The Parliament of the Commonwealth of Australia

Review of the Rollout of the National Broadband Network

Fifth Report

Joint Committee on the National Broadband Network

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Chair's Foreword

This is the fifth and final review report of the joint oversight committee of the National Broadband Network (NBN) and the NBN Co for the 43rd Parliament.

For all the challenges of the largest infrastructure build in our nation's history, as well as the policy risks to manage at the September 2013 election, Australians can now be confident the NBN will be completed in some form. It will make a big difference in many lives. It will strengthen our economy. It will promote our cultural identity in a flattening global culture. Overall, it will create opportunity and deliver equity for all Australians.

The NBN remains on track to deliver a rate of return to the taxpayer of over 7% per annum. The NBN, in its current form, assists greatly in delivering industry restructuring in telecommunications, which many have identified as an historic problem in Australia. And, on the politics of the moment, part of this upgrade is Telstra Management and shareholders improving their 'pits and pipes', including removing asbestos from old infrastructure -and may they do that safely.

By building the NBN, we can unlock this even more than the current cultural boom allows. We promote Australian culture to the world. We show respect to sectors like education as our second biggest export market and invite it to grow. We play to our strengths by unlocking entrepreneurship as a nation.

The NBN delivers ubiquity. This means the wholesale platform being built does not discriminate by location. Wherever you live and in no matter what style of residence you live in (farm or flat), the speed, reliability and wholesale pricing will have equivalence. The principle of consumer equity is finally alive in Australian telecommunications.

All of this is before we explore personal and business benefit of improved speed and reliability with a technology that is open to faster and faster speeds.

It is human capacity, not the technology's capacity that holds us back on even faster transfers of data. Once built, the advancement of speed is an exciting challenge for the innovators.

I make particular reference to the excellent report commissioned by Google titled *Culture Boom: How Digital Media Are Invigorating Australia* which can be found at: http://google-au.blogspot.com.au/2012/03/australias-cultural-boom.html#!/2012/03/australias-cultural-boom.html.

The cultural boom happening in Australia today, contributing $26 billion per year in export value to our economy is important and should not be dismissed as merely a platform to access episodes of the television series 'Game of Thrones'. It is an export market. As the report identifies, more Americans are digesting Australian content than Australians are today -with existing poor telecommunications. What an opportunity to promote Australia and expand our export economy by getting this build right.

I have personally done what I can to see the NBN completed to the best standard possible. It is, in my view, real nation-building. I invite the 44th Parliament and its NBN oversight committee, to commit to doing likewise.

As this is the final report, can I thank all 60 committee members, in particular, the 15 voting members. We have all got to know each other better through some difficult, but important policy discussions.

And finally, I also thank the Secretariat. I have often watched them and wondered what they are really thinking when committee members (including me) drift off track, ask the silly question, or demonstrate forgetfulness.

The Secretariat has been a group of quality professionals and the engine room of true oversight. On behalf of all committee members, I sincerely thank them.

Robert Oakeshott MP
Chair

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TABLES

Committee Membership

Chair	Mr Robert Oakeshott MP
Deputy Chair	Mr Ed Husic (from 14.5.2013)
	Mr Rob Mitchell MP (from 14.3.2012 to 14.5.2013)

Members

Mr Paul Fletcher MP	Senator Simon Birmingham
Mr Luke Hartsuyker MP	Senator Doug Cameron
Hon Sussan Ley MP	Senator Alex Gallacher (from 16.3.2012)
Ms Michelle Rowland MP (until 21.11.2011 then from 14.8.2012)	Senator Scott Ludlam
	Senator the Hon Ian Macdonald
Mr Mike Symon MP	Senator Dean Smith (from 10.9.2012)
Hon Malcolm Turnbull MP	Senator the Hon Lin Thorp (from 21.6. 2012)

Participating Members

Senator the Hon Eric Abetz	Senator Barnaby Joyce
Senator Chris Back	Senator Helen Kroger
Senator Cory Bernardi	Senator Sue Lines (from 16.5.2013)
Senator Catryna Bilyk (from 24.3.2011)	Senator Gavin Marshall (from 24.3.2011)
Senator Mark Bishop (from 24.3.2011)	Senator the Hon Brett Mason
Senator the Hon Ronald Boswell	Senator Anne McEwan (from 24.3.2011)
Senator Sue Boyce	Senator Claire Moore (from 24.3.2011)
Senator the Hon George Brandis SC	Senator Fiona Nash
Senator Carol Brown (from 21.6.2012)	Mr Paul Neville MP (from 10.5.2011)

Senator David Bushby

Senator Michaelia Cash

Senator the Hon Richard Colbeck

Senator Mathias Cormann

Senator Trish Crossin (from 24.3.2011)

Senator Alan Eggleston

Senator the Hon John Faulkner (from 24.3.2011)

Senator Concetta Fierravanti-Wells

Senator Mitch Fifield

Senator Mark Furner (from 24.3.2011)

Senator the Hon Bill Heffernan

Senator Gary Humphries

Senator the Hon David Johnston

Senator Stephen Parry

Senator Marise Payne

Senator Helen Polley (from 24.3.2011)

Senator Louise Pratt (from 24.3.2011)

Senator the Hon Michael Ronaldson

Senator Scott Ryan

Senator Anne Ruston (from 12.9.2012)

Hon Bruce Scott MP (from 26.5.2011)

Senator the Hon Nigel Scullion

Senator Arthur Sinodinos AO (from 12.9.2012)

Senator the Hon Ursula Stephens (from 16.3.2012)

Senator Glenn Sterle (from 24.3.2011)

Senator John Williams

Senator Nick Xenophon

Committee Secretariat

A/g Committee Secretary	Mr Peter Banson
Inquiry Secretaries	Ms Stephanie Mikac
	Dr Kate Sullivan

Terms of Reference

The resolution of appointment establishing the Joint Committee on the National Broadband Network was passed by the House of Representatives on 1 March 2011 and by the Senate on 3 March 2011 and provides:

(1)   That a Joint Committee on the National Broadband Network be appointed to inquire into and report on the rollout of the National Broadband Network (NBN);

(2)   That every six months, commencing 31 August 2011, until the NBN is complete and operational, the committee provide progress reports to both Houses of Parliament and to shareholder Ministers on:

(a)   The rollout of the NBN, including in relation to the Government's objective for NBN Co Limited (NBN Co) to:

(i)   connect 93 per cent of Australian homes, schools and businesses with fibre-to-the premises technology providing broadband speeds of up to 100 megabits per second, with a minimum fibre coverage obligation of 90 per cent of Australian premises; and

(ii)   service all remaining premises by a combination of next-generation fixed wireless and satellite technologies providing peak speeds of at least 12 megabits per second;

(b)   The achievement of take-up targets (including premises passed and covered and services activated) as set out in NBN Co's Corporate Plan released on 20 December 2010 as revised from time to time;

(c)   Network rollout performance including service levels and faults;

(d)   The effectiveness of NBN Co in meeting its obligations as set out in its Stakeholder Charter;

(e)   NBN Co's strategy for engaging with consumers and handling complaints;

(f)   NBN Co's risk management processes; and

(g)   Any other matter pertaining to the NBN rollout that the committee considers relevant.

List of abbreviations

ABG	Australian Broadband Guarantee
ACCAN	Australian Communications Consumer Action Network
ACCC	Australian Competition and Consumer Commission
ACMA	Australian Communications and Media Authority
ASQA	Australian Skills and Qualification Authority
CEO	Chief Executive Officer
DBCDE	Department of Broadband, Communications and the Digital Economy
DSLAM	Digital Subscriber Line Access Multiplexer
FSAM	Fibre Serving Area Modules
FTTN	Fibre-to-the-Node
FTTP	Fibre-to-the-Premise
GBE	Government Business Enterprise
GNAF	Geo Coded National Address File
HFC	Hybrid Fibre Coaxial
ISS	Interim Satellite Service
ITU	International Telecommunications Union
JCNBN	Joint Committee on the National Broadband Network
KPI	Key Performance Indicator

LTSS	Long Term Satellite Service
MCP	MDU Cabling Partner
MDU	Multi-Dwelling Unit
NBN Co	NBN Co Limited
NSW	New South Wales
NT	Northern Territory
RDA	Regional Development Australia
RFD	Telstra Retraining Funding Deed
RSP	Retail Service Provider
SDU	Single Dwelling Unit
SAU	Special Access Undertaking
VDSL	Very High Bit-Rate Digital Subscriber Line
WBA	Wholesale Broadband Agreement
WuW	Work Under Way

Recommendations

2 Performance Reporting and Regulatory Issues

Recommendation 1

The committee recommends the Government task the NBN Co Limited to update its Corporate Plan 2012-2015 to prepare strategies to minimise risk in any policy changes that may reasonably be expected to occur in the 2012-2015 period.

3 Regional and Remote Issues

Recommendation 2

The committee recommends the NBN Co Limited revised Corporate Plan and the six-monthly Shareholder Ministers' Performance Reports to the committee include further information on the National Broadband Network fibre rollout in regional Australia.

Recommendation 3

The committee recommends NBN Co Limited and the Department of Broadband, Communications and the Digital Economy closely monitor the current rate of Interim Satellite Service (ISS) activations and, prior to the customer cap on the ISS being reached:

- consult with relevant stakeholders and the Australian community on options for establishing cost efficient arrangements to ensure that education, health and local government facilities in rural and remote communities and other individuals determined to be most in need of access to the ISS are still able to access the service; and

- consider increasing the customer cap on the ISS, if additional satellite capacity becomes available at a competitive cost.

4 Additional Issues

Recommendation 4

The committee recommends that the Government continue considering investor interest in the National Broadband Network and the optimum capital structure for the NBN Co Limited.

Recommendation 5

The committee recommends that the NBN Co Limited continue to:

■ work with contractors to ensure sufficient mobilisation of skilled labour to meet National Broadband Network (NBN) rollout targets;

■ update NBN workforce modelling data to assist with communicating and planning for changing NBN training needs and workforce demand; and

■ encourage the participation of local recruitment firms and the local construction industry in the NBN rollout.

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Introduction

Background

1.1   The Shareholder Minister's[1] Fourth Performance Report (the Performance Report) on the rollout of the National Broadband Network (NBN) details performance information relating to progress of the NBN rollout for the six month period from 1 July to 31 December 2012.[2] Issues arising from recent NBN rollout events which cover the four-month period after the Performance Report are also included in this review report.

1.2   While the Performance Report was received by the committee on 28 March 2013, the statistical NBN rollout data contained in the Performance Report was earlier publicly released by the NBN Co Limited (NBN Co) on 29 January 2013.[3] This data revised down the combined target for satellite and fixed wireless, which represents a further revision of targets since the release of NBN Co's 2012-2015 Corporate Plan. In addition, at its 19 April 2013 public hearing, the committee received an update on the NBN rollout financial and rollout data already provided in the Performance Report.[4]

1.3   On 21 March 2013, the NBN Co announced an approximate three-month delay in the NBN rollout (fibre network) which meant that the newly

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1   The Shareholder Ministers are: Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy and Senator the Hon Penny Wong, Minister for Finance and Deregulation.

2   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, covering letter.

3   NBN Co, 2013, 34 500 Australian homes and businesses now using the NBN, media release, 29 January.

4   NBN Co, *Submission 13*.

revised NBN rollout targets for its fibre network were unlikely to be met and so were subsequently revised down to reflect the time delay. For its volume fibre rollout the NBN Co stated that its 'public projections have been underpinned by commitments from … four construction contractors that they would meet the June 30 target.'[5] The NBN Co has stated that it has 'taken immediate action' to remedy the issues causing the delay.[6]

1.4   In regard to regulatory matters, the NBN Co Special Access Undertaking (SAU) was withdrawn and replaced with a new version. The new SAU was lodged with the Australian Competition and Consumer Commission (ACCC) for consideration in December 2012. In early April 2013, the ACCC issued a draft decision 'proposing a number of changes, and consulting on the precise form of those changes' to the NBN Co SAU.[7] The statutory deadline by which the ACCC is required to make a final decision on the SAU is currently 19 July 2013.[8]

Committee's Role

1.5   Pursuant to its Resolution of Appointment and in accordance with its terms of reference, the committee is required to report to the Parliament and the NBN Shareholder Ministers every six months 'until the NBN is complete and operational'.

1.6   The committee is primarily enabled to examine and report on matters relating to the NBN Co objective to connect Australian premises to the NBN which includes:

- the achievement of take-up targets as outlined in the NBN Co Corporate Plan

- Progress of the NBN rollout and performance matters relating to the NBN Co such as consumer engagement, complaint handling, risk management and

- 'any other matter pertaining to the NBN rollout that the committee considers relevant.'

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5   NBN Co, 2013, NBN Co updates short-term fibre rollout timeline, media release, 21 March, p. 1.
6   NBN Co, 2013, NBN Co updates short-term fibre rollout timeline, media release, 21 March, p. 1.
7   ACCC, 2013, ACCC Issues Draft Decision on NBN Co Special Access Undertaking, media release, 4 April, p. 1.
8   ACCC, *Submission 5*, p. 1.

1.7 To date, the committee has reviewed and reported on a number of significant and ongoing issues associated with the NBN rollout which include:

- progress of the NBN rollout across the three technologies of fibre, fixed wireless and satellite

- issues raised and faced by regional and remote areas, including extension of the fibre and fixed wireless networks and the scope of mobile telephony

- regulatory issues and events associated with establishment of the NBN

- affordability and pricing issues for consumers

- E-readiness of small business, communities, governments and individuals, and associated consultation by the NBN Co

- connecting multi-dwelling units to the NBN

- medical alarms

- funding arrangements directly and indirectly associated with the NBN

- Workforce issues associated with the NBN rollout including the Telstra Retraining Funding Deed under the Binding Definitive Agreement between the NBN Co and Telstra Corporation.

1.8 The committee has in its First, Second, Third and Fourth reports commented on:

- specific key performance indicators (KPIs) to be included in future Shareholder Minister's reports, and

- the delay in receiving answers to questions placed on notice with the NBN Co and the Department of Broadband, Communications and the Digital Economy (DBCDE).

1.9 The committee has continued its commentary on a number of these matters in this report.

Reporting Timeframe

1.10 Following the committee's establishment in March 2011, its first report was presented to the Parliament in August 2011 and a second report was presented in November 2011. This enabled the committee, with agreement from the Shareholder Ministers, to alter its reporting timeframe so that it

reported biannually in June and December. This alteration in reporting timeframe by practice did not prevent the committee from reporting later in line with its original reporting dates.

Previous Reviews

1.11   In line with reporting requirements, the committee previously reported (Fourth Report) in February 2013 on the progress of the six monthly NBN rollout period from 1 July to 31 December 2011. This report, similarly to previous review reports, where relevant includes examination and comment on a number of issues and events which took place outside the six month timeframe reported on in the Performance Report.

1.12   This is the committee's sixth report on NBN related matters and the fifth and final NBN rollout review report for the 43rd Parliament. The Fifth Report includes continuing examination and commentary on the progress of the NBN rollout and associated regulatory matters, initially reported on in the First Report and continued through to the committee's Second, Third and Fourth reports.

1.13   Information contained in the Performance Report forms the basis of the committee's six-monthly review, and is supplemented with submissions, published reports, hearings and answers to questions placed on notice which are part of the formal parliamentary committee inquiry and review process.

About the Review

Objectives and Scope

1.14   As part of its Fifth Review, the committee examined and provided comment on:

- The NBN rollout through the fibre, satellite and fixed wireless networks and associated issues;

- KPIs included in the Shareholder Ministers' six monthly performance report and Corporate Plan targets; and

- ongoing regulatory issues

1.15   The committee has also continued its examination of:

- The potential of private equity to fund the NBN and

- Workforce issues associated with the NBN rollout, including the Telstra Retraining Funding Deed under the Telstra Agreement.

Conduct

1.16   A media release issued on 1 March 2013 announced the commencement of the Fifth Review and called for submissions to be received by 12 April 2013. A similar advertisement also appeared in *The Australian* on 20 March 2013.

1.17   A total of 20 submissions were received as part of the Fifth Review and are listed at Appendix A.

1.18   The committee subsequently held a public hearing in Sydney on 19 April 2013. Witnesses who gave evidence at this public hearing are listed at Appendix B. A transcript of the public hearing is available at www.aph.gov.au/jcnbn.

Information Provided to the Committee

Timing of Shareholder Ministers' Performance Report

1.19   In its First Report (August 2011) the committee recommended that it receive the Performance Report no less than three months before it was due to report to the Parliament.

1.20   This recommendation was made as the First Report could not include current NBN rollout information, as the Performance Report was delayed until late September 2011, which was a month after the committee's required reporting date.

1.21   The committee's Second Review (December 2011) then reported on NBN rollout information provided in the first Shareholder Minister's Performance Report.

1.22   The Shareholder Ministers' Second Performance Report was received on 10 April 2012, which was six days before the scheduled public hearing with the NBN Co and the DBCDE on 16 April 2012.

1.23   In its Fourth Report (February 2013), the committee again recommended a timeframe for receiving the Performance Report, but reduced the timeframe from three months to one month prior to a scheduled hearing with the NBN Co and the DBCDE.

1.24   In regard to its Fifth Review, the Shareholder Ministers' Performance Report was received at the end of March 2013, which provided the committee three weeks to review the information contained in it. As the statistical information contained in the report had earlier been publicly released on 29 January 2013, the committee had previously been aware of this information.

Answers to Questions on Notice

1.25   For the committee's previous reviews, the timeframes for receiving answers to questions on notice from the DBCDE were extended as a courtesy and to enable the committee's report to be drafted.

1.26   Following extensions, on most occasions answers to questions on notice were received either late in the report drafting process or after the draft report had been completed. The committee has previously commented on the importance placed on information provided by the DBCDE and NBN Co in assisting the committee to undertake its reporting role to the Parliament.

1.27   Following the committee's hearing on 19 April, it placed a large number of questions on notice to the DBCDE and the NBN Co. In response to the volume of questions received, the DBCDE advised that it would 'endeavour to meet the committee's timeframe for lodging responses', but that 'due to a large number of complex questions, and a range of competing priorities in the lead-up to the 2013-14 Budget it is unlikely the department and NBN Co will have finalised all the responses by the 3 May and 13 May 2013 deadlines.'[9]

1.28   The DBCDE also stated:

> We acknowledge that a number of the responses relate to questions around NBN Co's financial information, corporate plan and contractual arrangements and come at a time when NBN Co is finalising a number of other priorities and reports, including the preparation of responses to 81 questions on notice from the Additional Estimates hearings held in February 2013 and finalising the 2013-2016 Corporate Plan.

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9   Correspondence from the DBCDE dated 1 May 2013, p. 1.

> To assist the committee in preparing its fifth report on the Review of the NBN Rollout, NBN Co and the department will prioritise the questions that are relevant to the performance of the NBN in the current review period.[10]

1.29   The committee has in all its previous review reports commented on the lateness of answers to questions placed on notice by members, in addition to the limited information contained within responses.

Report Outline

1.30   Chapter 2 examines the Shareholder Ministers' latest six monthly NBN rollout performance report and associated issues. This includes discussion about: KPIs and NBN rollout targets contained in the NBN Co Corporate Plan; and the NBN Co financial result for the period. The status of outstanding regulatory matters in reference to the NBN Co SAU and Wholesale Broadband Agreement is outlined. Additional NBN rollout issues include discussion about costing alternative network models and connecting multi-dwelling units to the NBN.

1.31   Chapter 3 continues the examination of the NBN rollout of fibre, fixed wireless and satellite to regional and remote Australia. Network extensions and improving mobile networks are also discussed.

1.32   Chapter 4 continues the committee's ongoing examination of private equity funding of the NBN and workforce issues associated with the NBN rollout, including the Telstra Retraining Funding Deed.

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10   Correspondence from the DBCDE dated 1 May 2013, p. 1-2.

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Performance Reporting and Regulatory Issues

Background

2.1   The Shareholder Ministers' Fourth Performance Report (the performance report) includes information about the progress of the National Broadband Network (NBN) rollout covering the six month period from 1 July to 31 December 2012, in addition to developments or post-closing events covering the period from 1 January to 22 March 2013. More recent developments relating to regulatory issues are also included.

