that are only marginally less than the revenues for a full fibre rollout—\$6.3 to \$7.2 billion versus \$6.6 to \$7.5 billion in FY2028.<sup>164</sup>

---

161 Department of Communications, "National Broadband Network," at: [http://www.communications.gov.au/broadband/national\\_broadband\\_network](http://www.communications.gov.au/broadband/national_broadband_network)

162 Committee Hansard, 17 December 2013, p. 7.

163 NBN Co Caretaker Advice, p. 61.

164 Strategic Review, Exhibit 4-6, p. 102.

---

***Summary—Revenue Assumptions (MTM)***

- **The caretaker advice from NBN Co to Government notes that ‘limited speeds and product capabilities’ available on FTTN would result in reduced revenues compared to a full fibre rollout in the fixed line footprint.**
- **NBN Co will need to conduct extensive—line by line—field tests before the speeds and broadband quality that can be obtained in the (non-FTTP) MTM fixed line footprint will be known empirically. Even then, quality is likely to be variable, particularly in the FTTN footprint.**
- **The Strategic Review assumes revenues for the MTM that are similar to those for a full fibre rollout, despite the vast difference in broadband quality and product sets.**

***Complexity Creates Cost***

2.212 In its submission, iiNet provided a view of the MTM approach from its perspective as an RSP. iiNet noted that:

The NBN was initially designed to provide a national, standardised, uniform interface to a single provider. More than 90% of all services were planned to be delivered over FTTH technology. This simplified design promised a beneficial reduction in the complexity and cost of operating on-line services over the NBN.<sup>165</sup>

2.213 In relation to the MTM, iinet observed:

A multi-technology approach introduces the likelihood that HFC, VDSL and any other non-fibre based access services will require additional investment in business-to-business (B2B) interfaces, multiple points of interconnect (POIs) with multiple entities, rather than a single interface to a single, wholesale network provider.

The number of POIs in the initial project was considered a barrier to the NBN, for sub-scale companies, iiNet believes that the multi-technology approach will only exacerbate that issue, which, it is reported, encouraged some owners to exit the industry.

2.214 NBN Co’s caretaker advice notes that increased complexity from operating multiple fixed line networks will not be limited to RSPs. It will drive increased costs for NBN Co in:

- systems support:<sup>166</sup>

NBN Co’s systems support (OSS/BSS) will be impacted by a change in the technology mix from FTTP/wireless/satellite to additionally include FTTN.

- operating small pockets of FTTP within FTTN footprints:<sup>167</sup>

---

165 Submission 11, p. 4.

166 NBN Co Caretaker Advice, p. 143.

Operating small pockets of FTTP within the FTTN network will increase rollout costs, operational costs and increase the complexity of the network rollout and operations. This includes managing the different products and services that can be offered over the two networks

- business processes, people and IT system capabilities:<sup>168</sup>

Widespread changes across business processes, people and IT system capabilities would likely require a phased approach to business capability delivery. Management of the intersection of competing programmes of activities (FTTN capability development vs. Satellite capability development vs. scaling FTTP service activations) may provide significant resource and configuration challenges, especially within highly contended applications.

2.215 Further, the MTM introduces significant complexities in the provision of voice services over VDSL and HFC. The caretaker advice was clear in this regard.<sup>169</sup> These complexities extend to copper cutover and migration, which is made considerably more complex over FTTN than is the case with the existing migration to FTTP. The caretaker advice notes:<sup>170</sup>

NBN Co notes that it is unprecedented for a non-incumbent company to supply voice or FTTN broadband services over an incumbent operator's network. Hence, consideration needs to be given to the copper cutover and migration process for an FTTN network.

Given the steps involved, as described below, NBN Co is of the view that that the Coalition's approach to cutover is complex, and has very high risks.

2.216 NBN Co concludes that additional complexity will result in "material" additions to capital and operating expenditure for NBN Co:<sup>171</sup>

Delivery of IT capabilities to address systems impacts will have both material CAPEX and OPEX costs. The increase in CAPEX cost is driven by the extensive nature of changes required to the existing application portfolio, as well as the development of new applications. The OPEX costs are driven by the need for application support & maintenance as well as the need to support additional functionality in a more complex environment.

2.217 The committee notes that NBN Co's caretaker advice was developed under the Coalition's pre-election policy (which did not include the addition of HFC to NBN Co's operations environment). The committee considers that the addition of HFC networks will drive even greater complexity costs than flagged in NBN Co's caretaker advice. Indeed, the Strategic Review indicates that it is the intention to pursue copper disconnection in the areas covered by HFC as well:

As discussed in section 3.2.4, the scenario analysis for the Strategic Review has assumed voice will be provided via CPE that uses VoIP. It assumes that, as for FTTP areas, Telstra will continue to maintain and operate the existing copper plant only insofar as required to maintain special services

<sup>167</sup> Ibid, p. 84.

<sup>168</sup> Ibid, p. 145.

<sup>169</sup> Ibid, pp. 127-130.

<sup>170</sup> Ibid, p. 79.

<sup>171</sup> Ibid, p. 145.

(discussed in section 3.2.5), and that a similar disconnection and migration framework applies to Telstra and Optus as exists today in relation to disconnection and migration to FTTP.<sup>172</sup>

2.218 The Strategic Review factors in no additional operating expenditure to accommodate a more complex operations and technology environment, despite Mr Korda's observation—noted above—that “the level of overheads [in the Corporate Plan] was optimistic.”<sup>173</sup> Rather:<sup>174</sup>

Operating costs in network operations are usually expected to increase in order to support a more complex technology environment. However NBN Co's level of Operating Expenditure in the Corporate Plan is significant. Benchmarks with comparable multi-network wholesale telecommunications companies suggest there is substantial cost reduction potential in both ongoing operating and overhead costs for NBN Co. The Strategic Review therefore assesses that cost increases due to increased complexity can be more than offset by potential cost reductions.

#### *Summary—Complexity Creates Cost*

- **The caretaker advice from NBN Co flags “material” capital and operating expenditure increases from a more complex technology environment. Increased complexity is likely to increase costs for RSPs as well.**
- **The caretaker advice did not consider the addition of HFC networks to NBN Co's operations environment. The committee expects this will further increase complexity costs under the MTM.**
- **The Strategic Review has assumed no additional operating expenditure to accommodate a more complex technology environment, arguing that these costs will be offset by “potential cost reductions.”**

#### *Upgrade Costs*

2.219 The Strategic Review asserts that under the MTM model at least 65 percent of premises in the fixed line footprint will have access to download speeds of 100mbps by CY20.<sup>175</sup> The Strategic Review also provides an estimate of Net Present Value (NPV) savings of an upgrade approach versus building FTTP today. Once again, consideration of upload speeds or other elements of broadband quality is completely absent from the analysis.

---

<sup>172</sup> Strategic Review, p. 90.

<sup>173</sup> See section 2.1.2.

<sup>174</sup> Strategic Review, p. 83.

<sup>175</sup> Strategic Review, p. 99.

2.220 Section 4.3.2 of the Strategic Review analyses the upgrade paths of the technologies employed in the MTM scenario. The Strategic Review states that all scenarios ‘provide clear upgrade paths to higher speeds and better quality of service for all premises served.’<sup>176</sup> Upgrade paths are provided in Exhibit 4-4. These are described as ‘illustrative.’ ‘Hypothetical upgrade timing’ is also provided.

2.221 The Strategic Review acknowledges that the MTM will need to be upgraded, although not ‘before CY2023’:<sup>177</sup>

It is not possible to predict the future evolution of demand for broadband speed. However, a recent study commissioned by the Broadband Stakeholder Group in the UK<sup>92</sup> assessed that the need for download speeds would be ~20Mbps in CY23 for the median UK household and ~40Mbps for the top one percent of households. This suggests upgrades to the Optimised Multi-Technology Mix scenario would not be needed before CY23.

2.222 No explicit costs for these upgrades are provided for the MTM model in the Strategic Review.

2.223 The Gigabit-Capable Passive Optical Network (GPON) architecture employed by NBN Co in the current FTTP rollout is already capable of delivering high quality, reliable broadband including symmetrical gigabit speeds and dedicated information rates.<sup>178</sup> Further, NBN Co Corporate Plans present a 30 year business case (to 2040). NBN Co explains:<sup>179</sup>

Retaining the same end point for the long range explicit forecasting (30 June 2040) will allow ‘like-for-like’ comparisons as subsequent Corporate Plans are produced.

2.224 By contrast, the outlook for the MTM presented in the Strategic Review is short to medium term. No explicit costs for necessary upgrades are provided. The committee considers that the full cost of the MTM will only be known once flagged upgrade costs are included in the model.

### *Summary—Upgrade Costs*

- **The Strategic Review acknowledges that the MTM will need to be upgraded, but provides no costs for these flagged upgrades.**
- **The committee considers that the full cost of the MTM will only be known once these upgrade costs are included in the model.**

---

<sup>176</sup> Ibid.

<sup>177</sup> Ibid, p. 101.

<sup>178</sup> Once FTTP is deployed, future upgrades can be achieved relatively cheaply by upgrading active network equipment. The fibre architecture of the NBN allows for further upgrades (e.g. 10 gigabits, or 10,000mbps) to be offered in the future. See Answers to Questions on Notice, Additional Estimates 2013), No 306, at: [http://www.aph.gov.au/~media/Estimates/Live/ec\\_ctte/estimates/add\\_1213/bcde/nbn\\_274-308.ashx](http://www.aph.gov.au/~media/Estimates/Live/ec_ctte/estimates/add_1213/bcde/nbn_274-308.ashx)

<sup>179</sup> NBN Co 2012-15 Corporate Plan, p. 72.

---

## Concluding Remarks and Recommendations—Strategic Review

2.225 The committee considers that the assumptions and conclusions set out in the Strategic Review are unreliable in the case of all examined scenarios.

2.226 The Revised Outlook provides a different perspective to NBN Co's Corporate Plan on the costs, revenues and timeframe of a full FTTP build in the fixed line footprint. The Committee's concerns with the Revised Outlook include:

- the exclusion from the Revised Outlook of 'business as usual' architecture savings signed off by previous NBN Co management, and their characterisation as 'radical' for inclusion in Scenario 2;
- an assumption of a delay in the revised deployment schedule that is at odds with NBN Co's current run rate, reflects deliberately conservative estimates of premises passed at peak rollout, cannot be disentangled from political control of the speed of network deployment, and has the assumed effect of stripping out \$11.6 billion in revenues;
- assumptions on (redacted) higher unit costs for the fibre build that are at odds with recent evidence from NBN Co and the Department of Finance;
- higher unit costs that are extrapolated out to 2024 without normal and reasonable allowances for build efficiencies;
- the addition of a third satellite in the Revised Outlook, without direct explanation, with launch assumed at such a time (FY2021) to include costs but exclude revenues from scenario comparisons;
- overly pessimistic revenue assumptions that:
  - do not reflect existing strong demand for NBN services, or the high data usage patterns of Australians using the NBN;
  - ignore demand for important elements of broadband quality, particularly reliability and upload speeds;
  - have the effect of removing the revenue benefits that would result from the superior product set available on FTTP, compared to other technologies; and
- apples-and-oranges scenario comparisons that include costs and revenues for the Multi-Technology Mix (MTM) build at assumed completion, and costs for the Revised Outlook out to 2024, but exclude revenues for the Revised Outlook beyond 2021.

2.227 The Committee has equally strong concerns about the reliability of assumptions underpinning the MTM, the recommended option. These include:

- the financial model for the MTM was built using mostly international benchmarks and estimates, rather than field data;
- operating expenditure for the MTM is expected to be significantly higher than for a fibre network. The caretaker advice prepared by NBN Co points to the substantial costs associated with remediation and maintenance of the copper

network. The committee has heard similar evidence from witnesses representing the workforce in the field. Material operational costs are also expected from a more complex technology environment. Despite this, the Strategic Review assumes that operating expenditure for the MTM will be similar to what is required for a new fibre build;

- the ‘limited speeds and product capabilities’ available on FTTN are expected to result in reduced revenues compared to a full fibre rollout in the fixed line footprint. Further, NBN Co will need to conduct extensive field tests before the speeds and broadband quality in the (non-FTTP) MTM fixed line footprint will be known empirically. Despite this, the Strategic Review assumes revenues for the MTM that are similar to those for a full fibre rollout, despite the vast difference in broadband quality and product sets;
- the Strategic Review acknowledges that the MTM will need to be upgraded, but provides no costs for these flagged upgrades. The full cost of the MTM will only be known once these upgrade costs are included in the model.

2.228 NBN Co’s previous Corporate Plans have been developed over a period of many months, in some cases longer, and have been subject to independent oversight and verification. For example, the 2013-16 Corporate Plan—finalised in late June 2013—was independently reviewed by both Ernst and Young and KPMG before it was signed off by the NBN Co Board and submitted to Shareholder Ministers for approval. By contrast, the Strategic Review—which presents a different view of the information set out in the NBN Co Corporate Plan—was the result of “five weeks of intensive work on the part of lots and lots of people” and was subject to no independent external oversight.

2.229 The committee rejects the rollout strategy advocated by the current Government and reflected in the MTM. In particular:

- the deployment of higher-quality broadband (FTTP) to high value suburbs, and the deployment of inferior broadband (FTTN) to low value suburbs is an inappropriate use of taxpayers’ money. As a Government Business Enterprise, NBN Co should not have a rollout strategy that favours one suburb over another;
- the proposed Fibre on Demand product is expected to be too expensive for many residences and small businesses. This will create competitive disadvantages for individuals and small businesses outside the fibre footprint, and will entrench broadband inequality in Australia.

2.230 The Committee considers these rollout strategies reflect a fundamental misunderstanding of broadband quality—particularly uploads—and demand for this quality and reliability in the residential and small business market. Failure to consider that broadband quality and capability goes beyond download speeds is systemic in the Strategic Review. The Strategic Review also fails to consider the value of widespread access to this infrastructure to the digital economy.

2.231 The Committee concludes that the Strategic Review does not comprise a sufficient information base for the NBN Co Board or the Minister to adopt an alternative deployment path for the NBN.

2.232 The Committee is aware of management concerns with building stability with its supply partners. As a consequence, NBN Co should be directed to continue the FTTP roll out at the maximum rate possible while the further analysis is undertaken by NBN Co, the Departments and the Minister. NBN Co should be allowed to proceed without political interference in the roll out.

### **Recommendation 1**

**NBN Co should submit a revised Strategic Review that provides transparent assumptions and corrects deficiencies and distortions. The revised Strategic Review should provide details of only two scenarios:**

- **An optimised FTTP rollout that adopts the technology changes and other management initiatives outlined in Scenario 2, together with a plan to address identified industry capacity constraints; and**
- **A revised Multi-Technology Mix that is based on actual costs for FTTN and HFC derived from discussions with Telstra, Optus and vendors. This scenario should also include all costs to undertake the flagged upgrades to 100 Mbps by 2023, 250 Mbps by 2028 and 1000 Mbps by 2030.**

**The revised scenarios should include consideration of broadband quality beyond just download speeds, and the demand for attributes like upload speeds and reliability in the residential and small business market.**

**Prior to submission, the Strategic Review should be scrutinised and verified by an independent advisor engaged by the Department of Communications and the Department of Finance.**

### **Recommendation 2**

**NBN Co should continue to accelerate the roll-out of the FTTP network while further analysis is undertaken.**

**NBN Co should be allowed to proceed free from political interference.**



## Chapter 3

### Review Processes and NBN Co Governance and Culture

#### Background

3.1 The select committee was 'established to inquire into and report on the Government's reviews of the National Broadband Network (NBN) and the governance of NBN Co', including the processes for the reviews and the outcome of those reviews. The Committee is required to report on the establishment of the Government's strategic review of the NBN including:

- the adequacy of the terms of reference
- the selection of personnel and expert advisers to the review
- the data provided to the strategic review, in particular, any variation between that data and data used by NBN Co in preparing its annual report and corporate plan, and
- the impact of the strategic review on the operational effectiveness of NBN Co.

3.2 As noted, to date there are no less than six review processes that have been announced pertaining to the NBN. These are:

- The Strategic Review
- An Independent Cost Benefit Analysis and Regulatory Review
- The Broadband Quality and Availability study
- An NBN Governance Review
- An Independent Audit of the NBN Public Policy Process
- Review of the fixed wireless and satellite programs.

3.3 The Coalition broadband policy includes details of reviews which would be initiated by a Coalition Government. The NBN Co Strategic Review was to be a rapid but rigorous business review of NBN Co's rollout progress and costs, structure, internal capabilities, commercial prospects and strategic options to report to Government in 60 days. The Minister announced the terms of reference for the Strategic Review on 3 October 2013.<sup>1</sup>

3.4 The Independent cost-benefit analysis and review of regulation was to 'analyse the economic and social costs and benefits...arising directly 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 long-term

---

1 The Hon Malcolm Turnbull MP, Minister for Communications and Senator the Hon Mathias Cormann, Minister for Finance, Media Release, 'Dr Ziggy Switkowski Appointed Executive Chair of NBN Co Strategic Review of NBN Project to Commence' (3 October 2013).

industry matters'. Terms of reference and panel for the review were announced by the Government on 12 December 2013.<sup>2</sup>

3.5 The Coalition Policy document was unclear on the relationship between the Strategic Review and the implementation of the Coalition's policy. At the launch of the Coalition Policy, Mr Turnbull was asked:

**QUESTION:** You've said in announcing the policy you will commence a commercial review that will have 60 days to work out how quickly your National Broadband Network plan can be rolled out. You also announced that it will be rolled out by 2016. Please can we have those two aims resolved? You can't know that you will deliver it by 2016 if you need a commercial review to tell you.

**MALCOLM TURNBULL:** Let me take that question. I can answer that.

What we have got here is a policy that is very realistic, that we have researched very carefully, that we have discussed with people very knowledgeable in the field – people that are actually building new generation broadband networks, both here and internationally. So we haven't spent a lot of time – we have spent some time with academics – we have actually spent time with the men and the women that are really doing the work, that really know what they're talking about. They are the people that I would encourage every journalist who is interested in this area to talk to. They are the most knowledgeable people.

Now we believe the goals here are very realisable but what we are going to do, as Tony has said, immediately the NBN Co will set out a realistic objective assessment of how long it is going to take in dollars and time to complete the project on the current trajectory, on the current design and then set out what savings can be achieved both in dollars and time by making changes of the kind that we have proposed and indeed there are some other changes, because we didn't want to overcomplicate our proposal.

There are other changes of a more technical nature that can also make some considerable savings. So that is the, and the point of that is that that will have the benefit of all of the NBN's experience and have access to that information. So I am very confident that that will confirm the reasonableness of what we have proposed.<sup>3</sup>

3.6 The Coalition Policy document is equally unclear on the relationship between the Cost Benefit Analysis and the implementation of the Coalition's policy. At the launch of the Coalition Policy Mr Abbott and Mr Turnbull were asked:

---

2 The Hon Malcolm Turnbull MP, Minister for Communications, Media Release, 'Panel of Experts to conduct cost-benefit analysis of broadband & review NBN regulation' (12 December 2013).

3 Joint Press Conference, The Hon. Tony Abbott MP and The Hon. Malcolm Turnbull MP (9 April 2013), at: <http://mt.tbone.com.au/homepage-issues/launch-of-coalition-broadband-policy-transcript-of-tony-abbott-and-malcolm-turnbull-press-conference/#sthash.f5XcBUpn.dpuf>.

**QUESTION:** Who will do the independent review? Who have you commissioned to do that and will you abide by any recommendations they make if they conflict with your policy?

**TONY ABBOTT:** Look, it will be a fully independent review. It may be the Productivity Commission although we're conscious of the fact that the Productivity Commission has a very heavy workload. It may be Infrastructure Australia. But one way or another there will be a full independent review of telecommunications going forward, of broadband going forward and that will obviously include a cost-benefit analysis, a published cost-benefit analysis of our version of the National Broadband Network.

**QUESTION:** Will you do a cost-benefit analysis of Labor's NBN because Mr Turnbull you hinted at it at the kick-starter conference earlier this year. So, will you do a cost-benefit analysis of the NBN?

**MALCOLM TURNBULL:** The big question...the answer is yes, all of that will be examined but one of the...

**QUESTION:** A cost-benefit analysis of the NBN?

**MALCOLM TURNBULL:** The answer is yes.

3.7 The conduct and outcome of the cost benefit analysis in regard to the chosen broadband technologies will be examined by the committee in subsequent hearings.

## **Board appointments and selection of new management team**

### ***Appointment of new NBN Co Board***

3.8 Since the September 2013 federal election, the Government has replaced most of the NBN Co Board. On 3 October 2013 shareholder Ministers announced:

- The Government had received offers of resignation from five of the seven NBN Co directors and one resignation. The Government had accepted four of these offered resignations but has asked Dr Kerry Schott and Ms Alison Lansley to continue serving on the Board.
- The tenure of the seventh director, Mr Brad Orgill, has been terminated.
- With the approval of the Cabinet, the Ministers for Communications and Finance had appointed Dr Ziggy Switkowski to the Board as Chairman.
- Dr Switkowski had also been appointed as Executive Chairman of the NBN Co, pending the appointment of a new Chief Executive to replace Mike Quigley, who announced his intention to resign from the position in July.
- The Government intended to nominate additional non-executive directors to the Board shortly.<sup>4</sup>

---

4 The Hon Malcolm Turnbull MP, Minister for Communications and Senator the Hon Mathias Cormann, Minister for Finance, Media Release, 'Dr Ziggy Switkowski Appointed Executive Chair of NBN Co Strategic Review of NBN Project to Commence', (3 October 2013).

3.9 Media reporting at the time noted that the board members were asked to resign by the Minister for Communications:

Meanwhile, Mr Turnbull confirmed he asked the company's seven board directors to resign last week, and all but one have done so.

"That request should not be regarded as any criticism of any of the directors," he said. "The reason for that was simply to give the Government complete flexibility in remaking the board in light of its new policy agenda."

