
The Parliament of the Commonwealth of Australia

Review of the Rollout of the National
Broadband Network
Second Report

Joint Committee on the National Broadband Network

November 2011
Canberra

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Chair's Foreword

This Second Report of the 57-member strong oversight committee of the National Broadband Network (NBN) is the first report that examines detailed performance measures provided by the NBN Co and Government, and allows for a direct comparison of the foundation documents of the NBN Co Corporate Plan 2011-2013 with the Shareholder Ministers' letter to NBN Co dated 17 December 2010.

While there are several differences between these foundation documents and the recently provided performance update, it is evident that 2012 will see NBN Co transition from a company working through the frustrating and tangled regulatory stages, and the testing of first release sites, to provide the NBN rollout a broader engagement with retail providers and communities.

Compared to the NBN Co Corporate Plan, a lower than expected capital expenditure (capex) and higher than expected operating expenditure (opex) result, will be watched closely by the committee. This could be an early warning that it is costing more to do less, when compared to the expected results in the NBN Co Corporate Plan, even though the committee has at this stage accepted the argument from NBN Co that other reasons are behind this. The committee will watch this capex/opex combination closely, as value for money to taxpayers is the critical key performance indicator in turning this good concept into an even better reality for all.

Compared to the NBN Co Corporate Plan, timeframe slippage has also occurred, largely due to the number of unresolved issues between the Australian Competition and Consumer Commission (ACCC) and various stakeholders. The competition and consumer "rules of the game" remain unresolved at the time of writing. Certainty for markets, investors and consumers demands greater attention from Government to resolve outstanding regulatory matters, so there are no further schedule slippages.

It is understood by most that Australian telecommunications is currently not a level playing field. It is also understood this historic imbalance means decisions are being made on the front-end of this infrastructure project to eventually achieve a more competitive environment and better consumer result for the future, even if

decisions may look anti-competitive in the short term. It is also understood and acknowledged that this is initially challenging-challenging for regulators like the ACCC, challenging for some existing business models like those wanting to both wholesale and retail in Greenfield sites, and challenging for those looking for investment opportunities in the new markets that are coming with the NBN rollout. Even with this all being understood, however, it should also be understood by the relevant stakeholders involved in these regulatory decisions that challenging does not equate to delay, and should not be an excuse for delay.

If these matters can be addressed quickly and thoroughly, 2012 has great potential to be the Year of the NBN. The move from test sites to broader rollout will engage more people, and will see more retail engagement, and more innovative strategies and products introduced into Australia as a consequence. Regional and rural Australia will now, finally, have the opportunity through the next steps of interim satellite, wireless and FTTP to be better engaged in the Australian economy and services. And to add to this, the committee has made recommendations for better low socioeconomic engagement, and better remote indigenous engagement, so that these opportunities actually turn into real, ongoing and sustainable change for the better in regional, rural and remote information communication technology. I would hope key decision-makers consider these recommendations in detail and in good faith.

The committee will continue its work in the next six months on several key areas, including workforce related matters, and private sector engagement. Both are touched on in this report, however, the committee believes even more work needs to be done in detail on both. Personally, the options for privatisation of the NBN's national wholesale platform remain unclear. If the current model is a public sector "build-own-operate" project, then questions still remain as to where, when and how a "transfer" to the private sector is going to occur, if it is going to occur at all. The reason this is important to consider earlier than currently legislated, is because a sale, if tightly contracted, could occur in several sections, and considerations therefore need to begin on what terms and conditions on behalf of consumers such a model could take place.

Of course, if the majority parliamentary view is not to sell it, and indeed to keep it as a public asset returning an annual dividend to the taxpayer, then this change in the final policy position also needs to be made explicit for legislative reasons, and a debate about this deserves to occur soon. This public debate about the sale of the NBN, and the new process that is established as a consequence of such a debate, could be brought forward for the next NBN Co Corporate Plan. For this reason, work on exactly what the final product that is being built-whether a private or public one, whether sold in parts, as a whole or not at all-will be undertaken by the oversight committee throughout 2012.

Once again, the committee thanks all those who have taken the time to give evidence over the past six months. This all helps with the committee's independent considerations. Likewise, on behalf of the committee, I thank the secretariat for their ongoing diligence. This a large committee overseeing one of Australia's largest ever infrastructure projects, and the secretariat is showing great skill in managing it all. Well done and thanks once again.

Robert Oakeshott MP
Chair



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Committee Membership

Chair Mr Robert Oakeshott MP

Deputy Chair Mrs Yvette D'Ath MP

Members	Mr Paul Fletcher MP	Senator Simon Birmingham
	Mr Luke Hartsuyker MP	Senator Carol Brown
	Mr Ed Husic MP	Senator Doug Cameron
	Hon Sussan Ley MP	Senator Mary Jo Fisher
	Ms Amanda Rishworth MP (from 21.11.2011)	Senator Scott Ludlam
	Ms Michelle Rowland MP (until 21.11.2011)	Senator the Hon Ian Macdonald
	Mr Mike Symon MP	Senator the Hon Ursula Stephens
	Hon Malcolm Turnbull MP	

Participating Members

Senator the Hon Eric Abetz	Senator Steve Hutchins (from 24.3.2011 until 30.6.2011)
Senator Judith Adams	Senator the Hon David Johnston
Senator Chris Back	Senator Barnaby Joyce
Senator Guy Barnett (until 30.6.2011)	Senator Helen Kroger
Senator Cory Bernardi	Senator Gavin Marshall (from 24.3.2011)
Senator Catryna Bilyk (from 24.3.2011)	Senator the Hon Brett Mason
Senator Mark Bishop (from 24.3.2011)	Senator Anne McEwan (from 24.3.2011)
Senator the Hon Ronald Boswell	Senator Julian McGauran (until 30.6.2011)

Senator Sue Boyce	Senator the Hon Nick Minchin (until 30.6.2011)
Senator the Hon George Brandis SC	Senator Claire Moore (from 24.3.2011)
Senator David Bushby	Senator Fiona Nash
Senator Michaelia Cash	Mr Paul Neville MP (from 10.5.2011)
Senator the Hon Richard Colbeck	Senator Kerry O'Brien (from 24.3.2011 until 30.6.2011)
Senator the Hon Helen Coonan (until 22.8.2011)	Senator Stephen Parry
Senator Mathias Cormann	Senator Marise Payne
Senator Trish Crossin (from 24.3.2011)	Senator Helen Polley (from 24.3.2011)
Senator Alan Eggleston	Senator Louise Pratt (from 24.3.2011)
Senator the Hon John Faulkner (from 24.3.2011)	Senator the Hon Michael Ronaldson
Senator the Hon Alan Ferguson (until 30.6.2011)	Senator Scott Ryan
Senator Concetta Fierravanti-Wells	Hon Bruce Scott MP (from 26.5.2011)
Senator Mitch Fifield	Senator the Hon Nigel Scullion
Senator Michael Forshaw (from 24.3.2011 until 30.6.2011)	Senator Glenn Sterle (from 24.3.2011)
Senator Mark Furner (from 24.3.2011)	Senator the Hon Judith Troeth (until 30.6.2011)
Senator the Hon Bill Heffernan	Senator Russell Trood (until 30.6.2011)
Senator Gary Humphries	Senator John Williams
Senator Annette Hurley (from 24.3.2011 until 30.6.2011)	Senator Dana Wortley (from 24.3.2011 until 30.6.2011)
	Senator Nick Xenophon

Committee Secretariat

Committee Secretary	Mr Peter Stephens
Inquiry Secretary	Ms Stephanie Mikac
Senior Research Officer	Mr Patrick Regan
Research Officer	Ms Lauren Wilson
Administrative Assistant	Miss Kane Moir



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

ABS	Australian Bureau of Statistics
ACCAN	Australian Communications Consumer Action Network
ACCC	Australian Competition and Consumer Commission
ACMA	Australian Communications and Media Authority
ADSL	Asymmetric Digital Subscriber Line
APCG	Asia Pacific Consulting Group
AustPost	Australia Post
AVC	Access Virtual Circuit
BHC Council	Broken Hill City Council
BOT	Build-Operate-Transfer
CCS Act	<i>Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Act 2011 (Cth)</i>
CD Shire	Central Darling Shire
CEO	Chief Executive Officer
CP	Conditions Precedent
CVC	Connectivity Virtual Circuit
DBCDE	Department of Broadband, Communications and the Digital Economy

EPOS	Electronic Point of Sale
FAN	Fibre Access Node
FHA	Financial Heads of Agreement
FRA	Fixed Radio Access
FTTN	Fibre-to-the-Node
FTTP	Fibre-to-the-Premise
FWLDHB	Far West Local District Health Board
GB	Gigabyte
GBE	Government Business Enterprise
HFC	Hybrid Fibre Coaxial
ICT	Information Communication Technology
IID	Implementation and Interpretation Deed
IPND	Integrated Public Number Database
ISS	Interim Satellite Service
IT	Information Technology
JCNBN	Joint Committee on the National Broadband Network
KPI	Key Performance Indicator
LPO	Licensed Post Office
LTSS	Long Term Satellite Service
Mbps	Megabits per second
NBN	National Broadband Network
NBN Co	NBN Co Limited
NT	Northern Territory
NSW	New South Wales

PC	Productivity Commission
PIM	Public Information on Migration
POAAL	Post Office Agents Association Limited
POI	Point of Interconnect
PSTN	Public Switched Telephone Network
RFD	Retraining Funding Deed
RDAFW	Regional Development Australia Far West
RFDS	Royal Flying Doctor Service
RoA	Resolution of Appointment
RSP	Retail Service Provider
SAU	Special Access Undertaking
SFAA	Standard Form of Access Agreement
SoE	Statement of Expectations
SOTA	School of the Air
SSU	Structural Separation Undertaking
TLA Act	<i>Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Act 2010 (Cth)</i>
TLA Bill	Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill
TUSMA	Telecommunication Universal Service Management Authority
TUSMA Bill	Telecommunications Universal Service Management Agency Bill 2011
UDRH	University of Sydney Department of Rural Health
UNESCO	United Nations Educational, Scientific and Cultural Organisation

Universal Service Reform Bill	Telecommunications Legislation Amendment (Universal Service Reform) Bill 2011
USO	Universal Service Obligations
USP	Universal Service Provider
VoIP	Voice over Internet Protocol
WBA	Wholesale Broadband Agreement



Recommendations

2 Review of National Broadband Network Rollout Progress

Recommendation 1

The committee recommends that where possible tables and graphs be used in the Government's Six Monthly National Broadband Rollout Performance Report to enable information to be compared across years.

Recommendation 2

The committee recommends that the Department of Broadband, Communications and the Digital Economy review its existing clearance processes for providing answers to questions on notice with the aim of providing answers to questions taken on notice where possible on the notified due date or within a reasonable timeframe thereafter.

4 Access to Broadband Services in Regional and Remote Areas

Recommendation 3

The committee recommends that, as a matter of urgency, the NBN Co formalise and publicise its policy for the provision of costing extensions to its planned National Broadband Network fibre footprint, especially for regional and remote Australia.

Recommendation 4

The committee recommends that NBN Co:

- finalise and publicise its plans for community consultation with regional and remote Australia;
- in its report to the committee include:
 - ⇒ details of the progress of its consultation plans;
 - ⇒ issues raised; and
 - ⇒ numbers of participants.

Recommendation 5

The committee recommends that the Department of Broadband, Communications and the Digital Economy and the NBN Co:

- undertake a study of methods to improve access for low income households and other disadvantaged groups to the National Broadband Network and report its findings to the committee;
- in conducting the study, include examination of community proposals for measures which would support a basic broadband account and a broadband low income measure scheme.

Introduction

Background

- 1.1 The Joint Committee on the National Broadband Network¹ (the committee) was established by a resolution of appointment in March 2011² and appointed to inquire into and report every six months on the rollout of the National Broadband Network (NBN)³ and the Government's objectives for the NBN Co Limited (NBN Co) in the design, build and operation of the NBN.
- 1.2 In its First Report, the committee included comment on the following issues which arose during the course of its initial review:
- The delay in receipt of the Shareholder Ministers'⁴ NBN rollout performance report, including a brief discussion about the development

1 The Joint Committee on the National Broadband Network (JCNBN) is a new committee. Consecutive committees are expected to be established for the rollout period of the National Broadband Network (NBN).

2 The Resolution of Appointment of the JCNBN was passed by the House of Representatives on 1 March 2011 and the Senate on 3 March 2011.

3 The NBN is a Government policy initiative announced in April 2009 to provide a super-fast broadband service to all premises across Australia at an estimated total expenditure (as at 20 December 2010) of \$35.9 billion, with the Government expected to invest \$27.5 billion in the project. In addition to providing a super-fast broadband service to connect Australia's cities and regional centres, more broadly the NBN is also intended to drive national productivity, improve education and health service delivery and improve Australia's international competitiveness. See: Hon Kevin Rudd MP, Prime Minister and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'New National Broadband Network', *Joint Media Release*, 7 April 2009.

4 The NBN 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.

of Key Performance Indicators (KPIs) and measures and reporting intervals and the impact on the committee's reporting timeframe.

- The impediments which may be caused to the committee's future reviews because of delays in receiving answers to questions on notice from the Department of Broadband, Communications and the Digital Economy (DBCDE) and the NBN Co, and withholding information from the committee on commercial-in-confidence grounds.
- Competition issues associated with the uniform wholesale national pricing approach, Access Virtual Circuit pricing and the impact of the Australian Competition and Consumer Commission (ACCC) decision to increase the Points of Interconnect from 14 to 121.
- Timing of the completion of the NBN Co's Binding Definitive Agreements with Telstra Pty Ltd and Singtel Optus Pty Ltd, including their review by the ACCC.
- Timing and broader competition impact of Telstra's Structural Separation Undertaking (SSU).
- Timing for development of the NBN Co's Special Access Undertaking (SAU) and Wholesale Broadband Agreement (WBA).
- Regional and remote access to broadband to assist in the delivery of education and health services and support economic development.

1.3 As the committee was required to report to the Parliament by 31 August 2011 and did not receive information relevant to its review within the review period, it has agreed to present a second report to the Parliament and the NBN Shareholder Ministers before the end of 2011. The committee's second report includes additional information on matters reported on in the first review period, and also introduces a number of new issues which arose during the second review period.

Reporting Timeframe

1.4 Pursuant to its Resolution of Appointment (RoA), the committee is to report to the Parliament and the NBN Shareholder Ministers every six months 'until the NBN is complete and operational'. The committee met

its first reporting date⁵, and presented its report to the Parliament on 31 August 2011.⁶

- 1.5 In its First Report, the committee stated that it would present its second report on the NBN rollout by the end of 2011 and, as a result, proposed to adjust its reporting timetable from August/February (as provided for in its RoA) to June/December.
- 1.6 On 18 August 2011, the committee wrote to Shareholder Ministers to propose amendment to its reporting dates (as outlined above) to enable it to include information received from the NBN Rollout Performance report, which was expected to be received by mid September 2011.
- 1.7 Subsequently, on 23 September 2011, in addition to providing the committee with the Government's first NBN performance report, the Shareholder Ministers concurred with the changed reporting timetable as proposed by the committee from August/February to June/December.

Objectives and Scope of the Review

- 1.8 In this second review period, the committee has aimed to present the issues it identified in the Government's NBN rollout performance report in a timeframe that enables the Government to respond to early in the next reporting period. Further, the extended timeframe could enable the Government to develop its performance report in areas where the committee has asked for additional material or clarification.
- 1.9 The committee also aimed to receive information to allow it to provide an update on matters in the First Report which relate to:
 - the NBN rollout in regional and remote areas, covering technology type and access to broadband challenges and benefits, and
 - further discussion on competition concerns continuing to be raised by smaller internet service providers which are premised on gaining affordable access to and pricing of the NBN product.
- 1.10 Further, the review includes information about the process undertaken thus far in finalising the Binding Definitive Agreements between the NBN Co and Telstra and the NBN Co and Optus, ACCC consideration of

5 The committee's first reporting period included the six months from its establishment in early March 2011 to its reporting date of 31 August 2011.

6 The committee presented its report out of session on 31 August 2011.

Telstra's SSU and Customer Migration Plan, issues arising from the development and ACCC consideration of the NBN Co's SAU and WBA, and earlier than planned private sector engagement in funding the NBN.

- 1.11 Finally, the committee endeavoured to include information from Telstra following its shareholder approval of the Binding Definitive Agreement between the NBN Co and Telstra in the lead up to ACCC consideration of the Telstra SSU and Customer Migration Plan.
- 1.12 The committee's findings and conclusions reached on these matters are limited to information it received from a number of telecommunications companies, the NBN Co and the DBCDE. While the committee provided Telstra with an opportunity to present information to the committee at a public hearing, Telstra declined to appear.

Areas of Possible Future Review

- 1.13 Since its First Report in August 2011, and taking into consideration the matters reviewed in this report, the committee has identified various areas which may be the subject of future review. In addition to the committee's ongoing review of the NBN's rollout performance, further areas of review are likely to include:
- The impact of the NBN rollout on competition policy and the ongoing regulatory review of NBN-related matters by the ACCC
 - Telstra's SSU and Migration Plan
 - The NBN Co's procurement policy and tender processes
 - Regional and remote access to broadband services and the quality of fixed wireless and satellite services
 - Impact on competition for retail service providers
 - Government readiness to use and deliver services via the NBN.
 - Regulatory issues
 - Workforce participation and training
 - Network security and integrity
 - Private sector investment in the NBN.
- 1.14 Further, as outlined in the Prime Minister's letter to Senator Xenophon on 23 November 2010, the committee may also 'draw on any relevant

material from the [House of Representatives] Standing Committee on Infrastructure and Communications' report presented in August 2011, entitled *Broadening the Debate: Inquiry into the role and potential of the National Broadband Network*.⁷

Conduct of the Review

- 1.15 On 21 September 2011, a media release invited submissions to the committee's ongoing six-monthly review of the rollout of the NBN. The review was also advertised and submissions called for in the *Australian Financial Review* on 24 September 2011 and *The Australian* on 28 September 2011. The invitation to receive submissions closed on 20 October 2011.
- 1.16 The 38 submissions and 11 exhibits received in relation to the review are listed at Appendix A.
- 1.17 In addition, the committee held four public hearings on 20 September 2011, 13, 24 and 25 October 2011, each of which were publicised by media releases.
- 1.18 Witnesses who gave evidence at these public hearings are listed at Appendix B. Transcripts of the public hearings are available at www.aph.gov.au/jcnbn.