2.2   The Performance Report includes:

■   A summary of the key milestones met by NBN Co Limited (NBN Co) in the reporting period

■   Six monthly and annual financial statements for the period ended 30 June 2012, and

■   'Measurement against' Key Performance Indicators (KPIs) for the NBN Co for the six month period ended 31 December 2012.[1]

NBN Rollout Progress Over the Reporting Period

2.3   The key statistical results for the NBN rollout in the reporting period are listed in Table 2.1. Results have not been included with Corporate Plan targets as targets are provided for the end of financial year only and not for six monthly results.

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1   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 3.

Table 2.1   Key Cumulative Current Half Year Results for the National Broadband Network Rollout
              ended on 30 June and 31 December 2012

Cumulative Metrics	Cumulative Current Half year as at 31 December 2012	Cumulative Current Half year as at 30 June 2012
Construction commenced or completed[2]		
Brownfields	784 592	280 142
New Development Lots	60 686	13 885
Fixed Wireless	21 684	7062
Premises passed/covered		
Brownfields	46 078	28 860
New Development Lots	26 251	10 054
Fixed Wireless & First Release Interim Satellite	267 318	173 885
Premises Activated		
Brownfields	6613	3364
New Development Premises	3848	503
Fixed Wireless & First Release Interim Satellite	24 062	9669

Source   Shareholder Ministers' Fourth Performance Report, Submission 3, p. 5.

2.4   For Premises Passed/Covered, analysis of the cumulative KPI metrics
        shows that for the half year ended on 31 December 2012 the NBN Co
        achieved:

        ■ Brownfields – 17 218 premises passed/covered.

        ■ New development lots or Greenfields – 16 197 lots passed/covered.

        ■ Fixed wireless and satellite – 93 433 premises passed/ covered.

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2   Construction Commenced or Completed represents Fibre Serving Area Modules (FSAMs)
     where contract instructions have been issued together with the initial Network Design
     Document so that construction partners can commence work on the detailed design, field
     inspections and rodding/roping activities in a FSAM. This is followed by the release of a
     rollout map for the FSAM on the NBN Co web site showing the coverage area for that FSAM
     and the estimated number of premises to be passed/covered. Construction Commenced or
     Completed includes Premises Passed. Shareholder Ministers, 'Performance Report to 31
     December 2012', *Submission 3*, p. 5.

2.5   For Premises Activated, analysis of the cumulative KPI metrics shows that for the half year ended on 31 December 2012 the NBN Co achieved:

- Brownfields – 3249 premises activated.

- New development lots or Greenfields – 3345 premises activated.

- Fixed wireless and first release interim satellite – 14 393 premises activated.

Current Progress

2.6   On 29 January 2013, the NBN Co released key metrics showing the progress of the NBN rollout for the periods covering the six months ended in June and December for the years from 2011 to 2013. A part of this release, the key NBN rollout metrics included actual and target figures (rounded to the nearest 00').[3]

2.7   These figures revised down the fixed wireless and satellite target for premises activated from 38 000[4] to 37 700. This had the effect of lowering the total premises activated target by 300 premises. Table 2.2 shows the key NBN rollout metrics (rounded to the nearest 00) for the six month periods for June to December from 2011 to 2013.[5] The figures (actual) provided in the Shareholder Ministers' Report for the cumulative current half year as at 31 December 2012 are underlined.

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3   NBN Co, 2013, 34 500 Australian homes and businesses now using the NBN, media release, 29 January, p. 2.

4   NBN Co, *Corporate Plan 2012-2015*, p. 36.

5   NBN Co, 2013, 34 500 Australian homes and businesses now using the NBN, media release, 29 January, p. 2.

Table 2.2   Key NBN Rollout Metrics for the six month periods ended in June and December 2011-2013 (Construction commenced or completed, Premises/Lots Passed and Premises Activated)

	Actual	Actual	Actual	Target
	June 2011	June 2012	Dec 2012	June 2013
Construction commenced or completed				
	29 600	305 000	784 600	1 220 000
Brownfields			*784 592*	
Greenfields	-	-	*60 686*	
Fixed Wireless	-	-	*21 684*	
Premises/lots passed				
Brownfields	18 000	29 000	46 100 *46 078*	286 000
Greenfields	-	10 000	26 300 *26 251*	55 000
Fixed wireless		9 000	17 300	320 000
Satellite*	165 000	165 000	250 000	
Total (Fixed Wireless and Satellite)			*267 318*	
Total (premises/lots passed)	183 000	213 000	339 700 *339 647*	661 000
Premises Activated				
Brownfields	600	3400	6600 *6613*	44 000

Greenfields	-	500	3800 *3848*	10 000
Fixed Wireless	-	100	1000	37 700
Satellite	200	9600	23 100	
Total (Fixed Wireless and Satellite)			*24 062*	
Total (premises activated)	800	13 600	34 500 *34 523*	91 700

Source   NBN Co, 2013, 34 500 Australian Homes and Businesses Now Using the NBN, p. 2 and Shareholder Ministers Fourth Performance Report, p. 5.

2.8   On the release of the above figures, the NBN Co stated:

> The results reflect progress in the early stages of the rollout and are what we would expect given the time and work necessary to put in place the contracts and agreements needed to get to this point of execution. As can be seen by our targets, this rollout is not a linear progression, but a rapid ramp-up. We are targeting to pass more premises in the final quarter of the financial year than we will have passed in the entire project up to the beginning of that quarter. Additional construction resources will be added over the coming months to help achieve these targets.[6]

2.9   On 21 March 2013, the NBN Co revised down its rollout forecast for fibre to reflect a three month delay.[7] The NBN Co stated:

> The June 2013 Corporate Plan target of passing 341 000 premises with fibre is now expected to be achieved about three months later. Between 190 000 and 220 000 premises are now forecast to be passed by fibre by end June.[8]

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6   NBN Co, 2013, 34 500 Australian homes and businesses now using the NBN, media release, 29 January, p. 1.

7   NBN Co, 2013, NBN Co updates short-term fibre rollout timeline, media release, 21 March, p. 1.

8   NBN Co, 2013, NBN Co updates short-term fibre rollout timeline, media release, 21 March, p. 1.

2.10   The NBN Co attributed the rollout delay to a slower rate of rollout progress on the ground than forecast. The NBN Co stated that the 'delay will be recovered.'[9]

2.11   Immediate action undertaken by the NBN Co to remedy the current three month delay is outlined in detail in Chapter 4.

2.12   Although the NBN is currently delayed, the NBN Co expects that the NBN will still be completed by 2021 with the overall cost of the NBN to remain unchanged.[10]

Updated Three-Year NBN Rollout Plan

2.13   On 5 May 2013, the Government together with the NBN Co released an updated three-year NBN rollout plan which provides a timeline for another 1.35 million premises (or 190 new towns and groups of suburbs, homes and businesses) to be added to the NBN.[11]

2.14   The NBN Co stated that for areas that have had the NBN fibre network for over twelve months, about one third of families have elected to be connected to the NBN and of these about a third have subscribed to the fastest available speeds.[12]

2.15   The NBN Co also stated the pricing of NBN packages is competitive and highlighted a recent study undertaken in the first release site of Brunswick, Melbourne which found:

> …nearly half of existing NBN users polled said household internet costs were roughly the same since switching to the NBN, and 14% were paying less by using an internet phone service instead of a separate land line. Generally, those paying more were willing to do so to get higher speeds or larger download allowances.[13]

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9   NBN Co, 2013, NBN Co updates short-term fibre rollout timeline, media release, 21 March, p. 1.

10   NBN Co, 2013, NBN Co updates short-term fibre rollout timeline, media release, 21 March, p.1.

11   NBN Co, 2013, Broadband rollout plan extends to nearly 5 million homes and businesses, media release, 5 May, p. 1; Conroy S (Minister for Broadband, Communications and the Digital Economy), 2013, *Labor's NBN Coming to Another 1.3 Million Premises across Australia*, media release, 5 May, p. 1.

12   NBN Co, 2013, Broadband rollout plan extends to nearly 5 million homes and businesses, media release, 5 May, p. 1.

13   NBN Co, 2013, Broadband rollout plan extends to nearly 5 million homes and businesses, media release, 5 May, p. 1.

Key Performance Indicators

Background

2.16　　The KPIs included in the Shareholder Ministers' Performance Report show figures for similar categories to those presented in the previous Performance Report. Data is again presented as cumulative year on year.

2.17　　This includes three main categories for:

- Construction commenced or completed
- Premises passed/covered
- Premises activated.

2.18　　These three main categories are further divided into:

- Brownfields
- New Development Lots
- Fixed Wireless (for construction commenced or completed) or a combined Fixed Wireless and First Release Interim Satellite (for the two main categories of premises passed/covered and premises activated).

2.19　　To date the committee has also received information relevant to the NBN rollout for the six month period ended on 30 June 2011 to the six month period ended 31 December 2012. This has provided the committee with four performance reports and two years of NBN rollout information.

2.20　　The KPI categories contained in these four performance reports have been consolidated and presented in Table 2.3.

2.21　　Table 2.3 shows the changes in the way information about the NBN rollout has been presented to the committee. In the Shareholder Ministers' First Report information was presented in the two categories of premises passed and premises activated. The Shareholder Ministers' Second Report added another main category of work under way (WuW) and included 'covered' together with the main category of premises passed. Subcategories of: Brownfields, New Developments, First Release Interim Satellite and Fixed Wireless were also added.

2.22　　The Shareholder Ministers' Third Report removed the category of WuW and replaced it with Construction Commenced. The subcategory of New Developments was changed to New Development Lots and the subcategories of First Release Interim Satellite and Fixed Wireless were added together to create the subcategory of Fixed Wireless and Satellite.

2.23　　The Shareholder Ministers' Fourth Report changed the main category of construction commenced to construction commenced or completed. The subcategory of fixed wireless and satellite was changed to fixed wireless and First Release Interim Satellite.

Table 2.3   NBN Rollout KPIs used to indicate NBN Rollout Progress in Shareholder Ministers'
              Performance Reports 1 to 4

KPI Main Categories			
RN1 (June 2011)	**RN2 (December 2011)**	**RN3 (June 2012)**	**RN4 (December 2012)**
	Work Under Way	Construction Commenced	Construction commenced or completed
Premises Passed	Premises passed/covered	Premises passed/covered	Premises passed/covered
Premises Activated	Premises Activated	Premises Activated	Premises Activated
FTTP Greenfields			
KPI Sub Categories			
RN1(June 2011)	**RN2(December 2011)**	**RN3 (June 2012)**	**RN4(December 2012)**
(FTTP Greenfields category only)	Brownfields	Brownfields	Brownfields
Developer applications	New Developments	New Development Lots	New Development Lots
Active applications	First Release Interim Satellite	Fixed Wireless and Satellite	Fixed Wireless and First Release Interim Satellite
Contracts signed	Fixed Wireless		

Source   Shareholder Ministers' Performance Reports 1 to 4.

2.24   During the time the committee had been receiving Shareholder Ministers'
        Performance Reports the NBN Co publicly released a revised corporate
        plan which took into account the timeframe from 2012 to 2015. The 2012-
        2015 Corporate Plan publicly released on 6 August 2012 replaced the 2011-
        2013 Corporate Plan publicly released on 17 December 2010.

2.25   The NBN Co recently stated that it was in the process of revising its 2012-
        2015 Corporate Plan and would submit a new version to the Government
        in May 2013.[14]

Targets

2.26   The NBN rollout targets were originally included in the NBN Co 2011-
        2013 Corporate Plan and included separate tables for premises passed or

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14   Mr Mike Quigley, CEO, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 7.

covered (incremental year-on-year) and premises active service (incremental year-on-year). The majority of category titles for which targets were provided between corporate plans changed or categories were combined.

2.27   The NBN rollout targets were published with the public release of the 2011-2013 Corporate Plan on 17 December 2010. These targets were revised down with the public release of the 6 August 2012 Corporate Plan. The committee's Fourth Report outlines these changes in detail.

2.28   From the first corporate plan to the second, for total premises with active service, the figure for the financial year ended in 2011 is revised down by 34 200 premises; for 2012 the target figure is revised down by 102 500 premises; and for 2013 the figure is revised down by 327 000 premises.[15]

2.29   On 29 January 2012, with the release of the NBN rollout figures for the six months ended on 31 December 2012, the targets quoted for premises activated for combined fixed wireless and satellite network rollouts was revised down by 300 premises from the 2012-2015 Corporate plan, bringing the total NBN rollout target figure for June 2013, down by 300 premises to 91 700.[16]

2.30   Following this, on 21 March 2013, the NBN Co issued a statement that it would revise down its forecast for the rollout of fibre optic cable to reflect 'a delay of about three months.'[17] The revised NBN rollout figures will be published in the new NBN Co Corporate Plan.

2.31   The NBN Co stated the current three month delay in the NBN rollout would not impact on the expected completion date or the cost of the NBN. The NBN Co stated:

> At this stage there is no reason to say that the end date would shift, because, if you look at it overall, with 11½ million or 12 million homes that we will connect, the 100,000 homes that slipped early in the program can typically be recovered.[18]

2.32   In regard to the types of KPIs used and information provided to the committee, the performance report states:

> This is the fourth report and as such reflects initial reporting while systems and reporting processes are still in development. The data

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15   NBN Co, *Corporate Plan 2011-2013*, p. 15 and NBN Co, *Corporate Plan 2012-2015*, p. 36.

16   NBN Co, 2013, 34 500 Australian homes and businesses now using the NBN, media release, 29 January, p. 2.

17   NBN Co, 2013, NBN Co updates short-term fibre rollout timeline, media release, 21 March, p. 1.

18   Mr Ralph Steffens, Chief Operating Officer, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 15.

will become more meaningful against actual and forecast measures as the reporting series builds up over time. This report is consistent with a start-up company in the early years of the rollout. Further KPIs will be brought online as agreed with the Shareholders.[19]

NBN Co Limited Unaudited Financial Result

2.33   The Shareholder Ministers' Performance Report includes unaudited consolidated financial statements for the NBN Group for the six months ended 31 December 2012.[20]

2.34   Operational expenditure over the six month period ended on 31 December 2012 was approximately $333 million which represents an increase of approximately $46 million from the previous six month period.[21] The forecast operating expenditure target in the 2012-2015 NBN Co Corporate Plan for the financial year ended June 2013 is $1 093 million.[22] The current result of $333 million represents approximately 30 per cent of the target total.

2.35   Expenses were mainly attributed to:

- $153 million for employee related expenses
- $57 million for Information Technology and facilities expenses
- $29 million for external service costs.[23]

2.36   Over the same period, capital expenditure increased from the previous six month period from approximately $517 million to approximately $792 million.[24] The forecast capital expenditure target in the 2012-2015 NBN Co Corporate Plan for the financial year ended June 2013 is $3 191 million.[25] The current result of $792 million represents approximately 25 per cent of the target total.

2.37   Total revenue over the six month period was $29 314 000. Revenue was derived from:

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19   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 38.
20   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, pp 32-35.
21   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 6.
22   NBN Co, *Corporate Plan 2012-2015*, p. 77.
23   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 31.
24   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 6 and 31.
25   NBN Co, *Corporate Plan 2012-2015*, p. 75.

- Telecommunications revenue - $5 262 000[26] (which rose from $1 924 000 since June 2012)[27]

- Other revenue - $70 000[28] (which rose from $19 000 since June 2012)[29]

- Interest income - $23 983[30] 000 (which fell from 60 164 000 since June 2012).[31]

2.38   Over the six month period the NBN Co experienced an operating loss of approximately $408 million (the exact amount is $408 268 000).[32] This is almost double the loss experienced in the same period in 2011 of $220 567 000.[33]

2.39   Since its start-up, similarly to previous statements made, the NBN Co 'expects to record a tax loss in the current year' which is 'expected to continue for the next several financial years.' A nil income tax expense has been recorded with no deferred tax asset having been recognised for these tax losses at this point in time.[34]

Regulatory Issues

NBN Co's Special Access Undertaking

2.40   On 18 December 2012, the NBN Co lodged a new Special Access Undertaking (SAU) with the Australian Competition and Consumer Commission (ACCC). The new SAU replaced the SAU lodged with the ACCC in December 2011 (and subsequently withdrawn on 7 September 2012).[35]

2.41   The new SAU includes amended non-price terms which NBN Co stated arose from the now concluded 'Contract Development Process'. The SAU also contains other amendments which 'clarify the operation of the SAU.'[36]

2.42   On 4 April 2013, the ACCC released a draft decision on the new SAU. The ACCC stated 'notwithstanding the proposed variations, the draft decision

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26   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 32.
27   Shareholder Ministers, 'Performance Report to 30 June 2012', *Submission 4*, p. 30. DDTWID
28   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 32.
29   Shareholder Ministers, 'Performance Report to 30 June 2012', *Submission 4*, p. 30.
30   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 32.
31   Shareholder Ministers, 'Performance Report to 30 June 2012', *Submission 4*, p. 30.
32   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 32.
33   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 32.
34   Shareholder Ministers, "Performance Report to 31 December 2012', *Submission 3*, p. 31.
35   ACCC, NBN Co Special Access Undertaking (December 2012),< www.accc.gov.au>.
36   ACCC, NBN Co Special Access Undertaking (December 2012), <www. accc.gov.au>.

notes that many features of the SAU have merit' however its preliminary view is that changes to the SAU are required as 'it is not satisfied that the SAU meets the relevant criteria for acceptance.'[37]

2.43   The ACCC has proposed to issue a formal notice to vary the NBN Co SAU. The proposed changes:

> …are directed towards ensuring that, for matters not directly dealt with in the SAU, the access regime would continue to operate in the ordinary way. They would also preserve the primacy of commercially negotiated access agreements in the regime.[38]

2.44   The ACCC has proposed the following key amendments:

- 'Specific drafting amendments to provide certainty about how NBN Co will comply with its obligations under the telecommunications access regime; specifically any ACCC regulatory rulings;

- Allowing for periodic price re-balancing through review by the ACCC – the outcomes of these reviews would be constrained on the basis that any changes to price structures or relative prices must be revenue neutral in their effect;

- Amendments to clarify that the ACCC could have a role in overseeing the withdrawal of products and the introduction of new products and their prices, should the need arise, mainly to support an effective price cap regime;

- Amendments which allow a greater degree of flexibility in the approach that will be adopted at various points in time throughout the SAU, to mirror usual regulatory practice and so encourage efficient investment in and operation of the network; and

- The removal of a number of proposed non-price terms from the SAU, including those relating to service levels, in order to facilitate effective commercial negotiation.'[39]

2.45   The ACCC's proposed changes 'should deliver a framework for the regulation of NBN Co's services which:

- 'Ensures consumers and businesses get services of broadly the quality they get today for broadly the price they get today. Consumers and businesses would only pay more for services and/or usage beyond what they get today;

37   ACCC, 2013, ACCC issues draft decision on NBN Co Special Access Undertaking, media release, 4 April, p. 1.

38   ACCC, 2013, ACCC issues draft decision on NBN Co Special Access Undertaking, media release, 4 April, p. 2.

39   ACCC, 2013, ACCC issues draft decision on NBN Co Special Access Undertaking, media release, 4 April, pp 2-3.

- Allows for vigorous retail competition;

- Provides NBN Co with the opportunity, subject to efficient investment and adequate demand for its services, to earn a reasonable return on its investment (but no more);

- Provides NBN Co with incentives to not be wasteful, but to also innovate and invest to offer improved services/capacity over time in response to customer demand;

- Ensures that NBN Co and access seekers have incentives to commercially negotiate and agree non-price terms and conditions of access to NBN Co's services; and

- Provides a suitable balance, between certainty on key principles and flexibility over detailed terms of access, over the SAU's proposed 27 year term.'[40]

2.46   The ACCC has stated that the next step in the SAU assessment process is to issue the NBN Co with a formal notice to vary the SAU. Without any further variance to the current consideration process, the ACCC is required to make a final decision on the SAU by 19 July 2013.[41]

2.47   The ACCC stated the timeframe for consideration of the new SAU 'is consistent with timeframes for the ACCC's assessment of other undertakings and other regulatory processes.'[42]

Wholesale Broadband Agreement

2.48   Between 28 September and 30 November 2012, the NBN Co was undertaking discussions with customers in reference to the Wholesale Broadband Agreement (WBA). A final draft of the Contract Development Process relating to the WBA was released on 30 November 2012.[43]

2.49   While the subsequent draft of the WBA has been placed on hold pending ACCC assessment of the SAU, the NBN Co will align the contents of its WBA with the finalised and accepted SAU.[44]

2.50   The NBN Co has stated that it 'has proposed that the current WBA be extended pending the acceptance of the SAU.'[45]

2.51   The ACCC stated that it:

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40   ACCC, 2013, ACCC issues draft decision on NBN Co Special Access Undertaking, media release, 4 April.
41   ACCC, *Submission 5*, p. 1.
42   ACCC, *Submission 5*, p. 2.
43   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 18.
44   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 18.
45   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 18.