"Decisions about the board will be taken by the Cabinet in due course."<sup>5</sup>

3.10 On 12 November 2013 the shareholder Ministers announced that Mr Patrick Flannigan, Mr Simon Hackett and Mr Justin Milne had been appointed as Non-Executive Directors of NBN Co.<sup>6</sup>

3.11 At the committee's public hearing on 11 December 2013, the Acting-Chair, Senator the Hon Stephen Conroy, put to NBN Co executives that the NBN Co Board was unable to consider draft version 13 of the 2013-16 Corporate Plan because the Minister had asked NBN Co Board members to resign at the board meeting on either 19 or 20 September 2013. Mr Brown took on notice to review the minutes of the meeting and provide an answer.<sup>7</sup> At the time of writing NBN Co had not provided an answer to this question.

3.12 Similarly, Mr Drew Clarke, Secretary of the Department of Communications, also took on notice a question as to what day Minister Turnbull asked NBN Co Board members to offer their resignations:

**CHAIR:** They all did resign on the 19th or the 20th, didn't they?

**Mr Clarke:** I do not have the dates in front of me but there was a number of resignations.

**CHAIR:** So what happened, that they by osmosis heard on the grapevine that their resignations were desired?

**Mr Clarke:** No, there is a distinction between being asked to offer your resignation and being asked to resign.

**CHAIR:** I will accept that. So when were they asked to offer their resignation – if that makes it easier for you?

**Mr Clarke:** Thank you, it does. I do not have the dates in front of me but I would be very happy to take that on notice.<sup>8</sup>

---

5 Emma Griffiths, 'Malcolm Turnbull moves to put Coalition's stamp on NBN Co', ABC News (24 September 2013), at: <http://www.abc.net.au/news/2013-09-24/turnbull-moves-to-put-coalitions-stamp-on-nbn/4978020>

6 The Hon Malcolm Turnbull MP, Minister for Communications and Senator the Hon Mathias Cormann, Minister for Finance, Media Release, 'NBN Co Board Appointments', (12 November 2013).

7 *Committee Hansard*, 11 December 2013, p. 20.

8 *Committee Hansard*, 11 December 2013, p. 66.

3.13 Mr Clarke has subsequently advised that 'the Department is unable to comment on arrangements between the NBN Co Board and the Minister'.<sup>9</sup>

3.14 Fairfax Media requested the minutes of the 20 September 2013 Board meeting under Freedom of Information.<sup>10</sup> This request was denied. Fairfax sought the views of Mr Timmins, an FOI expert, in regard to NBN Co's decision to refuse the FOI request. Mr Timmins noted that NBN Co's arguments were 'speculative, ridiculous and without foundation' and 'all in all a confused and confusing set of words that suggest a really big effort to dream up something to put on paper but in the end are unpersuasive'.<sup>11</sup> Mr Mesman, NBN Co's FOI officer, subsequently noted at the 12 March public hearing:

I stand by my reasons. I presume you have access to those reasons, but, as a starting point, the actual document was found to be within the commercial activities exemption. I specifically referred to a secondary issue, outside of the commercial activities exemption, because the applicant had specifically asked for the attendances of the members of the board of directors. That was a complement to my primary reason, which was that I found that the board minutes were subject to our commercial activities exemption.<sup>12</sup>

3.15 The committee notes that NBN Co previously released Board minutes—on 30 August 2013—under Freedom of Information.

#### *Selection of new NBN Co Board members*

3.16 Mr Clarke advised the committee about the selection of new NBN Co Board members at the public hearing on 11 December 2013:

**CHAIR:** At estimates you advised that the selection of board members for NBN Co. after the election followed the usual process of long lists, short lists and a recommendation to the minister. Was that your evidence?

**Mr Clarke:** It was, Senator, with a qualification around Dr Switkowski. I think they were on different tracks, but the general point of my evidence stands. As you will recall, the timings of the appointments of Dr Switkowski and the subsequent appointments were separate. I do not want to infer that it was all bundled up into one single process.<sup>13</sup>

3.17 Mr Clarke advised that the appointment of new board members had followed the usual process, with the firm Russell Reynolds engaged by the Department of Communications in relation to the search for new board members.

---

9 Answer to Questions on Notice, 11 December 2013, No. 37.

10 Ben Butler, Lucy Battersby, 'NBN Co blocks FOI request: reputations at stake', *Sydney Morning Herald*, (17 February 2014), at: <http://www.smh.com.au/business/nbn-co-blocks-foi-request-reputations-at-stake-20140216-32ttz.html#ixzz2wr9VUbhq>

11 Cited in *ibid.*

12 *Committee Hansard*, 12 March 2014, p. 41.

13 *Committee Hansard*, 11 December 2013, p. 57.

3.18 Further evidence provided by Mr Clarke about the process for appointing board members raised questions of possible probity problems with the appointments process. However, the committee was not able to gain a clear insight of the process and sought further evidence from the Department of Communications:

**CHAIR:** Before Mr Milne was announced as being a board appointee there were media reports that he was at NBN Co. working for NBN Co. Did you see any of those reports? Are you familiar with those reports? Do you know if it is true?

**Mr Clarke:** I do not recall seeing those reports.

**CHAIR:** I saw them myself, so I was surprised at the time. Or not surprised, given the previous publicity that he was getting a job at NBN Co. Who placed Mr Flanagan's name on the list?

**Mr Clarke:** I am not going to be able to give you precise answers to these questions.

**CHAIR:** I am happy for you to take that on notice.

**Mr Clarke:** Certainly.<sup>14</sup>

3.19 The Department has advised that Russell Reynolds Associates included Justin Milne and Patrick Flanagan as short listed candidates for the NBN Co Board, noting:

Following the appointment of Dr Ziggy Switkowski as Executive Chairman, the Department appointed Russell Reynolds Associates, a global executive search provider, to conduct a search for executives suited to the NBN Co Board.

At the 19 November 2013 Senate Estimates hearing the NBN Co Executive Chairman, Dr Ziggy Switkowski, stated:

“As chairman I led the way in identifying potential board members. There was a reasonable list. To that end we were advised, and I know that the advisers were commissioned by the department, and I provided input – indeed, my recommendations – as to board appointments from the perspective that it was the minister who was going to make the call.”<sup>15</sup>

3.20 The process for selection of a new NBN Co Chairman was discussed in evidence at the committee's public hearing on 11 December 2013. Mr Clarke outlined the process followed, including a short list for consideration by shareholder ministers prior to the appointment by Cabinet.<sup>16</sup> Mr Clarke explained the input of the shareholder ministers to the CEO selection process:

**Mr Clarke:** There was a process by which the shareholding minister made a choice.

**CHAIR:** Who put Mr Switkowski's name in the ring?

---

14 Ibid, p. 59.

15 Answer to Questions on Notice, 11 December 2013, No. 35.

16 *Committee Hansard*, 11 December 2013, p. 57.

**Mr Clarke:** I believe it was the minister.<sup>17</sup>

### *Additional Executive Members*

3.21 Mr JB Rousselot was appointed Head of Strategy and Transformation at NBN Co on 23 October. In the role he was to 'lead the Strategic Review process that is commencing this week and then help manage the implementation of recommendations and their incorporation into the company's 2014-17 Corporate Plan'.<sup>18</sup>

3.22 On 13 November 2013 Mr Greg Adcock was appointed Chief Operating Officer of NBN Co. The company also announced that current Chief Operating Officer Mr Ralph Steffans would step down and leave the company immediately.<sup>19</sup>

3.23 On 12 December NBN Co announced that Mr Bill Morrow had been appointed Chief Executive Officer of NBN Co. The announcement stated that '[Morrow] will join the company in the New Year and will be based in Sydney'.<sup>20</sup> Media reports at the time indicated that Mr Morrow would take up the position 'between March and April'.<sup>21</sup>

### *Shareholdings of board and executive members*

3.24 Other probity issues involving NBN Co board members were raised during the committee's public hearing on 17 December 2013. These relate specifically to a potential conflict of interest involving NBN Co board members and senior management:

**Dr Switkowski:** I am completely confident that there is no conflict of interest that will prevent us from reaching the optimum outcome for NBN Co. Completely confident.

**Senator LUDLAM:** Do any of your board or any of your senior management team have shares in Telstra?

**Dr Switkowski:** I do not know the status of the shareholdings of one of our board members, but I do know that that person was appointed to the board with equity in Telstra shares and I think had undertaken to divest himself of those shares.

**Senator LUDLAM:** How about your management team?

**Dr Switkowski:** I am not aware.

**Senator LUDLAM:** What are your processes internally within the company for disclosure of that sort of thing? How would you be made aware of it?

---

17 Ibid, p. 58.

18 NBN Co, Media Release, 'JB Rousselot appointed Head of Strategy and Transformation', (23 October 2013).

19 NBN Co, Media Release, 'Greg Adcock named NBN Co Chief Operating Officer', (17 October 2013).

20 NBN Co, Media Release, 'Bill Morrow appointed NBN Co CEO', (12 December 2013).

21 Josh Taylor, 'Joining NBN Co is about leaving a legacy: Morrow', *ZDNet*, (12 December 2013).

**Dr Switkowski:** We would expect such holdings to be disclosed and then to be discussed, at this stage, with me.<sup>22</sup>

3.25 Further evidence was given that two of the NBN Co executives held Telstra shares, with one executive seeking legal advice with regards to his shareholdings.<sup>23</sup>

### *Processes of Appointments*

3.26 During the Committee's public hearing on 29 November 2013, Dr Switkowski was questioned about the timing of approaches made to himself, Mr Milne and Mr Rousselot:

**Senator CONROY:** Thank you. I note that last week you had a discussion about when you were first approached for the position. I am sure you were aware, for were horrified at the time, to see that there was media speculation very early in the year that you had been approached and offered the position. I just want to be very precise—and I accept 'precise' does not necessarily mean five o'clock on x day—about when you were first approached to take on a role at NBN Co.

**Dr Switkowski:** My recollection is that around about March-April I would have crossed paths with Mr Turnbull when we would have talked about the telecom industry broadly and NBN, but not with my joining that organisation being a topic. That evolved in the weeks that followed.

**Senator CONROY:** Sorry, in the weeks that followed March and April?

**Dr Switkowski:** Yes. I had always assumed at that time—I think I am right—that the minister was consulting widely with the industry, talking to a lot of people, and sometime around about—

**Senator CONROY:** He would have been talking widely to a lot of journalists.

**Dr Switkowski:** and some time—and I am not clear about this—around the middle of the year the topic would have been raised about joining the NBN and considering being on a list of potential candidates for the Chair role.

**Senator CONROY:** Did you have any discussions with Mr Turnbull about any other individuals who would be possible employees or board members of NBN Co.?

**Dr Switkowski:** I think in our conversations names did come up for all sorts of reasons.

**Senator CONROY:** But did Mr Milne's name come up or Mr Rousselot's name come up?

**Dr Switkowski:** For the board?

**Senator CONROY:** For any position—board or executive.

---

22 *Committee Hansard*, 17 December 2013, p. 64.

23 *Ibid.*

**Dr Switkowski:** It is hard to disentangle at which point I raised the matter of Justin Milne and JB Rousselot and their attraction for NBN Co., but I certainly did talk to the minister about those people, absolutely.

**Senator CONROY:** So you raised them with Mr Turnbull?

**Dr Switkowski:** As I said, it is hard to disentangle how these topics arose. Both of those individuals were known to each of us and they would have been, along with others—and there were lots of others—names that were judged to be relevant to the NBN situation.<sup>24</sup>

3.27 The media speculation referred to in this exchange was published in the *Australian Financial Review* and *Crikey* in May and June 2013, well before the commencement of any selection processes.<sup>25</sup> This speculation referred to personal associations between Minister Turnbull and the prospective appointees. The article in *Crikey* noted that 'Milne worked as head of datacasting at OzEmail when Turnbull was chairman'.<sup>26</sup> It also reported that 'the French-born Rousselot, who was reportedly inspired to move to Australia after meeting Turnbull on a skiing trip, formerly worked at OzEmail and Turnbull's boutique advisory firm'.<sup>27</sup> An answer to a Question on Notice also confirmed prior personal association between Mr Turnbull and Mr Rousselot:

Mr Rousselot and Minister Turnbull jointly own an old Cousta Boat and have done so for over 15 years. This is the only joint asset they hold.<sup>28</sup>

3.28 This evidence, and the answers from Dr Switkowski set out above, suggest that any subsequent selection processes by which he, Mr Rousselot and Mr Milne were selected for roles in NBN Co were not genuine merit selection processes. The Committee concludes that the processes of recruitment for the Board and Management have created the perception, at least, that these are political appointments for a political purpose. In reaching this conclusion the Committee is not making any conclusions about the skills and experience of any of the individuals.

---

24 *Committee Hansard*, 29 November 2013, p. 3.

25 On 12 June 2013, *Crikey* reported that Mr Milne and Mr Rousselot would be appointed at NBN Co if the Coalition won the election. At the time, Mr Turnbull rang *Crikey* and said this was "untrue" ("Tips and Rumours," *Crikey* (12 June 2013), at: [http://www.crikey.com.au/2013/06/12/tips-and-rumours-898/?wpmw\\_switcher=mobile](http://www.crikey.com.au/2013/06/12/tips-and-rumours-898/?wpmw_switcher=mobile)). See also David Ramli and Nabila Ahmed, "Coalition wants ex-Telstra players for NBN Co board," *Australian Financial Review* (13 May 2013), at: [http://www.afr.com/p/technology/coalition\\_wants\\_ex\\_telstra\\_players\\_eTMq13dFgQnq0s5kQ6OFbL](http://www.afr.com/p/technology/coalition_wants_ex_telstra_players_eTMq13dFgQnq0s5kQ6OFbL).

26 *Ibid.*

27 *Ibid.*

28 Answer to Question on Notice, Supplementary Estimates 2013, No. 193, available at: [http://www.aph.gov.au/~media/Estimates/Live/ec\\_ctte/estimates/supp\\_1314/communications/answers/QON\\_193.ashx](http://www.aph.gov.au/~media/Estimates/Live/ec_ctte/estimates/supp_1314/communications/answers/QON_193.ashx)

### *Summary of findings—Key Appointments*

- **Key appointment processes for the NBN Co Board and management pertaining to the conduct of the Strategic Review reflect to a large extent media reports naming the same personnel before the election. There is also clear evidence that key appointees have prior personal associations with the Minister.**
- **The Committee concludes that some of the processes of recruitment for the Board and management of NBN Co have created the perception, at least, that these are political appointments for a political purpose. In reaching this conclusion, the Committee is not making any conclusions about the skills and experience of any of the individuals.**

### **NBN Co culture**

#### *Findings of the Strategic Review*

3.29 A key finding of the Strategic Review relates to the culture of NBN Co and its effect on the rollout of the network. The Strategic Review explained part of the methodology used in examining the culture of NBN Co:

The Independent Assessment conducted approximately 60 interviews including all senior management and a sample of employees from a number of divisions, locations and levels. While this was not a comprehensive organisational review it is KordaMentha's professional opinion that there are a number of people and culture issues that are important to note in the Strategic Review and that NBN Co should address these issues in the preparation of its Corporate Plan.<sup>29</sup>

3.30 Mr Korda elaborated on this methodology during the public hearing on 17 December 2013:

Trying to compact in what we say, one of our processes – as we said in the strategic review – we interviewed approximately 60 people internally, including the executive committee and many employees that we randomly selected to get a view of the people and culture. That phrase was a common phrase that was used. We could have used the words 'siloes' but there are many siloes with NBN. There is the construction silo, the revenue silo, the chief operating officer silo, the finance silo, and so just if you took premises past there could be three different versions of premises past within the organisation. That is an example, and I think Ziggy mentioned it before.<sup>30</sup>

3.31 Dr Switkowski also commented on the NBN Co culture, advising the committee of his observations on first joining NBN Co:

The review found what I also found in the early weeks when I joined NBN, early in October – that is, that, commendably, there was a high regard and respect for the promises that were built into a corporate plan. But there was

---

29 Strategic Review, p.72

30 *Committee Hansard*, 17 December 2013, p. 70.

a very high resistance or reluctance to recognise that what was being experienced and delivered in the field was well away from the assumptions and the promises in the corporate plan. The culture was such that these differences were not properly debated and tested, and adequate remedial action was not taken. I have seen evidence of that in the inquiries and the interrogations of this committee. There is a kind of ferocious determination to say that what was in the plan and what was in the headlines of two years ago must have been right, and that they must still be right. The fact is they are not. They were not right then; they are not right now.<sup>31</sup>

3.32 The overall finding of the Strategic Review was that the culture of NBN Co was widely seen to be a problem, notwithstanding the motivated and committed people who had been attracted to work for the company.<sup>32</sup>

3.33 The Independent Assessment identified a number of factors believed to be responsible for the problematic culture in NBN Co:

- 'living in the political and media fish bowl';
- Hiring process lacking rigour;
- Whole-of-business strategy neglected in favour of targets within functional groups assumed to combine to progress the project;
- Lack of trust in motives of senior management;
- Fear of being blamed for mistakes; reluctant to document decisions for fear of consequences;
- Duplication of roles and functions; and
- Complex organisational structure with more personnel overheads than estimated for in the corporate plan.

3.34 Mr Korda too noted the problems of focusing solely on numbers:

We sort of observed the end result and we did find – we went through to try to find where all these cost savings were to be – there was just a general lack of business case for many significant decisions that needed to be made. I think it also had an overlay of trying to meet the culture of premises past. So you will get some decisions about passing premises in May or June that pushed up the costs.<sup>33</sup>

3.35 Other 'exogenous risks' identified by the Independent Assessment as affecting the culture of NBN Co include political and media interest and inherent risk in forecasting.<sup>34</sup>

3.36 The Strategic Review also noted that:

---

31 Ibid, p. 16.

32 Strategic Review, p. 72.

33 Committee Hansard, 17 December 2013, p. 70.

34 Strategic Review, p. 73.

...the Executive Committee has not been seen to operate efficiently and has tended to “seek to protect” perceived areas of responsibility and influence. While a number of recent changes are expected to improve the performance of the senior leadership team it was observed that “there is still a long way to go to optimise the performance of the organisation”. While the selection of a CEO is important for any organisation, it will be critically important for NBN Co.<sup>35</sup>

3.37 The Strategic Review noted that ongoing culture and organisational change—including long term direction focus, organisational structure and workforce model—are part of the re-direction of NBN Co under the implementation of the revised Statement of Expectations.<sup>36</sup> However the Strategic Review also details 'immediate' and 'medium term' next steps for the organisation. 'Immediate steps' focus on the task of the new CEO as the driver of review and change in the organisation and culture, as its new future direction is moulded by the revised Statement of Expectations. An 'immediate priority' is:

...to identify critical capability gaps, address overlapping roles, and realign responsibilities within the organisation. The company will need a substantial concerted effort and investment to make the changes required in CY14. Organisational capabilities will be reviewed and lifted, not just in relation to copper and HFC.<sup>37</sup>

3.38 In outlining the 'medium term next steps', the strategic review explains that defining a new operating model pursuant to the revised Statement of Expectations will be necessary to align construction, IT, business change and associated operational processes to support copper, HFC and FTTN.<sup>38</sup> The Strategic Review argues that:

This model will necessarily consider organisational changes to improve efficiency and productivity along with the redefinition of processes, culture and risk management practices that will support execution and delivery of the NBN.<sup>39</sup>

3.39 The Strategic Review notes that 'Changing the culture and re-directing and re-focusing the organisation will take several months and will be critical to success'.

#### ***'Political & Media Fish Bowl'***

3.40 The Strategic Review has identified that NBN Co staff living in a 'political and media fish bowl' is a major contributor to the cultural problems at the company.<sup>40</sup>

---

35 Ibid.

36 Strategic Review, p. 122.

37 Ibid, p. 119.

38 Ibid, p. 120.

39 Ibid.

40 Ibid, p. 72.

3.41 The company as a Government Business Enterprise will necessarily be the subject of scrutiny. However, whether that scrutiny is reasonable and enables the company to make unfettered decisions is another consideration.