Report Outline

- 1.19 Chapter 2 provides an overview of the progress of the NBN rollout in comparison to the NBN Co's targets. The content, format and timeframe for receiving the Shareholder Ministers' first NBN rollout Performance Report to the committee, as well as the type of information that could be provided by Shareholder Ministers in their future reports is also discussed.
- 1.20 Chapter 3 outlines the main issues associated with: the NBN Co's agreements with Telstra and Optus, development of the NBN Co's SAU and WBA, Universal Service Obligations, affordability, private equity engagement in funding the NBN, pricing for RSPs and competition issues raised by small RSPs.

7 Hon Julia Gillard MP, Prime Minister, to Senator Nick Xenophon, Senator for South Australia, 23 November 2010.

- 1.21 Chapter 4 continues discussion on issues raised in the First Report on the benefits and challenges of gaining access to the NBN in regional and remote areas, and Government readiness for receiving the NBN. In addition, social, economic and geographic factors impacting on access to the NBN is discussed.

Review of National Broadband Network Rollout Progress

Introduction

2.1 The Government's National Broadband Network (NBN) rollout Performance Report (the Performance Report) was provided to the committee on 23 September 2011. The content of the Performance Report is based on information provided by the NBN Co to Shareholder Ministers under its obligatory reporting arrangements and includes:

- A summary of the key milestones achieved by the NBN Co.
- [Unaudited] Year to date financial reports for the period ended 30 June 2011, including profit and loss statements, [a balance sheet] and a consolidated statement of cash flows.
- Measurement against the NBN Co's Key Performance Indicators (KPIs) as at 30 June 2011.¹

2.2 Issues raised through examination of the Government's Performance Report are included in the relevant chapters of this report. This chapter outlines and discusses a number of the issues associated with both the qualitative and quantitative information contained in the Performance Report, and the timeframe during which the committee has received this information. In addition, comment is made on how the committee may be able to participate in the consideration and development of KPIs and measures.

¹ Shareholder Ministers, *Submission 19*, p. 1.

Performance Reporting

Reporting Intervals

- 2.3 On 7 July 2011, the Shareholder Ministers wrote to the committee advising that the Government was in the process of 'finalising an appropriate reporting framework including key performance indicators on NBN Co's activities, which [could] be used as a basis for reports to both the Government and to [the] committee.'²
- 2.4 The Shareholder Ministers indicated that performance information on the NBN rollout in the form of an update (which would be based on information received from NBN Co) would be provided to the committee by mid September 2011.³
- 2.5 The Shareholder Ministers explained that providing this information earlier presented 'practical challenges' and stated mid September timeframe would ensure enough time for such a report to be drafted and for the inclusion of recent NBN rollout developments. The Shareholder Ministers stated:
- For the first report, there are practical challenges to providing the committee with appropriate material before mid September. It is important to ensure that there is time for NBN Co management to prepare a report of satisfactory quality, for the NBN Co Board to perform appropriate due diligence in reviewing the content of the report, and for initial Government consideration of the report. This timing would also ensure that the Government is able to provide the committee with relevant information surrounding recent developments as part of its first report.⁴
- 2.6 On 18 August 2011, the committee informed the Shareholder Ministers that it had noted the timeframe of mid September 2011 for receiving the Government's Performance Report. Taking into consideration the mid
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2 Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy and Senator the Hon Penny Wong, Minister for Finance and Deregulation, Correspondence to the Joint Committee on the National Broadband Network (JCNBN), dated 7 July 2011.

3 Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy and Senator the Hon Penny Wong, Minister for Finance and Deregulation, Correspondence to the JCNBN, dated 7 July 2011.

4 Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy and Senator the Hon Penny Wong, Minister for Finance and Deregulation, Correspondence to the JCNBN, dated 7 July 2011.

September reporting timeframe, the committee indicated it would arrange a public hearing on 20 September 2011 to examine the Performance Report.

- 2.7 In view of the Government's mid September reporting date, the committee also proposed that under its Resolution of Appointment (RoA) it would report to the Parliament by 31 August 2011, and then seek to amend its RoA to enable it to report in June and December instead of August and February.
- 2.8 In addition to providing further opportunities for examination of the Performance Report, the purpose of the committee's proposed new reporting timeframe was to enable the performance reporting period to align with existing NBN Co reporting arrangements in place with the Shareholder Ministers. This would assist in avoiding duplication of the reporting process on these matters. This timeframe would also enable the committee to undertake a more thorough examination of NBN rollout issues.
- 2.9 Referring to performance reporting, in its First Report the committee found:
- For NBN targets and KPIs, the committee expected the KPIs and performance measures to be resolved between the NBN Co, the Department of Broadband, Communications and the Digital Economy (DBCDE) and the committee as a matter of priority.
 - In regard to the Government's mid September 2011 reporting timeframe, at the earliest, the DBCDE and the NBN Co were aware of the committee's terms of reference and its August reporting date at its establishment in March 2011 and could have anticipated the committee's requirements in terms of reporting on NBN data. In addition, the committee made repeated requests to the DBCDE and the NBN Co for data on KPIs for the NBN rollout and performance measures.
 - There would be a benefit in receiving NBN rollout performance information on a six-monthly basis, in line with its expected June/December reporting timetable, so that short term and long term trends could be easily identified, examined and possibly benchmarked.
- 2.10 As a result of these findings, the committee recommended:
- that the NBN Co and the DBCDE, commencing for the first quarter 2011-12, provide a six-monthly report on the progress of the rollout of the NBN, using established KPIs and performance measures, no later

than three months before the committee is due to report to the Parliament.⁵

NBN Co Reporting Requirements

2.11 The Government's⁶ Statement of Expectations (SoE) outlines the NBN Co's responsibilities in respect to planning, reporting and performance management in line with its obligations as a Government Business Enterprise (GBE).⁷ The SoE states the purpose of the NBN Co's regular report will enable the Government to 'measure NBN Co's performance.'⁸

2.12 As part of its planning, reporting and performance management responsibilities, the Government expected that the NBN Co would:

- Report regularly to the Government to enable NBN Co performance to be measured. This includes reporting through an annual report and interim reports as required.
- Include in its annual report details on the NBN rollout cost and performance, achievement of service levels, faults, customer complaints, details of its progress towards meeting its coverage objectives and any expenditure incurred as a result, and other matters as advised by the Shareholder Ministers.
- In consultation with the Government, develop KPIs to enable monitoring against the NBN Co Corporate Plan and Business Plan.
- Continue to report to the Parliament and its committees, with particular reference to this committee.
- During the NBN rollout, develop a comprehensive strategy for engaging with individual consumers, including a complaints handling mechanism, and regularly report against this strategy to Government.
- In line with its practice of publishing a number of consultation, position and option papers about its planning, strategy development and operations, 'continue to conduct its planning and the execution of its

5 JCNBN, *Review of the Rollout of the National Broadband Network*, First Report, August 2011, Recommendation 1.

6 As sponsored on behalf of the Government by the Shareholder Ministers and released on 20 December 2010, p. 11.

7 This is in addition to its annual reporting obligations as prescribed in the *Commonwealth Authorities and Companies Act 1997* (Cth), and the *Governance Arrangements for Commonwealth Government Business Enterprises*, June 1997, Australian Government, *Statement of Expectations*, 20 December 2010, p. 11.

8 Australian Government, *Statement of Expectations*, 20 December 2010, p. 11.

strategy in a publicly transparent manner subject to any requirements for commercial confidentiality, and reflect this in its annual reporting.⁹

Development of Key Performance Indicators

- 2.13 Early after its establishment in March 2011, the committee expressed interest in receiving a regular NBN rollout performance update from the NBN Co and Shareholder Ministers or the DBCDE.
- 2.14 At a meeting in May 2011 with the NBN Co and the DBCDE, the committee expressed its interest in participating in the consideration and development of the content of the Performance Report as well as the relevant KPIs and measures that would be included in its Second Report.
- 2.15 At the committee's 5 July 2011 public hearing, the NBN Co indicated that it had been working closely with the Government to develop KPIs. The NBN Co stated that, once this process was complete, the Government would consult with the committee to determine the KPIs on which it would seek data. The NBN Co stated:
- We have been working closely with the Government on a range of KPIs. My understanding is that the instructions to us from the Government are that when that is established the Government will liaise with the committee to find which of those KPIs you would be interested in seeing.¹⁰
- 2.16 In correspondence to the committee dated 7 July 2011, the Shareholder Ministers stated that the NBN Co was in the process of finalising 'an appropriate reporting framework including KPIs on NBN Co's activities which could be used as the basis for reports to both the Government and the committee.'¹¹
- 2.17 At the committee's 13 October 2011 public hearing, in regard to the types of information provided in the Performance Report, the DBCDE stated that, as a starting point, it had included information that was requested earlier by the committee, and that it would build on this information in future reports. The DBCDE stated:

9 Australian Government, *Statement of Expectations*, 20 December 2010, p. 11.

10 Mr Mike Quigley, CEO, NBN Co, Transcript of Evidence, Canberra, 5 July 2011, p. 4.

11 Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy and Senator the Hon Penny Wong, Minister for Finance and Deregulation, Correspondence to the Joint Committee on the National Broadband Network, dated 7 July 2011.

On the performance benchmarks, there was a presentation to this committee in June, I think. I was not present personally but I understand there was a discussion about a proposal from Commonwealth officials then about what might be included in the report. That has been the base for this report and for subsequent reports. As the note to the KPI says, the material becomes more meaningful as it is added to and developed over time. If there are areas in which the committee would like reporting, you are very free of course to ask the Government for reports on those and the Minister would consider those, I am sure. This is a start rather than the steady set of reporting arrangements.¹²

2.18 The committee was also informed that it was not receiving from the Government via the DBCDE, the same type of information, in the same format as the NBN Co was reporting to the Shareholder Ministers.¹³

2.19 When asked about the points of difference in the reporting information received by the Shareholder Ministers from the NBN Co and that subsequently provided to the committee by the Shareholder Ministers, the DBCDE stated:

On the content that you have been provided, the company provided a quarterly report to the government as shareholder. The Government considered that and has deleted some material that would not normally be provided publicly – and was not provided in the corporate plan that was released last December – such as commercially sensitive material about risks that the company is facing and some forward looking material. Because of the passage of time there was, as you have noted, a month between the arrival of the report and its provision to the committee. There was also some additional material added to pick up developments over that period. That explains almost all the changes that were made.¹⁴

12 Mr Daryl Quinlivan, Deputy Secretary, Infrastructure Group, Department of Broadband, Communications and the Digital Economy (DBCDE), Transcript of Evidence, Canberra, 13 October 2011, p. 6.

13 Mr Quinlivan, DBCDE, Transcript of Evidence, Canberra, 13 October 2011, p. 6.

14 Mr Quinlivan, DBCDE, Transcript of Evidence, Canberra, 13 October 2011, p. 6.

Key Features of the Performance Report

Content and Format

2.20 The Government's Performance Report is presented as a mix of qualitative and quantitative information on the NBN rollout, covering the financial year ended on 30 June 2011. In particular, the Performance Report includes information in the following broad categories:

- **Commercial Negotiations and Events** which includes information about the Telstra and Optus Binding Definitive Agreements, the Commonwealth Funding Agreement between the NBN Co and the Government, and communication.
- **Operational Achievements** which includes product definition.
- **Networks** which includes data on the progress of the NBN rollout to specific first release and second release sites across the three technologies of fibre, wireless and satellite.
- **Resources** which includes information about NBN Co staff, organisational effectiveness, health, safety and environment information, industrial relations, premises and security, and information technology.
- **Regulatory and legal matters**, including developments in consideration by the Australian Competition and Consumer Commission (ACCC) of the Telstra and Optus Binding Definitive Agreements, the Telstra Structural Separation Undertaking (SSU) and Customer Migration Plan and the Wholesale Broadband Agreement (WBA), and an update on the negotiations over the Long Term Satellite Service (LTSS) with the Australian Communications and Media Authority.
- **Risks**, including identified risks relating to safety, quality, the Telstra and Optus Agreements, construction, revenue, operational support systems and Greenfields.
- **Unaudited Financials** which includes information about the NBN Corporate Plan, and the NBN Co's financial result and tax treatment.
- **Post Closing Events** which outlines a series of events which occurred throughout July, August and September 2011, covering the period

between end of June and when the committee received the Performance Report.¹⁵

- 2.21 In its introduction letter to the Performance Report, the Shareholder Ministers stated that initially some information contained within the report may be limited as NBN Co is in the early stages of the NBN rollout. In addition, Shareholder Ministers stated the 'report is consistent with a start up company in the early years of the rollout.'¹⁶
- 2.22 The Shareholder Ministers advised:
- ...the information will become more detailed as the rollout progresses, as more premises are connected and as NBN Co's operating and business systems come online during 2012.¹⁷
- 2.23 Further to the information on NBN rollout contained in the Performance Report, at the hearing on 13 October 2011, the NBN Co provided the committee with further updates on the progress of the NBN rollout.¹⁸
- 2.24 Supplementary information was presented in a graphs and maps format and included:
- The NBN Co's progress of the NBN rollout in:
 - ⇒ second release sites;
 - ⇒ progress on the interim satellite service (ISS);
 - ⇒ first release wireless sites; and
 - ⇒ information on new developments.
 - Information about access seeker innovation and changing business models
 - comparative information about bundled pricing between the NBN's 12 Mega bit per second (Mbps) product and the currently available ADSL2+ product and broadband usage.¹⁹

Key Milestones Achieved

- 2.25 Over the period ended 30 June 2011, the key milestones achieved in support of the rollout of the NBN were:
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15 Shareholder Ministers, *Submission 19*.

16 Shareholder Ministers, *Submission 19*, p. 1

17 Shareholder Ministers, *Government report to Joint Committee on the National Broadband Network on NBN Co Limited and its subsidiaries as at 30 June 2011*, 23 September 2011, p. 1

18 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 13 October 2011, p. 1.

19 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 13 October 2011, p. 1.

- 'Execution of mission-critical agreements' with Telstra and Optus.
- 'Securing a funding agreement from the Government covering the anticipated \$27.5 billion equity to be provided by the Government shareholders over time.
- Conclusion of the first major construction contract with Silcar Pty Ltd.
- The first switch-on of the NBN on mainland Australia, in Armidale, NSW.
- First Release Satellite launch.
- Commencement of construction in a further seven Tasmania stage two sites.'²⁰

Key Performance Indicators

- 2.26 The NBN Co Corporate Plan lists a 'number of specific high level deployment targets to be achieved by 30 June 2013' which are stated as incremental year-on-year figures for June 2011, 2012 and 2013, under the two broad categories of:
- premises Passed or Covered; and
 - premises with Active Service.²¹
- 2.27 These two categories are further reported against in three classifications for type of service:
- Fibre-to-the-Premise (FTTP);
 - satellite first release; and
 - wireless.²²
- 2.28 The FTTP product for Brownfields and Greenfields are reported on separately, with a distinction made between Greenfields build and Greenfields Build-Operate-Transfer (BOT).
- 2.29 As stated in the First Report, the NBN Co Corporate Plan provides that the targets are indicative only, as the NBN rollout is dependent on:
- the availability of exchange facilities for the location of the semi-distributed Points of Interconnect (POIs)²³

20 Shareholder Ministers, *Government report to Joint Committee on the National Broadband Network on NBN Co Limited and its subsidiaries as at 30 June 2011*, 23 September 2011, p. 1

21 NBN Co, *Corporate Plan 2011-2013*, 17 December 2010, p. 15.

22 NBN Co, *Corporate Plan 2011-2013*, 17 December 2010, p. 15.

- negotiations yet to be finalised on commercially attractive terms for the procurement of Greenfields BOT, and.
 - securing contracts with suppliers and construction contractors on competitive terms and conditions.²⁴
- 2.30 The Performance Report similarly includes the three NBN rollout technologies (fibre, satellite and wireless) with a number of KPIs under each technology to monitor rollout progress. These are:
- FTTP Brownfields with the KPIs for premises passed, premises connected and activated, premises in areas under construction.
 - FTTP Greenfields with the KPIs for total requests received, premises passed, premises connected and activated, premises in areas under construction.
 - First Release Satellite Solution with premises covered, premises connected and activated and uptake.
 - Wireless with premises covered, premises connected and activated, uptake and premises in areas under construction.
- 2.31 A table of the Corporate KPIs appears at the back of the Performance Report and includes data under two main headings:
- Health, Safety and Environment; and
 - Deployment.
- 2.32 These areas are further categorised to reflect information relevant to the NBN rollout in comparison to the NBN Co Corporate Plan target (which is restated where this target exists).²⁵

National Broadband Network Rollout Progress

- 2.33 In the First Report, the committee reported on the figures it had received from NBN Co in relation to the targets outlined in its Corporate Plan. These figures showed that NBN Co had met and exceeded its published

23 The point of connection to the NBN Co access capability for Retail Service Providers and Wholesale Service Providers. 'In the field, this is the physical port on the Ethernet Fanout Switch located at NBN Co's POI, where an Access Seeker connects to establish exchange of traffic with NBN Co's network.' NBN Co, *Corporate Plan 2011-2013*, 17 December 2010, p. 157.

24 NBN Co, *Corporate Plan 2011-2013*, 17 December 2010, p. 16.

25 Shareholder Ministers, *Government report to Joint Committee on the National Broadband Network on NBN Co Limited and its subsidiaries as at 30 June 2011*, 23 September 2011, pp 21-23.