> …has previously indicated that it expects parties to agree to short
> term arrangements for the continuing supply of NBN Co's services
> until assessment of the SAU concludes and the regulatory
> framework is established.[46]

Additional NBN Rollout Issues

Connecting Multi-Dwelling Units

2.52   The NBN Co stated that residential multi-dwelling units (MDUs) make up over 30 per cent of the 'addressable market.' As a result, a project to 'develop processes and capabilities to make those premises NBN ready' has been established.[47]

2.53   Each MDU will be cabled from the 'multiport to the Premises Connection Device for each end user in parallel with construction of the FSAM.' The NBN Co is engaging contractors to manage the end-to-end cabling of MDUs under four MDU Cabling Partner (MCP) work packages:

- 'MCP 1 - On 21 December 2012, a contract was awarded to Downer EDI to complete MDU buildings in New South Wales (NSW), the Australian Capital Territory and Victoria.

- MCP 2 - On 21 December 2012, a contract was awarded to Universal Communications Group Limited to complete MDU buildings in Tasmania and NSW.

- MCP 3 and 4 - At 31 December 2012 bilateral negotiations were underway with awarding contracts to complete further MDU buildings.'[48]

2.54   In regard to the Downer EDI contract, the NBN Co announced:

> …the signing of contracts with Downer EDI Limited and
> Universal Communications Group Limited for design and
> construction services covering a range of MDUs. These contracts
> will enable NBN Co to accelerate the rollout of the [Fibre-to-the-
> Premise] FTTP to around 17,600 blocks of flats and units across
> four states and territories over the next two years. The
> approximate value of the contracts is up to $87 million.[49]

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46   ACCC, *Submission 5*, p. 2.
47   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 20.
48   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 20.
49   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 11.

2.55   The NBN Co 2012-2015 Corporate Plan incorporates the lessons learned in regard to its experience in connecting MDUs to the NBN. This includes the move from the 'demand drop' approach, to a more efficient 'build drop' approach for installation and 'a higher degree of engagement with body corporate entities' including ahead of installation site surveys.[50]

2.56   The NBN Co's definition of MDUs includes:

> Premises that contain more than one dwelling unit, which can range from duplexes to 200+ unit apartment blocks. Each dwelling unit is assumed as equivalent to one [Geo Coded National Address File] GNAF (e.g. a 50 unit apartment block will have 50 GNAFs).[51]

2.57   The NBN Co offered a further explanation and stated Australian MDUs tend not to have a basement, but are basically individual homes E.g. townhouses, attached in blocks of nine or less units. The NBN Co stated:

> …it is important to clarify the MDU situation, because people think of MDUs as high-rise tower blocks with hundreds of units in them like we see in Singapore, Hong Kong, Japan et cetera. But in Australia on average an MDU has nine units. The vast majority of these have three, four or five. In Europe we call them townhouses. They are horizontal MDUs. They are basically individual homes which are also classified as an MDU but you would obviously connect them individually. They do not lend themselves to technology in the basement. There are no basements in the first place.[52]

2.58   The NBN Co has previously stated that it will need to have a high degree of engagement[53] with body corporate entities and undertake site surveys ahead of time[54], which incurs additional costs.[55] This detailed design and installation for the internal cabling of MDUs would also incur increased costs.[56]

2.59   The differentiation between single dwelling units (SDUs) and MDUs from the previous corporate plan to the current corporate plan therefore

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50   NBN Co, *Corporate Plan 2012-2015*, pp 14 and 45; Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 30.

51   NBN Co, *Corporate Plan 2012-2015*, p. 93.

52   Mr Ralph Steffens, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 18.

53   This is in line with the NBN Co's stakeholder engagement activities, NBN Co, *Corporate Plan 2012-2015*, p. 27.

54   Mr Ralph Steffens, NBN Co, Transcript of Evidence, Canberra, 30 October 2012, p. 8.

55   NBN Co, *Corporate Plan 2012-2015*, p. 45.

56   Mr Ralph Steffens, NBN Co, Transcript of Evidence, Canberra, 30 October 2012, p. 8; NBN Co, *Corporate Plan 2012-2015*, p. 45.

incorporates 'a provision for increased MDU costs relating to the design and cabling of all End-User units inside MDUs.'[57] This increased build and engagement cost of connecting MDUs to the NBN contributes to the overall customer connect costs which in turn serves to increase NBN Co's total capital expenditure.[58]

2.60   The NBN Co explained that costing MDU connections to the NBN is 'a very strict process' undertaken by NBN Co's finance department and takes account of the differing MDU building types. In regard to making savings on MDU connections, the NBN Co also stated that it had investigated using the existing copper network and having a Digital Subscriber Line Access Muliplexer (DSLAM)[59] in MDUs with basements, however this option raised issues ensuring an analogue voice service. The NBN Co stated:

> …the costings …are done by our finance department. In fact, we have a very strict process whereby the architects do the architecture and the technical stuff. The only part of the company for which we rely on financial numbers is our finance department. What I can say to you is that obviously we looked at the various costs of doing things in different ways. …a significant number of MDUs are really horizontal SDUs and so you have to treat them in an architecture sense and therefore in a financial sense as a single dwelling unit. There is a percentage that really do have basements and really do have main distribution frames and you can treat them as such. Obviously we looked at the option of running fibre into the basement, putting a small DSLAM into the basement and then using the existing copper. That has certain attractions, obviously, as you do not get into structural separation issues because normally that copper is owned by the building owner. There is no question there is a saving to be had by not having to fibre a multi-dwelling unit, but there are some other issues that need to be dealt with, such as how you ensure that you get analogue voice, which is a tricky issue. What I am really trying to say is that there is not a simple answer. It needs some very careful work because applying analogue voice in that situation is nontrivial.[60]

57   NBN Co, *Corporate Plan 2012-2015*, p. 45.

58   NBN Co, *Corporate Plan 2012-2015*, p. 76.

59   A DSLAM is a 'network device normally located in telephone exchanges providing multiple ports connecting end-user copper lines for the provision of digital subscriber line broadband service. NBN Co, *Corporate Plan 2012-2015*, p. 90.

60   Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 18.

2.61   The NBN Co added that while it had investigated using the existing copper network to connect MDUs to the NBN, it was executing the Government's FTTP policy. The NBN Co stated:

> …there are obviously ways you can look at doing MDUs using copper. We would be remiss if we did not have a look at that. It is an obvious thing to do, but it is a policy decision, and the government has been absolutely clear on what the policy is. It is to provide fibre to the premise into all MDUs. That is what we are executing on. That is what is happening.[61]

2.62   The NBN Co added that degradation of the copper network was not a consideration in using the existing copper network to connect MDUs to the NBN, but rather the Government's minimum internet speed policy under the NBN, as well as ensuring an analogue voice service for customers. The NBN Co explained:

> It is not so much degradation [of the copper network] as the issue, when you are using the copper in [very high bit-rate digital subscriber line] VDSL, with what you do with analogue voice. That is one of the issues that you have to think about when you are looking at that. It is a speed product. This is, once again, a policy issue. Our job as a GBE [Government Business Enterprise] is to bring to the government the technical and operational facts and the costs of options. It is no more and no less than that.[62]

2.63   The NBN Co stated the cost savings for connecting MDUs to the NBN (through building fibre to the basement) was not as great in Australia as in other countries such as Korea with a high percentage of high rise blocks, because Australian MDUs tend to be more like SDUs. The NBN Co stated:

> Directionally, there are more high-rises in places like Korea than there are in Australia, so you would not expect it to make as big a difference [in cost savings] in Australia as it does in those other countries. You would not expect it to, for the reasons we talked about before: because you have more horizontal MDUs, which are more like SDUs.[63]

2.64   The NBN Co is spending $9.8 billion in connecting SDU and MDU customers to the NBN, the individual cost of which has fallen from $2400 per premise as the connection model has changed and the number of installations has increased over time to $1100 per premise. The NBN Co explained:

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61   Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 39.
62   Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 39.
63   Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 28.

> …customer connect. That is the bit that goes from the multiport,
> the connection in the street, into the home. It is comprised of two
> parts: the drop and then the in-premises activity. We did a number
> of initial sites—several thousand—on a different model and the
> cost of those was $2,400. We got some learnings from that, we
> changed the model and now we are proceeding into volume. That
> is, once again, several thousand. This is a blend, by the way, of
> SDUs and MDUs—single dwelling units and multi-dwelling units.
> The volume actuals we are getting are around $1,100, which is in
> fact right on our corporate plan estimate of $1,100. Just to remind
> you what all of that is for, it is for connecting 6.9 million premises
> and passing and doing the build drops for the remainder. In fact,
> some of it is for drops into premises that ultimately may not be
> connected or may not have an active service, but it encompasses
> all of that. So we are very comfortable with our $9.8 billion.[64]

2.65   In terms of its progress in connecting MDUs to the NBN the NBN Co was
        encountering 'a lot of support' and stated:

> …for MDUs, we are going through a very structured process in
> identifying the strata owners. To date—and again it is early days—
> we see a lot of support, and we do not see too many issues in that
> respect. But ultimately we are going to engage with every single
> household in Australia; hence, I would not say that there will
> never be any issues going forward. I am sure that there will be
> problems to be resolved as we go along.[65]

Costing NBN Models

2.66   On 7 April 2009, the then Government announced the establishment of the
        NBN Co Limited to design and build the super-fast ubiquitous NBN[66]
        which, upon the public release of the first corporate plan in December
        2010 was estimated to have a total project expenditure of $35.9 billion.[67]

2.67   The NBN would:

■   'connect [with 90 per cent coverage] homes, schools and workplaces
      with FTTP, providing broadband services … in urban and regional

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64   Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 7.

65   Mr Ralph Steffens, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 29.

66   Hon Kevin Rudd MP, Prime Minister and Senator the Hon Stephen Conroy, Minister for
     Broadband, Communications and the Digital Economy, 'New National Broadband Network',
     media release, 7 April 2009.

67   Hon Kevin Rudd MP, Prime Minister and Senator the Hon Stephen Conroy, Minister for
     Broadband, Communications and the Digital Economy, 'Government Releases NBN Co
     Corporate Plan', media release, 20 December 2010.

towns with speeds of 100 megabits per second - 100 times faster than those currently used by most people – extending to towns with a population of around 1,000 or more people[68]

- use next generation wireless and satellite technologies that will be able to deliver 12 megabits per second 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.'[69]

2.68   More than a year later on 6 May 2010, the NBN implementation study was released which the Government stated 'confirms that high-speed broadband for all Australians is achievable, and can be built on a financially viable basis with affordable prices for consumers.'[70]

2.69   The Implementation Report prepared jointly by McKinsey and Company and KPMG made 84 recommendations regarding the NBN in relation to: technology, financing, ownership, the network policy framework and market structure. [71]

2.70   The scope of the NBN Implementation Study was to 'advise Government on how best to implement its stated policy objectives, not to evaluate those objectives'. The Implementation Study stated that it did not:

- 'Evaluate the Government's policy objectives

- Evaluate the decision to implement the NBN via the establishment of NBN Co

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68   This was later increased to 93 per cent coverage following a recommendation of the July 2010 NBN Implementation Study. Hon Julia Gillard MP, Prime Minister, Hon Wayne Swan MP, Deputy Prime Minister and Treasurer, Senator the Hon Penny Wong, Minister for Finance and Deregulation and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'Government releases NBN Co Corporate Plan', media release, 20 December 2010.

69   Hon Kevin Rudd MP, Prime Minister and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'New National Broadband Network', media release, 7 April 2009.

70   S Conroy (Minister for Broadband, Communications and the Digital Economy, L Tanner (Minister for Finance and Deregulation), 2010, Landmark Study Confirms NBN Vision is Achievable and Affordable, media release, 6 May, p. 1.

71   S Conroy (Minister for Broadband, Communications and the Digital Economy, L Tanner (Minister for Finance and Deregulation), 2010, Landmark Study Confirms NBN Vision is Achievable and Affordable, media release, 6 May, p. 1.

- Undertake a cost-benefit analysis of the macro-economic and social benefits that would result from the implementation of a superfast broadband network.'[72]

2.71   Since the release of the implementation study in May 2010, the NBN rollout is still in its early start-up phase which is evidenced by the NBN Co's financial results and the rate of the NBN rollout ramp up.

Fibre-to-the Premise and Fibre-to-the-Node

2.72   Since the announcement of the NBN, there has been regular public debate about the advantages and disadvantages of a high speed broadband network delivered using either a FTTP or a Fibre-to-the-Node (FTTN) platform.

2.73   The FTTP or Fibre-to-the-Home option delivers the broadband fibre network directly into the premise or home and FTTN is a mix of fibre and copper network, where the fibre is terminated at a node or cabinet in the street and then run with a copper cable into the premise or home.

2.74   In its First Review, the committee reported on how fibre optic technology had been selected to support the NBN over alternative technologies, because of the superior performance of a fibre network over a copper network, wireless and Hybrid Fibre Coaxial (HFC).

2.75   The NBN Co website also states that at the time prior to the build of the NBN, the Government was advised the proposals for a FTTN network did not 'represent value for money'. The NBN Co website states:

> The Government announced its decision to establish NBN Co in April 2009, after the Government received advice that none of the proposals submitted from interested parties to build a smaller-scale, Fibre-To-The-Node network represented value for money.[73]

2.76   The NBN Co stated that the FTTP while having a greater short term cost, was superior to the FTTN as it has a greater long term benefit. The NBN Co stated:

> Some countries are choosing to do fibre to the node or, increasingly, not just fibre to the node but fibre to the kerb or fibre to the cabinet, pushing the fibre even further out. In the end, it is a long-term, short-term trade-off, you would have to say. There are some pluses to a fibre-to-the-node rollout. You could do a fibre-to-the-node rollout to a part of Australia—certainly not 93 per cent. You could not use fibre to the node to get 93 per cent of premises

72   Australian Government, 2010, National Broadband Network Implementation Study, Mackenzie and Company and KPMG, 6 May, pp I and ii.

73   NBN Co, Frequently Asked Questions, <www.nbnco.com.au>, p. 3.

with a high-speed service. You could go only so far and then you would start to run into the problems you have with ADSL and ADSL2, unless you just keep pushing that fibre further and further, which will make the copper loops shorter and shorter, so there is a cost-benefit trade-off there. But, remember, as you push the fibre further and deeper and make the copper loops shorter and deeper with a fibre to the node or fibre to the cabinet, you need to put in more and more and more cabinets. Each one of those cabinets needs to be powered and active, and then they will have the same issues that we have talked about, such as of water ingress. So there comes a point at which you say this still is not the end architecture. Almost everybody in the world says that the right end architecture is fibre to the premise.[74]

2.77   The Department of Broadband, Communications and the Digital Economy (DBCDE) explained the FTTP option would deliver a better competition outcome than the FTTN option as well as deliver better value for money. The DBCDE stated:

> The Government started out with fibre to the node and ran a tender process for that purpose. For whatever reason the Telstra proposition to that failed and the independent panel that assessed the bids said there was no value for money. And probably the most important aspect for me when I came in and looked at this is that the ACCC said that this investment in fibre to the node was unlikely to necessarily deliver the kind of benefit that the Government perceived of it and that a substantial part of it would effectively be wasted, in terms of a competition outcome. So the Government is there, again, with an attempt to do fibre to the node that was previously unsuccessful and it is required to either do nothing or move up to fibre to the premises. It chose to move up to fibre to the premises...[75]

2.78   On 9 April 2013, *The Coalition's plan for fast broadband and an affordable NBN* was announced.[76] This plan for the NBN relies on a FTTN to deliver fast broadband to brownfields areas (or areas with existing copper networks) and 'where commercially feasible' with a reliance on a fibre network for new developments (or Greenfields) and where there is sufficient demand

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74   Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, pp 24–25.

75   Mr Peter Harris, Secretary, DBCDE, Transcript of Evidence, Sydney, 16 May 2011, p. 39.

76   Abbott T, 2013, The Coalition's Plan for Fast Broadband and an Affordable NBN, media release, 9 April.

to justify it, with examples of business districts, industrial and commercial parks, schools, hospitals and the like.[77]

2.79   The alternative FTTN NBN would:

> …extend fibre to cabinets within a few hundred metres of user premises or into the basements of apartment blocks. Fibre to the Node increases bandwidth at manageable expense by making use of the existing copper infrastructure over the last few hundred metres before reaching the customer's premises. Within a few years FTTN should support downloads exceeding 100 megabits per second over short lengths of copper. According to NBN Co's own bullish projections of user demand, such a ceiling would encompass the download speeds four fifths of NBN users are forecast to demand a decade from now. This proves there is still plenty of scope for legacy infrastructure to play a part in providing bandwidth. Of course fibre should generally run all the way to premises in new (Greenfields) housing estates, unless this isn't commercially feasible. In some places especially high maintenance costs may require copper to be replaced with fibre. Fibre would also typically extend to anywhere there is demand sufficient to justify it – business districts, industrial and commercial parks, schools, hospitals, medical centres and universities are just some examples.[78]

2.80   The Coalition has stated that under its NBN policy it would conduct:

- 'A rigorous review into NBN Co's current commercial progress and options to meet the Coalition's policy objectives.'

- An independent audit into how the NBN was arrived at

- 'An independent review into the long-term structure and regulation of telecommunications.'[79]

2.81   During the committee's Second Review, the Productivity Commission stated that if formally required, it was within its technical capacity to undertake analysis on the cost effectiveness of different forms of delivering high speed broadband. The Productivity Commission stated:

> That would be within our technical capacity, drawing on proper expertise of course. We do not profess to be telco-specific analysts.

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77   Coalition, 2013, The Coalition's Plan for Fast Broadband and an Affordable NBN, April, pp 5 and 6.

78   Coalition, 2013, The Coalition's Plan for Fast Broadband and an Affordable NBN, April, pp 5 and 6.

79   Abbott T, 2013, The Coalition's Plan for Fast Broadband and an Affordable NBN, media release, 9 April, p. 2.

> But, drawing on appropriate expertise, we could provide some advice to the committee if that were formally requested of us and we were prioritised to do that. We would want to undertake the project thoroughly and properly within our normal behaviour, rather than do it as an ad hoc research adjunct.
>
> …As a matter of course, the Productivity Commission has very open and transparent processes and always engages fully with all stakeholders. People see us as a neutral entity and therefore we do get close cooperation—because of the role we play. Certainly we would not want to move beyond that which is our core strength and gives us our credibility on other significant issues.[80]

2.82   On 22 February 2013, Mr Mike Quigley, Chief Executive Officer (CEO) of the NBN Co announced that the NBN Co had approached peak industry body, The Communications Alliance to seek a study into the advantages and disadvantages of alternative NBN models.[81]

2.83   In early May 2013, it was reported the Communications Alliance ruled out conducting the proposed study.[82]

2.84   When asked whether the NBN Co could consider a potential change in NBN policy within the framework of a corporate plan, the NBN Co commented:

> … a GBE does not enter into costing or working up corporate plans other than for the job that the government of the day has given it to work on. So we do not go off speculating on that and trying to develop alternatives. But I think that if you ask a question then we are obliged to answer the question.
>
> …Yes, we have the capability. But, as when we were developing the architecture, the design and ultimately the corporate plan for the network we are currently building, there are a large number of issues that need to be clarified before you can proceed with that.[83]

80   Mr Michael Woods, Deputy Chairman, Productivity Commission, Transcript of Evidence, Sydney, 24 October 2011, p. 26.

81   Binegmann, M, 'NBN can still be changed: Quigley', *The Australian*, 23 February 2013, p. 1; McDuling J, 'Quigley Stuck in an NBN Quagmire', *The Australian Financial Review*, 2 March, p. 21.

82   Bingemann M, 'Telcos Reject Call for Study on NBN System', *The Australian*, 6 May 2013, p. 6.

83   Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 14.

Concluding Comments

National Broadband Network Rollout Progress Over the Period

2.85   The progress of the NBN rollout for the period ended 31 December 2012, cannot properly be gauged or compared to progress in the previous six month period as there is no published half year target for the NBN rollout included in either the Shareholder Ministers' Performance Report or the NBN Co Corporate Plan. This was the same issue encountered during the committee's Third Review which examined NBN rollout data for the period ending in the middle of a financial year.