3.42 The Coalition in opposition adopted an uncompromising and indiscriminate approach in this regard, with the NBN Co Board and management subject to a series of sustained and personal attacks. These began with attacks on the integrity of former NBN Co CEO Mike Quigley with reference to his previous role(s) at Alcatel-Lucent.<sup>41</sup> Later, these attacks focussed on Mr Quigley's credentials and competence in his role as CEO of NBN Co.<sup>42</sup> These attacks soon broadened to encompass the credentials and competence of the entire NBN Co Board, culminating in the threat of a judicial inquiry.<sup>43</sup> In July 2013, the NBN Co Chairman Siobhan McKenna took the unusual step of writing to Mr Turnbull signalling that the Board had taken measures to protect itself from 'threats':

Non-executive Directors have been told directly and indirectly by members of the opposition that they can expect a Judicial Enquiry investigating their governance post-election. The Non-executive Directors naturally sought to engage independent legal counsel on this matter, which they have a right to do, and appointed Herbert Smith Freehills. It is not unusual for company directors faced with threats to exercise their right to appoint external advisers.<sup>44</sup>

3.43 Opposition attacks were also more generally focussed on the company and the project. Initially, these attacks focussed on 'demolish[ing]' the network.<sup>45</sup> Thereafter the Coalition would reflexively criticise network developments as they arose. For example, when the satellite program was announced in February 2012, it was attacked for being a 'Rolls Royce' solution. Mr Turnbull said:

Now the satellite industry, which is a large one, has told us and told anyone else who cares to listen, that there is more than enough capacity on existing

- 
- 41 See, for example, JCNBN *Hansard* (May 2011), at: <http://parlinfo.aph.gov.au/parlInfo/search/display/display.w3p;query=Id%3A%22committees%2Fcommjnt%2F2011-05-16%2F0001%22>. See also Renai LeMay, 'The Earl of Wentworth is debasing himself', *ITNews* (29 April 2011), at: <http://www.itwire.com/virtualisation/46833-the-earl-of-wentworth-is-debasing-himself/46833-the-earl-of-wentworth-is-debasing-himself?start=2>
- 42 See, for example, James Hutchison, 'Turnbull attacks Quigley over NBN management', *ITNews* (24 September 2012), at: <http://www.itnews.com.au/News/316706.turnbull-attacks-quigley-over-nbn-management.aspx>
- 43 For example, *Lateline*, "Turnbull Critical of NBN Co Board (18 July 2013), at: <http://www.abc.net.au/lateline/content/2013/s3806353.htm> . See also <http://www.malcolmtturnbull.com.au/media/transcript-arguments-in-favour-of-electronic-voting>
- 44 Cited in Renai LeMay, "Poison words: Turnbull + NBN board go to war," *Delimiter* (18 July 2013), at: <http://delimiter.com.au/2013/07/18/poison-words-turnbull-nbn-board-go-to-war/>
- 45 For example, Emma Rogers, "Abbott orders Turnbull to demolish NBN," *ABC News* (14 September 2010), at: <http://www.abc.net.au/news/2010-09-14/abbott-orders-turnbull-to-demolish-nbn/2260320>

satellites. That's existing satellites available for lease and satellites that are scheduled to be launched already to provide broadband services to the several hundred thousand customers in rural and remote Australia that these satellites of the NBN are going to service.<sup>46</sup>

3.44 Even straightforward regulatory processes—such as the process for securing orbital slots for the long term satellites—were targeted.<sup>47</sup>

3.45 Subsequently, Coalition attacks focussed on the performance of the company against its targets. Often these criticisms ignored evidence necessitating changes to Corporate Plan targets, particularly those relating to the shift in the commencement date brought about by the nine-month delay in finalising the Definitive Agreements with Telstra and achieving regulatory approval from the ACCC. For example, at the 16 April 2012 hearing of the Joint Committee, Mr Quigley said:

**Mr Quigley:** I will return for a couple of moments, if I can, to make some comments on the corporate plan from December 2010 and comparisons of the current rollout with the targets that were in that plan. In the fourth quarter of 2010, when we were finalising the plan, there were a number of assumptions we had to make which were based on the best information that was available to us at the time. Those assumptions were highlighted and bolded and put in a box, in fact, on page 16 of the corporate plan. A number of assumptions we made at that time have changed for reasons which we simply could not control. The most obvious of which was the deal with Telstra, which we assumed would be finalised by June 2011. In fact, it was not finalised until nine months later, in March this year.

The second was that, just weeks before the December 2010 plan was released, we had anticipated that the network would use 14 points of interconnect. You may recall that, at the end of November 2011, the ACCC recommended to government that the network use 121 points of interconnect. The list of these was not finalised until May 2011. While we attempted to include this change in the corporate plan, we could not know the full consequences of that decision and the impact it would have on the rollout.

The third area—in fact, just days before the 2010 corporate plan was released—is that the government announced the greenfields policy. While we did our best to factor the impact of this policy into the plan, it is now clear that our estimates of greenfields demand was far too high. Our plan also did not take into account the large proportion of connections for new housing that were transferred back to Telstra as the policy was finalised. So two fundamental assumptions driving our greenfields numbers changed. The best estimate of project demand of new developments turned out to be

---

46 The Hon Malcolm Turnbull MP, Doorstop Interview (8 February 2012), at: <http://mt.tbone.com.au/media/transcripts/transcript-doorstop-interview-8-feb-2012/#sthash.eqJ5gMWU.dpuf>

47 JCNBN *Hansard*, 16 April 2012, from p. 53. See also: <http://www.malcolmturnbull.com.au/media/nbn-contracts-to-buy-two-satellites-without-the-orbital-slots-to-fly-them-i>

way too high and a change in policy saw us move a lot of those numbers that we had assumed in December 2010 back to Telstra. As a result we need to reflect these changes in our new corporate plan targets to be provided to the government in May. Those were probably the three most significant assumptions in the December 2010 plan which had to be modified but there were also others.

We are now in the process of developing a new corporate plan based on current assumptions and we will provide this to government at the end of May. So it is neither reasonable nor valid to compare NBN Co.'s performance with the deployment forecasts that were included in the December 2010 corporate plan.

3.46 At a doorstep in Sydney on 5 May 2013, Mr Turnbull said:

The NBN will be lucky to meet 15% of its June 30 target. It was meant to pass, according its own plan 1.2 million premises by 30 June this year. It will be lucky if it does 15% it's more likely to something around 10%. This is a colossal failure. It is proceeding at a snail's pace.<sup>48</sup>

3.47 Similarly, Mr Fletcher, Parliamentary Secretary to the Minister for Communications, said in an article in *The Australian* on 4 December 2012:

The fibre-optic network is supposed to pass 12.2 million premises around Australia by 2021. More than three years later, as at June 30, 2012, it had passed just 38,914 - less than one third of 1 per cent towards the finish line. Yet NBN Co's corporate plan, issued in December 2010, promised to pass 317,000 premises by June 30, 2012.<sup>49</sup>

3.48 The committee considers that the effect of these sustained attacks had an adverse impact on the staff and culture of NBN Co. In fact, the Strategic Review considers this a key exogenous risk:

NBN Co has been subject to intense political and media interest since inception. The Independent Assessment commented that this attention has adversely impacted the performance of NBN Co and the efficient deployment of the network. While the ongoing interest in the project is understandable, NBN Co would benefit from being allowed to focus on its core task away from the political spotlight.<sup>50</sup>

3.49 Despite this being identified as a key risk to performance, current leadership does not appear to have taken steps to address this risk.

3.50 On 18 December 2013 under the heading 'Wage bill soars as 400 staff top \$200K,' *The Australian* referred to data 'uncovered during the production of the

---

48 The Hon Malcolm Turnbull MP, Doorstop Interview (5 May 2013), at:

<http://www.malcolmturnbull.com.au/media/transcript-doorstop-5-may-2013>

49 Paul Fletcher, "National Broadband Network rollout proving to be a costly failure," *The Australian* (4 December 2013), at: <http://www.theaustralian.com.au/business/opinion/national-broadband-network-rollout-proving-to-be-a-costly-failure/story-e6frg9if-1226529240654#>

50 Strategic Review, p. 73.

landmark strategic review'.<sup>51</sup> This data was either sourced from NBN Co or the Minister's office.

3.51 On 26 February 2014, an article appeared in the *Daily Telegraph* claiming that 'NBN Co sources have blamed former communications minister Stephen Conroy for changing the eligibility criteria for subscriptions, which had been limited to families and small businesses which had no other access to comparable services'. Under questioning during the 12 March committee hearing, Dr Switkowski acknowledged that 'NBN Co should not be commenting on such matters', but indicated that he had initiated no inquiries into the matter.<sup>52</sup>

3.52 At Senate Estimates on 25 February 2014, NBN Co Executive Chairman Dr Switkowski stated:

As we revealed on Friday of last week, the total investment so far in NBN Co approaches \$7 billion for three per cent of the build.<sup>53</sup>

3.53 The day following Dr Switkowski's statement, *The Australian* ran off its front page an article entitled 'NBN's \$7bn bill for 3pc of network'.<sup>54</sup> On 7 March 2014, the day the sixth audit/review of the NBN was announced, the Minister said:

But the truth is very little was actually done. To spend \$7 billion to get to less than 3 per cent of the country is a shameful legacy.<sup>55</sup>

3.54 As NBN Co demonstrated during its half yearly results briefing (see figure below), the \$7.3 billion capital expenditure invested to date has gone into network and systems that pertain to the entire build, not just the brownfields fibre local and distribution network (LNDN).<sup>56</sup> This includes *inter alia* the fibre transit network, hardware for the satellite and fixed wireless build, and investment in core IT systems. As Malcolm Maiden pointed out in his article on the subject:

The NBN is big, but it's still basically a construction project, and construction projects absorb money and time at the front end as their foundations are built.

---

51 Annabel Hepworth and Mitchell Bingemann, 'Wage bill soars as 400 NBN staff top \$200k', *The Australian* (18 December 2013), at: <http://www.theaustralian.com.au/business/in-depth/wage-bill-soars-as-400-nbn-staff-top-200k/story-e6fngaif-1226785396991#>

52 *Committee Hansard*, 12 March 2014, pp. 2-3.

53 *Committee Hansard*, Additional Estimates 2014, p. 40.

54 Annabel Hepworth, 'NBN's \$7bn bill for 3pc of network', *The Australian* (26 February 2014), at: <http://www.theaustralian.com.au/national-affairs/nbns-7bn-bill-for-3pc-of-network/story-fn59niix-1226837728018#>

55 Cited in: 'National Broadband Network to face audit after revelations of \$30 million branding spend', *News.com*, at: <http://www.news.com.au/national/national-broadband-network-to-face-audit-after-revelations-of-30-million-branding-spend/story-fncynjr2-1226848075453>

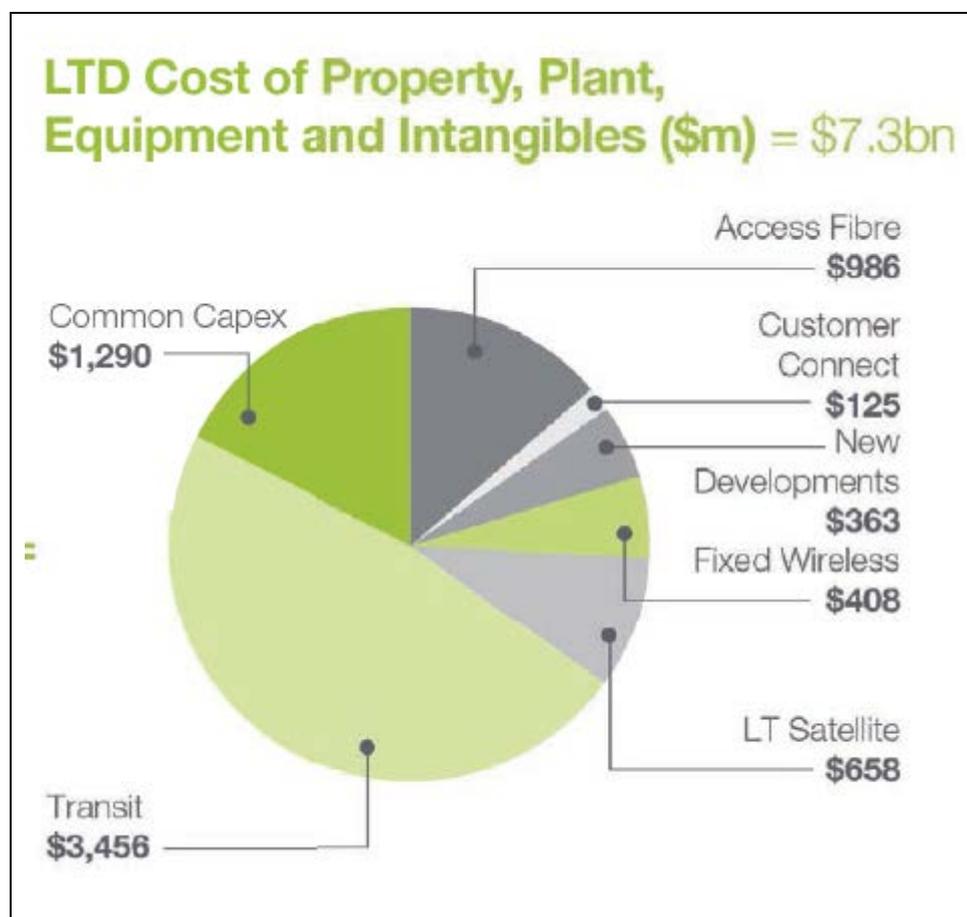
56 NBN Co, Half Yearly Results Presentation (21 February 2014), at: <http://www1.nbnco.com.au/content/dam/nbnco/documents/Half-Year-Results-Presentation-PDF.pdf>

By December 31, \$3.5 billion had been sunk into a broadband "transit network" that connects towns and cities. The transit network "passes" no premises in a statistical sense, but it is the NBN's spine. At December 31, it was 60 per cent complete, and 38,000 kilometres long.

Another \$658 million had been spent on hardware for the satellite portion of the network that will service remote areas, including two satellites that are being built in California, and a ground station at Bourke in western New South Wales.

Backbone infrastructure for the wireless portion of the network that will be sandwiched by fibre and satellite was in place at a cost of \$408 million, and 94 of a planned 121 points of interconnect for companies wanting to tap into the network had been completed. The NBN is behind its original schedule, but is far from only 3 per cent complete.

### NBN Life To Date Capital Expenditure



Source: NBN Co

#### Summary of Findings—NBN Co culture

- **The committee notes the finding of the Strategic Review that the intense politicisation of the NBN has adversely impacted the performance of NBN Co and the efficient deployment of the network.**

## **Concluding Remarks and Recommendations**

3.55 Key appointment processes for the NBN Co Board and management pertaining to the conduct of the Strategic Review reflect to a large extent media reports naming the same personnel before the election. There is also clear evidence that key appointees have prior personal associations with the Minister. The Committee considers that some of the processes of recruitment for the Board and management of NBN Co have created the perception that these are political appointments for a political purpose. In reaching this conclusion, the Committee is not making any judgements about the skills and experience of any of the individuals.

3.56 A key finding of KordaMentha was that 'no material issues exist within the accounts of NBN Co'. However, the Strategic Review draws radically different conclusions from the information contained in the 2013-16 Corporate Plan, which was signed off by an independent board in June 2013. Further, the Committee has found that the Revised Outlook includes financial manipulations and other irregularities. The Committee considers that the assumptions and conclusions set out in the Strategic Review are unreliable in the case of all examined scenarios.

3.57 It is not clear to the Committee how the NBN Co Board could have endorsed the Strategic Review, given its clear deficiencies. In the Committee's view, this should be investigated to ascertain how and at what point the governance processes at NBN Co have failed under the current Government.

3.58 The committee is also uneasy at the way in which the Government has unveiled multiple reviews and the very short timeframes announced for their completion. Noting the committee's findings of the Strategic Review, and the Government intention for the reviews to feed into the development of NBN Co's Corporate Plan 2014-17, the committee considers that the reviews and their findings should be subject to continuing and close parliamentary scrutiny.

3.59 The committee notes the finding of the Strategic Review that the intense politicisation of the NBN—driven principally by Coalition opposition to the project—has adversely impacted the performance of NBN Co and the efficient deployment of the network.

### **Recommendation 3**

**Governance processes between NBN Co and the Minister should be investigated to determine how a document with the deficiencies evident in the Strategic Review was produced and signed off by the NBN Co Board and the Minister.**

### **Recommendation 4**

**The Committee recommends that the Senate amend the Committee's Terms of Reference to enable ongoing and robust Parliamentary oversight of the National Broadband Network.**

# Chapter 4

## Transparency and Accountability

### Government undertakings

4.1 Prior to the September 2013 election, the Coalition's NBN policy identified increased transparency as a key change they would make to NBN Co, should they be elected:

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.<sup>1</sup>

4.2 The Coalition formed government after the September 2013 election. On 24 September 2013, while answering media questions about the government's interim Statement of Expectations to NBN Co, the Minister for Communications, the Hon Malcolm Turnbull MP confirmed the focus on the need for transparency in communications about the NBN:

But our commitment is, our focus is, to have a much greater level of transparency and openness.<sup>2</sup>

4.3 Mr Turnbull has made a number of subsequent undertakings. On Sunday Agenda on SkyNews on 15 December, Minister Turnbull said:

The main promise, the most important thing we said about the NBN was that we would tell the truth, and we would liberate the management of NBN Co to tell that truth.<sup>3</sup>

4.4 Speaking in the House of Representatives on 11 February 2014, Mr Turnbull said:

The bottom line is that as far as the NBN project is concerned, the government's commitment is to be completely transparent.<sup>4</sup>

4.5 In the same speech, he also said:

Maximum transparency is going to be given to this project.

4.6 The interim Statement of Expectations instructs NBN Co in how the government expects them to provide increased scrutiny and transparency:

---

1 Liberal Party, 'The Coalition's Plan for Fast Broadband and an Affordable NBN' (April 2013), p.12.

2 The Hon Malcolm Turnbull MP, Press Conference: Interim NBN Co Statement of Expectations (24 September 2013), at: <http://www.malcolmturnbull.com.au/media/press-conference-interim-nbn-statement-of-expectations>

3 *SkyNews Australian Agenda*, 'Interview with Malcolm Turnbull' (15 December 2013).

4 *House of Representatives Hansard*, 11 February 2014, pp. 13-14.

You will be aware that Government policy provides for increased security and transparency of NBN Co and its activities. As a first step in improving transparency we ask that you publish weekly information on your website indicating the numbers of premises passed, those premises that are passed but cannot receive a service (e.g. service class 0) and those premises with an active service for each element of the network. Your advice is also sought on longer term arrangements for improving the transparency of NBN Co operations.<sup>5</sup>

4.7 Under previous management, NBN Co exhibited unprecedented transparency for a government business enterprise. A summary of the measures employed by NBN Co in this regard was provided during the May 2013 senate estimates hearing:

One of the most consistent criticisms that I know you have had to sit and listen to endlessly is that there is more transparency in the Kremlin than there is at NBN Co. headquarters—I am sure you have heard that quip—so I just want to go through in some detail the information that is publicly available. The government and NBN Co. are committed to an unprecedented degree of public transparency on the NBN. Senator Cameron, you would be amazed at the amount of information that is freely and publicly available on the rollout of the NBN if you took the time to look and were not lazy about it—not that I am suggesting you are. Senator Cameron, you have not sat around this table and put your hand out and demanded that all of these questions be answered because, unlike some around this table, you have not been too lazy to go and do the work yourself.

NBN Co. provides monthly updates on the rollout progress on its website. These spreadsheets are called the monthly ready for service report. It lists NBN Co.'s most recent estimates of the status of every single fibre and service module on which construction has commenced, all 401 of them; every fibre distribution area to be completed before 30 June this year, all 667 of them; every new development on which construction has commenced, all 861 stages; and every fixed wireless site under construction, of which there are 92. NBN Co. also posts its one year construction schedule, which lists the areas in which construction will commence within a year, and its three year construction schedule, which lists the areas in which construction will commence within the next three years. In addition, NBN Co. posts its proposed footprint list, which lists every address for which services will become available within the next seven months, to assist retail service providers with their planning. NBN Co. also has a mapping tool which shows the network construction status in every part of Australia. The mapping tool includes a searchable list of every retail service provider connected to a particular address and a link to their NBN plans. NBN Co. also provides a list of all 121 points of interconnect and a construction schedule for each of them. NBN Co. also releases updates on rollout progress each quarter, which are available on its website, and provides detailed information on NBN costs and rollout progress every

---

5 Interim Statement of Expectations, p. 2.

six months in the performance report to the joint committee on the National Broadband Network.

In fact, the deployment information provided by NBN Co. on its website is so comprehensive that a J Xenon, on Whirlpool—and I should congratulate this individual—has created a website called mynbntracker, which enables users to track the detail of the rollout in their area, all using publicly available data. The website [www.mynbn.jxenon.com](http://www.mynbn.jxenon.com) allows you to enter your location and track all the public information available for your rollout region, including the status of construction process. This is extrapolated from publicly available information on the construction process tabled by Mr Quigley at parliamentary committees, including the expected completion date; the type of deployment, greenfields or brown fields; the name of the fibre serving area model; the name of the fibre serving area; the point of interconnect your area is connected to; the number of premises in your FSAM and FSA; and a list of all retail service providers. It is just remarkable what you can do when you take the time to have a look and do a little bit of hard work. NBN Co.'s website is a good place to start.

And there is an awful lot more information available publicly. GBEs are not required to release publicly their corporate plans but this government has released both NBN Co corporate plans containing detailed financial and deployment information—once again, on the website. NBN Co. also post on its website its annual reports, which include detailed financial and deployment information. NBN Co. also posts on its website detailed information about its special access undertaking, the wholesale broadband agreement, including related documents such as its network design rules.

NBN Co. executives routinely attend Senate estimates hearings and joint committees, providing detailed information if they are ever asked by any of the opposition senators and literally answer hundreds of questions placed on notice. At the last joint parliamentary committee in April Mr Quigley detailed the cost per premises passed and connected; a detailed breakdown of capital expenditure, including contingencies; a detailed breakdown of operational expenditure; detailed information on pricing, usage and take up; and detailed information across all stages of the construction cycle.

Finally, unlike most incorporated government companies, NBN Co. is subject to the FOI Act and releases information under this act regularly. Also available on its website are the board charter, the audit committee charter, the communications committee charter et cetera. There is a wealth of information on NBN Co. freely available out there for all to access.<sup>6</sup>

4.8 The Committee recognises that increased transparency and accountability is always welcome, particularly in the operations of a government business enterprise responsible for one of the largest infrastructure projects in our nation's history. Accordingly, this report will evaluate measures introduced under the current management of NBN Co to improve transparency.

---

6 *Committee Hansard*, Budget Estimates 2013, pp. 161-62.

## Public Information on the rollout

### *Construction schedule*

4.9 Current NBN Co management has removed much of the publicly available forecasting information on the rollout from NBN Co's website. Dr Switkowski noted during Supplementary Estimates hearings in November 2013:

...we have also brought greater clarity to the information that is publicly available about the state of the rollout—in particular, the maps on the NBN Co. website. Yes, the maps may not be as colourful as they once were but they are simpler and they do not create expectations that, as history as shown, NBN Co. and the industry struggle to meet.<sup>7</sup>

4.10 On 24 May 2013, former NBN Co Chairman Siobhan McKenna wrote to Mr Turnbull explaining why NBN Co informed local communities when physical design construction is occurring in their area:

Under NBN Co's construction partner contracts, “construction commenced” represents the milestone at which NBN Co releases to a construction partner a Contract Instruction to commence work in an area, as well as a Network Design Document (NDD). At this point, the construction partner starts developing Detailed Design Documents (DDD).