- targets for premises passed in Brownfields, and number of premises served through the ISS within the expected timeframe to end June 2011.
- 2.34 The legislation dealing with Telstra and NBN Co's responsibilities for Greenfields has now been passed by the Parliament. There has also been a subsequent change in the Greenfields model, from a supply model to a demand model. The target for lots passed for 2010-11 was revised from the NBN Co Corporate Plan of 45 000 lots passed, to approximately 65 000 lots passed and 40 000 premises connected.²⁶
- 2.35 In an update on the NBN rollout, the NBN Co stated that it was preparing for a volume rollout which would mean passing up to 6000 homes per day at full capacity.²⁷
- 2.36 By September 2011, the NBN Co had also completed construction and testing in the five first-release mainland sites, and launched the ISS.²⁸
- 2.37 In addition to meeting and exceeding the expected June 2011 target of 13 000 FTTP Brownfields with 14 000 premises reached by that date, the NBN Co stated that it had now passed more than 18 000 premises.²⁹ Of the FTTP Brownfields, 622 premises were connected and activated.³⁰
- 2.38 For Greenfields, the NBN Co has exceeded its expected target with 75 000 lots passed.³¹
- 2.39 Earlier in June 2011, NBN Co had awarded a major contract for its fixed wireless project and services were switched on in a number of first release sites, with commercial services for these having begun on 1 October 2011.³²
- 2.40 The NBN Co also provided an update on the construction contracts that it had entered into for the deployment of fibre. The NBN Co stated that while work was well under way in most parts of Australia, contracts for South Australia and the Northern Territory were expected to be finalised 'in the near future'.³³

26 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 5 July 2011, pp 2 and 3; NBN Co, Submission 2.1, pp 1-2.

27 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 2.

28 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 2.

29 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 2. The Performance Report states this figure as 18 243 premises passed, p. 22.

30 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 2. The Performance Report states this figure as 18 243 premises passed, Shareholder Ministers, Submission 19, p. 22.

31 Shareholder Ministers, Submission 19, p. 5.

32 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 2.

33 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 2.

- 2.41 The NBN Co stated that satellite services were growing fast, with over 2000 end users having registered for the service, and close to 1000 of these services to be either active or awaiting activation by the end of September 2011. The two high capacity satellites which will provide a LTSS are expected to be operational by mid 2015, until which time the ISS is scheduled to operate. The tender process for the space segment of the LTSS was to begin on 6 September, with the ground component tender process expected to be undertaken shortly after this time.³⁴
- 2.42 In regard to progress on fibre deployment in new developments or Greenfields, the NBN Co stated that it had switched on the first NBN Greenfield site of Bunya in Western Sydney. With respect to the laying of fibre in Greenfield sites, the NBN Co stated:
- We estimate that more than 1.9 million new premises will be constructed across Australia during the life of the NBN rollout. As I mentioned, we have received more than 2 200 new development applications for fibre infrastructure nationally. This represents some 176 000 premises. We continue to receive about 50 new applications each week. Simultaneously with Bunya, as part of our new development rollout, we have rolled out fibre in two other new developments in New South Wales and we plan to switch on fibre in new developments in Victoria, Queensland, Western Australia and South Australia this month.³⁵
- 2.43 Following comments made by the NBN Co, the Performance Report provided additional information on the NBN rollout.

Fibre Rollout – First Release Sites

- 2.44 The rollout information in Tables 2.1, 2.2, 2.3 and 2.4 provides an update on how the NBN fibre rollout is progressing across the five first release sites, in Tasmania for stages one and two, and for Greenfields.
- 2.45 Up until and including 30 June 2011, the first release sites had moved into the ‘transition and closure phase’, which includes a ‘post implementation review’ with the aim of examining quality of outcomes and incorporating lessons learned for ‘subsequent projects.’³⁶

34 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 2.

35 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 3.

36 Shareholder Ministers, *Submission 19*, p. 4.

- 2.46 The first customer trials by iiNet, Internode, iPrimus and Telstra commenced in Armidale, NSW on 18 April 2011.³⁷
- 2.47 Twelve access seekers (AAPT, AARNET, Comscentre, Exetel, iiNet, Internode, iPrimus, Nextgen Networks, Optus, Platform Networks, SkyMesh and Telstra) signed up for the end user trials across the mainland first release sites.³⁸

Table 2.1 Fibre-to-the-Premise First Release Sites

First Release Site	Construction Contractor	Date of Construction Contract	Premises Passed (based on current data subject to adjustment)
Armidale	Silcar Pty Ltd	Jul-10	4852
Brunswick	Telstra	Aug-10	3023
Kiama and Minnamurra Downs	Transfield Services	Jul-10	2454
Townsville	Ergon Energy	Jul-10	2773
Willunga	ETSA Utilities	Jul-10	1154
TOTAL			14 256

Source *Performance Report 30 June 2011, Networks*, p. 4.

- 2.48 Table 2.2 shows 3987 premises were passed in the Tasmania stage one FTTP deployment with 761 services delivered to 633 premises, with 604 of these premises active.³⁹
- 2.49 In addition, backhaul links were established between Hobart and both Smithton and Scottsdale and the first multicast service was provided to an end-user.⁴⁰

37 Shareholder Ministers, *Submission 19*, p. 4.

38 Shareholder Ministers, *Submission 19*, p. 7.

39 Shareholder Ministers, *Submission 19*, p. 3.

40 Shareholder Ministers, *Submission 19*, p. 4.

Table 2.2 Fibre-to-the-Premise – Tasmania Stage One

	Number
Services	761
Premises ordered	633
Premises active	604
Premises passed	3987

Source *Performance Report 30 June 2011, Networks, p. 3.*

2.50 Table 2.3 shows construction start dates for locations for the Tasmania Stage Two fibre rollout. The seven Tasmania Stage Two sites include approximately 11 150 homes and businesses. The rolling construction schedule ‘applied in Tasmania Stage Two makes the most efficient use of the workforce given the geographic spread of the locations.’ Depending on the size of site, construction in each site is expected to take between four and six months.⁴¹

Table 2.3 Fibre-to-the-Premise – Tasmania Stage Two

Location	Premises – approx	Construction Start Date (approval of detailed design)
Deloraine	1400	Commenced
George Town	2600	Commenced
Sorell	1500	Commenced
Triabunna	500	Commenced
Kingston Beach	950	Mid October
St Helens	2200	Late October
South Hobart	2000	Late October

Source *Performance Report 30 June 2011, Networks, p. 4.*

2.51 As indicated in Table 2.4, as at 30 June 2011, NBN Co had received approximately 1700 applications from developers for the laying of fibre in new developments, with 1188 active applications covering approximately 75 000 lots, with 403 developer contracts signed. The NBN Co determined

41 Shareholder Ministers, *Submission 19*, p. 4.

that approximately 300 Fibre Access Node (FAN) sites would need to be built and 'connected via leased interim managed backhaul.'⁴²

- 2.52 On 13 May 2011, Fujitsu Australia was appointed as a 'prime partner' to 'manage the design, construction and associated works for the deployment of fibre to new developments.'⁴³

Table 2.4 Fibre-to-the-Premise Greenfields

	Number
Developer applications (approx.)	1700
Active applications	1188
Total lots	75 000
Contracts signed	403

Source *Performance Report 30 June 2011, Networks*, p. 5.

Wireless

- 2.53 On 1 June 2011, NBN Co entered into a contract with Ericsson for the supply and managed services for wireless. The NBN Co also announced that it was planning to complete its fixed wireless service in rural and regional areas by 2015, with the first services available from 2012.⁴⁴
- 2.54 As of 30 June 2011, design for the fixed wireless network had begun, with purchase orders issued for the first three to four clusters or areas.⁴⁵

Satellite

- 2.55 First release contracts with Optus and IPStar were finalised on 6 May 2011 to enable a wholesale ISS (with capability of peak download speeds of up to 6Mbps) to be launched.⁴⁶
- 2.56 At the end of May 2011, the NBN Co released detailed eligibility criteria for rural and remote users of the ISS which would ensure that those with no alternative broadband access would be given priority, subject to a

42 Shareholder Ministers, *Submission 19*, p. 5.

43 Shareholder Ministers, *Submission 19*, p. 6.

44 Shareholder Ministers, *Submission 19*, p. 6.

45 Shareholder Ministers, *Submission 19*, p. 6.

46 Shareholder Ministers, *Submission 19*, p. 6.

service qualification process. A similar qualification used under the outgoing Australian Broadband Guarantee Program would be applied to the ISS qualification process.⁴⁷

- 2.57 In addition, interoperability testing with various providers was completed and evaluation of the LTSS sourcing plan was progressed 'with updated requirement specifications.'⁴⁸
- 2.58 Further discussion on satellite services is included in Chapter 4.

NBN Co Financial Results

- 2.59 The key financial results⁴⁹ summarised in the Performance Report state that operating expenses over the period were \$356 million, which was \$47 million (or around 15 per cent) higher than stated in the NBN Co Corporate Plan of \$309 million. Capital expenses were \$463 million, which was \$957 million (or around 66 per cent) less than stated in the NBN Co Corporate Plan of \$1420 million.⁵⁰
- 2.60 The NBN Co experienced a consolidated operating loss of \$323 million for the twelve months ended 30 June 2011, 'with no operational revenues.' The operating loss was attributed to:
- '\$119 m of employee-related expenses
 - \$161 m for legal and technical advice expenses and
 - \$37 m for IT [information technology] and facilities expenses.'⁵¹
- 2.61 The financial results are attributed to the greater outlay in operating expenditure on a 'change in approach to Greenfields for managed services, and \$8 million of unbudgeted costs associated with the Telstra and Optus transactions.'⁵²

47 Shareholder Ministers, *Submission 19*, p. 6.

48 Shareholder Ministers, *Submission 19*, p. 7.

49 While the Performance Report includes NBN Co's unaudited financial statements for the financial year ended 30 June 2011, the DBCDE stated that the financial statements were checked against the audited financial statements before the Performance Report was provided to the committee. Mr Quinlivan, Transcript of evidence, Canberra, 20 September 2011, p. 5.

50 Shareholder Ministers, *Government report to Joint Committee on the National Broadband Network on NBN Co Limited and its subsidiaries as at 30 June 2011*, 23 September 2011, p. 1

51 Shareholder Ministers, *Government report to Joint Committee on the National Broadband Network on NBN Co Limited and its subsidiaries as at 30 June 2011*, 23 September 2011, p. 11.

52 Shareholder Ministers, *Government report to Joint Committee on the National Broadband Network on NBN Co Limited and its subsidiaries as at 30 June 2011*, 23 September 2011, p. 1

- 2.62 The variance in capital expenditure is mainly attributed to ‘corporate IT systems and operational facilities, and limited investment in the rollout.’ The Performance Report states that ‘this is partly due to the delays in signing the Telstra Definitive Agreement and timeliness selection and evaluation’ of the LTSS.⁵³
- 2.63 In regard to capital expenditure, the Performance Report states:
- Total capital costs incurred over the past twelve months are \$463m with the rollout of the Fibre network amounting to \$85m, and \$118m spent on the Satellite and Wireless solutions, predominantly on the 2.3GHz wireless spectrum. A total of \$198m was spent on Systems and Processes, including Data Centres, National Support and Operations Centre, [Business Support Systems] and [Operational Support Systems].⁵⁴
- 2.64 Following equity injections of \$1050 million, cash flow increased to \$326 million over the previous twelve months. Net assets also increased by \$727 million with the cash component (as stated above) accounting for approximately 45 per cent of the total.⁵⁵
- 2.65 The Performance Report does not include a tax expense for NBN Co as the ‘company expects to be in a tax loss situation for at least the current financial year.’ The Performance Report also states the deferred tax associated with the loss will only be realised in the future ‘when it becomes probable that future taxable profits will allow the tax losses to be utilised subject to loss recoupment rules.’⁵⁶
- 2.66 The Performance Report provided an update of the negotiations and events in regard to the Telstra and Optus Binding Definitive Agreements and an update on the ACCC’s consideration of Telstra’s Structural Separation Undertaking (SSU), the NBN Co’s WBA and SAU. Discussion on these matters is included in Chapter 3 of this report.

53 Shareholder Ministers, *Government report to Joint Committee on the National Broadband Network on NBN Co Limited and its subsidiaries as at 30 June 2011*, 23 September 2011, p. 1

54 Shareholder Ministers, *Government report to Joint Committee on the National Broadband Network on NBN Co Limited and its subsidiaries as at 30 June 2011*, 23 September 2011, p. 11.

55 Shareholder Ministers, *Government report to Joint Committee on the National Broadband Network on NBN Co Limited and its subsidiaries as at 30 June 2011*, 23 September 2011, p. 11.

56 Shareholder Ministers, *Government report to Joint Committee on the National Broadband Network on NBN Co Limited and its subsidiaries as at 30 June 2011*, 23 September 2011, p. 11.

Other Issues

Release of Twelve Month and Three Year NBN Rollout Schedule

- 2.67 On 20 September 2011, the NBN Co advised that it was planning to release a schedule detailing the NBN rollout sites for the next 12 month period with the intention to release a three-year indicative NBN rollout plan early in 2012.⁵⁷
- 2.68 The 12 month NBN rollout schedule was released on 18 October 2011. The 12 month schedule outlined the construction plan for specified areas in jurisdictions across Australia where work on the NBN rollout 'will begin between now and September 2012, as well as where work on the rollout of the network is currently underway.'⁵⁸
- 2.69 The 12-month NBN rollout schedule is expected to be updated quarterly to include additional locations. The NBN Co had indicated that it will take '12 months from the start of the fibre network rollout in a given area until individuals are able to receive high-speed broadband over the NBN.'⁵⁹
- 2.70 The NBN Co commented that it was not possible to specify beyond a 12-month period the exact rollout timeframe down to the level of street and premises until detailed design had been undertaken on the ground in an area. However, the NBN Co stated that it would make announcements after it was 'reasonably confident' it had finalised them. The NBN Co also stated that:

What we will probably try and do is announce things as soon as we have reasonably confidently finalised them. As I said, within the next couple of weeks, we will be releasing information on everything that is going to be started within the next 12 months. Then there is a lead time of course until it is finished, so it will be closer to 24 months till all of those sites are completed. So everything that is going to be started in the next 12 months we will release that information. We will then look at everything that is going to be started in the next three years, but the latter two years of that are not as certain. They are indicative – they are our plans at this point in time – but we want to make sure people understand those latter two years are indicative. It is not our

57 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 3.

58 NBN Co, 'NBN Co Releases 12-Month National Rollout Plan', *Media Release*, 18 October 2011, p. 1.

59 NBN Co, 'NBN Co Releases 12-Month National Rollout Plan', *Media Release*, 18 October 2011, p. 1.

intention to try to release the whole 10 years at this point in time, because we simply have not got that far in the planning.⁶⁰

NBN Co Workforce

2.71 The Performance Report outlines the human resource component of the NBN Co. Table 2.5 shows the breakdown of employees across the various branches of the NBN Co as at 30 June 2011, and Table 2.6 shows the breakdown of these employees by jurisdiction.

Table 2.5 NBN Co Staff Resources as at 30 June 2011

Headcount	June 11 Actual
Operations	
Construction	98
Network Operations	224
Technology	182
Commercial Strategy	25
Product Development & Sales	67
TOTAL Operations Staff	596
Sales, General & Administration (S, G & A)	
Network Operations - CIO	124
All Other S, G & A	286
TOTALS, G&A Staff	310
TOTAL Headcount (including Contractors)	906

Source Performance Report 30 June 2011, Resources, People, p. 8.

60 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, pp 2- 3.

Table 2.6 NBN Co Employees by State and Territory as at 30 June 2011

State/Territory	Number of Employees
Australian Capital Territory	3
New South Wales	440
Northern Territory	0
Queensland	22
South Australia	9
Tasmania	5
Victoria	422
Western Australia	5

Source *Performance Report 30 June 2011, Resources, People, p. 8.*

2.72 On 24 August 2011, in preparation for volume rollout of the NBN, NBN Co had undergone a restructure involving changes to senior management. These changes reflected the incorporation of the lessons learned through its detailed planning process during the trial phase of NBN rollout. Of this restructure, the Chief Executive Officer, Mr Mike Quigley stated:

There have been some recent events within the company related to restructure. That happened on 24 August and involved some senior management changes. There has been a lot of media speculation about this, but I want to emphasise that the reason the restructure took place is because NBN Co. has grown from a start-up – literally from nothing – to now having over 1,000 employees in locations across Australia. We have completed testing in a number of areas and have incorporated those lessons into our detailed planning in preparation for volume rollout. Basically, we are entering a new phase of our business and the structure of the company needs to reflect that. The changes that I announced in the restructure were driven by the move from a planning, testing and refining design phase to an implementation and construction phase. We are preparing the company for the rollout across Australia.⁶¹

61 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 2.

2.73 The restructure also included the creation of a new communication unit within the NBN Co which is responsible for arranging information days with towns and areas about the NBN. Mr Mike Quigley stated:

As part of the restructure I did we are putting in place inside the company a unit where that is its job, to go out ahead of the rollout and hold town hall meetings, meetings in local libraries and information days. We are mobilising many councils, universities and other people who are very keen for this rollout to take place. It is quite encouraging to see how many people external to NBN Co. are keen to try to get the message out. We will be leveraging as much of that as we can, so as well as the electronic means we will actually have people with feet on the street talking to local councils, holding town hall meetings and doing similar things.⁶²

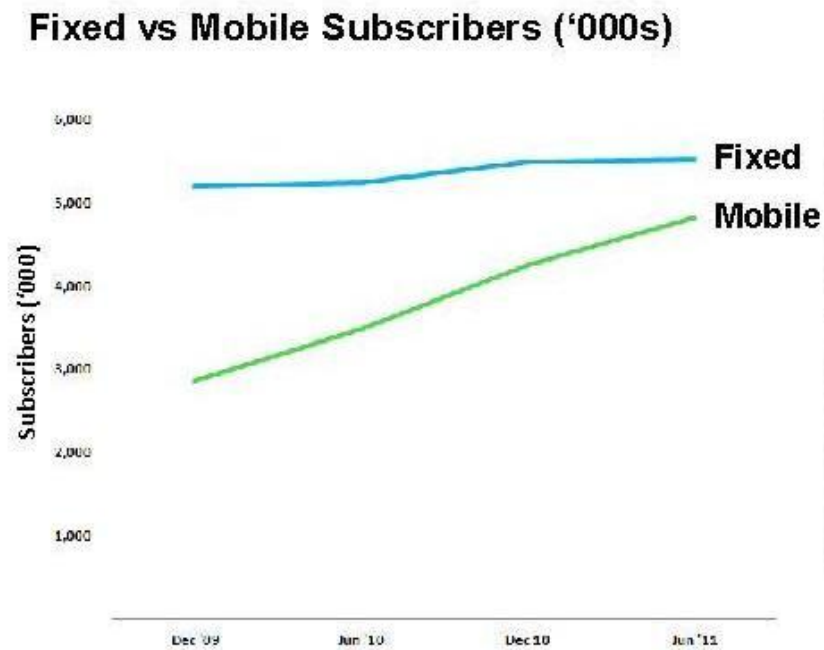
Demand for Wireless

2.74 According to figures by the Australian Bureau of Statistics (ABS), the number of mobile broadband subscribers in Australia is continuing to climb.⁶³ NBN Co found that these ABS results indicate that the number of fixed broadband subscribers is also increasing, but at a much slower rate (Figure 2.1). Yet, the average amount of downloads per month in gigabytes has doubled in the last 12 months for fixed-line networks, whereas on the mobile network the average download for a broadband subscriber has dropped by 20 per cent (Figure 2.2).