Current Progress of the National Broadband Network Rollout

2.86   On 29 January 2013, the NBN Co announced that it was ramping-up the NBN rollout with the aim of passing more premises in the final quarter of the financial year than had been passed in the entire project up to the beginning of that quarter.[84]

2.87   Two months later, on 21 March 2013, the NBN Co announced that it would revise its targets to take into account a three month delay in the NBN rollout. The delay was attributed to a slower rate of rollout progress on the ground by contractors than originally forecast.

2.88   The NBN Co states the current three month delay in the NBN rollout is not expected to delay the overall timeframe for the entire NBN rollout or affect total cost.

2.89   In early May 2013, the NBN Co released an updated three-year rollout plan which lists an additional 1.35 million premises that are scheduled to receive the NBN.

Key Performance Indicators and Corporate Plan Targets

2.90   The committee has previously commented that the NBN rollout data provided in tabular form in the Shareholder Ministers' Report does not readily enable comparison of progress against established corporate plan targets. Information provided in the Shareholder Ministers' Report is again presented in a way which does not enable comparison with corporate plan targets without checking against those targets separately.

2.91   Information contained in Table 2.3 shows how NBN rollout KPI categories have changed between performance reports. As previously reported the targets (contained in the Corporate Plans) have also been revised down between corporate plans and again with the release of NBN rollout information on 29 January 2013, which saw a revision of targets for the

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84   NBN Co, 2013, 34 500 Australian homes and businesses now using the NBN, media release, 29 January, p. 1.

satellite network. Targets in the NBN Co Corporate Plan will again be revised to take into account the three month delay in the NBN rollout.

2.92   The NBN Co has on previous occasions stated that the underlying premise of factors affecting the NBN rollout have changed and so corporate plan targets have changed. In addition, the NBN Co qualifies the information it has presented to the committee in addition to that contained in the Shareholder Ministers' Performance Report. In the information it provided to the committee at its hearing on 19 April 2013, the NBN Co qualified its forward looking statements stating no assurance is given to any third party 'that the results, performance or achievements expressed or implied by such Statements will actually occur, and no third party should rely upon the Statements or consider them as a representation of what will happen.'[85]

2.93   Together these issues culminate in the situation where tracking the progress of the NBN rollout is made more complex and reliance is placed on qualitative statements made in the public domain about NBN progress, rather than on published quantitative data.

2.94   Given that the NBN is the largest ever infrastructure project undertaken in Australia, at this early stage of the NBN rollout, it is timely that there be greater rigour placed on the public reporting of the financial and physical aspects of the NBN rollout.

NBN Co Unaudited Financial Result

2.95   The Performance Report covers the period which ends in the middle of the 2012-2013 financial year and shows a consolidated operating loss of approximately $408 million, almost double that experienced in the same period in the previous year. Over the same period in the previous year, revenue marginally declined.

2.96   Capital expenditure for the period was well below the corporate plan target, with the amount spent of $792 million approximately 25 per cent of the target total. Operational expenditure was $333 million which represents approximately 30 per cent of the target total.

Regulatory Issues

2.97   In December 2012, the NBN Co lodged a new SAU with the ACCC which replaces the NBN Co's SAU lodged with the ACCC in December 2011.

2.98   While the ACCC is still considering the SAU, in early April 2013, it issued a draft decision on the SAU providing suggestions to NBN Co for changes to the SAU. The ACCC has stated that the next step in the process is for it

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85   NBN Co, *Submission 13*, p. 19.

to issue a formal notice to the NBN Co to vary the SAU. The ACCC is required to make a final decision on the SAU by 19 July 2013.

2.99   A final draft of the CDP under the WBA was released on 30 November 2012. The NBN Co will align the contents of its WBA with the finalised and accepted SAU. As has previously occurred, in the interim, existing WBA signed between parties are expected to be extended.

Connecting Multi-Dwelling Units

2.100   The NBN Co is spending $9.8 billion to connect SDU and MDU customers to the NBN, the individual cost of which has fallen from $2400 to $1100 per premise, as the connection model has changed and the number of installations has increased over time.

2.101   The NBN Co also stated that it had investigated making use of the existing copper network to connect MDUs, but that this approach was not taken as it presented issues in ensuring a high speed connection and analogue voice services for customers. Finally it was not in line with Government policy in regard to building a FTTP connection.

2.102   Although still in the early stages of the NBN rollout, the NBN Co has stated that it has received 'a lot of support' in connecting MDUs to the NBN.

Costing NBN Models

2.103   The Government's NBN Implementation Study was not tasked with evaluating the merits of alternative fast broadband options, or conducting a cost benefit analysis of these options.

2.104   With increasing recent debate about an alternative way to deliver high speed broadband across Australia, the need for a cost benefit analysis of options available to deliver high speed broadband is timely. The NBN Co is best placed to undertake this kind of costing within the framework of its Corporate Plan.

Recommendation 1

2.105   **The committee recommends the Government task the NBN Co Limited to update its Corporate Plan 2012-2015 to prepare strategies to minimise risk in any policy changes that may reasonably be expected to occur in the 2012-2015 period.**

3

Regional and Remote Issues

Introduction

3.1   Chapter 3 examines issues associated with the National Broadband
        Network (NBN) rollout to regional and remote Australia through the
        fibre, fixed wireless and satellite networks—all three technologies will be
        used to rollout the NBN to regional and remote Australia.

3.2   NBN Co's performance information for the NBN rollout across the fibre,
        fixed wireless and satellite networks is discussed in Chapter 2. Broader
        issues relating to NBN policy and alternative network models are also
        discussed in Chapter 2.

3.3   In terms of the regional and remote aspect of the NBN rollout, the
        Australian Government's Statement of Expectations for the NBN Co in
        implementing the NBN notes that, in progressing the NBN rollout, 'the
        Government expects that the NBN Co will take into account the
        Government's commitment that fibre will be built in regional areas as a
        priority'.[1] The NBN Co 'will also bring forward the introduction of
        wireless and satellite services so that regional Australia can get better
        broadband access sooner'.[2]

3.4   The Australian Government's objective for the NBN Co is to:

> …connect 93 per cent of Australian homes, schools and businesses
> with fibre-to-the-premises technology providing broadband
> speeds of up to 100 megabits per second, with a minimum fibre
> coverage obligation of 90 per cent of Australian premises. All
> remaining premises will be served by a combination of

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1   Australian Government, *Statement of Expectations*, 20 December 2010, p. 3.
2   Australian Government, *Statement of Expectations*, 20 December 2010, p. 3.

> nextgeneration fixed wireless and satellite technologies providing peak speeds of at least 12 megabits per second.[3]

3.5   In accordance with the Government's Statement of Expectations, the seven per cent of premises that do not fall within the 93 per cent fibre footprint will therefore be serviced by either a fixed wireless or satellite connection.[4] As stated in the NBN Co Corporate Plan 2011-13, the technologies utilised should be:

> …Fixed Wireless to 4% of premises (delivering at least 12Mbps) (defined in this Plan as the Fixed Wireless Network or Wireless Network), and Satellite to 3% of premises (defined in this Plan as the Satellite Network).[5]

3.6   These technologies are used to reach areas of low population density that make it 'both difficult and expensive to build infrastructure to these premises'.[6] Consequently, this remaining seven per cent comprises regional and remote Australia.

3.7   In terms of regional and remote communication initiatives concerning the NBN rollout, the Shareholder Ministers' Fourth Performance Report to the Joint Committee on the National Broadband Network (JCNBN) notes that the NBN Co met with various councils and Regional Development Australia (RDA) bodies over the reporting period, providing information to 'increase practical understanding of the rollout, the NBN and its benefits'.[7] In September 2012, the NBN Discovery Truck also worked with local retail service providers (RSPs) to host community events in South Morang, Willunga, Kingston and Townsville, with more than 570 residents and multiple RSPs attending these events.[8]

3.8   This chapter discusses regional and remote issues emerging over the Fifth Review reporting period concerning:

- the fibre network
- the fixed wireless network
- the satellite network
- network extensions

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3   Australian Government, *Statement of Expectations*, 20 December 2010, p. 1. However, as discussed later, on 6 February 2013, NBN Co announced a new 25 Mbps speed tier for its fixed wireless and long term satellite services, Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 36.

4   Australian Government, *Statement of Expectations*, 20 December 2010, p. 3.

5   NBN Co, *Corporate Plan 2011-13*, p. 12.

6   NBN Co, *Corporate Plan 2011-13*, p. 69.

7   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 24.

8   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 24.

■ mobile networks

Fibre Network

Background

3.9   This section of the report looks at issues associated with the fibre rollout for regional Australia. (Issues relating to the fibre rollout more generally are discussed in Chapter 2.)

3.10   The NBN fibre footprint covers '93 per cent of all Australian premises and includes communities with more than 1000 premises, and communities with greater than 500 premises where transit backhaul passes near such communities'.[9] Seventy per cent of regional Australia will receive fibre.[10] The NBN Co Corporate Plan 2012-15 identifies that the fibre rollout will be completed by mid 2021.[11]

Rollout Progress

3.11   In March 2012, the NBN Co released its first 'Three-year fibre rollout plan', which has an objective of construction commenced or completed for approximately 3.5 million fibre premises by 30 June 2015, across 1 500 communities in every state and territory in Australia.[12]

3.12   As at 31 December 2012, the NBN Co had commenced or completed construction in respect of 784 592 fibre brownfield premises and 60 686 fibre new developments lots.[13] Tables 3.1 and 3.2 set out details concerning the deployment of fibre to regional (non-metro) Australia, as provided in the Shareholder Ministers' Performance Reports to the committee on the NBN rollout.

3.13   To 'determine the communities that will receive access to the NBN Co's Fibre network over the next 3 years', the NBN Co is following design principles that include 'balancing construction across states and territories and between metropolitan and regional locations'.[14]

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9   Joint Committee on the National Broadband Network (JCNBN), *Review of the Rollout of the National Broadband Network: Second Report*, November 2011, pp 91-92.

10   Senator the Hon Stephen Conroy, Minister for Broadband and Communications and the Digital Economy, 'National Press Club Address', 13 December 2011.

11   NBN Co, *Corporate Plan 2012-15*, p. 12.

12   NBN Co, *Corporate Plan 2012-15*, p. 19.

13   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 5.

14   NBN Co, *Corporate Plan 2012-15*, p. 19.

Table 3.1   Fibre deployment—brownfields

Fibre to the premise (FTTP) brownfields			
Premises passed	*Six months to 31 Dec 2011*[15]	*Six months to 30 June 2012*[16]	*Six months to 31 Dec 2012*[17]
Metro—premises passed	3 938	2 182 (6 120)	1 792 (7 912)
Non metro—premises passed	14 305	8 435 (22 740)	15 426 (38 166)

Table 3.2   Fibre deployment—new developments

FTTP new developments			
Premises passed	*Six months to 31 Dec 2011*[18]	*Six months to 30 June 2012*[19]	*Six months to 31 Dec 2012*[20]
Metro—lots passed	798	5 517 (6 315)	9 292 (15 607)
Non metro—lots passed	153	3 586 (3 739)	6 905 (10 644)

3.14   The importance of balancing construction between metropolitan and regional locations was reinforced over the committee's Fifth Review reporting period. As the Australian Communications Consumer Action Network commented:

> It is very important that we have the same access to services in regional and metropolitan areas. That has been a catchcry that has come through time and time again with regional review after regional review. We will be watching very carefully to make sure that any potential differences or changes to the current policy do not end up with a two-tiered system…Our members would be very unhappy if we ended up with a situation where there was a difference in the way that metropolitan and regional consumers were being treated.[21]

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15   Shareholder Ministers, 'Performance Report to 31 December 2011', p. 27.

16   Shareholder Ministers, 'Performance Report to 30 June 2012', p. 37.

17   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 39.

18   Shareholder Ministers, 'Performance Report to 31 December 2011', p. 28.

19   Shareholder Ministers, 'Performance Report to 30 June 2012', p. 37.

20   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 40.

21   Ms Teresa Corbin, Chief Executive Officer, Australian Communications Consumer Action Network, Transcript of Evidence, Sydney, 19 April 2013, p. 5.

3.15   Concerning this matter, the NBN Co emphasised:

> You cannot do everywhere at once, so it is just a decision of which areas you go to first. The government has given us clear instructions to try to get balance. As you know, we have put an emphasis on regional Australia early on. Now they have given us instructions to balance across states between regional and urban as well.[22]

3.16   The Shareholder Ministers' Fourth Performance Report to the committee on the NBN rollout noted a number of key outcomes through to March 2013 concerning the fibre rollout to regional Australia, including that, in February 2013, 'NBN Co switched on the NBN in Bacchus Marsh, the first regional area in Victoria to join the fibre network. Nearly 1,800 more homes and businesses will have access to the network in the coming months'.[23]

3.17   In October 2012, the NBN Co released updated coverage maps covering a further 148 600 premises in the fibre footprint in New South Wales, Queensland, South Australia, Victoria and Western Australia.[24] Additional detailed maps indicating where construction had commenced or been completed, covering approximately 98 800 premises in the fibre footprint in New South Wales, Queensland, South Australia, Victoria, Western Australia and the Australian Capital Territory, were released in January 2013.[25] These maps include regional locations where work to rollout the fibre network is commencing for the first time.[26]

3.18   On 21 March 2013, the NBN Co reported that it had 'updated its short-term fibre rollout timeline expecting to pass 341,000 premises with fibre about three months later than the June 2013 target, with between 190,000 and 220,000 premises now forecast to be passed by fibre by end June'.[27] This delay in the fibre rollout may affect regional communities. However, the NBN Co emphasised that this was a 'short-term issue' that would 'not affect the long-term delivery of the NBN or the overall cost of the project'.[28]

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22   Mr Mike Quigley, Chief Executive Officer, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 40.

23   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 37.

24   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 6.

25   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 36.

26   NBN Co, 2013, NBN Construction Commences Covering Around 100,000 More Premises, media release, 25 January.

27   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 37.

28   NBN Co, 2013, NBN Co Updates Short-Term Fibre Rollout Timeline, media release, 21 March.

3.19   The NSW Business Chamber highlighted possible delays in the fibre rollout to regional communities and the need for the rollout to prioritise regional communities in pre-existing 'internet black spots' as issues of concern to its members:

> The Chamber regularly engages with our members right across regional NSW who have reported that while they welcome the proposal to provide over 93% of Australia with… [fibre] NBN connections, the projected delivery of these services in regions such as the Central West, Northern Rivers, Murray-Riverina and New England have a commencement date of up to 2015 or beyond, which means that these areas remain significantly disadvantaged in terms of telecommunications services…

> As has been acknowledged by the NBN Co. itself, the rollout of the network has been slower than anticipated. The revising down of rollout numbers has been keenly felt in regional areas with many businesses expressing their disappointment in the slower connection to the network…

> Furthermore, there have been reports of several connection problems being faced by businesses in a variety of regions…in internet black spots. It is these areas that should be identified as requiring urgent roll outs.

> The Chamber requests that the NBN Co. continues to deliver the NBN as soon as possible to the areas most in need.[29]

3.20   The NSW Business Chamber also provided the committee with information on the fibre rollout progress in Kiama Downs, in regional New South Wales:

> The Chamber contacted a local chamber representative from one of the first active NBN sites, Kiama Downs, NSW for feedback regarding the implementation and connection phases of the rollout and to determine whether any initial or on-going service faults have been experienced by NBN customers…

> the Chamber understands that the roll out has been generally well received. BRW reported a 44% uptake of NBN in just over a year in Kiama Downs and Minnamurra. This represents the highest penetration in Australia…

> The Chamber is also aware that many Kiama businesses initially engaged with the NBN through an NBN expo in March 2012. The local engagement and education of businesses on the opportunities and benefits of high-speed broadband through the NBN Discovery

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29   NSW Business Chamber, *Submission 11*, pp 1-2.

truck has assisted many businesses in understanding the role the
NBN can play in their businesses future success and should
continue.[30]

Fixed Wireless and Satellite Networks

3.21   On 6 February 2013, the NBN Co announced a new 25 Mbps speed tier for
its fixed wireless and long term satellite services:

> …NBN Co announced plans to bring even faster internet to the
> bush by offering a new speed tier doubling the wholesale
> broadband speeds for rural and remote Australia. More than half a
> million homes, farms and businesses eligible to receive the NBN's
> Fixed-Wireless and Long Term Satellite services will be able to
> order wholesale download speeds of up to 25 Mbps and upload
> speeds of up to 5 Mbps from their internet service provider.[31]

3.22   The committee has previously noted that the NBN Co has aggregated the
data for the fixed wireless and satellite rollout, such that progress for the
fixed wireless service and satellite service cannot be individually
determined.[32]

3.23   As discussed in Chapter 2, on 29 January 2013, the NBN Co released six-
monthly figures on progress of the NBN rollout for the period covering
June to December 2012.[33] These figures revised down the fixed wireless
and satellite target for premises activated from 38 000 (as set out in the
NBN Co Corporate Plan 2012-15[34]) to 37 700.[35] The total premises activated
target in this area has therefore been revised down by 300 premises.

Fixed Wireless Network

Background

3.24   This section of the report examines issues associated with the fixed
wireless rollout for regional and remote Australia. (NBN Co's

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30   NSW Business Chamber, *Submission 11*, p. 2.

31   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 36.

32   JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013,
p. 42.

33   NBN Co, 2013, 34,500 Australian Homes and Businesses Now Using the NBN, media release,
29 January, p. 2.

34   NBN Co, *Corporate Plan 2012-15*, p. 36.

35   NBN Co, 2013, 34,500 Australian Homes and Businesses Now Using the NBN, media release,
29 January, p. 2.

performance information for the fixed wireless rollout is discussed in Chapter 2.)

3.25   On 1 June 2011, the NBN Co announced plans to complete the rollout of its fixed wireless network by 2015, with the first services to be available from the middle of 2012.[36] The fixed wireless network will cover around four per cent of premises outside of areas covered by the fibre and satellite networks.[37]

3.26   As set out in the committee's Third Review report, a fixed wireless service differs from mobile wireless networks 'as a fixed service is designed to support a dedicated number of premises, each with a wireless receiver affixed externally to the property. This enables the delivery of a more predictable level of service performance to premises compared to a mobile wireless network which is focussed on mobility'.[38]

3.27   The NBN Co signed a fixed wireless equipment supply and managed services contract with Ericsson in June 2011.[39] The first services over NBN Co's fixed wireless network commenced in April 2012.[40]

Rollout Progress

3.28   In August 2011, the NBN Co announced that the communities of Geraldton (Western Australia), Toowoomba (Queensland), Tamworth (New South Wales), Ballarat (Victoria) and Darwin (Northern Territory) would be the first to receive the fixed wireless service.[41]

3.29   The Shareholder Ministers' Fourth Performance Report to the committee detailed further progress in this area over the reporting period, noting that:

- Between 3 and 12 July 2012, NBN Co announced the local government areas in the Central West and Mid-Western regions of New South Wales and the Rockhampton, Townsville and Mackay regions of Queensland where planning proposals would be lodged to deliver fixed wireless broadband…
- On 8 and 9 November 2012, NBN Co announced local government areas where planning proposals would be lodged to deliver fixed wireless broadband including:

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36   Shareholder Ministers, 'Performance Report to 30 June 2011', p. 6.
37   Shareholder Ministers, 'Performance Report to 30 June 2011', p. 6.
38   JCNBN, *Review of the Rollout of the National Broadband Network: Third Report*, June 2012, p. 86.
39   Shareholder Ministers, 'Performance Report to 30 June 2011', p. 6.
40   Shareholder Ministers, 'Performance Report to 30 June 2012', p. 14.
41   NBN Co, *Corporate Plan 2012-15*, p. 39.