The preparation of each DDD involves construction field work. The work includes address verification, planning approval assessment, the electrical field design and the preparation of a field inspection report. Generating the field inspection report requires relevant ducts in the area to be “rodded and roped” and there may also be work on the ducts such as flushing using a “vac-truck” if there are duct blockages. This work is carried out by NBN Co's construction partners and is known as the “onsite proving exercise”. This work will always involve the presence of construction crews. It usually involves the erection of safety fences, traffic management and use of construction equipment. NBN Co's construction partners (or their subcontractors) are clearly present and visible in an area while these activities are happening. Telstra and its construction contractors (and their crews) are also in the field undertaking the remediation works requested by NBN Co once NBN Co has completed its onsite proving exercise. Local residents see these activities taking place in their community.

Local residents and businesses have an interest in whether their local area could be disrupted by any construction work and how long the disruption will last. Local residents and businesses will perceive little difference (if any) between construction activities as part of the field work and onsite proving exercise, Telstra's remediation to satisfy NBN Co's requirements, and construction activities that may involve the installation of fibre optic cable (whether in ducts or overhead), digging and or drilling on public

---

7 *Committee Hansard*, Supplementary Estimates 2013, p. 94.

property, installing pits or installing fibre distribution hub cabinets. These latter activities occur after the approval of the construction partner's DDD.<sup>8</sup>

4.11 This issue was canvassed at a public hearing of the committee in Canberra in November 2013. NBN Co acknowledged issues of public safety around providing this information to communities:

**Senator CONROY:** NBN Co. appears to have made a decision that that sort of activity, that you have just agreed looks like construction, is no longer to be considered construction—in fact, one of your public spokespeople actually denied that there was construction involved in what you are looking at there, and your maps have been altered to indicate that that is not construction. So I am just wondering whether or not you are keeping the public informed of what is happening. As you can see, there is a map right there that indicated where that Mudgee work, which you just saw a photograph of, was taking place, and that is the new map under your stewardship that represents that no activity is taking place in the area. So could you give me an explanation of why you have stopped informing the public where construction activity is taking place?

**Dr Switkowski:** Certainly. As you have described, some of the communications appear to be directed towards issues of public safety, traffic management et cetera—that is construction commenced—but over time have been interpreted as the beginning of a reasonable period by which time premises in that area will have access to high-speed connectivity. Over time, that figure I think has produced an expectation that has not been met. I understand the context of this originally, and that is: from construction commenced, to remediation, to build completion was expected to be a period of time of six to eight months.<sup>9</sup>

4.12 The lack of public information about the rollout is mentioned in a number of submissions. jxeeno notes that:

I am concerned with the decreasing levels of transparency at NBN Co, especially regarding information available publically. Since the change in Government, NBN Co has stopped publishing a number of documents previously publicly available....Removal of such files from the public has hampered public efforts to track the progress of the project, especially the removal of the Monthly Ready for Service plan, which limits the ability of individuals within rollout regions from finding out when they can expect to have service available in their area.<sup>10</sup>

4.13 This sentiment is echoed in another submission from Mr. Raper:

Great uncertainty now surrounds the NBN roll out and, despite claims to the contrary prior to the election, decreasing transparency at NBN Co has

---

8 Letter from Siobhan McKenna, Chairman, NBN Co to Malcolm Turnbull, Shadow Minister for Communications and Broadband (24 May 2013).

9 *Committee Hansard*, 29 November 2013, p. 39.

10 *Submission 12*, p. 13.

limited the ability of ordinary citizens like me to obtain information on the status of the NBN roll out...

Previously NBN Co published a variety of reports that enabled interested parties to track the roll out of the NBN. The Australian public could directly access these reports and monitor the progress of the NBN roll out. Alternatively, websites such as mynbn.info integrated data from these various reports and presented them in a user friendly way to those who did not wish to trawl through lines and lines of spreadsheet data. Indeed, I found mynbn.info presented NBN Co's data in a much more user friendly way than NBN Co's own website.

Regrettably, since the change in Government and despite assurances of increased transparency from Mr Malcolm Turnbull prior to the election, NBN Co have removed or restricted access to reports that were previously available to all Australians....

It is difficult to understand why NBN Co would wish to restrict access to reports it previously published freely. Removal of the reports from public access limits the Australian public's ability to track progress of the roll out.<sup>11</sup>

4.14 Evidence of community confusion from these measures appears in a number of submissions and in evidence taken at public hearings. For example, Digital Tasmania made the following comments at a public hearing in Hobart on 4 February 2014:

Consumers in many areas have expressed their disappointment to Digital Tasmania and in the media when much of the planned fibre-optic and fixed wireless areas were dropped from the rollout map following the change of government. As of mid-August last year, work was under way to connect fibre NBN to around 90,000 premises across Tasmania. When those rollout maps were revised after the coalition was elected, approximately 60,000 homes and businesses seem to have dropped off the map. This is two-thirds of Tasmanian homes and businesses which appear to have been taken off the construction schedule.<sup>12</sup>

4.15 Similarly, the City of Alexandrina is concerned that areas which were previously scheduled for rollout have apparently disappeared from the rollout schedule, with no information substituted to explain what is happening:

Our main concerns are that two of our areas that had been identified as under construction by NBN Co have now fallen off of the map. Goolwa and Victor Harbor are contiguous localities and we are concerned about any apparent piece meal approach to the roll-out. We also believed that plans and work for Strathalbyn were well advanced, but they too seem to have been lost.

---

11 *Submission 37*, pp. 1-3.

12 *Committee Hansard*, 4 February 2014, p. 25.

---

The recent change of Federal Government has delayed the project bringing uncertainty to our community and restricting our ability to implement programs based on access to high speed broadband. We are aware that the government intends to introduce a wider range of technologies; however our greatest concern is the delay to programs that we believed were well advanced.<sup>13</sup>

4.16 A submission from Mr Matt Wilkinson echoed these concerns.<sup>14</sup> Mr Wilkinson has had previous communications with NBN Co on the matter of the fibre footprint in Band 1 and Band 2 exchange service areas, and NBN Co's undertaking to serve his premises with fibre:

From my understanding, as of 15 July 2013, SA Power Networks was awarded a contract by NBN Co to complete the Fibre rollout to around 300,000 premises, of which 5STI-01 is to be included....

Prior to the 2013 Federal Election, Mr Turnbull, in his capacity of Shadow Minister for Communications and Broadband made a firm promise on a number of occasions to honour the existing signed contracts if elected to Government.

Some 31,600 search results on his promise can be found on Google here:

<http://www.google.com.au/search?q=malcolm%20turnbull%20honour%20existing%20contracts%20nbn>

As of December 2013, a number of FSA were removed from the NBN Co website, 5STI-01 included. To date, there is no indication as to when it will reappear in the rollout schedule, nor via which means the broadband will be delivered. Current experience shows that (as in Tas), existing contracts (to roll out fibre) are being torn up, and replaced with FTTN.<sup>15</sup>

4.17 The City of Victor Harbor voiced similar concerns:

In March 2012 Victor Harbor was confirmed as a high priority location for one of the first stages of the National Broadband Network (NBN) fibre to the premises rollout schedule through the Port Elliot Project (rural areas to receive a different service later). Victor Harbor and the region thought it hit the jackpot upon receiving the news however upon hearing of the current review there is a lot of uncertainty, anger and frustration within the local community.<sup>16</sup>

4.18 The lack of consultation or communication with local communities, and the absence of information available to these communities on the rollout, was thrown into stark relief in evidence given by the Mayor of Geraldton, Mr Carpenter, during the 29 January 2014 hearing in Perth:

---

13 *Submission 14*, p. 2.

14 *Submission 50*, p. 2.

15 This matter is chronicled on the Whirlpool forum at the following URL:  
<http://forums.whirlpool.net.au/archive/1959073#r35745544>

16 *Submission 53*, p. 4.

**Senator LUDLAM:**...since the election, when there was a very sharp and deliberate change of policy—we are still trying to establish what it is—what contact has the city had with NBN Co. or its various subentities?

**Mr Carpenter:** Prior to then, the amount of work that they did with us was excellent. They kept us well informed of rollout dates and all that type of stuff and where the particular areas where they were going to be laying the cable were. It was fantastic. As soon as the election came, it was like a guillotine; it just stopped.

**Senator LUDLAM:** That is an uncomfortable metaphor, but we can adopt that. That is nearly five months ago. What contact have you had with the corporation since then?

**Mr Carpenter:** I personally have had none, and as far as I know the officers of the city have not had any either.

**Senator LUDLAM:** Really? So all you get is in the public domain when they start removing FSAM areas from the maps?

**Mr Carpenter:** I was not aware of that until I saw it here today.<sup>17</sup>

### *Weekly progress report*

4.19 NBN Co, as directed in the Interim Statement of Expectations, has provided on its website a summary of weekly network progress. This summary contains information on premises passed for each network element (brownfields fibre, greenfields fibre, fixed wireless and satellite) the number of premises within that footprint that face a longer connection timeframe (so called 'service class zero' premises) and the number of activated premises for each network type. The current week's network progress is also presented on a state and territory basis.

4.20 This is a laudable development—previously network rollout progress was released at less frequent intervals. However, as is evident from the 25 February Estimates hearing, NBN Co produces weekly a Program Summary Report which contains considerably more information on rollout progress than what is made available on NBN Co's website. As set out during the Estimates hearing of 25 February 2014:

**Senator CONROY:** Are you familiar with the program summary reports that were provided to the previous government?...

**Dr Switkowski:** I am familiar with that particular report if from this distance it is the one I think it is.

**Senator CONROY:** Yes. It is entitled 'Program summary report'. It covers the date an FSAM was switched on, the number of premises connected, the take-up rate in every active FSAM in Australia, the contract instructions issued, the number of builds, bulk drops completed et cetera. Sound familiar?

---

17 *Committee Hansard*, 29 January 2014, p. 28.

**Dr Switkowski:** That has certainly been part of the internal management reporting because I observed that on the first day I arrived.

**Senator CONROY:** I am hoping you get it each week and read it.

**Dr Switkowski:** We get that report every week and review it, yes.

**Senator CONROY:** You are using the royal 'we'? I want to make sure you are part of the royal we?

**Dr Switkowski:** I am chief executive, so yes.

**Senator CONROY:** So these reports are still prepared internally with the same information? They will be expanding, because the number of—

**Dr Switkowski:** Yes. For all intents and purposes, yes.<sup>18</sup>

4.21 The information contained in the weekly progress report published on the website contains only a subset of this information. No information is provided on individual FSAMs (i.e. the date an FSAM was switched on, the take-up rate in every active FSAM in Australia, the contract instructions issued, the number of builds drops etc.). As noted above, the weekly progress report also contains little information on the rollout itself. The dearth of detail in the weekly progress report was mentioned by jxeeno, creator of the independent rollout tracker myNBN.info site, in his submission to the Committee:

It should be noted that NBN Co has also stated releasing its weekly rollout statistics as part of the Interim Statement of Expectations. Such efforts should be commended, however, provide little detail in terms of the actual rollout and its expected availability.<sup>19</sup>

4.22 It is unclear to the Committee why much of the pertinent information about network progress has been omitted from the weekly bulletin on NBN Co's website. This is particularly the case for the information on take up rates in individual FSAMs. Prior to 7 September 2013, these take up rates demonstrated that Australians are taking up fibre services at world-record rates.<sup>20</sup> However, the Committee notes that weekly provision of data demonstrating the popularity of the fibre service may make it problematic for NBN Co to switch to an inferior fixed-line deployment technology.

## **Committee Experience**

### ***Public Hearings***

4.23 Under the previous Parliament, there were three Parliamentary committees focussed on the NBN: the Environment and Communications Legislation Standing Committee, the Joint Parliamentary Committee on the National Broadband Network, and the House of Representatives Standing Committee on Infrastructure and Communications ('Inquiry into the role and potential of the National Broadband Network', report tabled 25 August 2011). Under the 42nd Parliament, there were two

---

18 *Committee Hansard*, Additional Estimates 2014, p. 58.

19 *Submission 12*, p. 13.

20 *Committee Hansard*, Budget Estimates 2013, p. 152.

Parliamentary committees focussed on the NBN: the Environment and Communications Legislation Standing Committee, and the Senate Select Committee into the National Broadband Network. Under the current Parliament, there are again two committees relevant to the NBN: the Environment and Communications Standing Committee and the Senate Select Committee on the National Broadband Network.

4.24 Under the current Parliament, NBN Co executives have continually pled a lack of availability to appear at hearings of the Committee. On each occasion, the committee had exchanged numerous letters with NBN Co in an attempt to find a compromise on a hearing date and time which would be suitable to NBN Co. On each occasion, the committee has been flexible in making the arrangements for public hearings in order to accommodate the busy schedules of NBN Co executives, and has twice changed the dates of hearings due to notice from NBN Co that the hearing date would clash with a board meeting. The committee had no choice but to issue three summons for NBN Co executives to appear and give evidence.

4.25 On one occasion, NBN Co executives did not comply fully with the order to appear, citing key staff being unavailable. On another occasion, the public hearing on 17 December 2013, Dr Switkowski advised the committee that he had chosen the NBN Co representatives who he thought would best be able to address the committee's questions, despite the Committee's order as to who should appear:

**CHAIR:** I am asking you about your actual ongoing operation. Mr Korda is not involved in the actual deployment and Mr Adcock is. We did ask for him, and it continues to be a surprise to the committee that you continue not to provide the witnesses that the committee asks for. That is an unusual set of circumstances. I have not bothered having an argument about it because we want to get on with the hearing. But I just find it extraordinary that you continue to prevent the committee from having access to the people who can directly answer the questions. Mr Rousselot has just indicated that Mr Adcock is the person to ask, and we asked for him to be here, sitting next to you, right now. Mr Rousselot just tried to pass the question to him.

**Dr Switkowski:** My reading of the mandate of this committee led me to conclude that the interests of this committee were going to be focused on the contents of the strategic review, and that was supported by my reading of Hansard from last week. So I have assembled a team today that I believe to be—

**CHAIR:** The committee decides who we will ask questions of.<sup>21</sup>

4.26 The committee notes that this is not the only example of arrogant behaviour from NBN Co executives at the committee's public hearings. The following exchange occurred at the committee's hearing on 11 December 2013:

**Mr Cooney:** Apologies, it is just my understanding—advice was given to us that three members of the committee constitute a quorum of the committee.

---

21 *Committee Hansard*, 17 December 2013, p. 7.

**CHAIR:** Yes, and when a senator calls a quorum then a quorum is called and it is tested. But you do not get to call a quorum. Got it?

**Mr Cooney:** Sorry, I did not mean to call a quorum; it was just a clarification.

**CHAIR:** It is very clear—got it? Mr Cooney, you have just attempted to close down a parliamentary committee and failed, so let us be very clear about what you just did: you have just attempted to close down a parliamentary committee.

**Mr Cooney:** I was asking for clarification.

**CHAIR:** You have just attempted to close down a parliamentary committee—so much for NBN Co. wanting to participate and have scrutiny.<sup>22</sup>

### *Questions on Notice*

4.27 The committee has also faced difficulties in obtaining answers to questions taken on notice by NBN Co and the Department of Communications. Answers were provided over a month late to questions taken on notice at the committee's public hearings on 28 and 29 November 2013. All answers to questions taken on notice at the committee's public hearings on 11 and 17 December 2013 are yet to be submitted to the committee.

4.28 During the hearing of 17 December 2013, the Chair signalled to NBN Co CEO Dr Switkowski that questions in writing would be lodged with NBN Co on the Strategic Review:

**CHAIR:** Thank you for that opening statement. Dr Switkowski, the committee will have a number of relatively detailed questions, which we wanted to put to you in writing. We appreciate how busy you have been and how busy the company have been since the change of government. If we provide these to you by the end of the week, would it be possible to get responses to the committee by, say, 24 January.

**Dr Switkowski:** I am sure that is very reasonable.

**CHAIR:** Thank you.<sup>23</sup>

4.29 To date, answers to all of these questions have not been received by the Committee. On 10 February 2014, the committee wrote to NBN Co seeking an update on when answers to questions on notice would be provided.<sup>24</sup> On 25 February 2014, during a Senate estimates hearing, NBN Co Chair Dr Switkowski was again reminded of outstanding questions on notice:

---

22 *Committee Hansard*, 11 December 2013, p. 43.

23 *Committee Hansard*, 17 December 2013, p. 3.

24 Correspondence is available here:  
[http://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/National\\_Broadband\\_Network/NBN/Additional\\_Documents](http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/National_Broadband_Network/NBN/Additional_Documents)

**Senator CONROY:**...At the Senate Select Committee on the NBN hearings in December, I asked Dr Switkowski: The committee will have a number of relatively detailed questions which we want to put to you in writing. We appreciate how busy you have been and how busy the company have been since the change of government. If we provide these to you by the end of the week, would it be possible to get responses by, say, 24 January? Dr Switkowski replied: I am sure that that is very reasonable.

It is now a month later and no answers have been provided to the committee. Why not?

**Dr Switkowski:** Let me—

**Senator CONROY:** If the answer is that you have provided them to the minister's office and they are in his office, please just indicate that and save time.

**Dr Switkowski:** I acknowledge your implied criticism and accept it. As I said, this is now the fifth such appearance before the Senate estimates or Senate subcommittee. I think there were more than 250 questions. We have been working our way through them. I am hopeful that we will get them out relatively quickly.

**Senator CONROY:** So they are actually still with NBN Co? They are not sitting on the minister's desk waiting for him to tick them off?

**Dr Switkowski:** They may be. I do not know where every question is in the process. Honestly, I do not.

**Senator CONROY:** I appreciate your candour. We will get grumpier if we have not got them returned to the committee to allow us to make use of the answers to further the questioning.

**Dr Switkowski:** Could we space out these supplementary hearings, perhaps?

**Senator CONROY:** Look, NBN Co is used to dealing with hundreds and hundreds and hundreds of questions from the Senate and other parliamentary committees, so it is no surprise to your Canberra office that we would be chasing this number of questions. It is absolutely normal for this committee and other committees to ask you this many questions. So it is nothing new. It might be, I appreciate, to you, but it is absolutely nothing new to the people sitting around you and behind you. They have managed in the past to get the questions in prior to all committee hearings and all estimates. I am just hoping that you can do the same.<sup>25</sup>

4.30 On 28 February 2014, following the estimates hearing, a response to the committee letter of 10 February 2014 was received from NBN Co. This response did not refer to the originally agreed timeframe for submission and contained no undertaking to submit answers by a given date.

4.31 Further, in answers to Questions on Notice that have been received from earlier hearings, there is evidence of NBN Co and the Department of Communications

---

25 *Committee Hansard*, Additional Estimates 2014, p. 56–57.

refusing the information requested on highly spurious grounds. This is despite the fact that the information requested was previously publicly available. One example was Question on Notice 205, which asked:

For each of the Fibre Serving Access Modules (FSAMs) identified by NBN as [...]

- a. What is NBN Co's current estimate of the “premises count within the FSAM once construction has been completed.”
- b. On what date was the FSAM determined to have construction commenced as defined using the metrics issued prior to the election on 7 September? (construction commenced is identified as point “e” in exhibit 18-1 of the draft NBN Co Corporate Plan 2013-16).<sup>26</sup>

4.32 The information requested is available in a document called the Monthly Ready for Service, which NBN Co Head of Product and Sales, John Simon, confirmed that NBN Co produces on a monthly basis.<sup>27</sup> Mr Simon was asked whether this report is still available on NBN Co's website:

**Senator CONROY:** That is the monthly Ready for service report. You identified that you knew what it was. Are they still published on the website?

**Mr Simon:** Yes. We still send out—

**Senator CONROY:** I do not think they are.

**Mr Simon:** We send out a Ready for service—

**Senator CONROY:** No. That is not what I asked. I am going to come to that. I asked whether they are still published on the website. Could you correct your answer?

**Mr Simon:** I do not believe that report in that format is published on the website. We send it to our RSP partners for their planning for sales purposes.

4.33 As noted above, this document used to be publicly available on NBN Co's website until it was taken down under current management. Despite the apparent ease with which this information could be provided by NBN Co, the reason given for refusing to provide this information was:

Provision of more detailed information at the Fibre Serving Area Module (FSAM) level is not provided publicly and to report regularly at this level would require an unnecessary diversion of the company's resources.<sup>28</sup>

---

26 Answer to Question on Notice, Supplementary Estimates 2013, No. 205. Full list of FSAMs available in Question on Notice 205, available here: [http://www.aph.gov.au/~media/Estimates/Live/ec\\_ctte/estimates/supp\\_1314/communications/answers/QON\\_205.ashx](http://www.aph.gov.au/~media/Estimates/Live/ec_ctte/estimates/supp_1314/communications/answers/QON_205.ashx)

27 *Committee Hansard*, Additional Estimates 2014, pp. 58–59.

28 Answer to Question on Notice, Supplementary Estimates 2013, No. 205.

4.34 As set out above, the document in question is distributed monthly to NBN Co's retail customers. As the information requested in this question on notice pertained to information that NBN Co previously made available publicly available, there is no commercial reason to keep the information secret. The Committee considers that the refusal to supply this information is directly at odds with the Minister's many public statements committing to improve transparency at NBN Co.

4.35 Similar refusals to provide information that NBN Co produces regularly as part of its normal business activities were visible in other questions of notice. The answer to question on notice 207, for example—which asked for information about the number of premises for which build instructions had been issued—referred back to the answer to Question on Notice 205, despite the fact that NBN Co produces the information weekly as part of the Program Summary Report, and the answer to 205 had no relevance whatsoever to the question asked. Similarly, the information requested in QoNs 206 and 208—again, available from documents that NBN Co produces regularly as part of its normal business activities—was refused on the same spurious grounds. As discussed at Senate estimates:

**Senator CONROY:** I will come to my question. I am just drawing your attention to it so you could have a quick look at it. The reason given for providing no additional information in relation to question 205 was that information is not provided at FSAM level. What I am confused about is how an answer to question on notice 205 can be an answer to a question that had not been asked about FSAMs. You actually refer me to a question that has nothing to do with the question I actually asked you. It is a completely different question that I ask and you say, 'Go and look at 205.'