62 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 8.

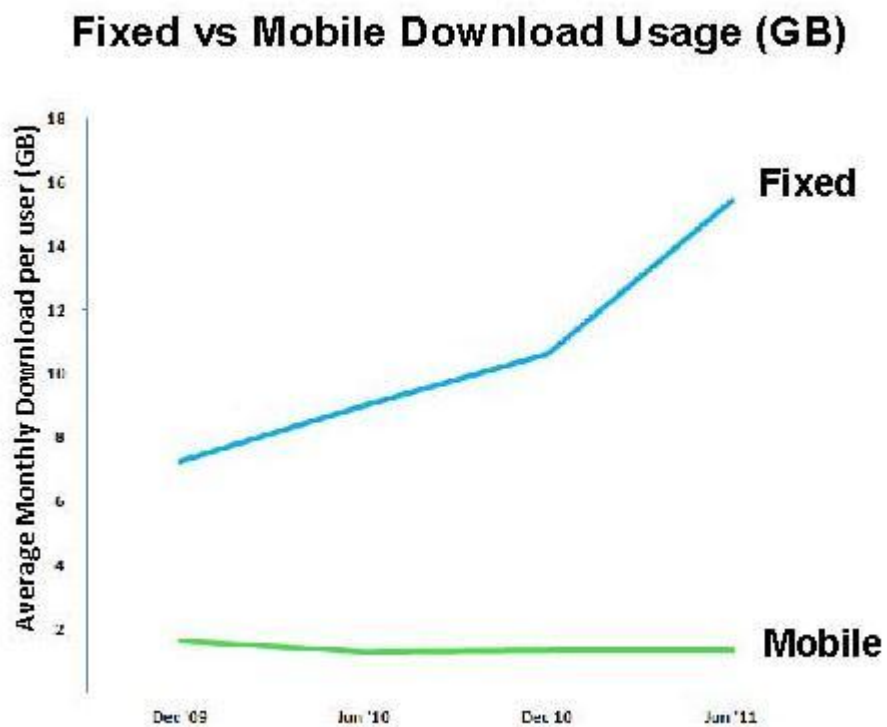
63 Australian Bureau of Statistics, *Report on Australian Internet Activity June 2011*.

Figure 2.7 Rate of fixed broadband and mobile access subscribers



Source NBN Co, Submission 2.4 Attachment 1.

Figure 2.8 Data downloads via fixed networks and mobile access



Source NBN Co, Submission 2.4 Attachment 1.

2.75 This data indicates that increasingly, portable devices such as smart phones and tablets are connecting to fixed-line wireless networks and relying less on networks such as the 3G network. The NBN Co stated that this 'is consistent with what is being seen around the world [and] is a trend we expect will continue'.⁶⁴ Further, Mr Mike Quigley stated:

I was speaking to the folks from Ericsson just the other day and they told me their prediction for 2016. When looking at total worldwide broadband data downloads they expect the amount of traffic on mobile broadband to be one half of one per cent of fixed line network traffic by 2016 ... What that says is what we all expect. We expect the number of connected devices to keep going up very rapidly. In fact in our first release sites we have measured the number of connected devices to be five on average, and Cisco are predicting that to be close to seven or eight on a worldwide basis by 2020. We expect the number of devices to go up, but the heavy lifting of applications other than voice is going to be done on fibre-based networks. We are seeing that same message coming from France Telecom, from operators like Shaw. Juniper Research I think recently estimated that there would be a seven-fold increase in the cost of just trying to keep up with the basic data that is being downloaded on wireless.

2.76 The NBN Co advised that the industry is planning for the demands created by this trend and stated:

There are only two things you can do: you can get more spectrum or you can build more cell sites. Building more cell sites, however, is becoming increasingly difficult in many parts of the world.⁶⁵

2.77 Commenting on the evolution, effectiveness and capacity of fibre and wireless technologies, the NBN Co stated:

[Wireless] technology, as you would expect, continues to evolve and the peak speeds will continue to go up. The issue with wireless technologies is not peak speed. The issue is capacities – how much can you download per subscriber in the busy hour? That is the issue that you have to face when you are looking at wireless technologies and, if you want to get a reasonable amount of download capacity then wireless in fact becomes more expensive than fibre. You cannot do too much with wireless and those sorts of capacities without it becoming very expensive,

64 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 13 October 2011, p. 4.

65 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 13 October 2011, pp 3-4.

which is why the crossover took place between fibre and wireless.⁶⁶

- 2.78 Additionally, the NBN Co commented that wireless has benefits of mobility, whilst fixed line is good for high-capacity downloads. The NBN Co stated that:

Wireless is very good for mobility and fixed line is very good for high-capacity download and video and that is why you need both technologies.⁶⁷

- 2.79 In summation, the NBN will include both wireless technologies and fixed-line fibre. The NBN wireless footprint will use leading next-generation 4G technologies whilst delivering increased capacity under fibre deployments to 97 per cent of Australian premises to meet the increasing demands in the market as indicated by ABS statistics.⁶⁸

Concluding Comments

National Broadband Network Rollout Progress

- 2.80 While the committee expresses its disappointment that the Government's Performance Report was received after its scheduled public hearing on 20 September 2011, it appreciates having received the Performance Report and the list of post closing events. The Corporate KPIs listed at the back of the Performance Report provide a useful snapshot of NBN rollout progress across the three technologies of fibre, satellite and wireless.
- 2.81 The NBN Co advised the committee that it has met and exceeded its targets for fibre and satellite rollout.
- 2.82 The committee understands that the content and size of the Performance Report reflects the early stages of the NBN rollout and that the NBN Co is still in its start-up phase, with employee numbers growing as the company gears up for volume rollout of the NBN. However, the committee was expecting more detailed information about the progress of the NBN rollout in a table format, across the three technologies to enable it to compare results between years.

66 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, p. 8.

67 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, p. 8.

68 Australian Bureau of Statistics, *Report on Australian Internet Activity*, June 2011.

- 2.83 The committee notes NBN Co's financial position as presented in the Performance Report and acknowledges that the NBN rollout is in its start-up phase, is not collecting revenue as yet from Retail Service Providers and so has experienced a consolidated operating loss of \$323 million for the year ended 30 June 2011.
- 2.84 In view of concerns received during the course of the previous review from various groups about the timing for receiving the NBN, the committee welcomes NBN Co's approach to publishing a twelve month NBN rollout schedule and its plan to publish a three year NBN rollout schedule. The committee is of the view that this will provide certainty for the community and industry about the timing and site selection for the NBN rollout.

Development of Key Performance Indicators

- 2.85 The committee met with the NBN Co and the DBCDE in May 2011 and discussed a possible role for it in determining the types of NBN rollout information and KPIs on which it would like further information.
- 2.86 The committee was not formally approached again to provide any comment on the type of content and format for the Performance Report and would welcome such a discussion prior to the receiving the next Performance Report.
- 2.87 The committee will write to Shareholder Ministers during the next review period to ascertain how it can participate in shaping the type of information and format of the next Performance Report to enable it to undertake its role in review of the NBN rollout.

Answers to questions taken on notice

- 2.88 Given the high importance placed on and large investment in the NBN, the committee is again drawing attention to the inability of the DBCDE and the NBN Co to adhere to notified timeframes for the committee's receipt of answers to questions.
- 2.89 As highlighted in the First Report, the committee received answers to questions taken on notice well outside of the notified timeframe. This has been the committee's experience for questions taken on notice by the DBCDE and the NBN Co for the hearings held on and after 13 October 2011.
- 2.90 The committee reiterates the comments it made previously: that adherence to timeframes for receiving answers to questions on notice allows the committee to include relevant formal evidence in its report; and often

provides useful evidence, further informing its findings and recommendations.

- 2.91 In addition, allowing for the fact that the overall planning, development and rollout of the NBN is at an early stage, the committee is concerned about both the quantity and especially the quality of the evidence that it has received in response to questions taken on notice by the DBCDE and the NBN Co. For a number of answers, it seemed that only material that was already available publicly, or evidence already taken at public hearings, was provided.
- 2.92 This approach does not assist the committee to fulfil its role properly and use its time productively. The committee suggests that, where possible, timeframes be reasonably met with information answering in more depth questions placed on notice by members of the committee.

Recommendation 1

- 2.93 **The committee recommends that where possible tables and graphs be used in the Government's Six Monthly National Broadband Rollout Performance Report to enable information to be compared across years.**

Recommendation 2

- 2.94 **The committee recommends that the Department of Broadband, Communications and the Digital Economy review its existing clearance processes for providing answers to questions on notice with the aim of providing answers to questions taken on notice where possible on the notified due date or within a reasonable timeframe thereafter.**

Competition and Regulatory Issues

Introduction

- 3.1 During the course of its first review period, the committee was presented with competition and regulatory issues arising from the implementation of the Government's National Broadband Network (NBN) policy. A number of these matters were raised in the committee's First Report and have been updated to take into account additional information received, and recent developments reported in the Government's 23 September 2011 NBN rollout Performance Report.
- 3.2 This chapter includes discussion on the competition and regulatory issues pertaining to: the Binding Definitive Agreements between the NBN Co Limited (NBN Co) and Telstra and the NBN Co and Optus, Telstra's Structural Separation Undertaking (SSU) and draft Migration Plan, the NBN Co's Special Access Undertaking (SAU) and Wholesale Broadband Agreement (WBA).
- 3.3 In addition, issues such as competition and pricing concerns raised by Retail Service Providers (RSPs) and the engagement of private sector equity to fund the NBN are also discussed.

Binding Definitive Agreements with Telstra and Optus

Background

- 3.4 On 7 April 2009, the Government announced the establishment of NBN Co to: design, build (over an eight year period)¹ and operate a ‘wholesale-only national high-speed broadband network for all Australians’ which would be capable of delivering speeds of up to 100 Megabits per second (Mbps) at a cost of up to \$43 billion.² The purpose of the NBN would be to connect all premises across Australia, to improve service delivery in areas such as education and health, and more broadly drive productivity growth, thereby enhancing Australia’s international competitiveness.³
- 3.5 The Government’s 2009 NBN policy (including the establishment of NBN Co) was intended as a micro economic reform measure designed to improve the competitive dynamics of the Australian telecommunications sector. Structural reform would be through the required separation ‘between the infrastructure provider and retail service provider.’ In 2009, the Government stated that the structural separation nature of the reform would mean ‘better and fairer infrastructure access for service providers, greater retail competition, and better services for families and businesses.’⁴
- 3.6 By implementing structural reform of the telecommunications industry, the NBN policy would have a significant impact on Telstra as the highly integrated and dominant industry incumbent.⁵

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- 1 Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill (CCS Bill) 2010, Explanatory Memorandum (EM), Regulation Impact Statement, p. 9.
- 2 Hon Kevin Rudd MP, Prime Minister, Hon Wayne Swan MP, Treasurer, Senator the Hon Penny Wong, Minister for Finance and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, ‘New National Broadband Network’, *Joint Media Release*, 7 April 2009; NBN Co, ‘NBN Co and Telstra reach heads of agreement’, *Media Release*, 20 June 2010, p. 2.
- 3 Hon Kevin Rudd MP, Prime Minister, Hon Wayne Swan MP, Treasurer, Senator the Hon Penny Wong, Minister for Finance and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, ‘New National Broadband Network’, *Joint Media Release*, 7 April 2009.
- 4 Hon Kevin Rudd MP, Prime Minister, Hon Wayne Swan MP, Treasurer, Senator the Hon Penny Wong, Minister for Finance and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, ‘New National Broadband Network’, *Joint Media Release*, 7 April 2009.
- 5 Telstra has ownership of the only copper network, larges cable and mobile network, and 50 per cent share of Australia’s largest subscription television provider, Foxtel, CCS Bill 2010, EM, p. 2.

- 3.7 Structural reform of the telecommunications industry would include: Telstra's structural separation, draft migration plan, and the commercial agreements between NBN Co and Telstra.⁶
- 3.8 Subsequently, the Government introduced three pieces of legislation which were passed in 2011 and are the foundation for the Government's NBN policy. These are the: *Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Act 2011 (Cth)*⁷, (the CCS Act), the *National Broadband Network Companies Act 2011 (Cth)*, and *Telecommunications Legislation Amendment (National Broadband Network Measures- Access Arrangements) Act 2011 (Cth)*.
- 3.9 The CCS Act contains a 'package of legislative reforms aimed at enhancing competitive outcomes in the Australian telecommunications industry and strengthening consumer safeguards'. These reforms include:
- 'addressing Telstra's vertical and horizontal integration' by requiring Telstra to either voluntarily structurally separate or be subject to mandatory functional separation;
 - 'streamlining the access and anti-competitive conduct regimes, and strengthening consumer safeguard measures such as the Universal Service Obligation, the Customer Service Guarantee and priority assistance; and
 - measures to improve regulatory enforcement.'⁸
- 3.10 The aims of the legislative framework implementing the NBN were also incorporated into the Government's Statement of Expectations (SoE) delivered to NBN Co in December 2010.
- 3.11 Prior to passing of the CCS Act and associated NBN legislation, following a year of negotiations between NBN Co, Telstra and the Government, on 20 June 2010, the parties entered into a non binding Financial Heads of Agreement (FHA).⁹
- 3.12 The FHA outlined 'the high level terms and conditions for the timing of the decommissioning of Telstra's copper and Hybrid Fibre Coaxial (HFC)

6 Australia Competition and Consumer Commission, (ACCC) 'Assessment of Telstra's Structural Separation Undertaking and draft Migration Plan', 30 August 2011, p. 1.

7 This Act was presented to the Parliament as the Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill 2010 and passed on 29 November 2010. It replaced the Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill 2009 which lapsed at the end of the 42nd Parliament.

8 CCS Bill 2010, EM, p. 1.

9 CCS Bill 2010, EM, p. 2.

networks (subject to certain exclusions).’ The FHA would enable the ‘progressive migration of customer services from Telstra’s copper and subscription television cable networks’ to the NBN, and thereby ‘deliver ... structural reform of the telecommunications sector.’¹⁰

3.13 In this way, the FHA also foreshadowed how Telstra would participate in the rollout of the NBN.

3.14 The FHA was estimated to be worth around \$11 billion¹¹ to Telstra¹² and would reduce overall NBN rollout costs by:

- ‘giving NBN Co access to Telstra’s existing infrastructure such as underground ducts’, and pits and manholes, lead in conduits, backhaul including use of dark fibre¹³ and, ‘exchanges and transmission.’¹⁴
- ‘Enabling decommissioning of the copper access network as the fibre network is rollout out.’¹⁵
- ‘Allowing for the progressive migration of customer services from Telstra’s copper and subscription television cable networks’ to the NBN.¹⁶

3.15 Just over a year later, on 23 June 2011, following further negotiation between NBN Co and Telstra, the parties arrived at a Binding Definitive Agreement.¹⁷

3.16 In addition to the signing of the Telstra Agreement, on 23 June 2011, NBN Co signed a Binding Definitive Agreement with Optus.

Telstra Agreement

Background

3.17 The NBN Co’s Binding Definitive Agreement with Telstra (the Telstra Agreement) consists of four documents¹⁸ which, together with the

10 CCS Bill 2010, EM, p. 2.

11 The \$11 billion consists of approximately \$9 billion in value from the terms of the Telstra Agreement and \$2 billion from the Government public policy reforms, NBN Co, ‘NBN Co and Telstra reach heads of agreement’, *Media Release*, 20 June 2010, p. 1.

12 NBN Co, ‘NBN Co and Telstra reach heads of agreement’, *Media Release*, 20 June 2010 p. 1.

13 NBN Co, ‘NBN Co and Telstra Sign Binding Definitive Agreements’, *Media Release*, 23 June 2011, p. 3.

14 NBN Co, Frequently Asked Questions, <www.nbnco.com.au>

15 NBN Co, Frequently Asked Questions, <www.nbnco.com.au>

16 CCS Bill 2010, EM, p. 2.

17 NBN Co, *Corporate Plan 2011-2013*, p. 85.

structural separation of Telstra, form the basis of Telstra's participation in assisting with the rollout of the NBN.¹⁹

3.18 Completion of the Telstra Agreement is a key assumption made under the NBN Co Corporate Plan and provides for the decommissioning of the Telstra network, with significant existing Telstra infrastructure made available to the NBN Co 'at the prices set out in the FHA.'²⁰

3.19 The NBN Co has stated there are three main components of the Telstra Agreement which are beneficial to the NBN Co, Telstra and the Australian taxpayer. These components are:

- It grants NBN Co access to Telstra facilities and infrastructure over a minimum period of 35 years, ensuring that the fibre optic component of the National Broadband Network, serving 93% of premises, can be rolled out efficiently and avoids duplicating infrastructure;
- It provides for the progressive disconnection of Telstra's copper and Hybrid Fibre Coaxial (HFC) customers (other than HFC pay-TV customers) and NBN Co will be Telstra's preferred fixed-line network;
- In addition, NBN Co and Telstra have negotiated interim arrangements for immediate access to Telstra infrastructure.²¹

3.20 The NBN Co stated that the benefit of the Telstra Agreement in regard to the NBN rollout would be to avoid duplication of existing infrastructure, reducing the cost of NBN build and so reducing the risk of delays and potential disruption to local communities. The NBN Co commented:

The outcome, we believe, is good for taxpayers and good for the broader community. We will, in making use of Telstra's facilities, avoid duplicating existing infrastructure. The deal reduces our costs to build the NBN, it reduces the risk of delays and, very importantly, it reduces potential disruption to local communities.²²

18 These four documents are: the Implementation and Interpretation Deed, the Subscriber Agreement, Infrastructure Services Agreement, and Access Deed. NBN Co, 'NBN Co and Telstra Sign Binding Definitive Agreements', *Media Release*, 23 June 2011, p. 4.