> ⇒ Victoria—the Goulburn Valley and North East Victoria, Bendigo, Central Victoria and parts of Northern Victoria; Bass Coast, South, East and Central Gippsland.
>
> ⇒ Western Australia—Great Southern, Wheatbelt region, Goldfields-Esperance area, Peel and South West Region.
>
> ⇒ New South Wales—Mid North Coast and Manning Region…
>
> ■ On 17 January 2013, NBN Co announced that its design and construction partners will work with local governments to identify appropriate locations for fixed wireless network infrastructure in and around the Mid Murraylands, South East, Far South East and Kangaroo Island areas of SA…
>
> ■ On 26 February 2013, NBN Co announced that its design and construction partners will work with local governments to identify appropriate locations for fixed wireless network infrastructure in and around the Gympie and Sunshine Coast area…
>
> ■ Also on 6 February 2013, NBN Co began outlining plans to provide some smaller communities and rural residents in parts of the Northern Rivers with facilities dedicated to delivering high-speed, fixed-wireless broadband services.[42]

3.30   As at 31 December 2012, there were 1 011 active fixed wireless premises and the NBN Co had commenced construction of the fixed wireless network for 21 684 premises.[43]

3.31   Ericsson and the NBN Co continued planning and site acquisition activities for volume rollout in areas where spectrum is available. Approximately 1 500 sites are undergoing planning and site acquisition.[44]

3.32   As at 30 December 2012, 21 RSPs had executed the NBN Co fixed wireless trial agreement and 12 RSPs were offering a fixed wireless service.[45]

3.33   Based on 'contracted rates negotiated with Delivery Partners and on actual costs received to date NBN Co's estimate of the capital costs for the Fixed Wireless network remains within the $1.4 billion forecast in the 2012-15 Corporate Plan'.[46]

3.34   One issue of interest over the committee's Fifth Review reporting period was the development approval process for NBN Co fixed wireless towers in local government areas.

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42   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, pp 3-5, p. 36.

43   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 8.

44   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 8.

45   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 23.

46   NBN Co, *Submission 13*, p. 11.

3.35   The Victorian Government submission to the inquiry raised concerns with the 'approach being taken by NBN Co to the fixed wireless rollout' as demonstrated by 'events surrounding the proposal to build an NBN Co wireless tower in the community of Napoleons in the Golden Plains Shire'.[47]

3.36   It was explained that the NBN Co plan had included Napoleons in the fixed wireless rollout and that NBN Co (or its agents) had submitted a development application for it and seven other sites in the Golden Plains Shire, with the following outcomes:

- NBN Co was informed on 20 January 2012 that their preferred site would not be approved
- alternative sites were suggested by Council during negotiations
- one site was investigated by NBN Co but the landholders would not agree
- the Napoleons application was rejected in June 2012 by the Council on amenity grounds
- when the application was rejected by Council NBN Co announced Napoleons would receive a satellite service
- this service would not be NBN Co's Interim Satellite Solution, therefore services would not be available until late 2015
- seven of the eight applications were approved without issue.[48]

3.37   The Victorian Government noted that the Victorian planning system 'contains options that could be utilised, individually or in combination, in relation to NBN Co telecommunications towers', but that, in the Napoleons case, the NBN Co is 'choosing to not exercise any of these options', including to 'investigate other sites suggested by Council' and 'appeal the Council decision to the Victorian Civil and Administrative Tribunal'.[49]

3.38   The Victorian Government stated that this outcome would 'result in long term consequences for that community as a satellite service is a less capable service than wireless. Satellite is considered to be a lesser service in comparison to fibre and fixed wireless services due to the impact of latency'.[50] The Victorian Government concluded:

> There have been no indications from the Commonwealth that the citizens of areas affected by this NBN Co policy will have opportunities to improve their services at a later date. It is highly unlikely that alternatives will be available to Napoleons from

47   Victorian Government, *Submission 1*, pp 1-2.
48   Victorian Government, *Submission 1*, p. 2.
49   Victorian Government, *Submission 1*, p. 2.
50   Victorian Government, *Submission 1*, p. 2.

other providers as Commonwealth policy settings mean NBN Co has an effective monopoly in the provision of fixed broadband.

NBN Co's policy of not taking full advantage of the options available to it leaves NBN Co open to a perception of pressuring councils to approve development applications. Councils will increasingly be aware that the rejection of a NBN Co tower site development application will lead to NBN Co's default outcome, the provision of a lesser satellite service for their communities…

It is the understanding of the Victorian Government that this issue is not confined to Victoria. For a project of the size and national significance of the NBN, the Victorian Government considers it vital that the initiative is developed and implemented in a transparent manner. It is the responsibility of the Commonwealth Government to ensure accountability of NBN Co to the communities it is supposed to serve.[51]

3.39   The issue of community consultation concerning NBN Co's fixed wireless towers was also raised as an issue:

This submission is a brief summary of our recent experience and that of other residents of Deuchar, Queensland and the lack of any sort of consultation from NBN Co…

In the Southern Free Times newspaper dated Thursday, January the 10th, 2013 (whilst many residents were away) a development notice appeared in relation to an application for a Material Change of use…

The notice gave scant detail and referred to the change of land use to 'Community Use—Telecommunication Facility…

Many residents were unaware of the application and the length of time to lodge objections was not long enough. Given the time of year some residents were unable to lodge their submissions within the time period…

In a narrow vote the application was approved by council…

We understand that there are many such towers now proposed for the Southern Downs Area and are now aware of other small communities who find themselves in our situation and are similarly being railroaded.[52]

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51   Victorian Government, *Submission 1*, p. 3.

52   Mr Brad Jones and Ms Kym Rose, *Submission 8*, pp 1-2.

Satellite Network

Background

3.40   This section of the report looks at issues associated with the satellite network rollout for regional and remote Australia. (NBN Co's performance information for the satellite rollout is discussed in Chapter 2.)

3.41   The satellite network will cover 'around three per cent' of premises outside of areas covered by fibre and fixed wireless networks.[53] In the period before it launches its own satellite service in 2015—the Long Term Satellite Service—the NBN Co is operating an Interim Satellite Service to provide broadband services for regional and remote Australians who do not have access to 'metro comparable' broadband.[54]

Rollout Progress

Interim Satellite Service

3.42   NBN Co's Interim Satellite Service (ISS)—also referred to as the First Release Satellite Service—was commercially launched on 1 July 2011, using spare capacity on existing satellites.[55] The ISS acts as a transition between the Australian Broadband Guarantee Scheme, which expired on 1 July 2011, and NBN Co's Long Term Satellite Service, scheduled for commercial service by mid-2015.[56]

3.43   Under the ISS, the satellite equipment and installation will be provided by the NBN Co, at no cost to the end user for a standard installation, and peak download speeds of up to 6Mbps will be available via participating RSPs.[57] These services are available to consumers through NBN Co contracts with Optus and IPStar.[58]

3.44   During the reporting period, Optus delivered a new Operational Support System/Business Support System platform to support the ISS and successfully migrated all RSPs, with the Shareholder Ministers' Performance Report to the committee noting that 'RSP feedback has generally been positive'.[59]

3.45   Skymesh is seeking to offer the current ISS to a number of remote schools, with 'approximately 57 schools and related premises…set to be connected

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53   Shareholder Ministers, 'Performance Report to 31 December 2011', p. 13.

54   NBN Co, *Statement of Corporate Intent: 2012-15*, pp 4-5.

55   Shareholder Ministers, 'Performance Report to 31 December 2011', p. 12.

56   NBN Co, *Corporate Plan 2012-15*, pp 20-21.

57   Shareholder Ministers, 'Performance Report to 30 June 2011', p. 6.

58   NBN Co, *Corporate Plan 2012-15*, p. 21.

59   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 9.

in the first six to eight months of 2013, including some very remote Indigenous schools and communities'.[60]

3.46   In terms of customer satisfaction with the ISS, the NBN Co explained that it had 'dimensioned 30 kilobits per second average busy-hour throughput' and, as a result, it was hearing from the people getting the service that 'they are very happy with it compared to what they were getting before'.[61]

3.47   The Shareholder Ministers' Performance Report further noted that, following the commercial launch of the ISS, services continued to be activated 'at a higher rate than forecast'.[62]

3.48   The NBN Co released 'more detailed eligibility criteria' for potential rural and remote users of its ISS in May 2011, confirming that, 'where high demand exists first priority will be given to those people who have no access to alternate broadband services, subject to a service qualification process'.[63] From 1 July 2012, the eligibility criteria for the ISS was expanded to include eligible education, health and local government facilities.[64]

3.49   Approximately 250 000 end users are eligible for the ISS, based on current eligibility criteria.[65] The NBN Co explained the increased coverage of the ISS from 165 000 premises in June 2012 to 250 000 premises in December 2012:

> When we look at the premises covered, it is based on the calculation that is done by DBCDE on the eligible premises—in other words, what is the footprint over which we have to provide a service? Those eligibility rules were expanded between those two dates that you just talked about, which means we ended up with a bigger coverage area…We have not passed any more; it is just that the coverage has gone up because there are more premises we are now obliged to serve.[66]

3.50   There is currently a 48 000 customer cap on the ISS.[67] Total active ISS as at 31 December 2012 was 23 051, with 12 RSPs actively selling services, and

60   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 22.

61   Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 39.

62   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 8.

63   Shareholder Ministers, 'Performance Report to 30 June 2011', p. 6.

64   NBN Co website <www.nbnco.com.au/nbn-for-home/how-it-works/satellite.html> (accessed 8 May 2013).

65   NBN Co, *Submission 2.5*, Answer to Question on Notice No. 7, Second Review of the JCNBN, p. 12.

66   Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

67   Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

the total number of pending orders for the ISS as at 31 December 2012 was 1 368.[68]

3.51   Against this background, an issue of interest over the Fifth Review reporting period was when the 48 000 customer cap on the ISS might be reached, based on current take-up rates.

3.52   The committee heard that the number of premises currently connected to the ISS is around 28 000.[69] The cap would therefore be reached '[s]ome time next year' and this would be before the launch date of the LTSS in mid 2015.[70] This raised concerns about what arrangements were in place for new customers wanting to access the ISS once the cap is reached. The NBN Co responded:

> We simply will not be able to serve them. There is no more economically viable capacity that we can identify…
>
> We have explored it and looked at it carefully. It just does not make sense because the cost is really…astronomical. It is very high…
>
> Something like three or four—multiples—of what is costing for the 48,000.[71]

3.53   The NBN Co clarified that a number of customers would therefore miss out on the ISS:

> …we are going to have a gap in which we cannot provide service to those people who are almost certainly going to want it. There is a long lead time on designing and launching satellites. The good news is that we have designed two specifically for Australia and they will come online in 2015.[72]

3.54   There was also interest in whether a number of spot beams were approaching capacity in the ISS. The NBN Co commented it expected that 'some of those beams are going to exhaust some time next year'.[73]

Long Term Satellite Service

3.55   The NBN Co's Long Term Satellite Service (LTSS) is scheduled for commercial service by mid-2015.[74] The two major components of the LTSS are a space segment and a ground segment.

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68   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 8.

69   Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

70   Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

71   Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

72   Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

73   Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

74   NBN Co, *Corporate Plan 2012-15*, p. 21.

3.56   In February 2012, Space Systems/Loral were awarded the contract to build the two next-generation Ka-band satellites for the space segment.[75] The contract is valued at approximately $620 million and followed a two-year procurement process.[76] The planned launch date for the two satellites remains unchanged from previous forecasts, at mid 2015. The Stakeholder Ministers' Fourth Performance Report to the committee noted that the contract with Space Systems/Loral had 'progressed well during the period'.[77]

3.57   On 4 March 2013, the NBN Co announced that Arianespace, the European satellite launch company, had been awarded a contract worth up to $300 million to launch the two NBN satellites.[78]

3.58   Previous committee reports have commented on the issue of orbital slot allocation. In its Third Review report, the committee noted that the NBN Co had 'lodged coordination applications' with the International Telecommunications Union (ITU) for four orbital slots for its two commissioned satellites, but that these slots were 'yet to be secured from the ITU'.[79] In its Fourth Review report, the committee stated that it would 'seek future evidence upon the…progress in obtaining orbital slots for the LTSS satellites'.[80]

3.59   Accordingly, there was continued interest over the Fifth Review reporting period about progress in obtaining orbital slots for the two satellites. The NBN Co clarified that:

> Just to be clear: we are not negotiating with the ITU or anyone; we are coordinating with other satellite operators. It is a very standard process that the ITU facilitates basically by having a register that advises everyone of all the activity going on around satellite frequency coordination. We have just recently filed resolution 49 data, which has been put into the ACMA, who have put it into the ITU. That basically puts into the satellite community that we now have a genuine satellite being built, contracted and progressing as planned and have a launch.[81]

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75   NBN Co, *Corporate Plan 2012-15*, p. 21.

76   NBN Co, *Corporate Plan 2012-15*, p. 21.

77   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 9.

78   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 37.

79   JCNBN, *Review of the Rollout of the National Broadband Network: Third Report*, June 2012, p. 91.

80   JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 51.

81   Mr Gary McLaren, Chief Technology Officer, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 39.

3.60   The Stakeholder Ministers' Performance Report further noted that the ITU orbital slot coordination process 'continued to progress'.[82]

3.61   There was also interest in the lead times for when equipment would start being rolled out to facilitate switching over from the ISS to the LTSS in mid 2015. The NBN Co responded that:

> We plan to do that around the time of the actual satellites going operational. We are not looking to do that any earlier. Our current corporate plan is to do that as the satellites become operational around mid-2015…
>
> We will still have the interim satellite in place, and there will be a migration over a period of time. It looks like it will take probably 12 to 18 months to do that migration. It is not something we can organise a workforce to do within a week or two and switch things over. It needs a customer visit. It needs to be supported through a program right across regional and rural Australia.[83]

3.62   In terms of the ground segment, the LTSS requires satellite ground stations to be built across Australia to receive and transmit data signals. Negotiations for 10 ground stations continued during the reporting period, with seven contracts having been exchanged and negotiations for the remaining three sites continuing in 2013.[84]

3.63   Ground stations are planned to be located in New South Wales (Wolumla, Bourke and Broken Hill); South Australia (Ceduna); Tasmania (Geeveston); Queensland (Roma); and Western Australia (Kalgoorlie, Geraldton, Carnarvon and Wagerup).[85]

3.64   In October 2012, the NBN Co announced that it had selected Cockram Corporation Pty Ltd and Perkins (WA) Pty Ltd to build the 10 ground stations, with contracts awarded being worth up to $180 million and construction due to be completed in 2015.[86] An estimated 20-30 construction workers will be required to build each facility, with a further 60 people expected to be employed nationwide to manage the service.[87]

3.65   In July 2012, the US satellite network specialist ViaSat was contracted to supply the equipment for the 10 ground stations, as well as the equipment

82   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 9.

83   Mr McLaren, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 39.

84   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 9.

85   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 11.

86   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 11.

87   NBN Co, 2012, NBN Co Selects Satellite Ground Station Construction Contractors, media release, 25 October.

to be installed in end user premises, with the contract worth approximately $280 million.[88]

3.66   The NBN Co confirmed that cost estimates for the satellite service remained within the Corporate Plan forecasts: '[b]ased on contracted rates negotiated with Delivery Partners and on actual costs received to date NBN Co's estimate of the capital costs for the Satellite network remains within the $1.8 billion forecast in the 2012-15 Corporate Plan'.[89]

Additional Issues

Network Extensions

3.67   As set out in the NBN Co Corporate Plan 2012-15, the network extensions framework allows individuals, businesses or governments to pay the 'incremental cost of extension of the fibre or fixed wireless network to areas where it would not otherwise be built'.[90]

3.68   There are three types of network extensions:

- Adjacent Fibre Network Extensions — covering premises located on the edge of a fibre serving area module. These premises can be individual (e.g. a house) or a group of premises (e.g. a group of houses or a group of businesses in an industrial area);
- Large Fibre Network Extensions — covering small communities or towns that are not planned to be serviced by fibre or individual premises or multiple premises that cannot be considered for an Adjacent Fibre Network Extension; and
- Fixed Wireless Network Extensions — covering small communities or towns that are planned to be serviced by satellite services.[91]

3.69   The committee has tracked the evolution of NBN Co's network extension policy for the fibre and fixed wireless networks over its previous reports. In its Second Review report, the committee recommended that:

> …as a matter of urgency, the NBN Co formalise and publicise its policy for the provision of costing extensions to its planned

88   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 11.

89   NBN Co, *Submission 13*, p. 11.

90   NBN Co, *Corporate Plan 2012-15*, p. 32.

91   Australian Government, October 2012, *Response to the Joint Committee on the National Broadband Network Third Report of 25 June 2012*, pp 16-17.

National Broadband Network fibre footprint, especially for regional and remote Australia.[92]

3.70   In its Third Review report, the committee recommended that the NBN Co:

■ …publicise the [Network Extension] policy and its process for communities in the fixed wireless and satellite service areas; and

■ At the point of announcing new areas within these footprints, ensure that the policy is attached to media releases and known to the relevant local government associations.[93]

3.71   Consistent with these recommendations, a network extension policy has now been introduced. As the Shareholder Ministers' Fourth Report to the committee on the NBN rollout noted:

The Network Extension policy was launched on the NBN Co website on 12 July 2012. The policy states that NBN Co must recover only the incremental cost of building any Network Extensions.

The policy outlines the process and criteria for individuals, businesses or government organisations to submit a request for NBN Co to deliver an extension of the existing fibre footprint or fixed wireless footprint beyond that which is planned.[94]

3.72   The Shareholder Ministers' Performance Report further notes that training on the network extension process and policy for NBN Co contact centre staff is scheduled for early 2013.[95]

3.73   On occasion, the issue of extending the fibre footprint can indicate community concern about perceived differences in quality between the services available on the fibre network from those available on the fixed wireless and satellite networks. The committee received evidence on this matter over the Fifth Review reporting period:

I live in Fernmount, a small hamlet of 200 houses 4km East of Bellingen. Unfortunately we are unable to obtain fibre to the premises if and when Bellingen receives the NBN roll out.

I believe you are going to receive a great deal of [complaint] as a result of the NBNCO policy for low-density regional communities. Currently we are facing a Hobson's choice as we are being offered

92   JCNBN, *Review of the Rollout of the National Broadband Network: Second Report*, November 2011, p. 124.

93   JCNBN, *Review of the Rollout of the National Broadband Network: Third Report*, June 2012, p. 104.

94   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, pp 18-19.

95   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 19.

> fixed wireless broadband which will only ever be a 2nd rate service if the rest of the network is installed post-September 2013.[96]
>
> Deuchar, Queensland is a rural community made up of predominately lifestyle properties located between Allora and Warwick on the Southern Downs…
>
> Under the current NBN rollout proposal the Optic Fibre cable will run through our area on the way to service Warwick…
>
> The NBNco Fixed Wireless solution delivers an inferior product to Rural Australia…[97]

3.74   Such comments point to the importance of continued community consultation and awareness raising by the NBN Co concerning the three technologies being used to rollout the NBN to regional and remote Australia, as well as about how local government and regional communities might utilise the network extension program.

3.75   As at 31 December 2012, the NBN Co had received 85 network extension applications.[98] One extension is currently being constructed, with eight under commercial discussion.[99]

Mobile Networks

3.76   Mobile services and mobile backhaul in regional Australia, in the context of the NBN rollout, were raised as issues over the committee's Fifth Review reporting period.

3.77   The 2011-12 Regional Telecommunications Independent Review Committee (the Sinclair Review) report had previously pointed to a need to improve mobile coverage in regional and remote Australia and one of its recommendations was that 'NBN Co engage with mobile carriers about using NBN fixed-wireless towers to also improve mobile coverage (recommendation 4.5)'.[100]

3.78   In its response to the Sinclair Review, the Australian Government agreed with this recommendation, noting that the 'construction of the NBN fixed wireless network provides an opportunity for carriers to expand their mobile phone coverage in certain locations across regional Australia by co-locating equipment in new towers built to support the network'.[101]

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96   Mr Marc Percival, *Submission 2*, p. 1.

97   Mr Brad Jones and Ms Kym Rose, *Submission 8*, pp 1-2.

98   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 19.