**Dr Switkowski:** I will have to reflect on that and come back to you.

**Senator CONROY:** I do appreciate that it goes through an iteration process, Dr Switkowski, where it moves beyond your control. But it makes the organisation look silly if the questions quite literally point to a question that has nothing to do with the original question asked.

**Dr Switkowski:** On this one you may have a point.

**Senator CONROY:** Still referring to question 207, are you aware that the program summary reports contain the numbers of premises for which NDDs had been released; the number for which construction has commenced; and the number for which build instructions have been issued?

**Dr Switkowski:** I think that is right.

**Senator CONROY:** The direction you have from the government is to be more transparent. The minister has made numerous statements about this. You said you have discussed them with him. Since the change of government, you have removed virtually all the publicly available information about the rollout. You have also refused to provide this information in direct answers to questions on notice, even though you produce the information that the Senate has asked for monthly. You have provided an absolutely incorrect direction in one of your answers on why it could not be provided—that it is a costly diversion or, in other words, it is too much money, even though it is a report in front of you. Even the

information that is provided in the weekly stats contains only a fraction of information that is actually available to you in the program summary reports. So while you may believe that you are providing more information by standing up and holding press conferences and just spouting the things that you want to talk about, the actual core information that was being provided by the organisation has been withdrawn.<sup>29</sup>

### ***Strategic Review***

4.36 On 3 December 2013, the Senate ordered the Minister representing the Minister for Communications, Senator the Hon Fifield, to table the strategic review no later than noon on 9 December 2013.<sup>30</sup> In responding to the order, a letter from Senator Fifield addressed to the Clerk of the Senate was tabled on 5 December. The letter advised that the strategic review should be withheld from the Senate on the grounds that the document may be prejudicial to the Government's commercial interests if it were to be publicly released:

The analysis undertaken by NBN Co includes detailed information and modelling of options to rollout the NBN using different architecture and technologies. The public release of this analysis could be prejudicial to NBN Co's future negotiations with a number of parties including vendors of telecommunications networks, equipment suppliers, information and business system providers, and construction contractors.<sup>31</sup>

4.37 The Minister's statement refusing to comply with the Senate's order concluded with the reassurance that the Government was implementing measures to achieve greater transparency in relation to the NBN (although these were not identified) and will continue to promote greater transparency of information in a manner 'which will not prejudice the financial interests of the Government and taxpayers'.

4.38 On 12 December 2013 the Government tabled in the Senate a redacted copy of the strategic review. The committee subsequently requested that NBN Co release a complete unredacted copy of the review, *in camera*, on a confidential basis to protect the commercial nature of the information. The request was denied by the Minister for Communications in a letter to NBN Co CEO, Dr Switkowski, on 17 December 2013. The letter stated that the review should not be released 'for reasons of public interest immunity'. It repeated the claim that releasing the document would damage the commercial interests of the Government and damage legal proceedings. The letter also directed officials from NBN Co not to answer any questions from the committee in relation to redacted material included in the review, either in public or in-camera, at the hearing in Sydney on 17 December 2013.

4.39 At its public hearing on 17 December 2013, the committee put to Dr Switkowski the stark difference between the information provided to the Committee and Committee experience in previous parliaments:

---

29 *Committee Hansard*, Additional Estimates 2014, p. 63.

30 Parliament of Australia, *Journals of the Senate*, 5 December 2013, p. 254.

31 Letter from Senator the Hon Fifield, 5 December 2013.

**Senator LUDLAM:** But we are being asked to accept the entire basis for this project being financially and commercially viable on the basis of a couple of blacked-out rectangles.

**Dr Switkowski:** Might I say that this is a step ahead of anything else you might have been asked to comment upon.

**Senator LUDLAM:** No, it is not. I have been working on these committees for five years now and we have been provided with full financials to the company, apart from one period where the background material for the expert panel was not provided to anybody, including the Senate, in 2009.

**Dr Switkowski:** I stand corrected.<sup>32</sup>

### **Concluding remarks and recommendations**

4.40 To the Committee's knowledge, since the change of management NBN Co has done two things to improve transparency. The first, which it was directed to do in the Interim Statement of Expectations, is the provision of a summary of weekly network progress. The second is regular results briefings modelled on the convention of publicly listed companies, the first of which took place on 21 February 2014. These are laudable developments.

4.41 However, on balance, the Committee considers that transparency has decreased markedly at NBN Co since the change of government, despite undertakings prior to the election. In summary:

- There is clear evidence of community uncertainty about the rollout of the NBN. Communities are not informed when physical construction is taking place in their area, and local communities are not being advised when services are expected to become available;
- The weekly rollout information that is published is only a subset of what is available to NBN Co management and appears overly selective. No take up rates for individual areas are published;
- Answers to Questions on Notice are submitted late or not at all, are evasive, and some answers do not attempt to address the questions asked;
- NBN Co personnel appear reluctant to be subject to Parliamentary scrutiny. On three occasions, they have had to be summoned to committee hearings, and in some cases requests for specific personnel have been denied;
- there is evidence of a Freedom of Information request being denied for spurious reasons;
- NBN Co previously released its half yearly results to the Joint Parliamentary Committee on the National Broadband Network and its full audited results annually in its Annual Reports tabled in Parliament. Results briefings are an additional reporting route with a different format—and should be

---

32 *Committee Hansard*, 17 December 2013, p. 23.

commended—but there is little or no information produced as a result that was not provided under the previous Parliament; and

- A request for *in camera* scrutiny of the unredacted Strategic Review has been denied by the Minister, despite the fact that these assumptions underpin a proposed Commonwealth investment of over \$40 billion—not including flagged upgrades.

4.42 Of key concern to the Committee is the uncertainty evident in the community on the network rollout. The Strategic Review lists under 'immediate next steps' an action 'engage and consult widely with stakeholders':

NBN Co will commence a program to engage and consult widely with stakeholders concerning the findings of the Strategic Review. This engagement will include the Department of Communications, Department of Finance, ACCC and ACMA, as well as industry representatives, peak bodies, RSPs, suppliers, infrastructure and access providers, communities and other relevant groups.<sup>33</sup>

4.43 It is now three months since the release of the Strategic Review, and the Committee can observe no progress in this area. The committee will be seeking advice from NBN Co about the specifics of its community engagement strategy in forthcoming hearings.

4.44 The committee notes the resignation of Mr Kieren Cooney as reported on 19 February 2014, after more than two years in his role as Chief Communications Officer. Dr Switkowski was reported as saying that Mr Cooney's resignation comes ahead of a review of marketing and communication in NBN Co, to be conducted prior to arrival of the new CEO Mr Bill Morrow in early April 2014. The committee expects that NBN Co will use this review as an opportunity to examine how it can improve transparency, better communicate with stakeholders and reduce the confusion evident in the community about the rollout of the NBN.

## **Recommendation 5**

**Shareholder Ministers and NBN Co should implement concrete measures to improve transparency and accountability. At a minimum, NBN Co should:**

**Immediately take steps to rectify community confusion on the rollout. NBN Co should inform communities where physical construction is taking place, and provide forecasting data on its website to advise local communities when services are expected to become available;**

**Attend all Parliamentary Committee hearings and answer questions on notice accurately and in a timely fashion, as is appropriate for a Government Business Enterprise accountable to the Australian people; and**

**Publish the full program summary report on its website, in accordance with the interim statement of expectations.**

---

33 Strategic Review, p. 120.

**Senator the Hon Kate Lundy  
Chair**

**Senator Scott Ludlam  
Greens Senator for WA**

# Coalition Senators' Dissenting Report

## Foreword

Coalition Senators find the Chair's report to be grossly misleading and untruthful in its portrayal of the evidence provided to the Senate Select Committee.

Coalition Senators additionally find that the process of preparing this interim report of the Senate Select Committee, including the provision of a deliberately falsified version of the majority report to the Coalition, to constitute an abuse of process. The 140-page majority report – which is replete with misrepresentations – and its self-serving recommendations were provided to Coalition senators one hour before the deadline for publication. This can only have been to deliberately limit Government members' ability to respond to the falsehoods and self-serving distortions littered throughout the report.

Anyone with a cursory understanding of the development of the National Broadband Network, the behaviour of the former Minister for Communications, Senator Stephen Conroy, and the performance of NBN Co will surely be gobsmacked by the assertions made in the Chair's report.

Senator Conroy possessed neither the competence nor capabilities to successfully build the NBN, and the interim report he and his colleagues have made underscores his financial illiteracy and their wilful ignorance of the true state of the project. But the interim report process exemplifies the Labor Party's dedication and proficiency when it comes to political game-playing and point-scoring.

The 97 per cent of Australians who Senator Conroy abjectly failed to deliver the NBN to surely wish he had displayed a similar commitment to improving their broadband.

During the Committee's work it has become abundantly clear that Labor Senators have no interest in examining or learning from the systemic and material failures of NBN Co, which by September 2013 had reached 3 per cent of Australian premises at a cost to taxpayers of \$6.5 billion, and was on a course that would have resulted in every Australian household and business paying \$43 per month more for broadband on average.

Instead, the Committee has degenerated into a highly politicised and at times farcical face-saving exercise where Senator Conroy, has sought to distort the history of the NBN and deny or disguise his direct personal culpability for massive economic

damage to a crucial input industry and the destruction of taxpayers' money on an unprecedented scale.

The majority interim report seeks to discredit the various independent analyses of the NBN undertaken since the September 2013 election. Instead it asks the public to believe that the NBN was on track and just around the corner – after six years where Labor's walk never once matched its talk. The plausibility of this narrative is a matter for the Australian public to judge for themselves.

But according to all of the evidence available, the NBN represents the single largest destruction of value for taxpayers in the history of the Commonwealth – and, it must be repeated, Senator Conroy bears direct personal responsibility for this outcome.

The following dissenting report will outline the reality of the situation at NBN Co, detail the appalling and undignified conduct of the Committee (which in the view of Coalition Senators is causing the Parliament significant reputational damage in the community) and challenge the baffling and illogical conclusions of the majority interim report.

It is the sincere hope of Coalition Senators that this Committee can more effectively focus its work and lift its standards of conduct going forward.

There are important questions for the Committee to examine – including those around how fast broadband can be delivered to Australians sooner, at lesser cost to Government and at prices which are affordable for consumers, and a separate set of questions about why the NBN project under Labor's oversight failed so disastrously.

### **Background to the Senate Select Committee**

To provide additional context to this Committee's operation, Government Senators note that the former Labor Government was not in favour of establishing the Joint Select Committee on the NBN in the 43rd Parliament. It was only established as part of negotiations with cross-bench MPs over the *Telecommunications (Structural Separation – Networks and Services Exemption) Instrument (no 1) 2011* when Senator Xenophon, in exchange for supporting the legislation, sought release of a redacted copy of the NBN Co Corporate Plan and establishment of the Joint Select Committee.

Until this negotiation in November and December 2010, Senator Conroy and the Government of which he was a part adamantly refused to disclose the NBN Co's business plan to the Australian taxpaying public, despite the latter being compelled to

---

provide at least (on the Labor government's estimate of the time) at least \$43 billion of debt and equity capital to the project.

Government Senators likewise note that this Senate Select Committee was established only after the shadow Defence spokesman and former Minister for Communications, Senator Conroy, overruled the current shadow Communications spokesman, the Hon. Jason Clare MP on the appropriate model for oversight of the NBN in the current Parliament.

The Hon. Jason Clare MP had previously verbally agreed with the Coalition to re-establish a Joint Standing Committee on the NBN, drawing a broad membership from both houses of Parliament and all parties. This Committee would have continued for the duration of the current Parliament.

It was the view of both the Government and Labor's spokesman on Communications that this Committee structure would have provided the most effective opportunities for constructive scrutiny of the NBN by the Parliament.

Senator Conroy – whose period as Minister was marked by a recurrent preference for opacity and secrecy over transparency and accountability – instead insisted on a small Senate Select Committee, to ensure voting numbers that favoured Labor and the Greens. He thereby excluded his own party's spokesman on Communications and assistant spokesman on Communications from participation in the key Parliamentary body performing oversight of the NBN.

### **Conduct of the Committee**

Government members of the Senate Select Committee regrettably must highlight the conduct of Labor and Green members of the Committee, with particular reference to: serial refusal to allocate equal time to Government members to question witnesses; serial failure to call witnesses requested by Government members; serial refusal to allow questions of witnesses present at hearings; frequent bullying and hectoring of witnesses; numerous unsubstantiated and bellicose accusations that witnesses were 'lying'; and many other instances of conduct that was unparliamentary and detrimental to public perceptions of the Senate.

Senator Conroy's insistence, as the former Minister for Communications, on temporarily chairing a committee charged with investigating a bungled and disastrously over-budget project for which he bears direct personal responsibility

shows an extraordinary inability to separate crude self-interest from the obligations to community and party that normally fall upon elected representatives.

Throughout the hearings, the Chair (whether Senator Lundy or Senator Conroy) has refused to allocate equal or sufficient time to Government Senators to question witnesses. This is conduct of such a crudely partisan and self-serving character that it brings the entire Committee process into disrepute.

This was no better highlighted than during a public hearing held in Sydney on 12 March 2014. A cursory examination of Hansard clearly shows that Opposition members – in particular Senator Conroy – were given disproportionate time to question witnesses compared to Government members.

Government Senators point out that at this hearing, the Opposition had more than three hours to question representatives of NBN Co while the Government was allocated considerably less than one hour. For example, Hansard from 12 March 2014 shows that from when proceedings commenced at 0829 hours until a break at 1027, almost every question was asked by Senator Conroy. Hansard shows proceedings recommencing at 1036, at which Government members asked questions – however, Senators Conroy and O’Neill nevertheless accounted for the bulk of questioning in this period as well.

The Chair has failed to call witnesses requested by Government members. On 13 February 2014 the Committee was advised of a number of witnesses who Senator Seselja requested to appear at a public hearing. But at a private meeting held on 20 March Government members of the committee were advised these witnesses had not even been contacted. Again, this is crudely self-serving conduct deeply at odds with Westminster-derived governance, and more akin to the parodies of democracy common in the Eastern Bloc prior to the fall of the Soviet Union.

The Chair has also arbitrarily disallowed questions of witnesses present at hearings – yet again, conduct hardly likely to contribute positive to community perceptions of the Senate as a place where issues are considered objectively and the truth sought without fear or favour.

Senator Conroy, during his temporary role as Chair of the Committee, denied Government members the opportunity to ask questions of a witness present and further denied a witness the right to augment their contribution by seeking more detailed information from another witness, as per usual practice:<sup>1</sup>

---

<sup>1</sup> page 13, Hansard transcript for Select Committee on the NBN public hearing on 17 December 2014

**Dr Switkowski:** This might be an opportunity to invite one of our advisers to comment on that, because it was an independent assessment. Their views are well worth listening to. Mr Korda—

**CHAIR:** Sorry; we will ask questions of Mr Korda later.

**Senator SESELJA:** I have asked a question of Dr Switkowski. He is seeking further advice. I would be very pleased to hear the additional information from Mr Korda.

**CHAIR:** And you will be able to, at the appropriate time in the committee hearing.

**Senator SESELJA:** Sure. But it seems that you want to limit the ability of questions to be answered. You have had 50 minutes. We have just started some questioning—

**CHAIR:** The committee has set out the agenda. The witness is—

**Senator SESELJA:** But there is nothing to stop additional information from coming forth.

**CHAIR:** The witnesses will be called this afternoon—

**Senator SESELJA:** There is no principle of the committee that we cannot have additional information.

**CHAIR:** The witnesses will be called this afternoon. You will be able to get all the information you need if you are patient.

**Senator SESELJA:** But I am going down a line of questioning which is no different to where you started in terms of the review. Dr Switkowski has said that he can provide additional information to that questioning, and I would like to get those answers. If Mr Korda can assist—

**CHAIR:** Mr Korda is listed to appear at 3.45 this afternoon, and you can put the questions to him—

**Senator SESELJA:** That is fine, but you have had 50 minutes—

**CHAIR:** If you do not have any more questions for the witnesses at the table—

**Senator SESELJA:** I do have questions for the witnesses.

**CHAIR:** Well, then, please ask them.

**Senator SESELJA:** And if Mr Korda can assist the witness, I am not sure why we as a committee would be prevented from getting those answers.

**CHAIR:** We have a separate entire period where we will be calling those witnesses, as agreed by you earlier today and—

**Senator SESELJA:** The witness at the table has said he can provide additional information through an additional witness.

**CHAIR:** last week. Would you like to ask Dr Switkowski some questions?

**Senator RUSTON:** Could I ask a procedural question, Chair? Is there anything preventing Mr Korda answering this question from a procedural perspective—

**CHAIR:** If you have finished your questions to Dr Switkowski, I have got lots more, so I can take up the flak.

**Senator SESELJA:** I am actually asking Dr Switkowski a question. I agree with Senator Ruston. Perhaps you can answer that question: is there anything preventing a witness coming to the table—

**CHAIR:** The committee have already agreed, and now what you are trying to do is change the order—

**Senator SESELJA:** No, I am not.

**CHAIR:** of the witnesses appearing before the committee in mid flight. We have already agreed on the program.

*Senator SESELJA: It is regular practice, and in fact I think we saw it in the hearings last week—*

*CHAIR: It is already agreed in the program.*

*Senator SESELJA: where additional witnesses were called from the back of the room where they could assist.*

*CHAIR: If you do not want to ask Dr Switkowski any more questions—*

*Senator SESELJA: I am asking him questions, but you seem desperate—*

*CHAIR: I will see if another senator—*

*Senator SESELJA: to stop Mr Korda from coming and assisting—*

*CHAIR: I am very excited for Mr Korda to appear, when he is called this afternoon.*

*If you have no more questions—*

*Senator SESELJA: I have plenty.*

*CHAIR: I will take the questions and I will keep going.*

*Senator SESELJA: Can I ask the question, though: what is the problem with him providing additional information?*

*CHAIR: He will provide it at 3.45, when he has been called.*

*Senator SESELJA: What is the problem with him providing—*

*CHAIR: Stop trying to run the committee from over there.*

*Senator SESELJA: I am not trying to run the committee. I am dealing with our witness at the table, who has requested another witness come and assist with answering the question.*

Considering Senator Conroy has himself on several occasions called witnesses present in the room to give evidence prior to their scheduled time to suit his line of questioning, Government Senators believe the exchange above exemplifies the misconduct, lack of impartiality and disrespect for the Committee process all too common in the proceedings of this particular Committee.

### **Bullying and Hectoring of Witnesses**

Coalition Senators are concerned that Senator Conroy has bullied and hectored witnesses in a manner that degrades community respect for the Committee process and the Senate, and is utterly inappropriate and unbecoming of a Senator: <sup>2</sup>

*CHAIR: Mr Adcock's salary? What is Mr Adcock's salary?*

*Dr Switkowski: It is disclosed in the annual report.*

*CHAIR: So you are refusing to—*

*Dr Switkowski: No, I am going to make those numbers available.*

*CHAIR: You know full well what they are. You are refusing to disclose them.*

*Dr Switkowski: The numbers will be available in the normal—*

*Senator RUSTON: Senator, I think you are badgering the witness here.*

*CHAIR: I am just getting a demonstration of the arrogance of the witness.*

*Senator RUSTON: Dr Switkowski has said he will make them available at the appropriate time.*

<sup>2</sup> page 35, Hansard transcript for Select Committee on the NBN public hearing on 17 December 2014

**CHAIR:** *The appropriate time is when the committee asks for them or decides it wants to insist on them.*

**Senator RUSTON:** *He may need to take it on notice. He may not actually have the exact figures.*

The contempt displayed by Senator Conroy towards Dr. Switkowski spilled over into Senate Estimates hearings with Senator Conroy directly accusing Dr Switkowski of lying (without providing any substantiating evidence whatsoever for the most serious allegation that can be levelled against a sworn witness):<sup>3</sup>

**Senator CONROY:** *Quite a lot are putting in claims. I am not saying you have acknowledged them. I will use 'acknowledge' as an affirmative stance towards resolving the dispute, rather than a complete try-on just because they have been incompetent in what they were contracted to do. That is probably it.*

**Dr Switkowski:** *I will accept that language. I do not know how many other of our contracting partners are in the process of lodging major claims against us, but we know Visionstream is one of them.*

**Senator CONROY:** *Well, there is almost no-one left, from the sound of it! When they see a soft touch, they know to stick in a big claim.*

**Dr Switkowski:** *Now, now. Do not go there. You keep saying that. It is inflammatory and it is wrong.*

**Senator CONROY:** *The actual numbers will prove whether I am right or you are right.*

**Dr Switkowski:** *They will prove whether we are right or you are right—exactly.*

**Senator CONROY:** *Yes. When the inflated numbers you forecast that you would be paying come to bear, you will be exposed.*

**Senator Fifield:** *Chair, I raise a point of order. Comments like 'you will be exposed' are clearly a reflection on the witness.*

**CHAIR:** *Exactly. Senator Conroy, can you stick to your—*

**Senator CONROY:** *What? I am allowed to reflect on witnesses. I cannot call them a liar, but reflecting on the witnesses—*

**CHAIR:** *Stick to your questions.*

**Senator CONROY:** *Let me be clear: I am reflecting.*

**CHAIR:** *Can you stick to your questioning and refrain from any comments, please.*

**Senator Fifield:** *It is an inappropriate reflection.*

**Senator CONROY:** *Thanks for your opinion!*

A member of the community casually observing the conduct of the Senate upon either occasion and taking note of Senator Conroy's callous treatment of Dr Switkowski would be forgiven for mistakenly assuming it was Dr Switkowski who was the former union official responsible for squandering almost \$7 billion on a network reaching 3 per cent of Australian premises, and Senator Conroy who in fact was one of the

<sup>3</sup> Hansard transcript for Senate Environment and Communications Legislation Committee, Estimates, 25 February 2014, page 56.

nation's most respected business leaders and a former CEO of both major private telecommunications carriers.