19 NBN Co, 'NBN Co and Telstra Sign Binding Definitive Agreements', *Media Release*, 23 June 2011, p. 4.

20 NBN Co, *Corporate Plan 2011-2013*, p. 51.

21 NBN Co, 'NBN Co and Telstra Sign Binding Definitive Agreements', *Media Release*, 23 June 2011, p. 1.

22 Mr Mike Quigley, CEO, NBN Co, Transcript of Evidence, Canberra, 5 July 2011, p. 2.

- 3.21 Through the decommissioning of its copper network and HFC capability, the Telstra Agreement would also assist Telstra to 'progressively structurally separate.'²³
- 3.22 Under the Telstra Agreement, there are nine 'conditions precedent' (CP) which must be either satisfied or waived for the Telstra Agreement to be completed.²⁴
- 3.23 The CP are outlined under the Implementation and Interpretation Deed (IID) which is the first of the four documents which form part of the Telstra Agreement.
- 3.24 The CP for completion of the Telstra Agreement are:
- 'approval by each of Telstra's and NBN Co's shareholders of the proposed transaction;'
 - Australian Competition and Consumer Commission (ACCC) 'acceptance of a [structural separation undertaking] (SSU) and approval of a Final Migration Plan in a form approved by Telstra and NBN Co and those documents come into force in accordance with the Telecommunications Act;
 - the [Telecommunication Universal Service Management Agency] (TUSMA) Agreement and the Information Campaign and Migration Deed being entered into by Telstra and the Commonwealth in a form acceptable to NBN Co;
 - the Commonwealth amending legislation or establishing other arrangements to implement its Greenfields policy in a form acceptable to Telstra and NBN Co;
 - the Commonwealth introducing legislation considered necessary or desirable by the Commonwealth and NBN Co to facilitate NBN Co's rollout, in a form acceptable to Telstra and NBN Co;
 - separate Australian Tax Office private tax rulings relevant to each party that confirm the tax treatment of elements of the transaction being acceptable to Telstra and NBN Co respectively;
 - if NBN Co notifies Telstra of a change to its stated intention, as at the execution date, to roll out fibre to 93% of premises in Australia at the

23 Australian Communications and Media Authority, Major Changes to Australian Telecommunications Announced, *Media Release*, 23 June 2011.

24 NBN Co, 'NBN Co and Telstra Sign Binding Definitive Agreements', *Media Release*, 23 June 2011, p. 4.

execution date, Telstra being satisfied that the change does not adversely affect Telstra;

- the parties agreeing to an initial plan establishing a program for the handover of specified infrastructure under the ISA over the course of NBN Co's Rollout; and;
- any other matters that the parties agree to be a condition precedent. Telstra has requested that NBN Co confirms that NBN Co has arrangements in place to ensure the cessation of supply by Telstra of certain products occurs in a non-discriminatory way.²⁵

3.25 Approval of the Telstra Agreement by Telstra shareholders occurred on 18 October 2011, with the only CP remaining to be satisfied, the ACCC acceptance and approval of Telstra's SSU and Draft Migration Plan.

Telstra's Structural Separation Undertaking and Draft Migration Plan

3.26 The structural separation of Telstra is designed to deliver greater competition across the telecommunications industry by replacing Telstra as the dominant market player and owner of telecommunications infrastructure with the NBN, a wholesale-only, open access network.²⁶

3.27 Telstra's structural separation is defined by the ACCC as 'the legal separation of Telstra's assets and activities into separate corporate entities with entirely separate owners/shareholders.'²⁷

3.28 The CCS Act establishes the framework 'within which Telstra can' choose to 'structurally separate and migrate its customer base'²⁸ or if it does not structurally separate, be subject to functional separation.

3.29 Structural separation includes:

- 'commitments by Telstra to cease the supply of specified services over networks under its control from the designated day - which is expected to be the day on which the construction of the new wholesale-only NBN will be concluded; and
- Equivalence and transparency measures regarding access to Telstra's key wholesale services in the period leading up to the designated day.²⁹

25 NBN Co, 'NBN Co and Telstra Sign Binding Definitive Agreements', *Media Release*, 23 June 2011, pp 4 and 5.

26 CCS Bill EM, p. 1.

27 CCS Bill EM, p. 1.

28 Shareholder Ministers, *Statement of Expectations*, December 2010, p. 3.

- 3.30 Telstra's draft migration plan outlines how and over what period 'Telstra will cease supplying copper and most HFC services – including wholesale services (where they are supplied) – as part of the migration of the NBN.'³⁰
- 3.31 If the structural separation option is not followed, functional separation would require Telstra to:
- 'Conduct its network operations and wholesale functions at arm's length from the rest of Telstra;
 - Provide the same information and access to regulated services on equivalent price and non-price terms to its retail business and non-Telstra wholesale customers; and
 - Put in place and maintain strong internal governance structures that provide transparency and reassurance for the regulator and access seekers that equivalence arrangements are effective.'³¹
- 3.32 While processes for either Telstra's structural or functional separation are provided for under the CCS Act, the Government's preferred option is for Telstra to structurally separate and 'accordingly the' CCS Act 'gives priority to a genuine structural separation process over the functional separation process.'³²
- 3.33 On 29 July 2011 and 24 August 2011, as required under the CCS Act³³, Telstra lodged its SSU and Draft Migration Plan respectively³⁴, with the ACCC for review.³⁵

ACCC Review

- 3.34 The *Telecommunications Act 1997* (Cth) requires the ACCC to undertake consultation on Telstra's draft migration plan and while it is not a requirement for the ACCC to do the same for Telstra's SSU, given 'the significance of the SSU in facilitating structural reform', the ACCC has undertaken a similar consultation process for the SSU.³⁶

29 ACCC, 'Assessment of Telstra's Structural Separation Undertaking and draft Migration Plan', 30 August 2011 (Discussion Paper) p. 1.

30 ACCC, Discussion Paper, p. 1.

31 CCS Bill Explanatory Memorandum, p. 2.

32 CCS Bill Explanatory Memorandum, p. 2.

33 CCS Bill Explanatory Memorandum, p. 2.

34 ACCC, Discussion Paper, p. 6.

35 CCS Bill Explanatory Memorandum, p. 2.

36 ACCC, Discussion Paper, p. 6.

- 3.35 In assessing and accepting the SSU, the ACCC would have to 'be satisfied that competition and consumer interests are supported by the specific reforms that have been proposed', ... 'particularly during the progressive transition to the new industry structure.'³⁷ Should the SSU and draft Migration Plan be accepted and approved by the ACCC, this would provide various protections 'from competition laws to facilitate' Telstra's structural separation.'³⁸
- 3.36 On 30 August 2011, the ACCC released its discussion paper on Telstra's SSU and draft Migration Plan for comment with submissions sought by 27 September 2011.³⁹
- 3.37 In its discussion paper, the ACCC stated that, as the SSU did not include a compliance plan for structural separation, the SSU would not be accepted in its present form. The SSU would need to be resubmitted by Telstra 'in a form that fully complies with the legislative requirements.'⁴⁰
- 3.38 The ACCC's preliminary view of the draft Migration Plan was that it accords with all of the statutory criteria.⁴¹
- 3.39 The ACCC outlined specific matters of concern, a number of which were serious enough for the ACCC to form the view that these matters would 'militate against ACCC acceptance of' the SSU. These are:
- There needs to be a clear and enforceable commitment to an 'equivalence of outcomes' that enables wholesale customers and Telstra's retail businesses to gain access to key input services of equivalent quality and functionality
 - clarification of the mechanisms that would ensure the proposed equivalence and transparency measures remain fit for purpose for the duration of the interim period.'
 - The inclusion of 'arrangements between Telstra and NBN Co that include the parties' ability to vary the arrangements without further scrutiny by the ACCC.'⁴²

37 ACCC, Discussion Paper, p. 1.

38 ACCC, Discussion Paper, p. 1.

39 ACCC, Discussion Paper, p. 5.

40 ACCC, Discussion Paper, p. 2.

41 ACCC, Discussion Paper, p. 5.

42 ACCC, 'ACCC calls for comment on Telstra's structural separation undertaking and draft migration plan', *Media Release*, 30 August 2011.

Industry Comments

- 3.40 While generally supportive of the structural reform of the telecommunications industry, Optus expressed concern about the equivalence and transparency of the Telstra SSU. In outlining its concerns about the SSU, Optus stated:

One of the principles we have been saying for a number of years around telco reform is that you must have the ability to have equivalence of access or equivalence of outputs between Telstra's retail customers and its wholesale customers. In other words, and this is one of the principles we put forward some time ago, we would ideally like to see a contract between Telstra network services and its retail arm which was in some way comparable to the contract they had between us or access seekers and Telstra wholesale, and then a level of transparency around those contracts. That would enable a number of things: No. 1, price comparability, which is one of our major concerns; No. 2, operational performance capability in terms of provisioning of services, billing, fault rectification and a range of other things that go to the heart of making sure there is an equivalence of outputs to access seekers and Telstra retail and a level of transparency; and, No. 3, a level of scrutiny by an independent regulator with powers to enforce compliance of that equivalence and transparency.⁴³

- 3.41 Internode was also supportive of the structural reform of industry, but also expressed concerns about the SSU and stated:

Under Telstra's SSU, which effectively replaces the existing regulatory regime, competitive providers like Internode will be worse off. We will have significantly less or in fact almost no recourse to the ACCC, and under that SSU Telstra will largely get to set all of the prices and access terms by which they deign to provide wholesale access to the old copper network. This is access that will be required for at least the next decade, which is in fact about as long as the entire industry has been providing DSL. So we are about to lock in a regulatory regime for the next decade yet in the course of the last decade we have seen massive shifts in broadband service, particularly DSL service. We have seen the retail prices spiral downwards. We have seen speeds ramp up. Now we are going to lock it down at, we assert, an access cost that

43 Mr Maha Krishnapillai, Director of Government and Corporate Affairs, Optus, Transcript of Evidence, Sydney, 24 October 2011, p. 38.

is somewhat worse than our current wholesale pricing from Telstra.⁴⁴

3.42 Internode was of the view that Telstra's market dominance would continue, and that smaller telecommunications providers such as Internode would be worse off because:

...they are likely to cost us more but they leave us largely at the mercy of Telstra, who can set the access pricing and the terms and conditions under which they provide the pricing, provide the only forum in which we can complain about that pricing and provide almost no transparency as to how they actually came up with the pricing.⁴⁵

3.43 Internode also stated that it had discussed its concerns with the ACCC.

3.44 Vodafone's main concern about the SSU (as discussed with the ACCC) is that there is an inadequate separation between Telstra's wholesale and retail businesses. Vodafone explained:

In particular, there are a number of aspects and approval processes within Telstra Corporation, as opposed to their retail and wholesale arms, that are still retained by Telstra Corporation and have a significant bearing on both wholesale and retail operations. For example, the Telstra Corporation part of the business still retains the pricing approval process for both retail and wholesale, and we think that that does not really lend itself to an adequate amount of separation.⁴⁶

3.45 Vodafone was also concerned that there be regulatory oversight of market behaviour to ensure consumers are not take advantage of when new competition is introduced into the telecommunications market.⁴⁷

Agreement Negotiation, Review and Completion Timeframes

3.46 Signing of the Telstra Agreement represents 'the conclusion of nearly two years of detailed negotiations' between NBN Co, the Government and Telstra.⁴⁸ The NBN Co Corporate Plan makes the assumption that the

44 Mr John Lindsay, General Manager, Regulatory and Corporate Affairs, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 57.

45 Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 57.

46 Mr Matthew Lobb, General Manager, Industry Strategy and Public Policy, Vodafone Hutchison Australia, Transcript of Evidence, Sydney, 24 October 2011, p. 59.

47 Mr Lobb, Vodafone, Transcript of Evidence, Sydney, 24 October 2011, p. 59.

48 NBN Co, 'NBN Co and Telstra Sign Binding Definitive Agreements', *Media Release*, 23 June 2011, p. 2.

Telstra Agreement would be completed and approved by the ACCC by 30 June 2011.

- 3.47 While the Telstra Agreement was arrived at prior to the end of June 2011, the timeframe for the completion of the Agreement has taken longer than expected as the two CP of: Telstra Shareholder approval and ACCC consideration and approval of Telstra's SSU and draft migration plan had not occurred within this timeframe.
- 3.48 In addition, the termination arrangements (under the IID) for the Telstra Agreement provides that 'if the CP are not satisfied or waived by 5 pm on 20 December 2011, then the IID, unless varied by prior agreement, will automatically terminate', and the three remaining documents forming the Telstra Agreement 'will not come into force and effect'.⁴⁹
- 3.49 The NBN Co stated that if the 20 December 2011 timeframe for satisfying all the CP is not met, then:

...the interim access provisions will continue in force for a period of 10 years to support Telstra infrastructure in use or ordered by NBN Co at that time. Those interim access provisions include a process the parties will follow to deal with any continuing need NBN Co has for access to Telstra infrastructure on expiry or early termination of the provisions.⁵⁰

- 3.50 The ACCC's acceptance and approval of Telstra's SSU and draft migration plan is a CP of the Telstra Agreement, without which the Agreement cannot be completed.⁵¹

- 3.51 In reference to whether the ACCC would complete its review of the SSU and Draft Migration Plan before 20 December 2011, it stated:

The resources are considerable. We have an entire branch dedicated to the consideration of the structural separation undertaking. On the time frames, I am going to give you the same answer that Rod Sims, our chairman, gave ... in Senate estimates last week which was that we are moving as quickly as we can. The issues are important ... but we give no guarantee as to when they might be concluded.⁵²

49 NBN Co, 'NBN Co and Telstra Sign Binding Definitive Agreements', *Media Release*, 23 June 2011, p. 5.

50 NBN Co, 'NBN Co and Telstra Sign Binding Definitive Agreements', *Media Release*, 23 June 2011, p. 5.

51 Mr Michael Cosgrave, General Manager, Communications Group, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 10.

52 Mr Cosgrave, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 4.

3.52 In an update on the status of the Telstra Agreement, the NBN Co stated, following ACCC approval of the Telstra SSU and draft migration plan, Shareholder Ministers must endorse the Agreement, but before this occurs Telstra will need to resubmit its SSU to the ACCC. Telstra is expected to take place in November 2011. In the event of a variation to the 'material value' to the Telstra Agreement as a result of any changes made, Telstra shareholders will be given an opportunity to vote on any changes. The NBN Co stated:

The ACCC has to accept Telstra's SSU and approve the migration plan and then NBN Co's shareholder, the Australian government, has to endorse the deal before the agreements become binding. Before these approvals can happen, as Telstra noted in its advice to the ASX, Telstra has to submit a revised SSU, which it expects to do in coming weeks following its current discussions with the ACCC.

While Telstra expects that the issues raised by the ACCC can be addressed without a material impact on shareholder value, it has indicated that if any material change does occur, shareholders will have an opportunity to vote on such changes. In any case we will not know the outcomes and what they mean for the shareholder approval process until these issues are resolved. While the focus of industry has been on Telstra's transparency and equivalence arrangements set out its SSU, the definitive agreements are also the subject of scrutiny by the ACCC.

Against this background, until all the conditions precedent have been met and the final agreements are available to the Telstra and NBN Co. boards and to the government, no further documentation regarding agreements can be released.⁵³

3.53 When asked whether any delay to the ACCC process for consideration of the Telstra SSU and migration plan would be a cause of concern for the NBN Co, Mr Mike Quigley, CEO stated:

...it would cause me concern. I am keen to have the deal done so we can get on with it and have some surety. We are working at the moment under an interim agreement. That interim agreement is not the final agreement. There are certain restrictions on it. We are not free to do all the things that we would like to do to get on with the job.⁵⁴

53 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, pp 1-2.

54 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, p. 3.

Optus Agreement

- 3.54 While the Binding Definitive Agreement between NBN Co and Optus (the Optus Agreement) was not included in the NBN Co Corporate Plan, the \$800 million value of the Agreement to Optus 'is financially beneficial to NBN Co resulting in an improvement in NBN Co's internal rate of return when compared to the...Corporate Plan.'⁵⁵
- 3.55 The Optus Agreement provides that as the NBN is progressively rolled out, Optus will decommission its HFC network and migrate its customers to the NBN. The rate of decommissioning HFC networks and the migration of customers will mirror the NBN rollout.⁵⁶
- 3.56 Optus stated that under the Agreement, its HFC network will be decommissioned with the exception of the part of the network used for Optus' fibre component for its mobile backhaul and other corporate customers.⁵⁷
- 3.57 The Optus Agreement, similarly to the Telstra Agreement is subject to approval by the ACCC, and confirmation of tax treatments. At the time of writing, neither the ACCC nor the Australian Taxation Office (ATO) have issued decisions on the agreement.⁵⁸

Future Third-Party Ownership of Optus' HFC Network

- 3.58 At the committee's hearing on 24 October 2011, there was some doubt as to whether Optus could sell its HFC network to a third party and whether that third party would then be able to offer broadband services over the Optus network. Optus stated:

The general principle is no; we have effectively made a sale of our HFC network and capacity to NBN Co. and agreed a migration strategy across to NBN Co. So the principle is fairly clear.⁵⁹

55 NBN Co, 'NBN Co and Optus Sign Binding Agreement', *Media Release*, 23 June 2011.

56 NBN Co, 'NBN Co and Optus Sign Binding Agreement', *Media Release*, 23 June 2011.

57 Mr Krishnapillai, Optus, Transcript of Evidence, Sydney, 24 October 2011, p. 37.

58 NBN Co, 'NBN Co and Optus Sign Binding Agreement', *Media Release*, 23 June 2011.

59 Mr Krishnapillai, Optus, Transcript of Evidence, Sydney, 24 October 2011, p. 40.

Additional Agreement Issues

Non Disparagement Clause

- 3.59 Both the Telstra and Optus Agreements contain a clause which precludes Telstra and Optus from marketing wireless services on the basis of comparable or equal performance standards as provided by an NBN service. The NBN Co described these clauses as 'an agreement to not present [the wireless network] as a replaceable – substitutable – service'.⁶⁰
- 3.60 Optus explained the practical interpretation of the clause for it and Telstra and stated:
- ...the key is that [neither Telstra nor Optus] can make claims around the performance standards of wireless broadband versus an NBN service.⁶¹
- 3.61 Importantly, this does not prevent either company from marketing wireless services. Under its Agreement, Optus commented that it:
- ... cannot go out and undertake certain marketing activities ... which, for want of a better term, will be sledging type activities – saying that the wireless service is superior to the fixed broadband service.⁶²
- 3.62 The NBN Co clarified what is permissible under the Agreements and what is prohibited under the non disparagement clause and stated:
- I do not think anywhere in the clause there is the word 'criticism'. It says that the wireless services are not substitutable for fibre today. That is what we are trying to make clear: that they are not substitutable.⁶³
- 3.63 While there is provision in trade practices legislation to deal with misleading comments which could be made in regard to marketing of wireless services, the NBN Co stated that the purpose of the non disparagement clause is to prevent in the future any delay which may be experienced through litigation.⁶⁴

60 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, p. 17.