99   NBN Co, *Submission 13.1*, Answer to Question on Notice No. 103, p. 25.

100 Department of Broadband, Communications and the Digital Economy (DBCDE), *Submission 10*, p. 1.

101 DBCDE, *Submission 10*, p. 1.

3.79　NBN Co's response to this matter was discussed in the committee's Fourth Review report, which noted that:

> …NBN Co has undertaken to develop a Facilities Access Policy for towers, duct and depot space, which would allow access seekers to obtain terms, prices and ordering and provisioning processes for accessing NBN Co facilities. This would allow for the co-location of mobile network equipment on NBN wireless sites…The NBN Co has already reached reciprocal agreements with Telstra and Optus for access to each others' facilities, including NBN Co built and owned wireless towers.[102]

3.80　However, the Victorian Government submission to the committee's Fifth Review argued that:

> The Commonwealth Government response to the recommendations regarding mobile coverage indicates a lack of understanding of the practical requirements of the mobile telecommunications carriers.
>
> A tower built to satisfy the fixed wireless requirements of NBN Co will not necessarily be suitable for the carriers to co-locate. Therefore carriers need to be involved in the planning stages. For example:
>
> - space required on each tower—a tower built to NBN Co needs only may not be high enough or structurally appropriate to allow any co-location
> - power requirements will change if carriers co-locate
> - ground equipment housing capacity and security capabilities need to be considered…[103]

3.81　The Sinclair Review report also included a 'proposal for a co-investment program, jointly funded by the Commonwealth and interested states or territory governments, to expand the mobile coverage footprint in regional Australia (recommendation 3.2)'.[104]

3.82　In its response to the Sinclair Review, the Australian Government noted that it would 'review the impact of the NBN fixed wireless network on improving mobile coverage in regional areas before making any commitments to fund a new program to extend mobile coverage'.[105]

102　JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 50.

103　Victorian Government, *Submission 1*, p. 4.

104　DBCDE, *Submission 10*, p. 1.

105　DBCDE, *Submission 10*, p. 2.

3.83   However, the Victorian Government submission to the committee's Fifth
        Review observed that:

> The expectation that the NBN Co fixed wireless network will, in
> itself, improve mobile coverage is flawed. NBN Co is not tasked
> with addressing mobile coverage in the Commonwealth's
> Statement of Expectations and this task is not included in its
> 2012-15 Corporate Plan.
>
> NBN Co should be involved as a partner in efforts to improve
> mobile coverage where opportunities exist to co-locate facilities.
> However, it is not practical to expect NBN Co to plan and deploy
> its fixed wireless network to deliver better mobile coverage and to
> achieve its coverage targets in a timely fashion. Either NBN Co
> will prioritise the fixed wireless network, in which case its impact
> on regional mobile coverage will be minimal, or it will face
> conflicting objectives.[106]

3.84   In response to this matter, the DBCDE highlighted that:

> The government agrees that NBN Co and mobile carriers should
> work together to take advantage of the NBN fixed wireless towers
> to improve mobile coverage in regional Australia, where possible,
> and we note that NBN Co, Telstra and Optus have recently
> entered into agreements to share tower infrastructure. This is
> obviously a positive development towards improved mobile
> coverage in regional and rural Australia…
>
> In addition, NBN Co has negotiated with carriers to secure further
> mutually beneficial arrangements which involve NBN Co
> accessing or constructing towers on sites that have been set aside
> for future development. This would apply when a carrier has a site
> for which it has all or some of the necessary approvals, but are not
> planning to build a tower in the near future. If such a site is
> considered appropriate for the fixed wireless network, NBN Co
> will initiate the construction process. This has the potential of
> seeing the networks expand at a quicker rate than they otherwise
> would.[107]

3.85   NBN Co further explained that to assist in the governance of specific co-
        location requests and applications, the NBN Co has 'established a number
        of framework agreements with third parties, including mobile network
        operators, which outline the process and procedures to co-locate on
        NBN Co's network infrastructure sites. These agreements address

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106 Victorian Government, *Submission 1*, p. 4.
107 DBCDE, *Submission 10*, pp 1-2.

operational, commercial and technical requirements for all incoming site share requests'.[108]

3.86   In terms of the Government's response to the Sinclair Review that it would 'review the impact of the NBN fixed wireless network on improving mobile coverage in regional areas before making any commitments to fund a new program to extend mobile coverage', the DBCDE further noted that '[d]evelopments in this area are being monitored by the government. A date for this review will be determined once the NBN fixed wireless network has further progressed'.[109]

3.87   Vodaphone Hutchison Australia (VHA) reinforced the 'central role' that the NBN Co could have in improving mobile services:

> We feel now that there is increasing agreement that the NBN can play a central role in improving mobile services…
>
> We welcome the committee's last report, in the sense that they have identified that delivering mobile services with the NBN is an important and exciting opportunity. The committee is right to identify that there are significant opportunities for the NBN and the committee was right to identify that more needs to be done to enhance those opportunities. We are pleased now to be getting some traction in this regard. We are having good discussions with NBN about this…[110]

3.88   As VHA further commented:

> …the NBN presents outstanding opportunities to improve both coverage and choice for regional consumers and they should be pursued as a matter of priority. This will ensure the full benefits of the NBN can be realised. Convergence of fixed and mobile/wireless technologies means that the old paradigm of separate fixed and mobile services is no longer relevant and a more holistic approach to… [telecommunications] infrastructure should be the new public policy focus…
>
> Given the importance of mobile and wireless technologies to the economy it is imperative that there be a greater recognition of infrastructure convergence and the benefits that NBN could deliver by enhancing the delivery of mobile solutions.
>
> The NBN and mobile technologies should be seen as complementary technologies rather than as competing alternates…

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108 NBN Co, *Submission 13.1*, Answer to Question on Notice No. 100, p. 24.

109 DBCDE, *Submission 10*, p. 2.

110 Mr Matthew Lobb, General Manager, Industry Strategy and Public Policy, Vodafone Hutchinson Australia, Transcript of Evidence, Sydney, 16 April 2012, p. 55.

> VHA therefore submits that the NBN should embrace the convergence of technology and develop products with this in mind.[111]

3.89   VHA also emphasised the broader role that the NBN could have in improving mobile services, clarifying that this encompassed both the NBN Co fixed wireless and fibre networks:

> It is important to recognise that what we are talking about when we are talking about mobile services is not just NBN fixed wireless service—in fact that is actually the least useful opportunity for the NBN network.
>
> What is going to be of most use to mobile services is NBN's fibre network to provide access for mobile services. As we have talked about previously, wireless services use a base station to connect your mobile phones but then they need transmission services to take the traffic out of the cell. That is where we see the most important opportunities for the NBN and mobile services.[112]

3.90   VHA pointed to the high costs involved in mobile backhaul, noting that the NBN could be used to provide lower cost backhaul options: '[t]he fundamental challenge, particularly for competitor mobile services such as Vodafone and Optus, is the build economics in regional Australia…We think the policymakers need to take a more holistic approach to solving this problem, and part of that is using the NBN to overcome the very high costs of regional backhaul'.[113]

3.91   On this point, Allen and Overy/Venture Consulting commented that there is 'yet an unexplored option to review the integration of the NBN fixed wireless network and the private sector regional mobile networks that often use common towers and backhaul', noting that mobile carriers 'may be interested in investing in this component and also in aligned operating arrangements'.[114]

3.92   VHA suggested that the provision of mobile backhaul might represent an additional revenue stream for the NBN Co: '[i]n addition to enabling mobile expansion, this would also significantly improve the business case for NBN by adding an additional revenue stream through the use of its fibre network for mobile backhaul'.[115]

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111 Vodafone Hutchinson Australia, *Submission 9*, pp 2-3.

112 Mr Lobb, Vodafone Hutchinson Australia, Transcript of Evidence, Sydney, 16 April 2012, p. 55.

113 Mr Lobb, Vodafone Hutchinson Australia, Transcript of Evidence, Sydney, 16 April 2012, pp 55-56.

114 Allen and Overy/Venture Consulting, *Submission 4*, p. 7.

115 Vodafone Hutchinson Australia, *Submission 9*, p. 2.

3.93   However, Pipe Networks Pty Ltd (PIPE) offered an alternative view on this matter. In its submission to the committee, PIPE explained that it owns and operates the 'third-largest metropolitan fibre-optic network in Australia', using this network to 'provide dark fibre and ethernet services for backhaul and resale' to many other carriers, carriage service providers and ISPs supplying fixed-line services, as well as backhaul for a number of wireless carriers and Vodafone Hutchinson Australia's mobile telecommunications network.[116]

3.94   PIPE emphasised that its backhaul services had enabled these companies to 'engage in infrastructure-based competition with Telstra', resulting in 'significantly increased competition in retail markets for Internet, fixed-line and more recently mobile telephony services'.[117]

3.95   As PIPE further explained, the market for fibre backhaul services in Australia is serviced by a number of providers, both large existing providers and smaller, growing businesses. The current fibre footprint is 'naturally denser in larger metropolitan areas, but is ever expanding', with this continued expansion being in the 'long-term interests of end users as more and more people are capable of being serviced or the edge of the nearest networks moves ever closer'.[118] PIPE therefore concluded that it had concerns about the NBN Co's possible entry into this market:

> Investment into larger network extensions may only come about upon securing an anchor tenant, such as a mobile provider. For example PIPE's agreement with Vodafone Hutchinson Australia in late 2010 extended PIPE's network by approximately 900 kilometers of new fibre over two years, which at the time of agreement represented a 60 percent increase to PIPE's existing network footprint…

> Intervention into this market by a taxpayer funded entity such as NBN Co will reduce network extension by existing and emerging private fibre providers to the detriment of the industry, the market and end-users.[119]

3.96   The NBN Co Corporate Plan 2012-15 notes that the NBN Co has 'received requests from the industry to develop products that are suitable for use as mobile backhaul' and that 'NBN Co is considering these requests and

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116 Pipe Networks Pty Ltd, *Submission 7*, pp 1-2.
117 Pipe Networks Pty Ltd, *Submission 7*, pp 1-2.
118 Pipe Networks Pty Ltd, *Submission 7*, pp 1-2.
119 Pipe Networks Pty Ltd, *Submission 7*, p. 2.

evaluating whether to develop products suitable for use as mobile backhaul' but 'no decision has yet been made'.[120]

Concluding Comments

Fibre Network

3.97   The committee notes that the NBN fibre rollout in regional Australia is progressing. It is critical that the NBN Co continues to balance construction between metropolitan and regional locations and meet its projected rollout timelines.

3.98   Given the significance of the NBN fibre rollout to regional Australia and that the NBN Co is following design principles, as set out in its Corporate Plan 2012-15, that include balancing construction between metropolitan and regional locations,[121] it would be useful for the NBN Co to provide further information on the fibre rollout in regional communities. This might include rollout performance information for regional Australia and further information on prioritisation of regional locations and the NBN Co's definitions of 'metro' and 'non-metro' (and other such definitions used in reporting documentation).

Fixed Wireless Network

3.99   The committee notes progress with the rollout of the fixed wireless network in regional and remote Australia, and that increasing numbers of NBN Co development proposals for fixed wireless network infrastructure are therefore being lodged in local government areas.

3.100   In terms of this development approval process, the committee is aware that the NBN Co and its design and construction partners are continuing to work with local government to identify appropriate locations for fixed wireless network infrastructure.[122] Planning tribunals under various state and territory legal systems provide options for appeal.

3.101   The committee points to the need for the NBN Co to continue to consult with state governments, local councils and regional communities in a timely manner on the implementation of the fixed wireless network—in particular, concerning the planning and development approval processes for wireless towers. The NBN Co needs to continue to make clear its policy on this matter. There would also be benefit in the NBN Co increasing its public reporting on progress in this area (including numbers of

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120 NBN Co, *Corporate Plan 2012-15*, p. 68.
121 NBN Co, *Corporate Plan 2012-15*, p. 19.
122 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, pp 3-5, p. 36.

development approvals lodged, approved, rejected and appealed) and on its communication and consultation activities concerning this matter.

3.102   The committee further points to the importance of continued community consultation and awareness raising by the NBN Co concerning the three technologies being used to rollout the NBN to regional and remote Australia, as well as about how local government and regional communities might utilise the network extension program.

Satellite Network

3.103   The committee notes progress with NBN Co's satellite network rollout for regional and remote Australia. However, it recognises the need to closely monitor take-up rates for the ISS before NBN Co's LTSS comes into operation in mid-2015, given that the 48 000 customer cap on the ISS is predicted to be reached some time in 2014, based on current take-up rates.[123]

3.104   Given that the eligibility criteria for the ISS (subject to a service qualification process) include education, health and local government facilities in rural and remote communities, as well as Indigenous schools and communities, there is concern about what arrangements might be put in place by the NBN Co for new customers wanting to access the ISS once the cap is reached.

3.105   The committee points to the importance of the NBN Co closely monitoring the current rate of ISS activations and, prior to the customer cap on the ISS being reached, consulting with relevant stakeholders and the Australian community on options for establishing cost efficient arrangements to ensure that education, health and local government facilities in rural and remote communities and other individuals determined to be most in need of access to the ISS are still able to access the service. If additional satellite capacity becomes available at a competitive cost, the customer cap on the ISS may be able to be increased.

3.106   The committee also notes progress with NBN Co's LTSS. Given that the LTSS is scheduled for commercial service by mid-2015, the committee emphasises the importance of the NBN Co continuing to regularly publicly report on progress in terms of obtaining orbital slots for the two satellites, satellite construction and launch dates, planning approvals and construction of ground stations, and equipment supply to meet planned timeframes.

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123 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

Network Extensions

3.107   The committee is pleased to note that a network extension policy for the fibre and fixed wireless networks has now been introduced and widely communicated.[124] The committee will be interested in the future outcomes of this policy, particularly for communities in regional Australia.

3.108   The committee points to the importance of continued community consultation and awareness raising by the NBN Co concerning the three technologies being used to rollout the NBN to regional and remote Australia, as well as about how local government and regional communities might utilise the network extension program.

Mobile Networks

3.109   The committee notes the NBN Co's progress in working to facilitate access to mobile providers with a view to using the NBN to improve mobile telecommunications in regional and remote Australia.[125] The committee is aware that the NBN Co has developed a Facilities Access Policy for towers, duct and depot space, to allow access seekers to obtain terms, prices and ordering and provisioning processes for accessing NBN Co facilities.[126] The committee encourages the NBN Co to publicly report progress in terms of the implementation and outcomes of this policy. The NBN Co is also encouraged to continue to publicly report on the impact of its fixed wireless network in improving mobile coverage in regional and remote areas.

3.110   The committee reiterates the recommendation in its Fourth Review report that the Government should support the NBN Co to continue to 'explore the synergies between fixed and mobile telecommunications networks with a view to using the National Broadband Network to improve mobile telecommunications'.[127] The NBN Co is encouraged to include a statement on this area in its revised Corporate Plan.

3.111   The committee also notes the importance of continued industry consultation in terms of the NBN Co developing products suitable for use as mobile backhaul, including consideration of the potential impact of these services on the existing market in this area. To further clarify this

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124 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 18.

125 DBCDE, *Submission 10*, pp 1-2, and NBN Co, *Submission 13.1*, Answer to Question on Notice No. 100, p. 24.

126 JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 50.

127 JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 52.

matter, it would be useful for the NBN Co to include an updated statement on mobile backhaul in its revised Corporate Plan.

Recommendation 2

3.112   **The committee recommends the NBN Co Limited revised Corporate Plan and the six-monthly Shareholder Ministers' Performance Reports to the committee include further information on the National Broadband Network fibre rollout in regional Australia.**

Recommendation 3

3.113   **The committee recommends NBN Co Limited and the Department of Broadband, Communications and the Digital Economy closely monitor the current rate of Interim Satellite Service (ISS) activations and, prior to the customer cap on the ISS being reached:**

- **consult with relevant stakeholders and the Australian community on options for establishing cost efficient arrangements to ensure that education, health and local government facilities in rural and remote communities and other individuals determined to be most in need of access to the ISS are still able to access the service; and**
- **consider increasing the customer cap on the ISS, if additional satellite capacity becomes available at a competitive cost.**

4

Additional Issues

Introduction

4.1   Chapter 4 considers three issues of interest during the Fifth Review
        reporting period of the Joint Committee on the National Broadband
        Network (JCNBN):

   - private equity engagement in funding the National Broadband
     Network (NBN); and

   - workforce issues, including Telstra workforce retraining issues related
     to the NBN rollout and NBN workforce planning (NBN Co contract
     issues are discussed in Chapter 2).

4.2   The committee discussed the operation of emergency alarms under the
        NBN rollout, including battery back-up issues, in its Fourth Review report
        and made a recommendation in this area.[1] Evidence relating to this matter
        received over the Fifth Review covered similar issues.[2]

Private Equity Engagement

Background

4.3   The issue of private equity engagement in funding the NBN has been
        discussed in each of the committee's reports to date.

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1   Joint Committee on the National Broadband Network (JCNBN), *Review of the Rollout of the
    National Broadband Network: Fourth Report*, February 2013, pp 53-66.

2   See Australian Communications Consumer Action Network (ACCAN), *Submission 6*, p. 5, and
    Ms Teresa Corbin, Chief Executive Officer, ACCAN, Transcript of Evidence, Sydney, 19 April
    2013, p. 2.

4.4   This section of the report again considers this issue and provides a brief overview of the Government's response to the committee's recommendations to date in this area. (Government funding of the NBN over the rollout period, under the equity agreement between the Government and the NBN Co, and broader matters relating to NBN policy and alternative network models are discussed in Chapter 2.)

Current Review

4.5   Over the Fifth Review reporting period, there continued to be interest in when and how private equity might be engaged in funding the NBN wholesale platform.

4.6   The Allen and Overy/Venture Consulting submission highlighted 'Ownership and funding—[t]he best structure and ownership model for the NBN, whether it should remain as a GBE or have private sector involvement and what form that private sector involvement should take'—as a key issue for the NBN rollout.[3]

4.7   Previous committee reports have explored the cost-benefit of bringing forward a timeframe for private equity engagement in funding the NBN. That discussion has highlighted a number of key factors affecting the use of private investment, including the amount available for investment, the rates of return required on investment and the level of control required by investors.[4]

4.8   This matter again arose during the Fifth Review, with Allen and Overy/Venture Consulting outlining a range of private equity engagement options for the NBN.[5] Private sector rates of return required on investment were similarly discussed.[6] Allen and Overy/Venture Consulting commented that 'the private sector should be involved in delivering and funding NBN solutions to the fullest extent that this is practicable and efficient' but observed that:

> In the short to medium term there are outcomes that may only be achievable under government ownership. Entrenched industry positions, regulatory risk and funding during a period of limited debt availability are relevant in this context.[7]

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3   Allen and Overy/Venture Consulting, *Submission 4*, p. 4.

4   JCNBN, *Review of the Rollout of the National Broadband Network: Third Report*, June 2012, pp 110-112; and JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, pp 70-72.

5   Allen and Overy/Venture Consulting, *Submission 4*, pp 6-7.

6   Mr Michael Reede, Partner, Allen and Overy, Transcript of Evidence, Sydney, 19 April 2013, p. 49.

7   Allen and Overy/Venture Consulting, *Submission 4*, p. 3.

4.9   Allen and Overy/Venture Consulting further noted:

> …the market has failed to deliver and the private sector has failed to deliver a comprehensive national broadband network to date. That is the result of, in our view, risk factors around Telstra's structural separation, the financial crisis and capital markets, but clearly that failure needs to be addressed by government and, hence, we have a government sponsored plan.[8]

4.10   However, in the 'mid to long term, there should be a plan to transition that back to private sector investment'.[9]

Government Response to Committee Recommendations

4.11   The committee's previous reports have considered the points of entry for private investment in the NBN—both in the form of equity and debt funding.

4.12   In its Third Review, the committee urged progress in 'gauging investor interest in the NBN' and 'exploring the cost/benefit of different capital structures for the NBN'.[10] In its response to the Third Review, the Government commented that:

> Following completion of the rollout, the government will consider the optimum capital structure for the Company, noting that NBN Co is required to operate within the ownership and investment settings determined through the *National Broadband Network Companies Act 2011*.[11]

4.13   Noting this response, in its Fourth Review the committee observed that there was 'merit, at this point in time, in beginning to gauge investor interest in the NBN and explore the optimum capital structure for the company'.[12]

4.14   In terms of debt financing, the Government's Statement of Expectations specifies that 'NBN Co should seek to raise debt capital at the earliest opportunity it is able without external support'.[13] NBN Co's Corporate Plan 2012-15 assumes initial debt-raising in 2015.[14]

8   Mr Reede, Allen and Overy, Transcript of Evidence, Sydney, 19 April 2013, pp 46-47.

9   Mr Reede, Allen and Overy, Transcript of Evidence, Sydney, 19 April 2013, p. 47.

10   JCNBN, *Review of the Rollout of the National Broadband Network: Third Report*, June 2012, p. 112.

11   Australian Government, October 2012, *Response to the Joint Committee on the National Broadband Network Third Report of 25 June 2012*, p. 18.