Government Senators view Senator Conroy's rudeness and lack of self-restraint as unacceptable. The disrespect shown to witnesses brings dishonour upon the Committee, and on the Senate as a whole.

Additional incidents of poor conduct or conduct unbecoming of the Committee include:

- Senator Lundy's resignation as chair of the Committee on 6 December 2013 and her re-appointment as chair on 20 December (with Senator Conroy appointed to the role in the interim). It is our understanding Senator Lundy was simply unavailable to attend scheduled hearings in December because of other commitments. Usual practice on such occasions is for the responsibilities of chair devolving to the deputy chair, or for hearings not to be held. Neither course of action was taken – instead, Senator Conroy chaired public hearings on 11 and 17 December 2013.
- Unreasonable demands for the repeated attendance at public hearings of senior executives of NBN Co. Representatives of NBN Co have appeared before public hearings of the Senate Select Committee more often since October than they appeared before the previous Joint Committee and Senate Estimates process during the entirety of 2012
- The Opposition's insistence on numerous public hearings being held at extremely short notice (necessitating the expenditure of significant resources by NBN Co), without any reasonable justification. It must be stated that this has materially affected the work of NBN Co's new leadership team to turn around the financial and operational disaster left by Senator Conroy's oversight of the Company.
- The Opposition's refusal to allow representatives of NBN Co to appear by video, despite allowing Senator Ludlam to do so at the hearing on 29 November 2013.
- Opposition members' insistence that representatives of NBN Co appear in person while the Company was preparing an extremely important and complex document – the NBN Strategic Review. Prima facie, this conduct was a calculated attempt to run interference in the legitimate work of NBN Co and the Company's efforts to get the project back onto a sustainable footing. Government Senators note that an offer of an alternate hearing the following week was refused. This caused significant and unwarranted inconvenience to NBN Co. It is difficult to avoid the conclusion that this

episode reflects Senator Conroy's determination to deliberately continue destroying value for taxpayers in Opposition, just as he unwittingly did through his incompetence and mismanagement in Government.

The sorry record of Committee conduct set out above makes it abundantly clear the bipartisan integrity of Committee process was seriously compromised, if not abused, by Opposition members.

It is the view of Government Senators that the failures of the Committee's integrity outlined above damages the Committee and undermines the legitimacy of this inquiry.

### **The State of the NBN Rollout**

Coalition Senators are astonished that so little focus has been given to examining the abject state of the National Broadband Network fibre rollout, which is intended to provide very fast broadband to 93 per cent of all Australian households and businesses. NBN Co is yet to meet a single fibre rollout target.

The Company has repeatedly fallen short of its publicly stated rollout targets by wide margins, including:

#### **Total Premises Passed by Fibre –Greenfields & Brownfields ('000)**

	<b>30 June 2012</b>	<b>30 June 2013</b>
Corporate Plan, December 2010	317	1,268
Corporate Plan, August 2012	39 (actual)	341
Actual		208

#### **Total Premises With Active Service on Fibre –Greenfields & Brownfields ('000)**

	<b>30 June 2012</b>	<b>30 June 2013</b>
Corporate Plan, December 2010	137	511
Corporate Plan, August 2012	4 (actual)	54
Actual		34

When they announced the current version of the NBN in April 2009, Prime Minister Rudd and Minister Conroy stated the rollout would be completed by 2018 and would have a net cost to Government of no more than \$26 billion (a forecast which was described as a 'conservative estimate').<sup>4</sup>

<sup>4</sup> [http://pandora.nla.gov.au/pan/80090/20100510-0258/www.minister.dbcde.gov.au/media/media\\_releases/2010/040.html](http://pandora.nla.gov.au/pan/80090/20100510-0258/www.minister.dbcde.gov.au/media/media_releases/2010/040.html)

By the September 2013 election, NBN Co had passed just 258,129 premises with fibre (2 per cent of the total needed to complete the network).

The rollout has been marred by serial delays, financial impairment of contractors, commercial disputes between contractors and NBN Co, and consistent failure to deliver.

NBN Co's underperformance has been notably worse in South Australia, Western Australia and the Northern Territory – under Senator Conroy, it appears there was virtually no interest in providing the 4 million Australians in these jurisdictions with very fast broadband and access to the opportunities of the digital economy.

At the election just 1714 premises in these States had service over the NBN fibre.

### **Responsibility for the NBN's Failures**

Coalition Senators welcome sporadic remarks from Senator Conroy belatedly admitting there were problems with the NBN project:

“We clearly underestimated and I think it's fair to say the construction model could be legitimately criticised ... We wouldn't have been so aggressive if we'd known how tough it was for the company. So that was an area where we were overly - ambitious ... I can understand and indeed empathise with those who are disappointed with the progress on the fibre roll-out.”<sup>5</sup>

However, Coalition Senators cannot reconcile this admission with Senator Conroy's repeated declarations over many years that the rollout was on time and within budget, such as:

“The [corporate] plan being released today confirms the project is on track.”<sup>6</sup>

It is also difficult to reconcile the disastrous outcomes from Senator Conroy's oversight of the project with his claims that he is focused on improving broadband for Australians living in regional and remote areas. These Australians are among those who would benefit most from timely provision of improved access to very fast broadband, and the services and opportunities to participate in the digital economy that it provides.

---

<sup>5</sup> Quoted in Ramli, D., (2013), “Labor's NBN Plans Too Ambitious”, available online [here](#).

<sup>6</sup> Quoted in Iggulden, T., (2012), “Conroy Slams Opposition, Media, Over NBN Fears”, available online [here](#).

But the facts show that the former government's mismanagement of the NBN has had a particularly adverse impact on citizens in regional and remote areas, by deterring private sector investment in broadband in these areas over the course of many years, yet failing to deliver NBN services on the timetable promised.

### **The NBN Co Strategic Review**

On 3 October 2013 the Government issued terms of reference for a Strategic Review of the National Broadband Network and asked NBN Co under a new Board and management team (with experience in the telecommunications sector) to carry out this work. This first phase of the Strategic Review was directed to assess:

- The progress and cost of the NBN rollout to date.
- The estimated time and cost to complete the network if it proceeded unchanged.
- The estimated time and cost to complete the network under various alternative designs.
- And the impact of these alternatives on broadband prices and NBN Co's commercial viability.<sup>7</sup>

The Strategic Review report was received by the Government in draft form on 2 December 2013, and approved in final form by the NBN Co Board and tabled in Parliament on 12 December 2013.<sup>8</sup>

The report found Labor's fibre-to-the-premises NBN was roughly two years behind schedule, on track to cost \$32 billion more than forecast, and unable to be finished for at least a decade.

On the other hand, universal access to high speed broadband could be delivered sooner and at lower cost under alternative approaches to the design of the network.

The key findings set out in the 12 December 2013 report included:

- At the end of September 2013, four years into the rollout and after \$6.5 billion of funding, the NBN reached 3 per cent of Australian premises and had fewer than 100,000 users.<sup>9</sup>
- The rollout had achieved only 45 per cent of its target as of September (even though NBN Co's targets were drastically pared in August 2012 in its revised Corporate Plan).<sup>10</sup>

---

<sup>7</sup> Minister for Communications & Minister for Finance – 'NBN Co Initiates Strategic Review' – Joint release, 3 Oct 2013.

<sup>8</sup> Strategic Review report: <http://www.nbnco.com.au/content/dam/nbnco/documents/NBN-Co-Strategic-Review-Report.pdf>

<sup>9</sup> NBN Co – 'Strategic Review Report' – Dec 2013, pp.40-41 (rollout, users) and p.67 (total investment).

- The Labor fibre-to-the-premises NBN would cost at least \$73 billion to complete – 66 per cent more than claimed by the former government prior to the 2013 election.<sup>11</sup>
- The Labor fibre-to-the-premises NBN would not be finished until at least 2024.<sup>12</sup> When Kevin Rudd announced the FTTP network in April 2009, he said it would be finished by 2018.<sup>13</sup>
- A completed Labor NBN would drive up broadband prices by at least 50 to 80 per cent – equivalent to an increase of \$43 per month in a typical household’s bill.<sup>14</sup>
- Allowing NBN Co sufficient commercial and technical flexibility to roll out a multi-technology NBN could save \$32 billion, deliver very fast broadband to virtually all Australians by 2019, and leave retail prices unchanged in real terms.<sup>15</sup>

Due to time constraints – the analysis in the December 2013 report was carried out in five weeks – this phase of the Strategic Review primarily focused on the fixed line NBN (which will serve 93 per cent of Australian premises).

In February 2014 a second phase of the Strategic Review started, this time focused on the NBN fixed wireless and satellite networks (which jointly serve 1 million premises in regional and remote areas of Australia). It will provide the Government with a report on these at the end of March 2014.

---

<sup>10</sup> NBN Co – ‘Strategic Review Report’ – Dec 2013, p.40. In August 2012, NBN Co’s June 2013 target for brownfield and greenfield premises passed with fibre was reduced from 1.3 million to 341,000 (other quarterly targets were adjusted accordingly). The figure achieved by June 2013 was 207,000 premises. NBN Co – ‘NBN Co 2011-2013 Corporate Plan’ – Dec 2010, p.77 (original target). NBN Co – ‘NBN Co 2012-2015 Corporate Plan’ – Aug 2012, p.12 (revision) and p.36 (revised target).

<sup>11</sup> NBN Co – ‘Strategic Review Report’ – Dec 2013, p.55. Note the Review’s ‘revised outlook’ cost estimate of \$73 billion for Labor’s FTTP NBN assumes a 10 per cent capex ‘contingency reserve’ in line with the NBN Co Corporate Plan. The cost expressed in directly comparable terms to cost estimates for other scenarios is \$78 billion if the same 20 per cent capex contingency assumed in costing all other variants of the NBN is used in the modelling of Labor’s FTTP NBN).

<sup>12</sup> NBN Co – ‘Strategic Review Report’ – Dec 2013, p.11.

<sup>13</sup> Prime Minister, Treasurer, Minister for Finance & Minister for Communications – ‘New National Broadband Network’ – Joint release, 7 April 2009: “...the Government and the private sector will invest up to \$43 billion over 8 years to build the national broadband network” with rollout commencing “in early 2010”.

<sup>14</sup> NBN Co – ‘Strategic Review Report’ – Dec 2013, p.106. This is only a ‘first round’ price hike – since higher prices reduce demand, to generate revenues sufficient for the 7.1 per cent return on capital specified by Labor would require further increases.

<sup>15</sup> NBN Co – ‘Strategic Review Report’ – Dec 2013, p.102 (timetable, cost) and p.106 (pricing).

---

## Progress on the Multi-technology Mix

- The Chair's report was silent on the swift progress made by the NBN Co in transitioning towards the Strategic Review's recommended multi technology mix.
- NBN Co has advised the Government that to deliver fast broadband sooner, at less cost to taxpayers and more affordably for consumers, the NBN should be completed using a multi-technology mix (MTM).
- These technologies include fibre to the node, fibre to the building, hybrid fibre coaxial cable (HFC), fibre to the premises as well as fixed wireless and satellite networks.
- This approach aims to minimise costs by selecting the appropriate technology to maximise use of existing infrastructure, to make the right investment at the right time.
- This is predicted to save taxpayers \$32 billion, get the NBN finished four years sooner and deliver download speeds of 50 megabits per second to premises in 90 percent of the fixed line footprint by 2019.
- The Strategic Review, delivered to Government on 12 December 2013, has identified that with the use of a multi-technology mix the NBN will cost \$41 billion, a saving of \$32 billion compared to the \$73 billion Labor's NBN would have cost.
- The Government's use of a mix of technologies and existing infrastructure will speed up the NBN rollout schedule.
- It will get the NBN finished four years sooner and deliver download speeds of 50 megabits per second to premises in 90 percent of the fixed line footprint by 2019.
- NBN Co will establish 121 points of interconnect: 80 in metropolitan Australia and 41 in regional Australia. In the view of the Australian Competition and Consumer Commission (ACCC), this semi-distributed network design, where the NBN will reach but not overbuild competitive backhaul routes, is the best long-term outcome for customers.
- The ACCC concluded that this arrangement would best promote retail and wholesale competition across all geographic markets. The government has accepted the ACCC's advice and industry generally supports the design.

## **Trials of VDSL Deployments**

- On 19 November 2013, NBN Co announced they are going to run a pilot program to examine new ways to accelerate the rollout of the NBN<sup>16</sup>.
- The FTTB pilot will test the rollout of high speed VDSL broadband to end users in ten apartment complexes and office blocks in Carlton, Brunswick and Parkville in Melbourne. These buildings will comprise up to 1000 individual homes and offices<sup>17</sup>.
- The pilot will run for a period of approximately three months.
- Four telcos have signed up to participate in the FTTB pilot: iiNet, M2, Optus and Telstra.
- Vectoring is a technology that helps make copper broadband networks faster. Vectored Very-high-bit-rate digital subscriber line (VDSL) has not been deployed in Australia until now. However, experience from Europe (adjusted for Australian gauge copper) suggests that a very high proportion of vectored VDSL premises can receive download speeds of approximately 50 megabits per second or more.
- The first results for this technology in the FTTB trials have been very encouraging. In one apartment building in Melbourne, over 150 metres of internal copper wiring has been delivering download speeds of more than 100 mbps, with upload speeds of more than 40 mbps.
- The NBN Co is also conducting a series of trials before it moves to a full-scale rollout. The trials allow NBN Co to test different planning processes and construction methods, and to work with telecommunications companies on how services will be activated and assured.
- Work on the FTTN build pilots has commenced in Umina, near Woy Woy on the NSW Central Coast and Epping in Melbourne's northern suburbs<sup>18</sup>.
- NBN Co will construct two small scale Copper Serving Area Modules, erecting kerbside node cabinets which will connect NBN Co fibre to spare copper pairs in the Telstra pillar. The company will use equipment provided by Alcatel-Lucent.
- Once active, NBN Co will invite service providers to participate in a FTTN end user trial to test the delivery of high speed broadband to up to 100 premises at each location.

---

<sup>16</sup> <http://www.nbnco.com.au/about-us/media/news/pilot-program-fibre-to-the-building.html>

<sup>17</sup> <http://www.nbnco.com.au/about-us/media/news/telcos-and-consumers-sign-up-for-fttb-pilot.html>

<sup>18</sup> <http://www.nbnco.com.au/about-us/media/news/nbn-co-prepares-for-revised-rollout-model.html>

## Demand Forecasts

- The Coalition recognises that Australian households are continuing to consume more data every month.
- ABS data shows that over the previous three years the growth of household monthly downloads has been around 50 per cent per year.
- The Chair's report states: "The committee disputes the assumption that consumers are only interested in using bandwidth for video applications"<sup>19</sup>.
- However, to say that video is a major driver of bandwidth consumption is not even remotely a controversial claim in the industry. Video continues to be a prime driver of this increased bandwidth demand. Cisco predicts that video traffic will be 73 per cent of all IP traffic by 2017, up from 60 per cent in 2012<sup>20</sup>.
- The Chair's report also states: "The committee considers that the government's policy does not reflect the service being sought by Australian consumers. Because the policy is based on an incorrect assessment of the needs of consumers, the key elements of the policy – implementing MTM in the rollout and relying on the Telstra copper network – will deliver an NBN which cannot supply the demands of business and communities, particularly those situated in rural and regional Australia"<sup>21</sup>.
- However, this is at odds with industry demand forecasts. For instance, a study by the Broadband Stakeholders Group in the U.K. found that most applications today do not require line speeds beyond 25Mbps - 50 Mbps for optimal performance<sup>22</sup>. The report found that less than 20 per cent of homes will need download speeds of 25mbps by 2018 and 40 per cent of homes will need those speeds as of 2013.

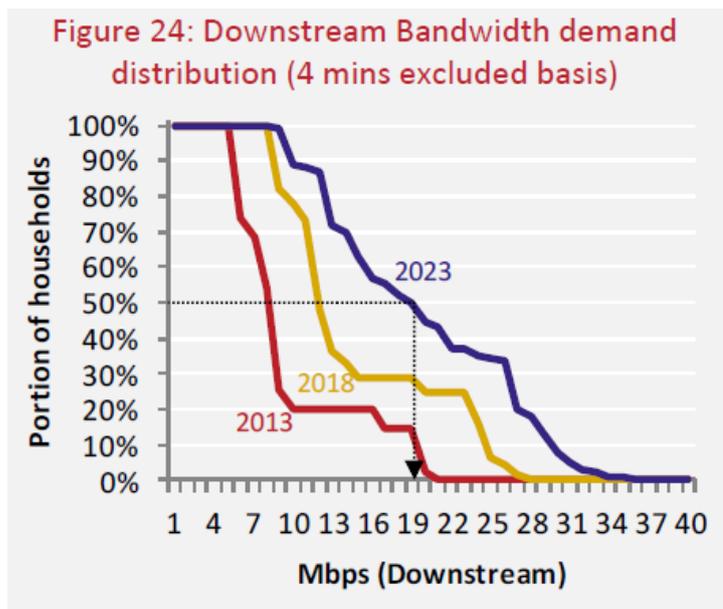
---

<sup>19</sup> At 4.4

<sup>20</sup> [http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/VNI\\_Hyperconnectivity\\_WP.html](http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/VNI_Hyperconnectivity_WP.html)

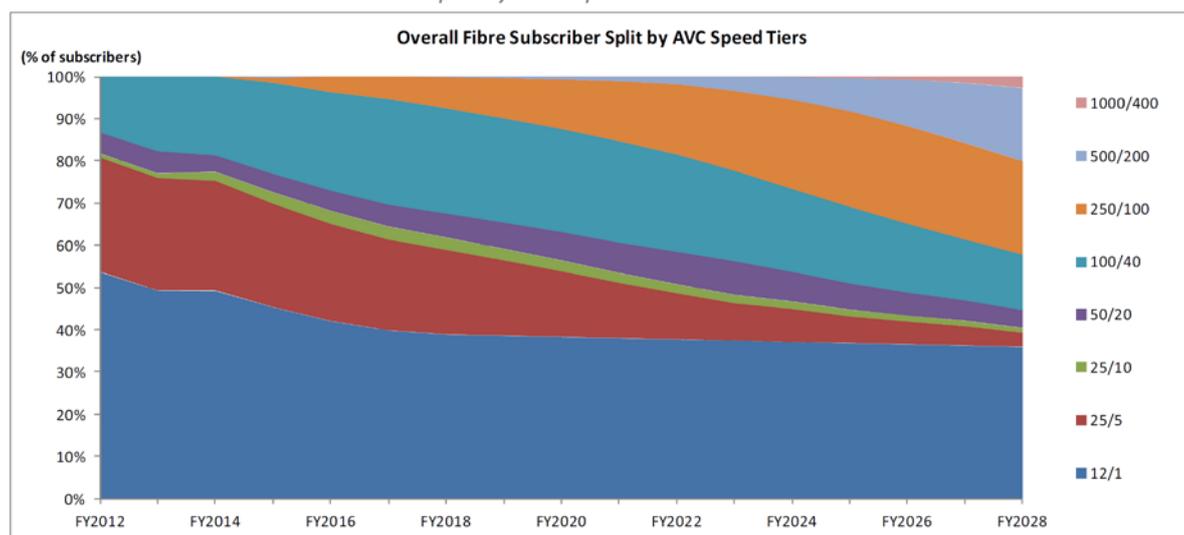
<sup>21</sup> At 4.9

<sup>22</sup> Broadband Stakeholder Group, (2013), Available online [here](#), page 26.



- The NBN’s demand forecasts paint a similar picture, showing that by 2018, less than 40 per cent of premises will require speeds of greater than 25mbps and that by 2023 around 50 per cent of houses will still be accessing speeds of 25mbps or less<sup>23</sup>.

Exhibit 8-4: Overall Fibre Subscriber Split by AVC Speed Tiers



Source: NBN Co

### Labor’s Failure on the NBN Interim Satellite Service

One of the most regrettable episodes in the development of the NBN brought to the attention of the Committee was the NBN Interim Satellite Service (ISS), a temporary internet access service for Australians in regional and remote areas who have no other way of getting broadband.

<sup>23</sup> NBN Co (2012), (Corporate Plan, 2012-15), p.46

In December 2013 the ISS reached its capacity limit of 48,000 customers, and registrations for new service were closed.

This has triggered understandable outrage in regional Australia, because as late as July 2013 Labor told 250,000 households and businesses (many with other options for getting broadband) that they were eligible for the ISS. Tens of thousands of families who want a service and genuinely have no other option now can't get one.

The ISS is costing NBN Co (and therefore taxpayers) \$351 million – a staggering \$7300 per user.

Only a fraction is recovered because consumers pay similar prices (\$50-60/month for a typical plan, \$24 of which goes to NBN Co.) as in populated areas – even though costs are up to 20 times higher. Yet despite this huge subsidy, users often have worse service than on the old Australian Broadband Guarantee – a Coalition scheme for broadband in remote areas, which averaged \$2500/user in subsidies.

Users were promised download speeds of 6 megabits per second. What they are getting is dial-up speeds, especially during peak hours (between when kids come home from school and late evening). This is because of incompetence under Labor, which allowed a few irresponsible retail service providers to ignore the NBN 'fair use policy' (which limited monthly downloads per user to 9GB) and sell plans with download caps up to 60GB.

A small number of heavy users take up most ISS capacity, and use it so heavily for streaming video and file sharing that performance has been degraded for all 48,000 users. As a result kids in the outback can't get online to do their homework, families can't Skype, and farmers can't access real time market prices or weather.