61 Mr Krishnapillai, Optus, Transcript of Evidence, Sydney, 24 October 2011, p. 39.

62 Mr Andrew Sheridan, General Manager, Interconnect and Regulation, Optus, Transcript of Evidence, Sydney, 24 October 2011, p. 39.

63 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, p. 18.

64 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, p. 18.

3.64 Optus stated that while the non disparagement clause provides no more or less than what is required under current trade practices legislation and that it will not prevent Optus from marketing its wireless service. Optus commented that:

We have not seen that as anything more or less than what will be required under trade practices legislation today – that we cannot make claims about the performance of our wireless network being superior in a way that it is not. We will still continue to aggressively market wireless broadband throughout that period.⁶⁵

3.65 The NBN Co also stated that the effect of the clause would be to protect shareholder interests and secure the NBN investment. The NBN Co commented:

All [NBN Co is] trying to do is write a clause into a document that protects the shareholders' interests. As I have said repeatedly, we are all in favour of as much mobile penetration as can possibly happen because we are seeing an increasing number of mobile devices in use driving up our usage on fixed line networks which makes our business case a little more secure.⁶⁶

3.66 The NBN Co also stated that more broadly, the non disparagement clause component of the Telstra and Optus Agreements provides a 'constraint [that] is only one that makes good sense'. Further, as taxpayer funds are being used to enable decommissioning of the copper network and structural separation, 'it makes perfectly good sense to make sure that Telstra continues to use the fixed line service.'⁶⁷

3.67 The Department of Broadband, Communications and the Digital Economy (DBCDE) added that the non disparagement clause component of the Telstra and Optus Agreements is under consideration by the ACCC. The DBCDE also 'expressed confidence that the ACCC would treat [these clauses] as they have throughout the [SSU] process, as being a particularly important outcome.'⁶⁸

65 Mr Krishnapillai, Optus, Transcript of Evidence, Sydney, 24 October 2011, p. 39.

66 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, p. 18.

67 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, p. 18.

68 Mr Peter Harris, Secretary, DBCDE, Transcript of Evidence, Sydney 24 October 2011, p. 18.

Workforce Retraining

Retraining Funding Deed with Telstra

- 3.68 Under the Telstra Agreement, the Government will provide \$100 million to Telstra to assist it in the retraining and redeployment of its staff which are affected by reforms to the structure of the telecommunications industry.⁶⁹ The Retraining Funding Deed (RFD) sets out the terms on which the Government will provide this funding to retrain certain staff over an eight year period.
- 3.69 Concluding on 20 June 2019, the RDF requires Telstra to give priority to retraining staff who currently work on the copper and HFC networks, including the wholesale copper workforce and the direct field support workforce. Telstra will give priority to retraining its employees in NBN related technical, process and system activities.⁷⁰
- 3.70 Payments to Telstra will commence after it submits to and receives approval from the DBCDE for an initial training plan and budget.⁷¹ The training plan must cover a three year period and include an outline of training targets which will set out the skills required and the training courses to be developed or refreshed.⁷² Telstra must also provide six monthly reports to the Government on progress against training plans, and a more detailed annual report which includes report on these matters.⁷³
- 3.71 Under the RFD, Telstra must consult with stakeholders in respect of the development of training plans and use funds to develop and deliver training courses that facilitate the following objectives:
- to support the availability of an appropriately trained workforce for the NBN; and
 - to establish a retraining arrangement for Telstra staff who may otherwise have faced redundancy due to the rollout of the NBN.⁷⁴

69 DBCDE, *Submission 3.2*, p. 1

70 DBCDE, *Submission 3.2*, p. 1.

71 Mr Quinlivan, DBCDE, Transcript of Evidence, Sydney, 24 October 2011, p. 2.

72 Ms Pip Spence, First Assistant Secretary, NBN Implementation Division, DBCDE, Transcript of Evidence, Sydney, 24 October 2011, p. 2.

73 DBCDE, *Submission 3.2*, p. 1.

74 Telstra, 'Telstra signs NBN Definitive Agreements', *Media Release*, 23 June 2011.

Optus Employees

- 3.72 In contrast to the Telstra Agreement, the Optus Agreement does not involve a component of public grants for retraining of Optus staff. Outlining the different objectives of the two agreements, the DBCDE stated:

The negotiations with Telstra were designed to develop both something that was in the public interest and had value for them. We were not at any point negotiating with Optus on a similar basis. So the Optus negotiation is entirely conducted between NBN Co. and Optus. The Telstra negotiation was effectively a tripartite arrangement. It involved the government negotiating as well as NBN Co. with Telstra. It had a different objective, which was the migration, the overall agreement, to structurally separate and migrate. So the purpose behind obtaining sufficient value for Telstra to agree to do that, in a public policy sense, was not just the ability to retrain workers – which we think is quite an important public policy interest in its own right – but was the structural separation outcome from the ability for Telstra to accept a certain price for a certain set of functions in order to free up its network for a competitive-neutral telecommunications industry for the future.

The negotiation with Optus was an NBN negotiation entirely of a commercial nature around migration, so the ... retraining for Optus, would clearly not be a matter for Mr Quigley. It would be a matter for ministers to consider should they believe there is a need to do so.⁷⁵

Special Access Undertaking

Purpose

- 3.73 Under trade practices law, the NBN Co will voluntarily lodge a SAU with the ACCC. The SAU 'is intended to provide regulatory certainty to an investor in relation to the issues covered by the SAU and for the term of the SAU.' The SAU is also designed to provide market certainty 'about the way NBN Co will engage and operate for the term of the SAU.'⁷⁶
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75 Mr Harris, DBCDE, Transcript of Evidence, Sydney, 24 October 2011, pp 8-9.

76 NBN Co, *Corporate Plan 2011-2013*, p. 106.

- 3.74 The SAU 'will cover key price and product aspects of access to NBN Co's fibre, wireless and satellite networks' as well as a number of 'non-price terms and conditions.' The NBN Co Corporate Plan states that the following product aspects are proposed to be addressed in the SAU:
- 'Descriptions of the wholesale Layer 2 services and products that NBN Co intends to supply;
 - Initial fibre, wireless and satellite wholesale product sets and some conditions of supply;
 - NBN Co's product development, variation and withdrawal processes.
 - NBN Co proposes to include the following price aspects in the SAU:
 - ⇒ Pricing principles and methodology;
 - ⇒ Initial pricing for key wholesale products;
 - ⇒ Ongoing price regulation for certain wholesale products.
 - Detailed long-term constraints on total revenue able to be earned by NBN Co, using a Regulatory Asset Base methodology;
 - Cost prudence commitments in relation to the Regulatory Asset Base;
 - NBN Co's non-discrimination commitments; and
 - Reporting procedures.⁷⁷
- 3.75 In July 2011, the NBN Co released a SAU discussion paper and the third version of its WBA for industry comment. The SAU discussion paper:
- 'describes the key commitments that NBN Co intends to make in its SAU',
 - outlines the 'proposed approach to pricing of key "Price Controlled Offers", the operation of NBN Co's proposed Regulatory Asset Base, and long term revenue constraint methodology.'
 - 'Providing an ongoing role for the ACCC over the term of the SAU, to ensure the commitments made in the SAU continue to remain relevant as the industry evolves.'⁷⁸
- 3.76 The NBN Co sought Industry feedback by 19 August 2011.⁷⁹

77 NBN Co, *Corporate Plan 2011-2013*, p. 106.

78 NBN Co, 'SAU Discussion Paper and Wholesale Broadband Agreement', *Media Release*, July 2011, p. 1.

79 NBN Co, 'SAU Discussion Paper and Wholesale Broadband Agreement', *Media Release*, July 2011, p. 1.

- 3.77 In its Corporate Plan, the NBN Co stated that the finalisation of the SAU was dependent on:
- 'key policy matters such as the number and location of Points of Interconnect [POIs]⁸⁰ and the required approach to uniform national wholesale pricing.' and
 - A preference to wait until proposed NBN legislation was enacted.⁸¹
- 3.78 At the committee's 24 October 2011 hearing, the NBN Co stated that it was still in discussions with the ACCC in regard to the SAU, which were 'going well' and that it would publish its SAU as soon as it was able to.⁸²
- 3.79 Further the NBN Co stated:
- We are hoping that [the SAU] will be lodged shortly. We are still in discussions with the ACCC on that. I flagged at estimates that we have shifted certain parameters around that agreement. I am looking to simplify it somewhat. That drafting is underway now. I continue to have discussions with the ACCC.⁸³
- 3.80 The ACCC recently stated that the NBN Co has indicated it intends to provide an SAU to the ACCC for consideration in November 2011.⁸⁴

Timeframe for ACCC Consideration

- 3.81 The ACCC is required to assess the NBN Co's SAU against 'reasonableness criteria' as provided for under trade practices legislation. These criteria include the: 'promotion of competition, encouraging economically efficient investment in and use of infrastructure, legitimate business interests of access providers, interests of access seekers and direct costs.'⁸⁵

80 A Point of Interconnect (POI) is the point of connection to the NBN Co access capability for Retail Service Providers and Wholesale Service Providers. 'In the field, this is the physical port on the Ethernet Fanout Switch located at NBN Co's POI, where an Access Seeker connects to establish exchange of traffic with NBN Co's network.' NBN Co, *Corporate Plan 2011-2013*, 17 December 2010, p. 157.

81 NBN Co, *Corporate Plan 2011-2013*, p. 107.

82 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, p 11.

83 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, p 16.

84 ACCC, Correspondence to Baker and McKenzie, 11 November 2011, p. 2.

85 NBN Co, *Corporate Plan 2011-2013*, p. 107; Mr Michael Cosgrave, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 8.

- 3.82 The statutory timeframe for ACCC consideration and either rejection or acceptance of the SAU is six months, 'subject to extensions of time and stop-clocks.'⁸⁶
- 3.83 The ACCC commented that its consideration of the NBN Co SAU could take between six and twelve months depending on the suitability of the SAU lodged with the ACCC and the comments made around it.⁸⁷
- 3.84 When asked about the consequence of ACCC rejection of the SAU, the ACCC commented that:
- Provided we have a regulated service – which we should have by that stage – if the commission's position differed from what was in the SAU, it would be open to access seekers to ask the commission to make an access determination in ways that, in all likelihood, reflected areas that the commission had concerns with. The commission could take a fairly swift reactive move in the event it found an undertaking unacceptable.⁸⁸

Wholesale Broadband Agreement

Purpose

- 3.85 The NBN Co's Corporate Plan 2011-2013 provides for development of a WBA which takes the form of an agreement between NBN Co and a RSP which purchases wholesale broadband services from the NBN Co. The WBA sets 'out the complete terms and conditions of access to all of the services and products being provided over' NBN Co's 'fibre, wireless and satellite networks'.⁸⁹ More specifically, it sets out:
- ..the arrangements for the delivery of commercial services over the NBN encompassing such matters and products and price, service levels, technical information, credit policies and future product development.⁹⁰

86 NBN Co, *Corporate Plan 2011-2013*, p. 107.

87 Mr Cosgrave, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 9.

88 Mr Cosgrave, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 13.

89 NBN Co, *Corporate Plan 2011-2013*, pp. 106-107.

90 NBN Co, 'NBN Co offers clarity and transparency on pricing and regulatory approach', *Media Release*, 28 July 2011.

- 3.86 After a ten month industry consultation process,⁹¹ ahead of moving into the commercial launch of its services in October 2011, on 28 July 2011, the NBN Co released version three of the WBA.⁹²
- 3.87 In addition to being the contractual vehicle for the supply of its services to customers, the WBA will have the regulatory purpose, as required under legislation, of 'declaring' NBN Co's services.⁹³
- 3.88 In the period leading up to the release of version three of the WBA, the NBN Co completed two separate public consultation processes, public workshops, and performed 'customer deep dives', involving more than 100 hours of face-to-face discussions. Of its WBA industry consultation process, the NBN Co stated:
- This engagement has allowed NBN Co to respond to customer concerns in a manner that it believes balances the legitimate interests of end users, customers and the objectives of the NBN.⁹⁴
- 3.89 As the WBA 'guarantees equivalence' in NBN Co's dealings with RSPs, the WBA will be an identical document for all RSPs. Until the final version of the WBA is approved, NBN Co has signed interim agreements or a Standard Form of Access Agreement (SFAA) with already participating RSPs in NBN trial sites.⁹⁵ The SFAAs put in place will be replaced with a WBA once it has been finalised.⁹⁶

Industry Comments

- 3.90 Optus was of the view that there were 'a number' of the terms and conditions in the WBA that had direct implications for its pricing policy, in particular liability issues. Optus commented that the WBA is a 'very complex document', and it is taking 'some time' to work through it.⁹⁷
- 3.91 Optus stated that NBN Co has put its pricing into the market in terms of expected wholesale rates and is billing RSPs on an interim basis, reflecting some of the retail prices that have already been released. Although some

91 NBN Co, 'SAU Discussion Paper and Wholesale Broadband Agreement July 2011', *Media Release*, July 2011.

92 NBN Co, *Corporate Plan 2011-2013*, pp. 106-107.

93 NBN Co, 'SAU Discussion Paper and Wholesale Broadband Agreement July 2011', *Media Release*, July 2011.

94 NBN Co, 'SAU Discussion Paper and Wholesale Broadband Agreement July 2011', *Media Release*, July 2011.

95 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, pp. 5, 6.

96 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 24 October 2011, p. 6.

97 Mr Krishnapillai, Optus, Transcript of Evidence, Sydney, 24 October 2011, pp. 37, 41, 42.

RSPs have chosen to release their prices with caveats, Optus was not prepared to release its prices until it had finalised terms and conditions under its WBA with NBN Co.⁹⁸ Optus commented:

There are a number of terms and conditions in that contract which have direct implications for our pricing policy. We are very keen to release our pricing, as you can imagine, but we also know that we have to work out on what basis the contract with NBN Co will be finalised. We have talked about some of those issues in the broad. Issues around liability in particular, are ones that we have to factor into our cost pricing and therefore our pricing for customers.⁹⁹

3.92 Further, Optus stated that an important factor in discussing the WBA with NBN Co was that the ACCC had to agree to the terms of the provision of NBN Co's wholesale services to RSPs. Optus advised that this process had not yet begun.¹⁰⁰

3.93 Internode¹⁰¹ stated that a transition is underway towards commercial operations for the NBN. While Internode's customers have had a 'paid-for' ADSL service and a free trial service from NBN Co, it is now charging for its services. While there is no contractual certainty of supply of services until a WBA is signed, Internode was of the view that it is 'inconceivable that NBN Co would withdraw these services' in the interim.¹⁰²

3.94 Internode raised concern about RSPs signing an interim agreement with the NBN Co on the grounds of differing concessions between individual agreements. Internode stated:

What concerns me about the wholesale broadband agreement is that they have actually offered us a wholesale broadband agreement and asked us to sign it. But of course it is subject to the proviso that all of the retail service providers will end up with the same agreement. So what I would really like to understand is how, if we signed it and Optus, for instance, managed to win some concessions in the agreement, then that change in the wholesale

98 Optus: Mr Sheridan, Transcript of Evidence, Sydney, 24 October 2011, p. 41; Mr Krishnapillai, Optus, Transcript of Evidence, Sydney, 24 October 2011, p. 42.

99 Mr Krishnapillai, Optus, Transcript of Evidence, Sydney, 24 October 2011, p. 37.

100 Mr Sheridan, Optus, Transcript of Evidence, Sydney, 24 October 2011, p. 41.

101 Internode is the fifth largest RSP in Australia, with about 30 per cent of its customers in South Australia: Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 49.

102 Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, pp. 48.

broadband agreement would be applied to the agreement we have.¹⁰³

- 3.95 Internode stated that it had ‘a high degree of confidence’ that there will be ‘very few changes’ to the final WBA that will materially affect the cost of using the NBN and that the WBA will need to be settled by the end of November 2011.¹⁰⁴
- 3.96 Vodafone Hutchison Australia (Vodafone) stated that the SAU and WBA establish the NBN Co’s ‘fundamental commercial relationships’. Vodafone stated that both documents will ‘evolve’ over time, and that the NBN Co has made a range of commitments about how it will consult with industry as these documents change.¹⁰⁵
- 3.97 Further, Vodafone was of the view that the regulatory oversight of that evolutionary process is important, and that this point needs to be clarified about the assessment process about to be undertaken by the ACCC.¹⁰⁶

Recourse to ACCC

- 3.98 While the ACCC has a role in assessing the NBN Co SAU, it does not have a role in assessing the WBA. The ACCC raised concerns that the five year term that was being applied to interim agreements ahead of a finalised SAU would mean that RSPs would not have recourse to the ACCC under these agreements. The ACCC stated that the SAU should set the framework under which the WBA could be entered into. The ACCC commented:

...we did have a concern about was the term of the access agreement that NBN Co. was seeking to have access seekers enter into which was a five-year access agreement. That poses a concern largely because of the hierarchy stack, if I can out it that way, that exists in the legislation. ...The stack effectively places access agreements at the top of the pyramid and then a cascade below that has access to terminations and access undertakings – it might be the other way round, but various determinations by the commission. That is intended – and the commission have no issue with this – to encourage agreement between access providers and access seekers. The difficulty is that, in the event that people enter

103 Mr Sheridan, Optus, Transcript of Evidence, Sydney, 24 October 2011, p. 53.

104 Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 56

105 Mr Lobb, Vodafone, Transcript of Evidence, Sydney 24 October 2011, p. 59.

106 Mr Lobb, Vodafone, Transcript of Evidence, Sydney, 24 October 2011, p. 59.

access agreements, clearly they have no recourse to the commission.