12   JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 74.

13   Department of Broadband, Communications and the Digital Economy (DBCDE), *Submission 10*, Third Review of the JCNBN, p. 9.

14   NBN Co, *Corporate Plan 2012-15*, p. 80.

4.15   During its Third Review, the committee heard that the NBN Co had 'not had any discussions on debt financing yet'.[15] With the NBN Co Corporate Plan 2012-15 projecting debt financing to commence in 2015, the committee therefore recommended that:

- NBN Co progress its consideration of debt financing arrangements as a priority.[16]

4.16   The Government response to the Third Review report supported this recommendation.[17] However, the Government response further observed that 'debt arrangements are subject to market conditions outside of NBN Co and the government's control and will need to be assessed closer to the point that debt is required'.[18]

Workforce Issues

Telstra Workforce Retraining Issues

Background

4.17   This section of the report looks at Telstra workforce retraining issues related to the NBN rollout, including the Telstra Retraining Funding Deed (RFD) and Telstra Training Plan. In particular, it provides a brief overview of the Government's response to the committee's recommendations to date in this area.

4.18   The Binding Definitive Agreements between the NBN Co and Telstra form the basis of Telstra's participation in assisting with the NBN rollout.[19] In support of these agreements, the Government has committed to provide $100 million to Telstra under the RFD to assist it in the retraining and redeployment of Telstra employees affected by structural reforms of the telecommunications industry.[20] The RFD between the Commonwealth and

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15   Mr Mike Quigley, Chief Executive Officer, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, Third Review of the JCNBN, p. 50.

16   JCNBN, *Review of the Rollout of the National Broadband Network: Third Report*, June 2012, p. 116.

17   Australian Government, October 2012, *Response to the Joint Committee on the National Broadband Network Third Report of 25 June 2012*, p. 17.

18   Australian Government, October 2012, *Response to the Joint Committee on the National Broadband Network Third Report of 25 June 2012*, p. 18.

19   NBN Co, 2011, NBN Co and Telstra Sign Binding Definitive Agreements, media release, 23 June.

20   Conroy S (Minister for Broadband, Communications and the Digital Economy) and Wong P (Minister for Finance and Deregulation), 2012, Definitive Agreements between NBN Co and Telstra Come into Force, media release, 7 March.

Telstra came into force when the Binding Definitive Agreements commenced in March 2012. The term of the RFD is eight years.

4.19   The objectives of the RFD are 'to support the availability of an appropriately trained workforce for the NBN and to retrain Telstra staff who may otherwise face redundancy as a consequence of the rollout of the NBN'.[21]

4.20   The RFD sets out how Telstra will identify employees eligible for retraining in NBN related technical, process and system activities; the scope of training courses to be made available; the standards and quality that must be met; and the timing of training. It operates by identifying two categories of employee: an Automatically Eligible Workgroup (AEW) and another group of employees who may be determined to be eligible. The AEW group includes the Telstra:

- copper and hybrid fibre coaxial (HFC) based field workforce which undertakes installation and maintenance and construction and maintenance activity on Telstra's Customer Access Network;
- direct field support workforce which conducts copper/HFC based field workforce support, including workforce management, workforce and resource planning, and construction program management;
- support of copper/HFC operations workforce which provides design of products, management of damages, network integrity, plant assigning, customer network improvements and contract management; and
- wholesale copper service workforce which provides the interface between retail service providers and Telstra in relation to copper services.[22]

4.21   The other eligible group comprises those 'employees who Telstra is satisfied may face redundancy over time (if not retrained) as a consequence of the decommissioning of the copper network or the deactivation of the HFC network'.[23]

4.22   The RFD requires that a Training Plan be developed by Telstra and approved by the Commonwealth. Each Training Plan covers a three-year period, with the initial Training Plan covering the period 30 April 2012 to 30 June 2014.[24] The scope of the Training Plan is to identify training needs, course development, training methodology and targets for retraining.

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21   Telstra Corporation, *Submission 12*, Fourth Review of the JCNBN, p. 1.
22   DBCDE, *Submission 10*, Third Review of the JCNBN, pp 4-5.
23   Telstra Corporation, *Submission 12.1*, Fourth Review of the JCNBN, p. 3.
24   Telstra Corporation, *Submission 12.1*, Fourth Review of the JCNBN, p. 2.

4.23   The RFD and Training Plan include a detailed reporting regime, covering both financial and training activities. Telstra must:

   ■ provide a half yearly report to the Department on progress against the training plan and a more detailed annual report to the Department on the training plan; and

   ■ meet with the Department every six months and, unless agreed otherwise, to discuss, among other things, the progress of the retraining; and

   ■ hold quarterly meetings with its unions which the Department will attend as an observer.[25]

Government Response to Committee Recommendations

4.24   The committee's Third Review and Fourth Review reports discussed the Telstra RFD and Training Plan in detail.

4.25   In order to better monitor progress under the Telstra RFD and Training Plan in supporting the availability of an appropriately trained workforce for the NBN, the committee recommended in its Third Review that:

   …the Department of Broadband, Communications and the Digital Economy publicly disseminate a reporting document on annual progress under the Telstra Retraining Funding Deed.[26]

4.26   In its response to the Third Review the Government noted that it 'broadly support[ed] this recommendation' and agreed that information about progress under the RFD could be included in its 'annual statement outlining the direct and indirect employment benefits of the National Broadband Network' as part of the Government response to the committee's reports.[27]

NBN Workforce Planning

Background

4.27   Over the Fifth Review reporting period, there was continued interest in workforce issues in the context of the NBN rollout. This matter has been discussed in each of the committee's reports to date.

4.28   This section of the report looks at NBN workforce planning—in particular:

   ■ training and accreditation;

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25   DBCDE, *Submission 14*, Answer to Question on Notice No. 54, Fourth Review of the JCNBN, p. 5.

26   JCNBN, *Review of the Rollout of the National Broadband Network: Third Report*, June 2012, p. 131.

27   Australian Government, October 2012, *Response to the Joint Committee on the National Broadband Network Third Report of 25 June 2012*, p. 18.

- subcontractor workforce planning (NBN Co contract issues are discussed in Chapter 2); and

- participation of local recruitment firms and the local construction industry.

Training and Accreditation

4.29   The Shareholder Ministers' Fourth Performance Report to the committee on the NBN rollout noted that work had commenced on the development of a Training and Accreditation Program to establish 'a number of accreditations that will be required by workers who perform specific tasks in the construction and maintenance of the NBN', with the accreditations designed to 'minimise the risk of quality and safety issues through a national system of training and assessment'.[28]

4.30   The NBN Co has also applied to the Australian Skills and Qualification Authority for 'approval of a suite of NBN Co specific national skills sets and NBN Co branded qualifications to provide training for job seekers', with approval expected before the end of 2013.[29]

Subcontractor Workforce Planning

4.31   The Shareholder Ministers' Performance Report noted that an update of 2010 workforce modelling data was completed over the reporting period.[30] This process sought to 'update the forecast level of demand for construction and design roles', as well as the impact of a number of other matters.[31] The 2012 modelling forecasts a 'peak workforce of 16,000-18,000, which is consistent with the 2010 forecast' but reflects 'changes in the demand for specific occupations'.[32]

4.32   As explained in previous reports, this workforce modelling draws on national rollout schedules to:

- identify where and when NBN construction activities will take place and the type of network architecture to be built;
- identify the rollout schedule data which is then overlayed with assumptions built upon construction activities, including; crew composition, productivity rates, occupations and installation guidelines; and

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28   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 16.
29   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 16.
30   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 15.
31   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, pp 15-16.
32   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 16.

- provide a forecast of demand for workers, by region, occupation and time.[33]

4.33   In March 2013, the NBN Co announced a construction delay of about three months in its fibre rollout timeline.[34] It was noted that this delay was a 'short-term issue' that would 'not affect the long-term delivery of the NBN or the overall cost of the project'.[35] The NBN Co commented that some of its construction contractors had 'progressed work on the ground at a slower rate than forecast':

> "The problem is we are just not seeing the ramp up of construction workers on the ground that would be needed to deliver these targets.

> "This lack of mobilisation, combined with some of our contractors recently lowering their forecasts, has led us to make the judgment call to reforecast our end-of-year projections…[36]

4.34   The NBN Co announced a series of actions to address this delay, including that:

- NBN Co will directly manage the Northern Territory rollout to ensure the delivery of fast broadband to the NT and to allow contractor Syntheo to focus on WA and SA. This will see NBN Co create up to 200 jobs in the NT at the peak of the rollout
- NBN Co and its construction partners will train and employ additional specialist telecoms workers ("fibre splicers") to help recover lost time in the rollout of the network
- NBN Co's fibre construction contractors will increase their investment in equipment and manpower as well as technology to accelerate on-the-ground design and planning.[37]

4.35   The short-term delay in the fibre rollout timeline raised a number of issues concerning the mobilisation of skilled labour by subcontractors and the training and employment of additional fibre splicers. On this point, Mr Mike Quigley, Chief Executive Officer of NBN Co, acknowledged that:

> In hindsight, we probably should have been more involved in the details of the construction companies. We keep across them in general terms. We have some 21 or 22 major partners doing everything from launching satellites to building satellites to building fixed wireless networks and delivering ethernet

33   Australian Government, October 2012, *Response to the Joint Committee on the National Broadband Network Third Report of 25 June 2012*, p. 20.

34   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 37.

35   NBN Co, 2013, NBN Co Updates Short-Term Fibre Rollout Timeline, media release, 21 March.

36   NBN Co, 2013, NBN Co Updates Short-Term Fibre Rollout Timeline, media release, 21 March.

37   NBN Co, 2013, NBN Co Updates Short-Term Fibre Rollout Timeline, media release, 21 March.

aggregation equipment…We did not anticipate having to get into this level of detail in the construction. That is why we contracted it. What we subsequently found out is that we needed to, that we have to, and that is what we are doing now and have been doing since that time.[38]

4.36   Mr Ralph Steffens, Chief Operating Officer of NBN Co, added that:

We need to remind ourselves that the area we are struggling with is predominantly cable holding, cable splicing and cable testing, and some civil activities around boring, trenching and pit replacement. We are struggling with the fact that we have relatively small projects on a relatively large scale across large geography. There is a challenge, clearly, for the delivery partners. They have to make sure that the right people are there at the right time with the right material and the right skills, and then you achieve enormous productivity. That is the area we are working with. There is nothing which led me to believe that the industry would not fix this problem. The peak run rate we are looking at, which we have not changed, is certainly achievable.[39]

4.37   In terms of fibre splicing, the NBN Co confirmed that they had 'rework on the splicing front':

Where you clearly see a correlation is in the difference between experienced and unexperienced operators. The unexperienced are driving a higher degree of rework…

With a very experienced operator versus an operator who has just come out of training school, there is easily a three- or four-fold difference in performance.[40]

4.38   Concerning the number of fibre splicers, the NBN Co further confirmed that:

The good news is that we do not need thousands or tens of thousands of splicers across the network. We are talking about hundreds. It is a high-skilled, well-paid job, which is there for many years to come—way beyond the build, obviously, because there will always be augmentation work to be done—so there are a

38   Mr Mike Quigley, Chief Executive Officer, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 21.

39   Mr Ralph Steffens, Chief Operating Officer, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 22.

40   Mr Steffens, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 22.

> lot of splicers coming out of school today; hence you have more
> issues today than we will have in the future.[41]

4.39   The NBN Co concluded that '[w]e have to say that it is true that this
         learning curve on splicing was one of the things that has caused the delay
         in getting to the number that we hoped to, by the end of June'.[42]

4.40   Against this background, it is noted that a series of NBN Co
         Subcontractors Jobs and Training Forums have been held with delivery
         partners to plan for the future labour mobilisation required for the rollout.
         As the Shareholder Ministers' Fourth Performance Report to the
         committee highlighted, a Subcontractors Jobs and Training Forum was
         held in conjunction with Silcar in Western Sydney during September 2012,
         with over 70 subcontractors in attendance.[43] The purpose of the forum was
         to 'inform subcontractors about the significant increase in future workload
         and options for growing their workforce'.[44] Other forums were held in
         Melbourne (Transfield) and Hobart (Visionstream), with further forums
         being organised with other delivery partners.[45]

Local Workforce Participation

4.41   The participation of local recruitment firms and the local construction
         industry in the NBN rollout was also of interest over the Fifth Review
         reporting period—in particular, whether some of these groups at the local
         level might perceive they had been 'shut out' of contract processes.
         Mr Quigley responded that:

> We are getting that message and we are doing all that we can to
> try to connect those people we are receiving that message from to
> our construction partners. It is clear that there is still substantial
> work to be done to optimise that, to try to ensure that this kind of
> layering that we have in the construction industry in Australia is
> not impeding rapid progress. I have to say today it is.[46]

4.42   Mr Steffens further noted that this is 'one of the fundamental issues':

> You have this so-called supply chain, this layering where work
> packages go through many hands before they reach the people
> who actually execute the work. We on a local level are having
> events where we connect the local community with our delivery

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41   Mr Steffens, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 22.
42   Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 23.
43   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 16.
44   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 16.
45   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 16.
46   Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 13.

partners to ensure that the communication flow gets improved in that we cut through these layers as efficiently as possible. That is probably the most important area that we need to focus on in order to speed up the rollout.[47]

4.43   The Shareholder Ministers' Performance Report further noted that, as a result of work with various industry groups, 'an umbrella model for accessing funding' has been established to 'support sub-contractors in taking on trainees and increasing their workforce'.[48] This umbrella approach to funding proposals will 'facilitate principal contractors/delivery partners and their sub-contractors being engaged with large federally funded programs' and 'assist their understanding of how to access government funding and how to connect with apprentices, local job seekers and Indigenous Australians'.[49]

Concluding Comments

Private Equity Engagement

4.44   The committee has investigated the points of entry for private investment in the NBN—both in the form of equity and debt funding—in all five of its reports to date. This discussion has been in the interest of ensuring the most efficient build of the NBN.

4.45   The committee reiterates the recommendation made in its Fourth Review report that the Government should commence gauging investor interest in the NBN and considering the optimum capital structure for the NBN Co.[50]

4.46   Noting the current projected timeframe for debt financing to commence in 2015,[51] the committee understands that the NBN Co has now 'sought advice and held discussions with a range of external third parties' concerning this matter.[52] The committee encourages the NBN Co to continue this process and include an update on this area in its revised Corporate Plan.

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47   Mr Steffens, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 13.

48   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 16.

49   Australian Government, October 2012, *Response to the Joint Committee on the National Broadband Network Third Report of 25 June 2012*, p. 21.

50   JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 75.

51   NBN Co, *Corporate Plan 2012-15*, p. 80.

52   NBN Co, *Submission 7.12*, Answer to Question on Notice No. 58, Fourth Review of the JCNBN, p. 5.

Workforce Issues

4.47   The committee continues to be interested in Telstra workforce retraining issues and NBN workforce planning as part of the NBN rollout. In its Fourth Review, the committee recommended that:

> … in providing an annual statement to the committee on the progress of the Telstra Retraining Funding Deed (RFD), the Department of Broadband, Communications and the Digital Economy include in this information an update on:
>
> ■ ongoing company retention rates for employees in the Automatically Eligible Workgroup, retrained under the RFD;
>
> ■ the current numbers and roles of employees in the other eligible workgroup under the RFD and an overview of the current reasons for eligibility or exclusion in terms of this group.[53]

4.48   The committee looks forward to receiving updated information about progress under the Telstra RFD and Training Plan as a regular part of the Government's response to the committee's reports. The committee will continue to investigate any further matters of interest arising in this area. The Department of Broadband, Communications and the Digital Economy (DBCDE) is also encouraged to continue to make regular public reports on progress under the Telstra RFD and Training Plan.

4.49   As discussed earlier, the committee notes that the DBCDE and the NBN Co have undertaken a number of initiatives to communicate, plan for and address emerging NBN training needs and workforce demand, to identify future skills gaps and ensure an appropriately skilled workforce to support the rollout.[54] Other initiatives include the NBN Co's recent announcement that it will be working with construction partners to 'train and employ additional specialist telecoms workers ("fibre splicers") to help recover lost time in the rollout'.[55]

4.50   In previous committee reviews, the department and the NBN Co have also indicated that they are 'working closely with all stakeholders including the NBN Co's service delivery partners, the industry skills boards and training organisations to facilitate partnerships and support an appropriately skilled workforce to support the rollout'.[56]

4.51   The committee further notes the Government response to recommendations in its previous reports concerning the issue of NBN

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53   JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 93.

54   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, pp 15-16.

55   NBN Co, 2013, NBN Co Updates Short-Term Fibre Rollout Timeline, media release, 21 March.

56   DBCDE, *Submission 14*, Answer to Question on Notice No. 56, Fourth Review of the JCNBN, p. 7.

workforce planning. In its Third Review, the committee recommended that:

> …NBN Co publicly communicate major areas of emerging training need and workforce demand with regard to the rollout of the National Broadband Network, to assist with future Australian workforce planning in this sector.[57]

4.52   In its response to the Third Review, the Government supported this recommendation and provided a detailed overview of NBN Co initiatives in this area.[58]

4.53   In its Fourth Review, the committee suggested that further coordination in this area may be of benefit, in developing and implementing an overall NBN workforce strategy. It therefore recommended that:

> …in providing an annual statement to the committee outlining the major areas of emerging National Broadband Network (NBN) workforce demand and training need, the Department of Broadband, Communications and the Digital Economy include in this information a more detailed report on:
>
> - the workforce development strategy supporting the NBN rollout, including current workforce modelling and outcomes from work with training organisations and industry skills boards, to identify skills gaps in this area and develop training programs;
> - how the development and implementation of this overall workforce strategy is being coordinated.[59]

4.54   The committee looks forward to receiving updated information about progress in this area as a regular part of the Government's response to the committee's reports. The NBN Co and the DBCDE are also encouraged to continue to make regular public reports on progress in this area.

4.55   The committee notes the significance of workforce planning in meeting projected NBN rollout targets. The NBN Co's March 2013 announcement concerning a short-term delay in the fibre rollout timeline as a result of issues with subcontractor mobilisation of skilled labour,[60] as discussed earlier, suggests that this area requires continued attention.

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57   JCNBN, *Review of the Rollout of the National Broadband Network: Third Report*, June 2012, p. 131.

58   Australian Government, October 2012, *Response to the Joint Committee on the National Broadband Network Third Report of 25 June 2012*, pp 19-22.

59   JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 94

60   Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 37.

Recommendation 4

4.56   **The committee recommends that the Government continue considering investor interest in the National Broadband Network and the optimum capital structure for the NBN Co Limited.**

Recommendation 5

4.57   **The committee recommends that the NBN Co Limited continue to:**

- **work with contractors to ensure sufficient mobilisation of skilled labour to meet National Broadband Network (NBN) rollout targets;**
- **update NBN workforce modelling data to assist with communicating and planning for changing NBN training needs and workforce demand; and**
- **encourage the participation of local recruitment firms and the local construction industry in the NBN rollout.**

Robert Oakeshott MP
Chair
4 June 2013
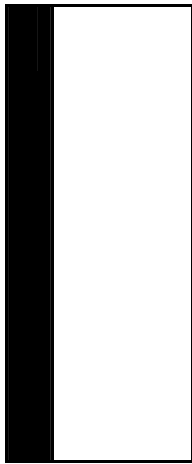
Dissenting Report by Coalition Members and Senators

1   SUMMARY

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

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

- The fibre rollout is well behind schedule. The original NBN Co 2011-2013 Corporate Plan estimated fibre would be available at 950,000 brownfields and 319,000 greenfields premises by June 2013. In reality the NBN's fibre network had passed 71,000 brownfields and 32,000 greenfields premises by May.

- Similarly, estimates of usage are similarly below forecasts. The number of premises with active service over NBN fibre by June will be a tenth or less of the number projected in 2010.

- NBN's fixed wireless network is also behind schedule, while the interim satellite service (the most successful part of the NBN so far) will run out of capacity for new users some time in 2014.

- NBN Co's relationships with key contractors are in disarray, while its design and oversight of the rollout have been undermined by poor

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

- NBN Co itself continues to burn through cash and spend lavishly on headcount, despite its failures in rolling out the network and revenue generation. By June close to $5 billion will have been invested and billions more accumulated in liabilities.

- The governance and management of NBN Co has recently become a matter of legitimate public speculation, with Senator Conroy doing little to inspire confidence or quash rumours by refusing to allow NBN Co's CEO to respond to questions on the matter.