Originally 165,000 households and businesses were told they were eligible. In theory these were premises without access to any other type of broadband (4G mobile, ADSL or fixed wireless). In early 2013 this was lifted to 250,000 by Labor. As a result, tens of thousands of users who were told they were eligible can't get a service, the 48,000 current users now get terrible service, and thousands of people are being subsidised \$7300 by taxpayers even though they have other types of internet access.

Under Labor's ISS, NBN Co and its retail providers wasted \$351 million of taxpayers funds.

## Broadband Quality Project

- Coalition Senators welcome the development of the Broadband Quality Project. The Broadband Quality Project maps the likely available broadband services and speeds in local areas. The Department of Communications Secretary Drew Clarke said:

“I alluded at the estimates hearing to the fact that there were several further developments of the MyBroadband website. Ms Grainger has already alluded to the fact that we are trying to update the underlying data because the status of broadband will continue to evolve. Second, just in the last few days, we have published the underlying data for the 78,000 regions that are mapped in broadband. To support that, we have published as open data the data that you could get if you scraped or interrogated all 78,000 and wrote it all down, because we encourage people to get into it, understand it and critique it.... Third, it is our goal to add a speed test capability directly on the website ourselves, and we are currently going through the analysis of that.”<sup>24</sup>
- It is expected that underserved areas will, on average, receive fast broadband services 2 years sooner than they would have under Labor. This is a significant benefit to those living in areas where fast broadband services are not presently available.
- Coalition Senators believe that those with no or limited services have the most to gain from the rollout of fast broadband. Coalition Senators therefore strongly support the Government’s commitment to prioritise underserved areas in the forward rollout plan.

## New NBN Board

- The new Government have put in place four new board members at the NBN Co with extensive industry knowledge and experience – particularly in deploying linear infrastructure – to increase the level of oversight they are able to provide on this project.
  - **Ziggy Switkowski: Appointed as executive chairman, Dr Switkowski is one of Australia’s most respected executives in telecommunications. He is a former CEO of Telstra and Optus, at times when they were rolling out and upgrading their networks.**
  - **Patrick Flannigan:** Former Head of Construction at the NBN Co and founder of the Utility Services Group, which employs approximately

---

<sup>24</sup> Committee Hansard, March 12,

2,000 people nationally, servicing linear infrastructure in the electricity, gas, water and telecommunications sectors.

- **Justin Milne:** Former Managing Director of MSN, Microsoft's first entry into the internet portal business, a former CEO of OzEmail Managing Director of Telstra BigPond and later Group Managing Director, responsible for Bigpond and Telstra Media.
- **Simon Hackett:** Founder of Internode and sister company Agile Pty Ltd, a licensed telecommunications carrier. He has deployed networks to deliver ADSL2+, Optical Fibre, Microwave, and Fixed Computer Society. Simon will resign his position on the board of iiNet Limited at the end of this month to focus on his role with NBNC Co.
- Recent comments by members of the previous board suggest that they were frequently ignored and hampered in their role of providing oversight by the previous Government (see comments below, in 'Culture of the NBN Co').
- The previous board also had a long and protracted disputes with senior members of the NBN Co executive. Former Chairwoman Siobhan McKenna sought the replacement of CEO Mike Quigley<sup>25</sup> and reportedly intervened to prevent the Minister meeting with the CEO without her being present<sup>26</sup>.
- The Coalition members note that the new Board has acted professionally and harmoniously and welcome the new level of oversight introduced to this important project.

## Culture of NBN Co

- The Strategic Review has identified that NBN Co currently has some very significant limitations in terms of performance, capabilities and culture. The building of a national broadband network is a huge, complex undertaking. In order to achieve its objectives, a major transformation of NBN Co is required<sup>27</sup>.
- Between the widespread deployment of fibre to the cabinet plus VDSL2, the emergence of vectoring and bonding, the initial commercial trialing of fibre to the distribution point, and emerging protocols such as g.fast, the past five years has seen significant technological advancements in the way copper is used<sup>28</sup>.
- A more nimble approach to designing (and imagining) the NBN can preserve this technological optionality.

<sup>25</sup> McDuling, J., (2013), "McKenna in Push to Replace NBN Chief Quigley", available online here: [http://www.afr.com/p/technology/mckenna\\_in\\_push\\_to\\_replace\\_nbn\\_chief\\_3XKzAbKOgffIS3IajLYB2M](http://www.afr.com/p/technology/mckenna_in_push_to_replace_nbn_chief_3XKzAbKOgffIS3IajLYB2M)

<sup>26</sup> Kitney, D., (2013), "Siobhan McKenna Rolling Out a Revolution at the NBN", available online here: <http://www.theaustralian.com.au/business/in-depth/siobhan-mckenna-rolling-out-a-revolution-at-nbn/story-e6fgrgaf-1226630372814>

<sup>27</sup> Strategic Review, Page 114 - <http://www.nbnco.com.au/about-us/media/news/strategic-review.html>

<sup>28</sup> Minister Turnbull's speech at the NBN Rebooted Conference 18 November 2013.

- If investment decisions can be deferred until demand either materializes or can reasonably be foreseen, savings arising from the time value of money are not the only economic value generated.
- In plain terms this means keeping the option open of doing something different than what might seem at a certain point in time to be the answer – of responding to changing technology and changing market conditions.
- The Strategic Review found that changing the culture and re-directing and re-focusing the organisation will take several months, so while there may be some short-term uncertainty, transforming the organisation will be critical to its success<sup>29</sup>.
- The Strategic Review recommends this transformation address: reinforcing and aligning the leadership and governance; investing to lift and leverage capabilities in key areas such as dealing with partners, project management and capabilities in copper and HFC; and defining an operating model with clear accountabilities and performance metrics overall and by function<sup>30</sup>.
- The Independent Assessment identified areas requiring improvement in relation to the culture and leadership of NBN Co<sup>31</sup>:
  - Staff cite many examples of inaccurate information, lack of robust challenge, fear of contradicting senior staff, and mistrust in the motives of some leaders.
  - Duplication of roles across some functions has impeded collaboration, confused roles, and reduced efficiency.
- A number of examples exist of the professional staff of the NBN being unable to tell their political superiors news they didn't want to hear:
  - Former CEO Mike Quigley recently told an industry conference: “You do think, should I have been more conservative? But the timescales are already set for you, the time frames are already put out there for you so there's not much you can do.”<sup>32</sup>
  - Additionally, when former Board Member Diane Smith-Gander was asked whether the former board had asked the Government to conduct a cost-benefit analysis into the NBN, she said: “Think about the notion of suggesting anything to Minister Conroy.”<sup>33</sup>

---

<sup>29</sup> Strategic Review, Page 115 - <http://www.nbnco.com.au/about-us/media/news/strategic-review.html>

<sup>30</sup> Strategic Review, Page 114 - <http://www.nbnco.com.au/about-us/media/news/strategic-review.html>

<sup>31</sup> Strategic Review, Page 72 - <http://www.nbnco.com.au/about-us/media/news/strategic-review.html>

<sup>32</sup> Jabour, B., (2013), available online here: <http://www.theguardian.com/technology/2013/dec/03/labors-broadband-one-hurdle-from-success>

<sup>33</sup> Hutchinson, J., (2014), Ex-NBN Deputy Chair Smith-Gander Has ‘No Regrets’, available online her: [http://www.afr.com/p/technology/ex\\_nbn\\_deputy\\_chair\\_smith\\_gander\\_kevo1VbasOIzQk5hLoJroN](http://www.afr.com/p/technology/ex_nbn_deputy_chair_smith_gander_kevo1VbasOIzQk5hLoJroN)

- NBN Co Executive Chairman, Dr Switkowski has suggested the culture at NBN Co has not been conducive to producing accurate information about the NBN. Dr Switkowski stated:

“I think this followed a line of questioning that suggested that there was a lot of data being published routinely by NBN in the past and that that data is now of a different form and less voluminous than it used to be. That, broadly stated, is correct. But as we have said in this forum and in the subcommittee forums, what was very, very clear as it changed over in the September-October period was that within NBN there was this culture of acquiescing or even supporting quite unreasonable forecasts—unreasonably optimistic—and not recognising that the actual performance and the trend was moving sufficiently far away from those forecasts as to make the gap unable to be closed under any set of reasonable interventions. The information that was out there, aside from the headlines that generated it in the media, in business and in households as to the imminence of access to the NBN was uneven in its accuracy. There were colours on maps that said NBN is in your area and you will be able to connect within whatever the number was—12 months. Twelve months later, that was still the case and it was still 12 months out. I do not for a moment criticise the original intent—I think the intent was good; it was to be complete in the disclosure of the information—but it was not kept accurate or current. Then as the pressure increased on NBN, in terms of our failure to hit targets, those maps were not adjusted and those forecasts were not adjusted finely enough. In the end, I thought—others did too—that they were misleading. So we have cut back on the maps, indicating only those areas where we know construction has commenced and where we are confident that a person reading those maps can reasonably conclude that they will be connected in a reasonable period of time”<sup>34</sup>.

## NBN Transparency

- The Chair’s report stressed the importance of transparency in the NBN project.
- The Coalition members note the Chair has not lost her sense of irony. The shortfalls of the previous Labor Government when it comes to transparency were legend:
  - The Labor cabinet was briefed ahead of the election that delays had increased funding costs on the project by \$1.4 billion and that consultants KPMG had warned the Government the rollout targets were “presenting a significant risk to the project” and that this “has not been achieved in any international comparison”<sup>35</sup>. Yet Communications Minister Anthony Albanese told the ABC ahead of the election, “the corporate plan was considered by KPMG. They found that it was, in terms of the timelines and the costings, that all the assumptions were good.”<sup>36</sup>

<sup>34</sup> Hansard, 25 February 2014, pages 68-69

<sup>35</sup> Kenny, C., (2013), “Labor Knew of NBN Rollout Risk”, available online [here](#).

<sup>36</sup> ABC, (2013), “NBN Debate”, available online [here](#).

- The Labor cabinet was briefed by its own bankers, Lazard, that the project would have a negative net present value of \$31 billion<sup>37</sup>.
- Did not publicly disclose that many houses being passed were could not be serviced and were classed ‘Service Class 0’ – rather, it was leaked to media, which reported that up to 91 per cent of some ‘Ready for Service’ sites were so classified<sup>38</sup>.
- Release of rollout progress was sporadic and was timed to minimise embarrassment for the then Government. For instance, write downs for the company’s June 30, 2013 targets were announced under the cover of the Labor leadership challenge on March 21, 2013<sup>39</sup>.
- By contrast, the current Government have introduced a number of important transparency measures, including:
  - The undertaking on an independent Strategic Review, which for the first time gave the public a real insight into the true costs of the project – in time and dollars.
  - The NBN Co has begun publishing rollout progress and uptake on a week-by-week basis; these statistics provide a state-by-state breakdown of the rollout and cover service class ‘0’ premises.
  - The NBN recently held a quarterly analyst briefing, where senior NBN executives took questions from analysts, journalists and senior
- The Chair’s report was also critical of redactions in the NBN Strategic Review. For instance, the Chair’s report stated: “Further, some redactions create a mockery of the report. For example, the committee is of the view that the following graph reproduced from page 64 of the strategic review is rendered completely useless in its redacted form.”<sup>40</sup>
- The previous Government regularly redacted material that contained commercially sensitive material. In one extreme case, Labor attempted to force senators to pass crucial NBN legislation without seeing its Corporate Plan; independent senators were asked to sign a seven-year non-disclosure agreement in exchange for viewing the plan – and then released a heavily redacted version of the plan<sup>41</sup>.
- The previous Government also had a habit of presenting material to NBN committees and hearings with no financial information included. For instance, in February 2013, the NBN Co gave a presentation to estimates on the costs of the project, which included no actual costs of the project, as the slide shows:

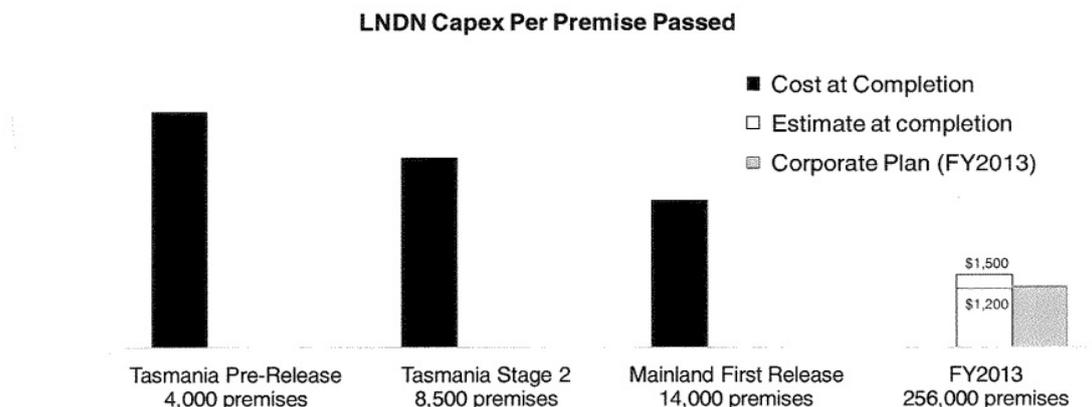
<sup>37</sup> Kenny, C., (2013), “Labor Told of \$31 Billion NBN Risk”, available online [here](#).

<sup>38</sup> For instance, Ramli, D., & Hutchinson, J., (2013), “NBN Statistics Reveal Many Can’t Connect”, available online [here](#).

<sup>39</sup> Cai, P., (2013), “NBN Admits to Three Month Delay”, available online [here](#).

<sup>40</sup> At 3.22

<sup>41</sup> ABC, (2010), “Cracks in the Government’s Cone of NBN Silence”, available online here: <http://www.abc.net.au/am/content/2010/s3072564.htm>



- The Chair’s report and Opposition members also referred repeatedly to draft 2013-16 Corporate Plans. This was given to the Government prior to the caretaker period and it was rejected by the Government because further downward revisions needed to be made, to take into account the failing contractor model and stoppages due to asbestos.
- Under questioning about its release, then Minister Anthony Albanese claimed it couldn’t have been accepted by the Government (and hence released publicly) in the election campaign: “Well, if we receive it, it’s gotta be gone through the cabinet process. Of course we are now in caretaker mode.”<sup>42</sup>
- Immediately after the election, the plan was leaked to the *Australian Financial Review*.

## Communication with Consumers and Stakeholders

- The NBN has suffered significant reputational damage as a result of significant construction delays and the promotion of unrealistic rollout schedules.
- The failure of NBN Co under Labor to honestly report what was happening on the ground and keep its promised rollout commitments caused significant uncertainty and angst for the communities being misled.
- NBN Co stated that:
 

“It is estimated that the average time from construction commencing to NBN services being available is 12 months.”<sup>43</sup>
- However, a range of factors – both within the NBN Co’s control and external to its control – meant that the true construction timeframe was much less predictable.
- Local residents have been frustrated at the apparent delays. For example NBN Co told residents that construction had commenced Ascot in September 2012, and would be complete in late 2013. And yet, construction contracts had not

<sup>42</sup> ABC, (2013), “NBN Debate”, available online here: <http://www.abc.net.au/lateline/content/2013/s3824057.htm>

<sup>43</sup> NBN Co website.

been issued by the time of the election. These contracts have now been issued and work is underway.

- The timeframes Labor gave communities often did not reflect reality and in many cases were extremely misleading.
- The Government is committed to providing communities with accurate information about the rollout. In order to achieve this NBN Co has begun using common sense language and definitions.
- For instance, NBN Co no longer uses the phrase ‘construction commenced’ which under Labor may have merely reflected that high level design work had commenced, but instead now uses the term ‘build commenced’ when construction contracts were actually signed. These terms provide communities with a much clearer understanding of where the rollout is up to in their community.
- As part of this commitment to be honest with Australians NBN Co now provides realistic maps detailing where the build has commenced and where services are available. As a result of this change some areas have been temporarily removed from the rollout maps as no actual construction work was underway. Accurate information about the rollout in these areas will be made available soon.
- Coalition Senators also note that several severe write-downs in the targets for the FTTP rollout to 30 June 2013 occurred under Labor, including a cut of about a third from 341,000 premises to between just 190,000 and 220,000<sup>44</sup>. Further, the Government was aware ahead of the election that the 2012-15 corporate plan forecast for June 2014 would be written down<sup>45</sup>. Despite this significant cut no alteration was made to NBN Co’s forward rollout maps to reflect that a significant number of premises had been delayed and would not be ready for service within the promised 12 month window.
- It is ironic that the Chair’s report cites ‘confusion’ caused by the changes to a multi-technology mix model when the previous Government’s rollout schedules left communities waiting, in some cases for years on end, with no accurate information about the rollout of the NBN.
- Many Labor MPs actively exaggerated the progress of the rollout in their own communities. The Member for Adelaide, the Hon Kate Ellis MP stated in November 2011 that :

“Prospect was first announced by the Federal Government as one of the first sites in Australia to be connected to the NBN in June 2010. I have been advocating for Adelaide residents to be able to access high speed and affordable broadband for many

---

<sup>44</sup> NBN Co, (2013), March 21

<sup>45</sup>

years and am thrilled that we are among the first in the country to be connected to the network."<sup>46</sup>

- Ms Ellis has been telling her community for years that they will soon have the NBN. It speaks volumes for the failure of the project to date that after 4 years she is still correct in stating that Prospect will be one of the first areas in the country to be connected.
- Coalition Senators note that a significant source of uncertainty for communities results for Labor MPs' claims to their constituents. For instance Labor's Shadow Assistant Minister for Communications, Michelle Rowland MP, told her constituents that "They (the Liberals) will rip the NBN out of the ground."<sup>47</sup> Labor MPs false claims have created the uncertainty they now criticise.
- As NBN Co Chief Operating Officer Greg Adcock mentioned at a recent half yearly results hearing, the changes have been designed to *reduce* uncertainty in the rollout. As ongoing
 

"One of the reasons for this and one of the key reasons for this was to give communities and commentators, the main users of the maps, a predictable indicator of the status of the rollout. As mentioned previously, the lifecycle of an FSAMs construction varies wildly, mainly during the design phase. We therefore now show when the actual instruction for construction has been issued following acceptance of a design."<sup>48</sup>

### **Wrongful Claims that the Rollout Has Slowed**

- The Chair's report asserts that the rollout of the NBN has slowed.
- Such a claim is bizarre. While it is true that the rollout of the NBN ground to a virtual halt under Labor in mid-2013, due to asbestos stoppages, since the change of Government the Coalition has overseen the remobilisation of contractors and significant progress in the rollout.
- The Chair's report highlights comments from officials of the former Tasmanian State Labor Government stating that while they had no actual evidence, anecdotally they felt it had slowed<sup>49</sup>. The Tasmanian State Labor Government officials were not able to provide evidence because it is a patently false assertion.
- In actual fact NBN Co rollout figures demonstrate that the Coalition Government is on track to pass more premises in Tasmania this year than in the entirety of the project under Labor.

<sup>46</sup> Ellis, K., (2011), available online here: <http://www.kateellis.com.au/newsroom/592/>

<sup>47</sup> <http://www.dailytelegraph.com.au/newslocal/west/greenway-combatants-ready-to-do-battle-in-labors-most-marginal-nsw-seat/story-fngr8i5s-1226565294268>

<sup>48</sup> NBN Co, (2014), "Transcript of Half Yearly Results", available online [here](#).

<sup>49</sup> At 4.34

### Total Premises Passed by fibre in Tasmania – Both Greenfields and Brownfields

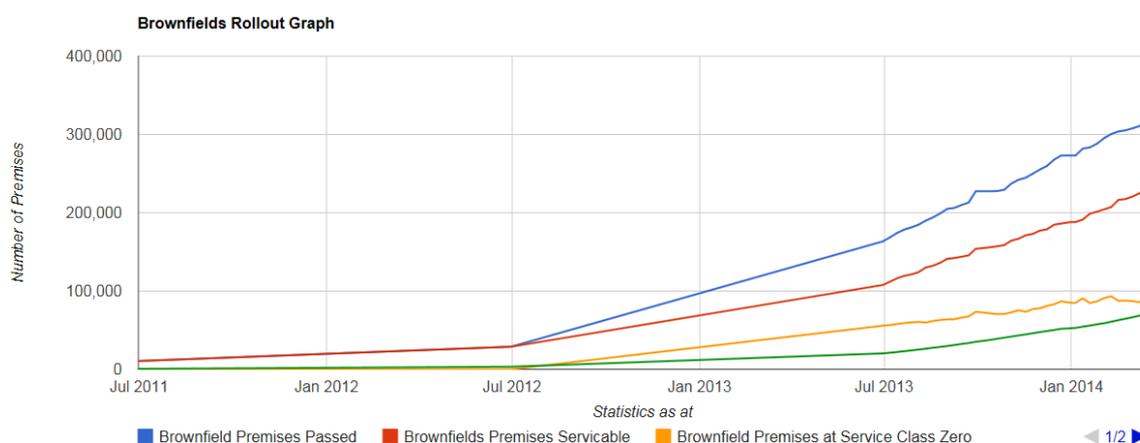
	As at Sept 2 2013	2014 construction (projected)
Premises passed	32,020	36,000

- Far from slowing the rollout these figures demonstrate that the Coalition has released significant volumes of work for Tasmanian contractors this year. Under the Coalition the pace of the rollout in many instances has actually increased, including in Tasmania.
- NBN Co is also progressing the rollout around the country:

### Total Premises Passed by fibre– Brownfields

	Premises Passed	Premises Serviceable	Premises at Service Class Zero	Premises Activated
8 September 2013	206,214	142,183	64,031	31,075
16 March 2014	321,097	229,907	91,190	70,430

- In just over 6 months since the election of the Coalition NBN Co clearly has significantly improved NBN Co's rollout performance. The disingenuous assertions made by Opposition Senators that the rollout has slowed is simply not back up by the facts.
- As the myNBN site shows, there only evidence of a slowdown is the number of 'Service Class 0' premises:



- The Coalition notes the irony of Labor MPs accusing the Government of slowing down the rollout. In six years of Government, they managed to upgrade only 2 per cent of households in Australia.