The clear intent always was that there would be a framework set by an access undertaking that would be considered and, if suitable, accepted by the commission. That access undertaking would be the framework under which access agreements were then entered into.¹⁰⁷

3.99 The ACCC raised its concern with the NBN Co which responded by extending its trial agreements until the end of November 2011. The ACCC preference is that only 'substantive agreements' be entered into, but that where this is not possible, where access seekers encounter difficulties under interim agreements, they have recourse to a 'regulatory backstop' with the ACCC.¹⁰⁸

3.100 In addition, in response to industry concern about regulatory uncertainty in the absence of the SAU, the NBN Co recently announced that it had:

...reduced the initial term of its WBA to 12 months and established a bilateral and multilateral Contract Development Process to further enhance the long term WBA whilst the SAU is being considered by the ACCC.¹⁰⁹

Competition and Pricing

Background

3.101 In the committee's First Report, issues were raised in relation to how the implementation of the NBN would affect competition at various levels in the telecommunications industry and more broadly the Australian economy.

3.102 The main competition issues mentioned in the First Report were the impact on competition of: the structural separation of Telstra, the wholesale, open access structure of the NBN, pricing of access to the NBN, how the use of different broadband technologies may affect the cost and price of the NBN, and the ACCC's decision to increase the number of POIs from 14 to 121.

107 Mr Cosgrave, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 1.

108 Mr Cosgrave, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 12.

109 NBN Co, Wholesale Broadband Agreement (WBA), Media Release, 21 November 2011.

- 3.103 The focus in the First Report was how NBN access pricing and how the cost of physical capital was impacting on competition among RSPs, especially small RSPs.
- 3.104 The RSPs have again expressed concern about the impact on competition of access pricing under the NBN, the absence of competition in backhaul in some areas and the impact of the ACCC's decision to increase the POIs from 14 to 121.

Points of Interconnect

- 3.105 The ACCC stated that its decision that the POIs be increased from 14 to 121 was intended to create greater competition for RSPs. Part of the ACCC's decision-making process for determining POI numbers involved taking into consideration: existing infrastructure use, existing competition and the long-term interest of end-users.¹¹⁰
- 3.106 The ACCC's initial determination on POI numbers was based on maintaining 'competition between the backhaul providers' so that 'there was not an over build by NBN Co or existing infrastructure providers.' This would need to be balanced by 'competition between transmission providers' to each POI.¹¹¹
- 3.107 The ACCC implemented its approach by:
- ...recommending that competition principles be adopted and then worked with NBN Co. to come up with a mechanism, proposed by NBN Co., which would do two things – firstly, select points of interconnect where there was already competition between at least two backhaul providers and, secondly, ensure that there was a reasonable prospect that those providers would still engage in competition once the POI was built and that there was an element of overlay which allowed for an actual network architecture to be constructed.¹¹²
- 3.108 Through this process, the ACCC proposed that there should be approximately 120 POIs. The ACCC then asked for industry comment on its POI proposal and based on comments received, the ACCC increased the number of POIs to 121. Since then, following negotiation with Telstra, there have been 'a few minor variations' to the location of POIs. Location

110 Dr Robert Nicholls, General Manager, Convergence and Mobility Branch, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 2.

111 Dr Nicholls, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 2.

112 Dr Nicholls, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 2.

changes reflect 'where there is power, water and space in Telstra exchange buildings. The outcome is that Telstra will provide 111 exchange buildings and that ten new buildings are being built by NBN Co.'¹¹³

- 3.109 Internode stated that POI locations were chosen arbitrarily and only 'the potential' for competitive backhaul, rather than the 'actual physical presence of' competitive backhaul was taken into account by the ACCC. Internode explained the barrier created for RSPs providing services in regional areas where there is limited competitive backhaul present and stated:

The barrier or challenge for existing regional service providers is that they have all the overheads of connecting to the NBN and all of their existing overheads of running their existing network, which they are already operating on very squeezed margins because as soon as they look even vaguely viable Telstra starts marketing up against them, as is their right. But it means that, in the build-up to the NBN, those regional service providers face significantly increased costs as a dual network operation overhead, which is likely to spell the end for most of them. It is also worth noting there are relatively few regional-only service providers.¹¹⁴

- 3.110 Internode added that the problems it had encountered with the absence of competitive backhaul in regional areas meant 'a huge amount of uncertainty as to what it will cost' Internode to provide a service in regional areas and so may not choose to do so.¹¹⁵

- 3.111 In response to Internode's concern, the ACCC stated:

Regardless of who provides backhaul, somebody incurs the cost of the backhaul from regional areas to metropolitan points of presence. In coming up with our advice on points of interconnect, we had to make a choice: should that be monopoly provided by NBN Co. or should that be competitively provided by the five competitors. ... Our advice was that competition would yield the best outcomes. There will still be a cost of transmission between metropolitan areas and regional areas. The only difference between whether there are 14 points of interconnection or 121 is whether that cost is incurred by NBN Co. or incurred by

113 Dr Nicholls, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 2.

114 Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 50.

115 Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 50.

competitors who are seeking to provide services on a competitive basis to [RSPs] such as Internode.¹¹⁶

- 3.112 The ACCC explained that it understood that there are trade-offs in the advice it provided on POIs, but that the basis of its decision was on 'a belief in competition that existed providing the best outcomes.'¹¹⁷
- 3.113 The ACCC welcomed the NBN Co's announcement of a wholesale charge rebate in response to the concern raised by RSPs such as Internode above.¹¹⁸
- 3.114 The rebate is intended to 'make it cheaper and easier for broadband service providers to start offering services to consumers and businesses over the NBN.' The rebate is provided 'on capacity charges in the early days of the network's establishment.'¹¹⁹
- 3.115 The rebate is for 'the wholesale charge for the first 150 Mbps per month on its Connectivity Virtual Circuit until there are 30 000 premises passed in a connectivity serving area, which connects' to a POI.¹²⁰
- 3.116 Australia On Line was of the view that the NBN Co's announcement of rebates to assist RSPs 'would not materially lower the prohibitive costs of servicing ... customers via the NBN.'¹²¹
- 3.117 Australia On Line, similarly to Internode, also stated that it would be more difficult under the increased number of POIs to provide services to rural and regional areas. Australia On-Line stated:

It will cost Australia On Line **15 fold** more to service its existing national customer base via the NBN than is currently the case. This increase represents a dramatic imposition of mountainous barriers to entry to the national retail broadband. This **15 fold** increase in costs is a direct result of increasing **17 fold** the number of POI that are required to connect nationally via the NBN compared to that required to connect nationally to the ADSL network. It currently requires 7 POI to connect nationally to the ADSL network and the NBN requires 121 POI to connect nationally to the NBN. In the event that NBN Co rebates all our NBN connection charges, it will

116 Dr Nicholls, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 3.

117 Mr Cosgrave, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 3.

118 Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 50.

119 NBN Co, 'NBN Co makes it cheaper for service providers to start up on the NBN', *Media Release*, 9 August 2011.

120 NBN Co, 'NBN Co makes it cheaper for service providers to start up on the NBN', *Media Release*, 9 August 2011.

121 Australia On-Line, *Submission 1.1*, p. 1.

still cost Australia On Line **14 fold more** to connect nationally via the NBN than is currently the case via the ADSL network. The cost to connect to the NBN with NBN rebates would be \$647,350 per month for National connection which is still **14 fold more** than our current cost of \$45 773 per month for national connection to the ADSL network.¹²²

- 3.118 Both Internode and Australia On Line stated that the higher cost of providing a broadband service in regional and remote areas means less choice and so less overall competition for this service in these areas.¹²³

Loss of Infrastructure

- 3.119 Internode also raised the issue of the sunk cost it has incurred resulting from lost infrastructure through NBN overbuild. This situation will be similar for most RSPs who have invested in infrastructure to enable them to provide a service. As previously outlined, Telstra and Optus will be compensated for their loss of infrastructure in the NBN overbuild through the Telstra and Optus Agreements.¹²⁴
- 3.120 Internode outlined its total investment in infrastructure and was concerned that in addition to not receiving compensation for its lost infrastructure, would have to pay to remove its existing infrastructure from Telstra exchange buildings. Internode stated:

Our investment in DSLAMs per exchange runs between \$100,000 and \$200,000 per exchange site – some even more. We have 200 sites. We have invested a lot in this infrastructure ... [and once the NBN comes through] ... Then it is obsolete. There is some concern that we may actually have to pay Telstra fees in order to remove it from the exchange building.¹²⁵

Basic Package Pricing

- 3.121 The NBN Co's pricing of the NBN for RSPs consists of: Access Virtual Circuit (AVC) and Connectivity Virtual Circuit (CVC). The basic price offered by the NBN Co for an RSP to access services from the NBN is \$24 per month across all three technologies (fibre, wireless or satellite) at a

122 Australia On-Line, *Submission 1.1*, pp 2-3.

123 Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 50; Australia On-Line, *Submission 1.1*, p. 2.

124 Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 52.

125 Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 52.

downstream speed of 12 Mbps. On top of this is a CVC charge of \$20 per Mbps which adds approximately \$1 per 'average end user for a 12/1 Mbps service with current average data usage.' The NBN Co is expected to lower its pricing as it expects that 'increased usage ... will be adjusted on a yearly basis to reflect take up rates, average speed increases and usage increases.'¹²⁶

3.122 The RSP would then charge a price in addition to the \$24 (plus the CVC charge) to take account of any over heads, charges and taxes, with the inclusion of a profit margin.

3.123 Table 3.1 shows the NBN Co's pricing of access to the NBN for RSPs.

Table 3.1 Traffic Class 4 Access Virtual Circuit Peak Information Rate Charges per month excluding GST

Downstream/ (PIR Mbps)	Upstream/ (PIR Mbps)	Fibre	Wireless	Satellite
12	1	\$24*	\$24	\$24
25	5	\$27	\$27	\$27
25	10	\$30	\$30	\$30
50	20	\$34	\$34	\$34
100	40	\$38	\$38	\$38
250	100	\$70	\$70	\$70
500	200	\$100	\$100	\$100
1000	400	\$150	\$150	\$150

*Note: AVC Pricing for Fibre at \$24 per month from Financial Year 2012 to Financial Year 2019, steadily decreasing to \$23 per month by Financial Year 2040.

Source NBN Co Corporate Plan 2011-2013, p. 101.

3.124 Five RSPs have released their pricing under the NBN. Two of the larger RSPs, Telstra and Vodafone have not yet released any prices for NBN products.

3.125 Internode was of the view that NBN Co's usage fees for RSPs is too high, with the overall pricing geared toward providing a quick return to the Government's investment in the NBN.

3.126 Prior to the release of the NBN Co's rebate on capacity charges, (which Internode stated has resolved the issue it raised about barriers to entry for small RSPs), Internode was concerned that it would not be able to afford access for high speed end users and that the CVC charge of \$20 per Mbps is arbitrarily set. In regard to the CVC price Internode stated:

... the charge for the CVC at \$20 a megabit is a fairly arbitrary number. It is not really in line with the experience of network operators to date where you achieve an economy of scale as the volume of traffic increases. NBN Co. are proposing to charge all access seekers, regardless of scale, this \$20 a megabit fee. That does not recognise that, over a fairly short time frame, end users are likely to use the network more and as a result require more capacity and that is actually going to end up driving costs up for retailers. But for operators like Internode – we have 200 exchanges with our own DSLAM equipment, which is the equipment that is the other end of the ADSL service – and operators like Optus, who are in the same boat, largely our backhaul networks, particularly around the capital cities, are fixed cost. As the traffic on those networks rises, our costs remained largely static, so in fact our cost per megabit to use those networks falls because the traffic rises and the cost stays the same.¹²⁷

3.127 Internode is offering NBN access packages ranging from \$49.95 per month for its basic 12 Mbps service to \$165 per month for a terabyte. Internode explained its pricing strategy and stated:

Our entry level service at 12 megabits with 30 gigabytes of included data costs \$30 for the phone service plus \$20 for the internet service. So it is a \$49.95 entry level service, which we think is a fairly reasonable and affordable price point for most people. Our entry level 100 megabit service, which also includes a phone line, is effectively \$30 plus \$45 – again, for a 35 gigabyte usage allowance. To put that in perspective, the average Internode customer uses 18 gigabytes a month. So that entry level service is more than sufficient for the average customer. It is worth noting that there are outliers to that 18 gigabytes. There are some people who download an awful lot and we provide services that allow them to do that. In case somebody wants to ask the question: we do offer a true terabyte service for \$165 a month. We find that

127 Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 49.

most people wanting that are actually business customers. A terabyte is a huge amount of data.¹²⁸

3.128 Initially, Internode had released a higher priced package, which it lowered once the NBN Co provided a rebate on capacity charges for the first 150 Mbps per month on the CVC.¹²⁹

3.129 Optus stated that it had waited to announce its pricing packages under the NBN as it had been working on its WBA with the NBN Co which would have an impact on Optus pricing. Optus stated:

We are working through the implications of a couple of things, the main one being the wholesale broadband agreement with NBN Co. There are a number of terms and conditions in that contract which have direct implications for our pricing policy. We are very keen to release our pricing, as you can imagine, but we also know that we have to work out on what basis the contract with NBN Co. will be finalised. We have talked about some of those issues in the broad. Issues around liability in particular are ones that we have to factor into our cost pricing and therefore our pricing for customers.¹³⁰

3.130 On 9 November 2011 Optus announced seven pricing packages which would commence in NBN trial sites from 21 November 2011. Packages start at \$39.99 per month for 40 Gigabytes (GB) of data when bundled with an Optus post paid mobile service and rise to \$129 per month for up to 1000 GB of data.¹³¹

3.131 Vodafone stated that it had not announced its pricing packages under the NBN, as it was in trial mode and 'focused on the operational and technical aspects of the NBN'.¹³²

3.132 The ACCC stated that the cost of usage fees and the impact on small RSPs, especially the provision of NBN services in regional remote areas would be within the ACCC purview in its consideration of the SAU.¹³³

128 Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 48.

129 Mr Lindsay, Internode, Transcript of Evidence, Sydney, 24 October 2011, p. 51.

130 Mr Krishnapillai, Optus, Transcript of Evidence, Sydney, 24 October 2011, p. 37.

131 Optus, 'New Era of Competition as Optus announces reveals NBN pricing', *Media Release*, 9 November 2011.

132 Mr Lobb, Optus, Transcript of Evidence, Sydney, 24 October 2011, p. 60.

133 Mr Cosgrave, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 4.

Voice Only Services

- 3.133 Historically, the telecommunications industry has been dominated by the Public Switched Telephone Network (PSTN). The rollout of the NBN will decrease the use of the PSTN with more telecommunications being delivered via high quality Voice over Internet Protocol (VoIP) services. The NBN Corporate Plan indicates that this transfer from old technologies to newer services will equate to a decline in voice revenues but will be substituted by increasing broadband revenue noting, 'business models continue to shift from toll calling charges to access charges'.¹³⁴
- 3.134 The Corporate Plan also indicates:
- The significant investment by Internet Service Providers in Digital Service Line Access Multiplexers and other equipment in order to provide broadband services over copper is expected to be redirected to content, service differentiation and value added services over the NBN, fuelling the development of new applications and innovation that will drive consumer demand.¹³⁵
- 3.135 There are concerns that, under NBN Co's wholesale packages combining voice and data services, RSPs will only provide voice services through a combined package. NBN Co stated:
- ...that anyone in Australia who currently accesses a fixed voice-line service will continue to be able to do so. Customers in areas that we serve with the NBN fibre network will continue to have access to voice-only services over a Telstra copper line, up until the NBN fibre service is rolled out in their area. After the NBN fibre is rolled out, the agreement with Telstra means that customers will be able to access a voice-only service over this new infrastructure. ... Customers in [the wireless and satellite footprints] will continue to have access to fixed voice line services over a Telstra copper line. This is the arrangement where in that last notionally 10 per cent the copper service will remain.¹³⁶
- 3.136 After the NBN rollout, the prices at which Telstra can offer these services will remain subject to specific retail price controls. Telstra's carrier licence conditions require it to offer low-income packages for access to a fixed line telephone service. Similarly, the Low Income Measure Assessment Committee will continue to work with Telstra to ensure low-income

134 NBN Co, *Corporate Plan 2011-2013*, p. 30.

135 NBN Co, *Corporate Plan 2011-2013*, p. 30.

136 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 13 October 2011, p. 2.

products are offered. Further, NBN Co's commercial agreement with Telstra provides that customers accessing special services will continue to have those services provided at no increased cost on the fibre network.

The NBN Co commented:

When it comes to providers other than Telstra, I understand there is no obligation upon them to provide discounted services to people on low incomes. This obligation remains solely with Telstra.¹³⁷

- 3.137 Since the committee's First Report, iPrimus has released a voice-only service priced at \$24.95 per month, using the fibre network infrastructure. The NBN Co commented on such services, arguing that:

... while there may not be RSPs other than Telstra offering services to those who qualify for low-income assistance, there will still be voice-only options at reasonable rates.¹³⁸

- 3.138 The Australian Communications Consumer Action Network (ACCAN) was concerned that there were not more than one voice service provider announcing pricing. The ACCAN stated:

It does concern me, but I do get some hope that Primus announcement is the first of more. To be perfectly frank, in that regard it is keeping prices to an amount, which we are pleased about. Of course we will be tracking it very carefully over time to see whether or not they stay at that level. We have assurances from NBN Co. that over time prices will come down. We will have to see if that happens.¹³⁹

- 3.139 The ACCC stated that it would monitor the provision of voice only services offered as this service is important to 'a substantial proportion of the Australian public.' The ACCC stated:

I know this has been the subject of some discussion between [committee members] and NBN Co. I have seen [NBN Co] point [the committee] to some initial offers from retail service providers that include the provision of voice only services at rates broadly equivalent with what are currently offered in the market by such products as Telstra's HomeLine Budget. It is an issue we will certainly keep under examination, because I would accept that the

137 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 13 October 2011, p. 2.