- Finally, several recent incidents involving the handling of asbestos unearthed during the rollout have underlined how dangerous the work of rolling out an NBN can be, and the paramount importance of complying with all occupational health and safety rules.

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

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

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

2 NBN ROLLOUT – TARGETS

2.1 Brownfields Fibre Falling Further Behind Schedule

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

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

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

In its original NBN Co 2011-2013 Corporate Plan, released in December 2010, NBN Co estimated it would pass 950,000 brownfields premises by the end of June 2013.[2]

In August 2012 the revised NBN Co 2012-2015 Corporate Plant slashed the target to 286,000.[3] In March 2013 the target was again reduced to between 155,000 and 175,000 premises.[4] And as of mid-May, NBN Co's fibre network had passed 71,000 brownfield homes.[5]

Key issues holding back the brownfield rollout include:

- Inaccurate geospatial address data, which has complicated design.

- Designs incompatible with efficient construction practices.

- A schedule NBN Co and its contractors have unable to meet.

- Construction prices insufficient for NBN Co's contractors to operate profitably.

- Shortages of skilled workers such as fibre splicers.

- Inadequate investment in measuring and improving productivity and quality.

- Failure to secure access to electricity poles to deploy fibre aerially.

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

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

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

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[2] NBN Co (2010) "NBN Co 2011-2013 Corporate Plan," p.15.
[3] NBN Co (2012) "NBN Co 2012-2015 Corporate Plan," p.36.
[4] NBN Co (2013) "NBN Co Updates Short Term Fibre Rollout Timeline," 21 March 2013, online at: http://www.nbnco.com.au/about-us/media/news/nbn-co-updates-short-term-fibre-rollout-timeline.html.
[5] NBN Co (2013) "Submission to the Senate Standing Committee on Environment & Communications," p.2.
[6] NBN Co (2010) "NBN Co 2011-2013 Corporate Plan," p.77.
[7] NBN Co (2012) "NBN Co 2012-2015 Corporate Plan," p.37.

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

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

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

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

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

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

[8] NBN Co (2013) "NBN Co March Quarter Rollout Update," online at: http://www.nbnco.com.au/assets/media-releases/2013/press_release_march_rollout_update_2013-15-may-2013.pdf.
[9] Anderson, S. (2013) "iiNet Seals Multimillion-Dollar NBN Deal," *The Canberra Times*, 23 May 2013.
[10] McDuling, J. (2013) "Project 45: Telstra's Secret Plan to Speed Up NBN Rollout," *The Australian Financial Review*, 28 May 2013.
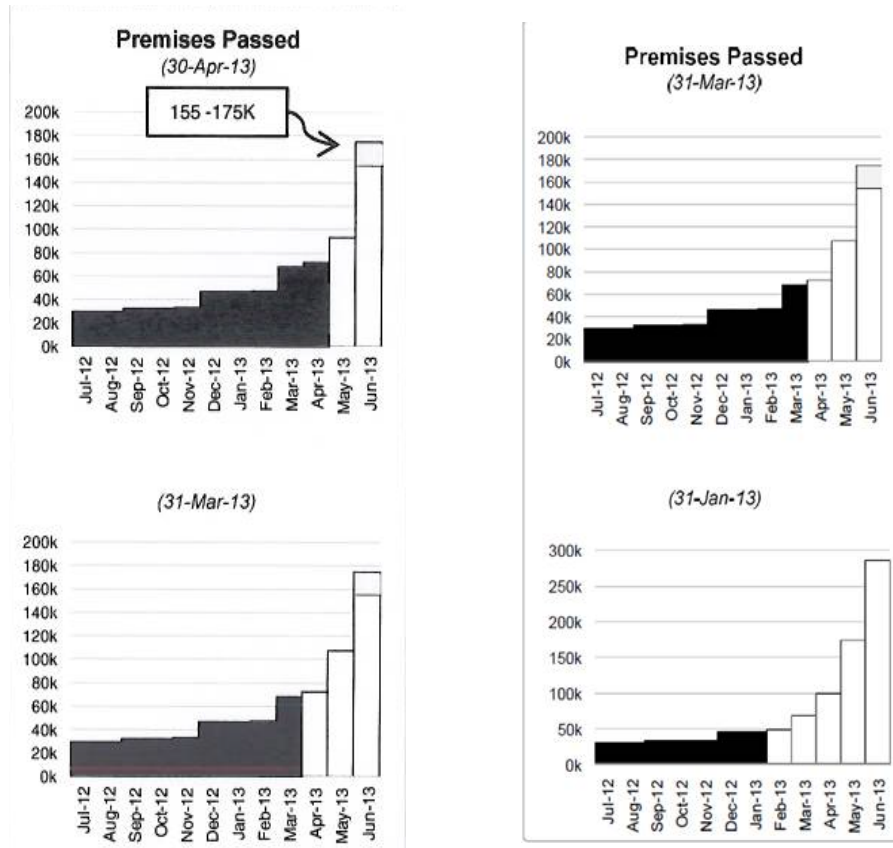
In a 19 April presentation to the Joint Committee, NBN Co claimed it would pass approximately 107,000 premises in brownfield areas with fibre by the end of May.[11] Yet as the graphs reproduced above show, on 30 May NBN Co presented evidence at a Senate Estimates hearing suggesting it had passed 95,000 premises by the end of May – 11 per cent short of an objective articulated only a month earlier.[12]

Recommendation:

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

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[11] NBN Co (2013) "Report to the Parliamentary Joint Committee on the National Broadband Network," 19 April 2013, p.18.
[12] NBN Co (2013) "Presentation to the Senate Standing Committee on Environment and Communications", 30 May 2013, p.2.

2.2 Greenfields Fibre Rollout Slower in 2013

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

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

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

    a.   December 2010, NBN Co 2011-2013 Corporate Plan: 319,000 premises passed.[14]

    b.   August 2012, NBN Co 2012-2015 Corporate Plan: 65,000 premises passed.[15]

    c.   March 2013, downward revision to 35-45,000 premises passed.[16]

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

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

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[13] NBN Co (2013) "NBN Co March Quarter Rollout Update," online at: http://www.nbnco.com.au/assets/media-releases/2013/press_release_march_rollout_update_2013-15-may-2013.pdf.
[14] NBN Co (2010) "NBN Co 2011-2013 Corporate Plan," p.15.
[15] NBN Co (2012) "NBN Co 2012-2015 Corporate Plan," p.36.
[16] NBN Co (2013) "NBN Co Updates Short Term Fibre Rollout Timeline," 21 March 2013, online at: http://www.nbnco.com.au/about-us/media/news/nbn-co-updates-short-term-fibre-rollout-timeline.html.
[17] NBN Co (2013) "Presentation to the Senate Standing Committee on Environment and Communications", May 30, p.2.

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

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

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

Recommendation:

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

2.3   NBN Failing to Connect Multi Dwelling Units

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

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

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

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[18] Hutchinson, J. (2013) "NBN Co Accused of Domaging Rivals' Pipelines", in *The Australian Financial Review*, January 9.
[19] Hansard (2012) "Hearing of the Joint Parliamentary Committee on the NBN", 20 October 2012, p.4.
[20] Crozier, R. (2013) "NBN Co Responds to Fibre Delay Analysis", in *IT News*, 7 March 2013, available online here: http://www.itnews.com.au/News/335603,nbn-co-responds-to-fibre-delays-analysis.aspx/0.
[21] http://www.nbnco.com.au/working-for-us/tenders/a092-rfp-mdu-cabling-contractors.html.

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

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

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

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

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

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

> **Mr TURNBULL**: You have had briefings, no doubt, from Mr Quigley's former colleagues at Alcatel about the performance of VDSL vectoring?
>
> **Mr McLaren**: Yes, we have absolutely discussed with our vendors what experience they have around the world.
>
> **Mr TURNBULL**: Mr Quigley, have you done any analysis of what cost savings would be available on your plan—the current plan— if that were undertaken?
>
> **Mr Quigley**: Sorry? If what—

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[22] NBN Co, (2012), "Corporate Plan, 2012-15", p.14.
[23] JCNBN Public Hearing Hansard, 19 April 2013, p.7.

>**Mr TURNBULL**: If you were to do a portion of the brownfields rollout with what is called fibre to the node—but we are talking about a vectored VDSL solution.
>
>**Mr Quigley**: No, we have not.[24]

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

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

Recommendations:

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

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

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

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

2.4   Fixed Wireless Rollout Also Behind Schedule

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

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

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[24] JCNBN Public Hearing Hansard, 19 April 2013, p.19.
[25] McKinsey, (2009), "NBN Implementation Study", p.79.
[26] Ramli D., & Tadros, (2013), "More Delays for NBN As Wireless Rollout Falters", in *The Australian Financial Review*, June 5.

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

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

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

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

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

> **Mr. McLaren**: "We have always expected there will be some areas, mainly due to vegetation—trees and the like—that will cause those installations to not be able to pass through that qualification step and we will have some that we will not be able to fulfil.
>
> "We are seeing those being slightly higher than we would have originally expected. We believe that could be because a lot of our services are currently in the Ballarat region, which is a region in Victoria on the Great Dividing Range. It is heavily forested and we are dealing with quite a lot of forest and vegetation. That means that we are having to take that order and park it for our satellite service, when it is available, to be able to deliver those services."[29]

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

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

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

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

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

Recommendation:

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

3 NBN ROLLOUT – OPERATIONAL ISSUES

3.1 Engagement with Civil Contractors

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

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

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

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

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

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

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

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

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

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

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

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

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

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[31] McDuling, .J, Ramli, D. & Hutchinson J (2013) "NBN At War With Contractors," *The Australian Financial Review*, 2 April 2013.
[32] Senate Hansard (2013) March 21, p. 2367.

Silcar CEO Peter Lamell left the company in May 2013,[33] Service Stream managing director Graeme Sumner left the company in April 2013,[34] and Service Stream executive general manager Stephen Ellich left in May 2013.[35] As discussed in another part of this report, there was a similarly high turnover of construction-related executives at NBN Co.

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

Recommendation:

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

3.2   Handling of Asbestos Risk

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

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

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

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

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

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

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

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

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

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

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

[41] Hansard, 3 June 2013, p 47.

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

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

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

> **Mr FLETCHER**: I have one last question. NBN Co. put out a tender in September, and one of the matters it provided for was toxic waste and asbestos removal. Is that related to asbestos in Telstra pits? Who bears the cost of that remediation if it turns out to be different to expectations?
>
> **Mr Quigley:** I will have to take that one on notice as well. Telstra are responsible for remediating their pits so they are fit for use, so as part of that, if Telstra is doing the work, Telstra would be responsible for that. If we were doing some work—and we obviously do some work in ducts and pits—we would obviously be responsible for it. So I cannot answer on this particular tender until I have checked on it.
>
> **Mr FLETCHER:** Are you finding that asbestos is a big issue across the board?
>
> **Mr Quigley:** What is your view, Ralph? I would not say it is a big issue.
>
> **Mr Steffens:** No. It is present, as it would be anywhere, in any geography. But it does not seem to be a huge problem at this stage.[43]

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

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

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[42] 'Union warning over asbestos in pits and pipes', *Sydney Morning Herald*, 5/6/13, p 10.
[43] Committee Hearing, 19 April 2013, Hansard, p 34.

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

Coalition members and Senators are concerned by:

- The risk to the health and safety of workers employed by Telstra, NBN Co or their contractors, on the NBN rollout and associated work in Telstra's pits

- The risk to the health and safety of residents and passers-by

- The legal liability to which NBN Co may be exposed

- The potential delays to the rollout, and likely additional harm to NBN Co's financial position as a result

- Evidence NBN Co management may not have regarded the asbestos risk as a significant one.

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

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

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

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

Recommendations:

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

3.3   Insufficient Skilled Labour

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

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

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

> **Mr Steffens**: Where you clearly see a correlation is in the difference between experienced and unexperienced operators. The unexperienced are driving a higher degree of rework. That is to be—
>
> **Senator LUDLAM**: How much?
>
> **Mr Steffens**: With a very experienced operator versus an operator who has just come out of training school, there is easily a three- or four-fold difference in performance. [46]

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

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

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[45] Hutchinson, J., McDuling, J., and Ramli, D. (2013) "NBN Contractors Fail to Deliver", in *The Australian Financial Review*", 2 April, p.1
[46] Hansard (2013) "Hearing of the Joint Parliamentary Committee on the NBN", 19 April, p.22.
[47] Hutchinson, J. (2013), "NBN Co To Pay for Training to Speed Rollout", in the *Australian Financial Review*, 12 April.

thousands or tens of thousands of splicers across the network. We are talking about hundreds."[48]

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

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

NBN Co has stated that it intends to double its external workforce (that is, the workforce it employs on the project via intermediary contractors) from 7,500 to 15,000 in the next financial year, presenting it with significant challenges in finding a corresponding volume of additional fibre splicers[50].

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

Recommendation:

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

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[48] Hansard (2013) "Hearing of the Joint Parliamentary Committee on the NBN", April 19, p.23
[49] Hansard (2013) "Hearing of the Senate Standing Committee on Environment and Communications", May 30, p.92
[50] NBN Co (2013) "13.3. Supplementary Submission to the Joint Committee on the NBN", June 4.
[51] Hutchinson, J., & Ramli, D., (2013), "Low Pay Turns Workers Off NBN", in *The Australian Financial Review*, 25 February.

3.4   Aerial Rollout of Fibre

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

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

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

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

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

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

Recommendation:

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

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[52] Ramli, D. (2013) "Broadband Rollout Stalled by Utilities," *The Australian Financial Review*, 9 Apr 2013.
[53] Ramli, D. (2013) "Broadband Rollout Stalled by Utilities," *The Australian Financial Review*, 9 Apr 2013.
[54] NBN Co (2010) "NBN Co 2011-2013 Corporate Plan," p.47.
[55] *Ibid*, p.52.

3.5   Interim Satellite Service Users Face Cap

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Recommendation:

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

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[57] Angel, A., (2012), "Opportunity knocks for workers in a growth industry", in *The Australian*, 29 October, available online here:
http://www.skybridge.com.au/files/121029%20Opportunity%20knocks%20for%20workers%20in%20a%20growth%20industry.pdf.

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

4   NBN CO ORGANIZATIONAL ISSUES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

> **Senator BIRMINGHAM**: How has the board, since Ms McKenna became chair, reinforced to management their accountability to the board? Have there been any particular changes in the way management is expected to present their accountability to the board under Ms McKenna?
>
> **Senator Conroy**: I am happy to take on notice—
>
> **Senator BIRMINGHAM**: Why won't you let Mr Quigley actually answer that?
>
> **Senator Conroy**: I am sorry. If you want to ask about the board, you are asking me.
>
> **Senator BIRMINGHAM**: No, this is a management question, Minister.
>
> Senator Conroy: It is not.
>
> **Senator BIRMINGHAM**: It is a management question.
>
> **Senator Conroy**: I have said I am happy to take that on notice.
>
> **Senator BIRMINGHAM**: Why won't you let Mr Quigley speak for himself?
>
> **Senator Conroy**: You are asking board related questions.[62]

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

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

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

Recommendation:

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

4.2   Soaring Headcount & Executive Turnover

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

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

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

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

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

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

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

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

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

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

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

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

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

- Of nine directors appointed to the NBN Co Board in 2009, five have stepped down: Mr. Doug Campbell, Mr. Clem Dougherty, Mr. Peter Hay, Mr. Gene Tilbrook and Mr. Harrison Young.

- Of the nine executives listed in NBN Co's Annual Report as Key Management Personnel in June 2011 six have left: Mr. Patrick Flanigan, Mr. Jean-Pascal Beaufret; Ms. Christy Boyce; Mr. Steve Christian; Mr. Jim Hassell; Mr. Tim Smeallie.[68]

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

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

- Head of Construction, Dan Fleming.[69]

- Head of Fixed Wireless Rollout, Joe Prelc.[70]

- General Manager of Marketing, John Casey.[71]

- Head of Quality & Efficiency Paul Takac.[72]

- Executive General Manager of Construction, Health & Safety, Paul Donker.

- Executive General Manager of Construction Program Management, Stephen Butler.

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

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[68] NBN Co (2011) Annual Report 2010-11, p.37.
[69] Bingemann, M. (2013) "Targets in Focus as NBN Co Loses Construction Chief", in *The Australian*, January 16.
[70] McDuling, J. & Hutchinson, J. (2013) "NBN Co Wireless Project Manager Quits", in *The Australian Financial Review,* 10 May.
[71] Ramli, D. & Hutchinson, J. (2013) "Marketing Chief Latest to Quit NBN Co", in *The Australian Financial Review,* May 1.
[72] Bingemann, M., & Hepworth, A. (2013) "Liberals Put NBN Chief Mike Quigley on Notice", in the *Australian*, June 1.
[73] Senate Standing Committee on Environment and Communications (2013) "Answers to Senate Estimates Questions on Notice, Additional Estimates Hearings February 2013, Broadband, Communications and the Digital Economy Portfolio, NBN Co Limited, Question No: 284," answers to Questions 5-7.

Recommendation:

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

4.3 NBN & DBCDE Spending on Ads Without Regard to Effectiveness

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

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

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

> **Senator BIRMINGHAM:** And what did that evaluation find?
>
> **Senator Conroy**: This material goes to cabinet.
>
> **Senator BIRMINGHAM**: The evaluation report of the first stage of the NBN campaign is a cabinet document?
>
> **Mr Robinson**: It is.
>
> **Senator BIRMINGHAM**: It is amazing the things you will take to cabinet to claim confidentiality over them.[75]

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

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

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

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[74] Estimates, May 20, pp.65.
[75] Estimates, May 30, p. 66.
[76] NBN Co Annual Report, 2011-12, p.79.
[77] NBN Co, (2013), "Answers to Questions on Notice, Public Hearing 30 October 2012", Question 370.
[78] See Dissenting Report by Coalition Members and Senators, available online here, p.137.

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

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

Recommendations:

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

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

4.4   Indirect Operating Expenses

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

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

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

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

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

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

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

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

Rent for each location is outlined below:

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

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

Recommendation:

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

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

A

Appendix A – Submissions

Submissions

1   Victorian Government

2   Mr Marc Percival

3   Shareholder Ministers

4   Allen and Overy and Venture Consulting

5   Australian Competition and Consumer Commission

6   Australian Communications Consumer Action Network

7   PIPE Networks

7.1   Confidential

8   Mr Brad Jones and Ms Kym Rose

9   Vodafone Hutchison Australia Pty Ltd

10   Department of Broadband, Communications and the Digital Economy

10.1 Department of Broadband, Communications and the Digital Economy

10.2 Department of Broadband, Communications and the Digital Economy

11   NSW Business Chamber

12   Competitive Carriers' Coalition

13   NBN Co Limited

13.1 NBN Co Limited

13.2 NBN Co Limited

13.3 NBN Co Limited

14   Department of Finance and Deregulation

B
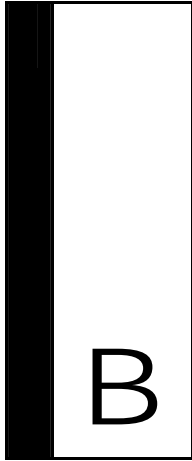
Appendix B – Hearing and Witnesses

Friday, 19 April 2013 - Sydney

Australian Communications Consumer Action Network

Ms Teresa Corbin, Chief Executive Officer

Ms Narelle Clarke, Deputy Chief Executive Officer

Mr Steven Robertson, Policy Officer

Competitive Carriers' Coalition

Mr Matt Healy, Chairman

Mr David Forman, Executive Director

Department of Broadband, Communications and the Digital Economy

Mr Drew Clark, Secretary

Mr Ian Robinson, Deputy Secretary

Department of Finance and Deregulation

Ms Jan Mason, Deputy Secretary, Business, Procurement and Asset Management

Lend Lease Corporation Limited

Mr Dale Connor, Chief Operating Officer, Construction and Infrastructure-Australia

NBN Co Limited

Mr Mike Quigley, Chief Executive Officer

Mr Robin Payne, Chief Financial Officer

Mr John Simon, Head of Product and Sales

Venture Consulting and Allen and Overy

Mr Michael Reede, Partner, Allen and Overy

Mr Justin Jameson, Chief Executive Officer, Venture Consulting

Vodafone Hutchison Australia Pty Limited

Mr Matthew Lobb, General Manager, Industry Strategy and Public Policy