- The previous Government was well aware that significant write-downs would have to be made to the NBN rollout, well before the change of Government. This was made clear in evidence provided to the Committee<sup>50</sup>:

**Senator RUSTON:** As for the revision down from the 1.2 million to the 600,000—and this may not be a question to you Mr Adcock because you were not around at the time—what was the basis for that downsizing or that reducing of the target?

**CHAIR:** Now you wouldn't answer any questions from me about version 13—

**Senator RUSTON:** I am not asking about any versions—

**CHAIR:** The 600,000 is from version 13, just so you are very clear.

**Mr Adcock:** It was the number that was presented to me.

**Senator RUSTON:** Okay. I don't care which version this is in, to be perfectly honest.

**CHAIR:** That's very funny.

**Senator RUSTON:** Well, I'm glad you find it amusing.

**Mr Adcock:** It was the public number when I arrived there.

**CHAIR:** I agree, because that was what the version 13 number was. But I am happy to ask questions about version 13. If you want to answer questions about version 13, I have got about 50 you have taken on notice and we can go back and start again.

**Senator RUSTON:** Let's go back to version 12, because we all accept that version 12 is a legitimate document. Let's go back to whatever document that currently has full status. Could you—whoever—please run me through what were the main reasons in your opinion for the need to look at a lower number in projections? What—and just as an example if you want to be really specific—was the impact of the asbestos find on these numbers?

**Mr Brown:** Let me have a go first. There were three particular influences in terms of our ability to achieve any number we set ourselves. The first one was the mobilisation of the construction companies themselves. It is on the record that they were struggling with getting the sequencing of work right and their subcontractor base mobilised to do the job. So it was one of the drivers. The second one relates to the design approval process and expediting the designs back out of the hand-offs between ourselves, Telstra and the construction companies that were involved in that.

The third one was delays due to asbestos out of Telstra. However, I would note that these were the smallest of the three categories of reasons for why we were forecasting down the numbers.

- The sentiments expressed in the Chair's report are at odds with the admission by the former Minister Stephen Conroy that the contractor model put in place by the NBN Co has failed:

“What we found was that the construction industry were unable to deliver on their contractual obligations. And back in March-April, the NBN Co actually sacked Syntheo in the Northern Territory, have now effectively sacked Syntheo in South Australia, and have already brought in other providers before the election to begin work on the ground in Western Australia because Syntheo had failed to meet by not just a small margin, but an extraordinary margin their contractual obligations ... So ultimately - and I think I said this on Friday - I think the construction model that NBN Co put in place hasn't delivered.”<sup>51</sup>

<sup>50</sup> Hansard, 11 December, p.35

<sup>51</sup> ABC, (2013), “Stephen Conroy Discusses NBN and Working with the Construction Industry”, available online here: <http://www.abc.net.au/lateline/content/2013/s3868978.htm>

## **Senator Conroy's True Legacy - \$38 billion of Costs for ANY version of the NBN**

The NBN Strategic Review estimates a mixed technology NBN will require \$41 billion, a vast sum. To Telstra's costs for a similar upgrade were put at \$15 billion by its then-CEO Sol Trujillo in May 2008.<sup>52</sup>

Coalition Senators note some factors driving up the price of the NBN are outside government's control. Labour and materials are more expensive in Australia than comparable countries.

Unlike Telstra, NBN Co doesn't own an existing network it can leverage, and must pay for access if it is to take advantage of legacy infrastructure.

Greater prudence in forecasting is also a factor. All but one of the cost estimates in the Strategic Review reflect the new management's view that NBN Co should hold a 'contingency' budget (reserved against cost overruns) of 20 per cent of capex, given the project's risks. The exception is the Review's revised outlook for the Labor NBN, where total costs for Labor's NBN, where the contingency is 10 per cent of capex, as in the NBN Corporate Plan.

(Note that on a 'like-for-like' basis where both plans are costed using a 20 per cent contingency, total projected funding required for Labor's NBN rises from \$73 billion to \$78 billion.)

But the real drivers of the NBN's final price tag are vast financial obligations entered into under Labor that the network must now bear:

- In June 2011 NBN Co agreed to pay Telstra and Optus to gradually migrate customers to the NBN and decommission their rival networks. It also agreed to 35-year leases over Telstra dark fibre, ducts and exchange space. The current Corporate Plan forecasts the resulting payments will account for 90 per cent of direct opex and total about \$17 billion from 2011 to 2021.<sup>53</sup>
- To deliver the network promised by Labor, NBN Co has committed to far more costly investments in satellite, wireless, its transit network and its IT systems than first thought. The Strategic Review estimates capital expenditure on these (and network design) will total \$12.8 billion from 2011 to 2021 – \$3.6 billion or 40 per cent more than estimated in the current Corporate Plan.<sup>54</sup>

---

<sup>52</sup> Grahame Lynch – 'Comment: Here Cometh the Reality Check' – CommsDay, 28 May 2008.

<sup>53</sup> NBN Co – 'Strategic Review Report' – Dec 2013, pp.51-52: "Approximately 90 per cent of total direct operating expenditure" in 2011-2021 is paid to Telstra and Optus. Exhibit 2-17 shows direct opex is \$19 billion in those years.

<sup>54</sup> NBN Co – 'Strategic Review Report' – Dec 2013, exhibit 2-25, p.61. Revised non-FTTP capex is \$12.8 billion excluding the contingency, up from \$9.2 billion. Most satellite, transit, IT BSS/OSS and wireless capex is committed.

- NBN Co has ramped up overhead expenses (salaries, travel, legal advice, consultants, office space, recruitment and advertising) far ahead of both its revenues and network rollout, to about \$700 million per year.<sup>55</sup> The current Corporate Plan forecasts ‘other’ (overhead) operating expenses will total a staggering \$7.9 billion from 2011 to 2021. That is more than double the estimate offered to the public by the Labor Government and NBN Co in the original Corporate Plan in 2010.<sup>56</sup>

Combined, these three areas amount to \$35-38 billion of spending commitments between 2011 and 2021 locked in under Labor’s watch.

The overwhelming majority of these obligations must be met in full if the NBN is to be completed. This is true regardless of choices about network design or technology. Coalition Senators note it is true under Labor’s NBN, and under the five alternative scenarios modelled in the Strategic Review – all confront \$35-38 billion of financial commitments if the NBN’s fixed, wireless and satellite networks are rolled out to all Australian premises.

It is important to realize this is BEFORE a single cent is spent upgrading the fixed network that 93 per cent of Australian premises will rely on for very fast broadband. Crippling costs of \$35-38 billion for any NBN, before spending anything on the fixed network, are Senator Conroy’s true legacy.

**Senator Zed Seselja (Deputy Chair)**  
**Liberal Senator for ACT**

**Senator Anne Ruston**  
**Liberal Senator for SA**

**Senator Dean Smith**  
**Liberal Senator for WA**

---

<sup>55</sup> NBN Co – ‘Strategic Review Report’ – Dec 2013, exhibit 2-18, p.53.

<sup>56</sup> In 2010 ‘other’ (non-direct) opex was forecast at \$3.7 billion for 2011-2021. In 2012 this increased to \$7.9 billion. NBN Co – ‘NBN Co 2011-2013 Corporate Plan’ – Dec 2010, p.135; ‘NBN Co 2012-2015 Corporate Plan’ – Aug 2012, p.77.



# **Appendix 1**

## **Public submissions**

- 1 Competitive Carriers' Coalition
- 2 Central Coast Community Union Alliance
- 3 Gosford City Council
- 4 Mr Carl Sudholz, Fast Task Tools Pty Ltd
- 5 Mr Derek Bell, Lucid Web Design
- 6 Mr David Abrahams, Central Coast Broadband Alliance
- 7 Mr Grant Booth
- 8 Mr James Hodgson
- 9 Councillor Linda Scott, City of Sydney Council
- 10 Innovative Synergies
- 11 iiNet
- 12 Mr Kenneth Tsang (jxeeno)
- 13 Queanbeyan City Council
- 14 Alexandrina Council
- 15 Ballarat ICT Limited
- 16 Mr Andrew Pullen
- 17 Mr Chris Gibbs
- 18 NORTH Link
- 19 Mr Jamie Clingin
- 20 Ms Leah Lothringer
- 21 Mr David Saunders
- 22 Griffith City Council
- 23 Albury City Council
- 24 Aurora Gaming
- 25 Mr Nick Assiouras
- 26 RP & JA Anderson
- 27 Dr Craig Watkins
- 28 Mr James Chisholm

- 29 City of Darebin
- 30 Mr Matt Emmerson
- 31 Mr Duncan Hames
- 32 Willoughby City Council
- 33 Yarra Ranges Council
- 34 Tasmanian State Government Department of Premier and Cabinet
- 35 City of Greater Geraldton
- 36 Mr Bryan Walpole
- 37 Mr Gavin Raper
- 38 Mr Paul Goossens
- 39 City of Melton Council
- 40 Future Party
- 41 Mr Robert Hill
- 42 Mr Andrew Thornton
- 43 Mr Paul Murphy
- 44 Bundaberg Regional Council
- 45 Mr Alister Walker
- 46 Mr Richard Ure
- 47 City of Bunbury
- 48 Mr Gavin Lynch
- 49 Mr Fred Andronikos, VIC
- 50 Mr Matt Wilkinson, SA
- 51 Mr Mark Ryan, NSW
- 52 Mr Paul Davis, ACT
- 53 City of Victor Harbor, SA
- 54 Ms Janet Scott, SA
- 55 Mr Paul Maybon, NSW
- 56 Mr Steve Ulrich, ACT
- 57 Mr Benjamin Jarvinen, business owner – Renown Wolf, QLD
- 58 City of Sydney (please note – this is a separate submission to submission 9 from Councillor Linda Scott, City of Sydney)
- 59 Mr Dick Garner, SA

- 60 City of Nedlands Council, WA
- 61 Mr Robert Lindstrom, VIC
- 62 South West Development Commission, Regional Development Australia, WA
- 63 Mr David Fuller
- 64 Mr Paul Aslin
- 65 City of Whittlesea, VIC
- 66 Ms Nicola Bussell, business owner, VIC
- 67 Evocities, NSW
- 68 Mr Conrad Fuller, NSW
- 69 Mr Paul Di Berardino, Proeye Communications and Security Systems, VIC
- 70 NBN Alliance (crowd sourced submission)
- 71 Mr Paul Budde, NSW
- 72 Mr Nick Maxfield, WA
- 73 Ms Carolyn Armstrong, WA
- 74 Mr Dagmar Dixon, WA
- 75 Mr Michael Lansley, WA
- 76 Ms Jacqueline Brody, WA
- 77 The Warren Blackwood Alliance of Councils (Inc), WA
- 78 Ms Susan Hirst, WA
- 79 Ms Annie L-Wells, TAS
- 80 Mr Mohammad Mawla, NSW
- 81 Mr Mark Campbell, SA
- 82 Mr Joshua Tefay, NSW
- 83 Mr Jacob Griffiths, VIC
- 84 Wagga Wagga City Council, NSW
- 85 Ms Virginia Bidwell, Bridgetown WA
- 86 Mr Cameron Watt, VIC
- 87 Mr Nick Bardis, TAS
- 88 Ms Shannon Wynter
- 89 Mr James Imray



## **Appendix 2**

### **Additional information, answers to questions on notice and correspondence,**

#### **Additional information received**

- 1 NBN Co Opening Statement - Public Hearing Wednesday 11 December 2013, Canberra
- 2 Letter from the Minister for Communications, the Hon Malcolm Turnbull MP, regarding release of unredacted copy of the NBN Strategic Review - Public Hearing Tuesday 17 December 2013, Sydney
- 3 Power point presentation, CEPU and ETUWA - Public Hearing Wednesday 29 January 2014, Perth
- 4 CEPU document tabled - Public Hearing Tuesday 4 February 2014, Hobart
- 5 CEPU photographs tabled - Public Hearing Tuesday 4 February 2014, Hobart
- 6 CEPU document tabled - Public Hearing Tuesday 4 February 2014, Hobart
- 7 Letter from Chair of Senate Select Committee on the National Broadband Network to Executive Chairman NBN Co regarding outstanding answers to Questions on Notice, 10 February 2014
- 8 Letter from the Chair of the Senate Select Committee on the National Broadband Network to Minister for Communications regarding outstanding answers to Questions on Notice, 28 February 2014
- 9 Letter from Executive Chairman NBN Co to Chair of the Senate Select Committee on the National Broadband regarding outstanding answers to Questions on Notice, 28 February 2014
- 10 Letter from Chair of Senate Select Committee on the National Broadband Network to Executive Chairman NBN Co regarding outstanding answers to Questions on Notice, 7 March 2014

**Answers to Questions on Notice**

- 1 Index of Questions on Notice from public hearing on 28 November 2013, Canberra
- 2 Index of Questions on Notice from public hearing on 29 November 2013, Canberra
- 3 Index of Questions on Notice from public hearing on 11 December 2013, Canberra
- 4 Index of Questions on Notice from public hearing on 17 December 2013, Sydney
- 5 Index of Questions in Writing from public hearing on 17 December 2013, Sydney
- 6 Index of Questions on Notice from public hearing on 29 January 2014, Perth
- 7 ACMA - answer to question on notice - public hearing - 28 November 2013, Canberra
- 8 Department of Finance - answer to question on notice - public hearing - 28 November 2013, Canberra
- 9 Department of Communications - answers to questions on notice - public hearing - 28 November 2013, Canberra
- 10 Department of Communications - answers to questions on notice - public hearing - 29 November 2013, Canberra
- 11 NBN Co - answers to questions on notice - public hearing - 29 November 2013, Canberra
- 12 Department of Communications - answers to questions on notice - public hearing - 11 December 2013, Canberra
- 13 NBN Co - answers to questions on notice - public hearing - 11 December 2013, Canberra
- 14 NBN Co - answers to questions on notice - public hearing - 11 December 2013, Canberra
- 15 NBN Co - answers to questions on notice - public hearing - 17 December 2013, Sydney

**Correspondence**

- 1 Letter from Mr David Sullivan, Committee Secretary to Visionstream - invitation to public hearing in Hobart on 4 February 2014, dated 20 January 2014
- 2 Letter from Visionstream Australia to Mr David Sullivan - response to invitation to public hearing in Hobart on 4 February 2014, dated 24 January 2014
- 3 Letter from Chair to Visionstream Australia - regarding invitation to public hearing in Hobart on 4 February 2014, dated 31 January 2014
- 4 Letter from Visionstream Australia to Chair - regarding invitation to public hearing in Hobart on 4 February 2014, dated 3 February 2014



## **Appendix 3**

### **Public hearings and witnesses**

**Thursday 28 November 2013—Canberra**

*Australian Communications and Media Authority*

CAHILL, Ms Maureen, General Manager, Communications Infrastructure Division

TANNER, Mr Giles, General Manager, Digital Economy Division

WHITE, Mr Paul, Executive Manager, NBN and Industry Monitoring Branch

*Communications, Electrical and Plumbing Union of Australia*

MIER, Mr David, National Official, Electrical Division

MURPHY, Mr Shane, Assistant Secretary, New South Wales Branch

*Department of Communications*

HEAZLETT, Mr Mark, First Assistant Secretary,

ROBINSON, Mr Ian, Deputy Secretary

*Department of Finance*

RENEWICK, Mr Robin, Assistant Secretary, NBN and Moorebank Shareholder Branch

**Friday 29 November 2013—Canberra**

***NBN Co.***

SWITKOWSKI, Dr Ziggy, Executive Chairman

***Department of Communications***

ROBINSON, Mr Ian, Deputy Secretary

***Department of Finance***

MASON, Ms Jan, Deputy Secretary, Business, Procurement and Asset Management

---

**Wednesday 11 December 2013—Canberra*****Australian Competition and Consumer Commission***

COSGRAVE, Mr Michael, Group General Manager, Communications Group

RIORDAN, Mr Sean, General Manager, Industry Structure and Compliance Branch

***NBN Co.***

ADCOCK, Mr Greg, Chief Operating Officer,.

BROWN, Mr Kevin, Head of Corporate and Commercial

COONEY, Mr Kieren, Chief Marketing Officer

MCLAREN, Mr Gary, Chief Technology Officer

***Department of Communications***

CLARKE, Mr Drew, Secretary

GRAINGER, Ms Joanna, Assistant Secretary

HEAZLETT, Mr Mark, First Assistant Secretary

***Department of Finance***

MASON, Ms Jan, Deputy Secretary, Business, Procurement and Asset Management

ROBINSON, Mr Ian, Deputy Secretary

**Tuesday 17 December 2013—Sydney**

***Boston Consulting Group***

FORTH, Dr Patrick, Partner

WILMS, Mr Maikel, Partner

***Deloitte Touche Tohmatsu***

DRUMM, Mr Jeremy, Partner

HARDING, Mrs Clare, Partner

***KordaMentha***

KORDA, Mr Mark, Partner

***NBN Co.***

ADCOCK, Mr Greg, Chief Operating Officer

MCLAREN, Mr Gary, Chief Technology Officer

ROUSSELOT, Mr Jean-Baptiste, Head of Strategy and Transformation

SWITKOWSKI, Dr Ziggy, Executive Chairman and Chief Executive,

***Telstra Corporation***

GALLAGHER, Mr William (Bill) David, General Counsel, Corporate Affairs

GOONAN, Mr Anthony Patrick, Executive Director, Engineering Planning

SHAW, Mr James, Director Government Relations

**Wednesday 29 January 2014—Perth*****iiNet***

BUCKINGHAM, Mr David, Acting Chief Executive Officer

DALBY, Mr Steve, Chief Regulatory Officer

McINTYRE, Mrs Rachael, NBN Product Manager

***ETU***

McLAUGHLAN, Mr Leslie, State Secretary

***CEPU***

McVEE, Mr Barry, Branch Secretary, Communications Division

O'DONNELL, Mr John, WA Branch President, Communications Division

***City of Greater Geraldton***

CARPENTER, Mr Ian, Mayor

***Women in Technology WA (Inc.)***

TOWLER, Ms Marjolein, Chair

**Tuesday 4 February 2014—Hobart*****Tasmanian State Government***

DALLA-FONTANA, Ms Maria, Manager, Digital Futures, Department of Economic Development, Tourism and the Arts

KNEVETT, Mr Mitchell, Director, Office of eGovernment, Department of Premier and Cabinet

STEVENS, Mr Michael, Deputy Secretary, Department of Premier and Cabinet

***Local Government Association of Tasmania***

GARCIA, Mr Allan, Chief Executive Officer

***Tasmanian Chamber of Commerce and Industry***

BAILEY, Mr Michael, Chief Executive Officer

***TASICT***

WINTER, Mr Dean, Executive Officer

***Digital Tasmania***

DALTON, Mr John, Spokesperson

***Civil Contractors Federation (TAS)***

COOK, Mr Anthony John (Tony), Chief Executive Officer

GRANGER, Mr Adrian John, State President

***ETU and CEPU***

MIER, Mr David, National Official

GILL, Miss Emma, Tasmanian State Organiser

***Universal Communications Group***

BRACKEN, Mr Brian, Site Manager

LUNA, Mr Rafael, Chief Executive Officer

McARTHUR, Mr Roger, Chief Technical Officer

MINNEKEER, Mrs Susan, General Manager Operations

***Aurora Energy Pty Ltd***

LARKIN, Mr Michael, General Manager, Service Delivery

TERRY, Mr Sean, Group Manager, Strategy and Government Relations

---

**Tuesday 11 March 2014 – Terrigal*****Gosford City Council***

BEAL, Mr Jamie, IT Coordinator

MORRIS, Councillor Hillary

***Central Coast Business Review***

ADAMS, Mr Edgar George, Editor

***Erina Chamber of Commerce***

ALLEN, Ms Michelle, CEO, Webstuff.biz

ATKINSON, Mr Austen, Head of Studio, Planet55 Studios

DA COSTA, Dr Kate, Executive Officer

GLASS, Ms Sally, CEO, CHIK Services and eHealth Space

YEATS, Mr Samuel, CEO, Ultra Serve

***Regional Development Australia Central Coast***

MOULAND, Mr John, CEO

***Central Coast Broadband Alliance***

ABRAHAMS, Mr David, Spokesperson

***The Central Coast Community Alliance***

SUNDSTROM, Mr Jeffrey Ian, Spokesperson

***Hunter Institute of TAFE***

LEWIS, Ms Louise, Manager, Digital Learning

***Central Coast Grammar School***

SOEDE, Mr David, ICT Manager

***Paul Budde Communication Pty Ltd***

BUDDE, Mr Paul Gerard, Managing Director

***CCTS Telecommunications***

RICHTER, Mr Ian, Director

***Private capacity***

SPEDDING, Mr Patrick

BUCHANAN, Mr Trevor

**Wednesday 12 March 2014 – Sydney**

***NBN Co***

ADCOCK, Mr Greg, Chief Operating Officer

BROWN, Mr Kevin, Head of Corporate and Commercial

McLAREN, Mr Gary, Chief Technology Officer

MESMAN, Mr David, General Manager Legal—FOI & Knowledge Management

PAYNE, Mr Robin, Chief Financial Officer

ROUSSELOT, Mr JB, Head of Strategy and Transformation

SWITKOWSKI, Dr Ziggy, Executive Chairman

***City of Sydney***

SHIELDS, Mr Peter Richard, Technical Services Manager

***Private capacity***

SCOTT, Councillor Linda

***Department of Communications***

CLARKE, Mr Drew, Secretary

GRAINGER, Ms Joanna, Assistant Secretary

ROBINSON, Mr Ian, Deputy Secretary

***Department of Finance***

MASON, Ms Jan, Deputy Secretary, Business, Procurement and Asset Management

RENEWICK, Mr Robin, First Assistant Secretary, Commercial and Claims Division

# **Appendix 4**

**Rollout Trajectories of NBN Co—17 December 2013**