138 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 13 October 2011, p. 2.

139 Ms Teresa Corbin, CEO, Australian Communications Consumer Action Network (ACCAN), Transcript of Evidence, Sydney, 25 October 2011, p. 19.

provision of voice only services is important to a substantial proportion of the Australian public.¹⁴⁰

Other Issues

Universal Service Obligations

- 3.140 The objective of the Universal Service Obligation (USO) is to ensure basic voice telephony and payphone services are reasonably and equitably accessible to all Australians. As a universal service provider (USP), Telstra is required to ensure that its services meet this obligation.¹⁴¹
- 3.141 The Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill (TLA Bill) was presented on 20 October 2011 to amend the regulation of Telstra following reform of the telecommunications industry and the establishment of the NBN Co. The TLA Bill received royal assent on 10 December 2010.¹⁴²
- 3.142 The Explanatory Memorandum to the TLA Bill stated there are difficulties with USO requirements. It stated that:
- ..current requirements imposed on the primary universal service provider (currently Telstra) are imprecise and difficult to enforce.¹⁴³
- 3.143 Seeking to overcome these difficulties, the *Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Act 2010 (Cth)* (TLA Act) provides for the Minister to determine the minimum performance benchmarks which USPs must meet to fulfil their responsibilities. Further, it specifies maximum periods of time for new connections, fault rectification and reliability standards.¹⁴⁴
- 3.144 Under the TLA Act, the Minister has the power to issue written determinations providing rulings and performance standards for the provision, maintenance and location of payphones. There must be public

140 Mr Cosgrave, ACCC, Transcript of Evidence, Sydney, 25 October 2011, p. 10.

141 *Telecommunications (Consumer Protection and Service Standards) Act 1999 (Cth)*.

142 House of Representatives, *Votes and Proceedings No. 21*, Wednesday, 9 February 2011, p. 285.

143 Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill, (EM) p. 2.

144 Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Bill, EM, p. 2.

consultation and notification of proposals to remove payphones. Those who may be adversely affected by such a proposal may request the Australian Communications and Media Authority (ACMA) to direct the USP not to remove that service. Matters which ACMA must consider when making such a direction are also specified in the TLA Act.

- 3.145 Under its licence conditions and the USO, Telstra is required to provide discounted phone-line rental services. The ACCAN stated that the current price for this service is \$20.95 per month but is soon to be increased to \$22.95 per month.¹⁴⁵ Telstra also offers other services including pensioner discounts, a bill assistance program, and sponsored access providing telephony services for people who seek shelter within emergency accommodation. Generally supportive of these services, Ms Teresa Corbin, Chief Executive Officer of ACCAN stated:

We have been on the record for some time as saying that, whilst we really welcome these measures and they are very valued, particularly by people who provide emergency assistance for people in financial hardship, we would like these services to be expanded to be broader than just Telstra. At the moment a low-income consumer does not have a choice. They have to go to Telstra if they want to access these benefits.¹⁴⁶

Telecommunications Universal Service Management Authority

- 3.146 On 23 June 2011, the Government and Telstra agreed on a package of measures that 'will ensure basic universal telecommunications service standards during and after the NBN rollout'.¹⁴⁷
- 3.147 As part of this package of measures, the TUSMA will be established to assume responsibilities for administering the USO and other public interest services. From 1 July 2012, the TUSMA will ensure:
- 'all Australians have reasonable access to a standard telephone service;
 - payphones are reasonably accessible to all Australians;
 - the ongoing delivery of the Emergency Call Service by Telstra;
 - the ongoing delivery of the National Relay Service;

145 Ms Corbin, ACCAN, Transcript of Evidence, Sydney, 25 October 2011, p. 18.

146 Ms Corbin, ACCAN, Transcript of Evidence, Sydney, 25 October 2011, p. 18.

147 The Hon Julia Gillard MP, Senator the Hon Stephen Conroy, Senator the Hon Penny Wong, 'Government and Telstra agree on package of consumer measures' *Joint Media Release*, 23 June 2011.

- that appropriate safety net arrangements are in place that will assist the migration of voice-only customers to an NBN fibre service as Telstra's copper customer access network is decommissioned; and
 - technological solutions will be developed as necessary to support continuity of public interest services (i.e. public alarm systems and traffic lights).¹⁴⁸
- 3.148 The Telecommunications Universal Service Management Agency Bill 2011 (TUSMA Bill) was introduced into the House of Representatives on 2 November 2011.¹⁴⁹ The TUSMA Bill is part of a package of legislation: the Telecommunications Legislation Amendment (Universal Service Reform) Bill 2011 (Universal Service Reform Bill) and the Telecommunications (Industry Levy Bill) 2011.
- 3.149 The TUSMA Bill's Explanatory Memorandum provides that the structural separation of Telstra and the changes to the telecommunications industry will also require the service delivery arrangements for the USO to transition to a model where the Government will contract with service providers for the supply of these important services.¹⁵⁰
- 3.150 The TUSMA Bill:
- provides for the establishment of TUSMA as the statutory agency that will have the responsibility for the effective implementation and administration of service agreements or grants that deliver universal service and other public policy telecommunications outcomes;
 - sets out TUSMA's corporate governance structure and reporting and accountability requirements;
 - provides for the Minister, subject to the scrutiny of Parliament, to set the standards, rules and minimum benchmarks for TUSMA's contracts and grants; and
 - sets out arrangements for consolidating the two current USO and National Relay Service industry levy regimes into a single regime to contribute funding towards TUSMA's costs.¹⁵¹

148 ACMA, 'Major changes to Australian telecommunications announced', *Media Release*, 23 June 2011.

149 House of Representatives, *Votes and Proceedings No 77*, 2 November 2011, p. 1034.

150 The Telecommunications Universal Service Management Agency Bill 2011 (TUSMA Bill), EM, p. 4.

151 TUSMA Bill, EM, p. 2.

3.151 Under the Universal Service Reform Bill, the Minister may permit USO regulatory obligations to be progressively lifted from Telstra subject to a number of preconditions being met in relation to Telstra's contractual and regulatory compliance and performance.¹⁵² Legislative responsibility will be placed on TUSMA to ensure the service agreements or grants that it has in place effectively deliver public interest policy objectives.

3.152 At the Senate Environment and Communications Legislation Committee hearing on the TUSMA Bill, the Minister for Broadband, Communications and the Digital Economy stated:

TUSMA will also have a role in implementing safety net arrangements for migration of voice-only customers from Telstra's copper network to the NBN in fibre areas.¹⁵³

3.153 The DBCDE stated that under the new USO regime, the USO standards that are currently in place will be maintained and any impact of these standards will be through TUSMA, jointly funded by industry and the Government.¹⁵⁴

3.154 The Minister for Broadband, Communications and the Digital Economy provided information on the projected costs of TUSMA's operation:

... for the first time Government will also be making a substantial contribution towards TUSMA's costs and delivery of key telecommunications public interest safeguards to provide a smooth transition to industry. The budget contribution will be at least \$50 million in 2012-13 and 2013-14 and then \$100 million each financial year thereafter.¹⁵⁵

3.155 The DBCDE also commented that less would be spent on delivering the USO over time as there are structures and incentives in place for continued improvement. The DBCDE stated:

You may well pay less, because there are specific provisions there to encourage change. There will be a technology review at 10 years but there is also a proposition that the parties will continue at any point in time [to discuss] how to more efficiently deliver a USO at an earlier point than 10 years, which cannot be unreasonably

152 TUSMA Bill, EM, p. 2.

153 Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, Transcript of Evidence, Senate Environment and Communications Legislation Committee, Canberra, 18 October 2011, p. 60.

154 Mr Harris, DBCDE, Transcript of Evidence, Sydney, 24 October 2011, p. 17.

155 Senator Conroy, Transcript of Evidence, Senate Environment and Communications Legislation Committee, Canberra, 18 October 2011, p. 60.

rejected. We have structures and incentives in place ... to encourage this.¹⁵⁶

- 3.156 The cost of continuing USO delivery under new USO arrangements is \$290 million.¹⁵⁷
- 3.157 The Senate Environment and Communications Legislation Committee is currently inquiring into the legislative package.

Pricing, Affordability and USOs

- 3.158 The ACCAN was concerned that under the newly emerging telecommunications environment, affordability of basic services would decrease, thereby increasing the digital divide. The ACCAN stated:

Currently our assessment is that the entry level offers over the NBN are comparable to what is available in the market today and download speeds will be improved. ... The problem is that we do not want to increase the digital divide for people on low incomes. People who have a problem affording the internet now, probably will continue to do so.¹⁵⁸

- 3.159 To address the potential for any increase in the 'digital divide', the ACCAN proposed a broadband low-income measures scheme, that is:

... somewhat akin to the low-income measures for phone services that exist now and which Telstra is required to provide. We are thankful that the government and NBN Co have assured us that the low-income measures for phone services will continue at the same price.¹⁵⁹

Private Sector Equity Engagement

Background

- 3.160 In Chapter 2 of the First Report, the committee addressed funding of the NBN.¹⁶⁰ The First Report stated that the Government:

156 Mr Harris, DBCDE, Transcript of Evidence, Sydney, 24 October 2011, p. 17.

157 Mr Harris, DBCDE, Transcript of Evidence, Sydney, 24 October 2011, p. 16.

158 Ms Corbin, ACCAN, Transcript of Evidence, Sydney, 25 October 2011, p. 18.

159 Ms Corbin, ACCAN, Transcript of Evidence, Sydney, 25 October 2011, p. 15.

160 See Joint Committee on the National Broadband Network, First Report, August 2011, *Review of the Rollout of the National Broadband Network* (JCNBN), pp 34-36.

- intended the NBN be jointly funded through public and private sector investment,¹⁶¹ and
 - expected to divest itself of its interest in NBN Co within five years of the completion and operation of the NBN.¹⁶²
- 3.161 On 20 December 2010, the Government estimated the total capital expenditure for the NBN at \$35.9 billion, with the Government expected to contribute \$27.5 billion in rollout equity.¹⁶³ The peak funding requirement for the project is estimated to be \$40.9 billion. The Government stated that it would fund its investment in the NBN through the Building Australia Fund, and the issue of Aussie Infrastructure Bonds to the public.¹⁶⁴
- 3.162 On 22 June 2011, the Government and NBN Co entered into an equity funding agreement, whereby the Government provides assurances to NBN Co that it will provide equity funding to NBN Co until 30 June 2021, unless the agreement is terminated earlier. The Government is expected to provide funding sufficient to meet the forecast of expenditure outlined in the NBN Co Corporate Plan. The total funding pursuant to the agreement is capped at \$27.5 billion, excluding any amounts payable in the event of termination. As at 23 September 2011, a total of \$1.362 billion in equity has been made available to NBN Co.¹⁶⁵
- 3.163 The committee undertook to examine whether, given Part 3, Divisions 2 and 3, of the *National Broadband Network Companies Act 2011* (Cth) (the Companies Act), there are provisions for the Government to attract private equity during the construction phase of the NBN, thereby enabling an earlier return to taxpayers.¹⁶⁶

161 Hon Kevin Rudd MP, Prime Minister, Hon Wayne Swan MP, Deputy Prime Minister and Treasurer, Hon Lindsay Tanner MP, Minister for Finance and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'New National Broadband Network', *Joint Media Release*, 7 April 2009.

162 Hon Kevin Rudd MP, Prime Minister, Hon Wayne Swan MP, Deputy Prime Minister and Treasurer, Hon Lindsay Tanner MP, Minister for Finance and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'New National Broadband Network', *Joint Media Release*, 7 April 2009.

163 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', *Joint Media Release*, 20 December 2010.

164 NBN Co, *Corporate Plan, 2011-2013*, p. 133.

165 Shareholder Ministers, *Submission 19*, p. 2

166 JCNBN, p. 55.

Legislative Provisions

- 3.164 As prescribed in Division 2 of Part 3 of the Companies Act, privatisation of NBN Co is expected to occur after:
- The Minister for Broadband, Communications and the Digital Economy declares that the NBN is built and fully operational.
 - The Productivity Commission (PC) has concluded an inquiry into the NBN.
 - The PC's report has been referred to and reported on by a Parliamentary Joint Committee on the ownership of NBN Co.
 - The declaration by the Minister for Finance and Deregulation, that conditions are suitable to sell NBN Co, has not been disallowed by either House of the Parliament,¹⁶⁷
- 3.165 If these conditions have been met, the Finance Minister may then declare that conditions are suitable 'for the entering into and carrying out' of a scheme for selling NBN Co.¹⁶⁸

Timeframe

- 3.166 In relation to the equity agreement between the Government and NBN Co, the Government stated that its investment provides market certainty and certainty for NBN Co to 'enter into the long term commercial contracts needed to deliver the Government's NBN policy objectives.'¹⁶⁹
- 3.167 The committee sought information on whether it would be in the national interest to bring forward the timeframe for private equity engagement. The DBCDE advised that the Implementation Study undertaken by McKinsey & Company/KPMG noted that private equity should not be introduced before privatisation, as it would be too expensive and constrain the Government's ability to get its policy and regulatory settings right before allowing private ownership. It would also lead to a substantial distraction for management, both for initial transactions and in an ongoing basis. This applies to both cash and any proposals to sell assets in return for equity.¹⁷⁰
- 3.168 The NBN Co Corporate Plan contemplates private equity in the context of debt funding with 2015-16 the first opportunity for this to occur. The

¹⁶⁷ *National Broadband Network Companies Act 2011* (Cth) s 47.

¹⁶⁸ *National Broadband Network Companies Act 2011* (Cth) ss 50(2), 51(2) and 53.

¹⁶⁹ Australian Government, *Statement of Expectations*, 20 December 2010 (SOE), p. 12.

¹⁷⁰ DBCDE, *Submission 3.3*, p. 2.

Companies Act provides for the sale 'within five years' of the Government's interest in the NBN once it is fully built and operational, subject to the conditions for such a sale.¹⁷¹

Cost/Benefit and Capital Structure

- 3.169 The committee asked what would be the cost/benefit to the economy of bringing forward the introduction of private equity. The DBCDE advised that the McKinsey & Company/KPMG Implementation Study concluded that use of private equity to fund the NBN would be more expensive than use of government equity.
- 3.170 Under the Companies Act, the Commonwealth must retain total ownership of the NBN Co, until certain provisions of the Act are satisfied.¹⁷²
- 3.171 The reasoning underpinning this finding was that Government was better able to manage public sector risk, than a mix of both public and private sector risk.¹⁷³
- 3.172 The committee also asked what determining the 'optimum capital structure' for NBN Co would entail, and how this process could be undertaken. The DBCDE advised that, in accordance with the Governance Arrangements for Commonwealth Government Business Enterprises (GBE) of June 1997, in relation to financial governance, each GBE should have a target optimal capital structure. This is the combination of financial liabilities and equity used to fund the assets of the GBE, agreed annually between the directors and Shareholder Ministers in the corporate plan consultation process.¹⁷⁴

Equity Agreement

- 3.173 The committee asked about the equity agreement between the Government and NBN Co, the review process and any variations to equity requirements since the formation of NBN Co.
- 3.174 The DBCDE stated that funding for NBN Co will be reviewed annually, as part of the corporate planning process. As a result of a review, the Government may either terminate the equity funding agreement, or vary
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171 Ms Stacie Hall, First Assistant Secretary, Government Business, Special Claims and Land Policy, Department of Finance and Deregulation, Transcript of Evidence, Sydney, 24 October 2011, p. 20.

172 National Broadband Network Companies Bill 2010, EM, p. 6.

173 DBCDE, *Submission 3.3*, p. 2.

174 DBCDE, *Submission 3.3*, p. 3.

the annual or total equity funding commitment to NBN Co, in accordance with the most recently endorsed corporate plan.¹⁷⁵

- 3.175 The DBCDE also advised that NBN Co's Corporate Plan, sets the basis of its equity requirements. The NBN Co Corporate Plan provides that total expenditure for the NBN is estimated to be \$35.9 billion. This is less than the Government's original \$43 billion estimate, partly due to the Telstra Agreement. The 2013-2015 Corporate Plan will be the basis for NBN Co's equity requirements.¹⁷⁶

Commercial-in-Confidence Material

- 3.176 In its First Report, the committee noted that NBN Co had not provided information, or had not answered questions, on commercial-in-confidence grounds.¹⁷⁷ Such gaps in available material had limited the scope of the committee's inquiry. Similar experiences have also affected the gathering of evidence for this report.
- 3.177 On several occasions, the question of access to, or disclosure of, commercial-in-confidence material by parties involved in the rollout of the NBN was discussed at public hearings.
- 3.178 The DBCDE commented on the nature of commercial-in-confidence material, and the interests involved:

... commercial-in-confidence is not just a matter for the Government or even for NBN Co as a government-owned instrumentality to say that it will or will not give the committee access in those circumstances. We would have to bring Telstra into this as well. That said, everything we have done to date has been designed to maximise the transparency of documents. ... We have attempted to make these things as transparent as we can. I see no reason why that attitude will not continue, but we would have to consult with Telstra to be sure that they too were satisfied.¹⁷⁸

175 DBCDE, *Submission 3.3*, p. 4.

176 DBCDE, *Submission 3.3*, p. 4.

177 JCNBN, p. 21.

178 Mr Harris, DBCDE, Transcript of Evidence, Sydney, 24 October 2011, p. 12.

- 3.179 The DBCDE undertook to examine the relevance of the public interest test in assessing what material should be considered commercial-in-confidence.¹⁷⁹

Concluding Comments

Telstra's Structural Separation Undertaking

- 3.180 The committee notes the information it has received regarding the Telstra and Optus Agreements including Telstra's SSU and draft migration plan, and review of these documents by the ACCC.
- 3.181 The committee is concerned about a number of the issues raised by industry groups in relation to the equivalency and transparency considerations arising from the Telstra SSU. The committee understands this issue has been raised as a point of concern with the ACCC during the course of its review of the SSU, and prior to the release of its SSU discussion paper.
- 3.182 In addition, the committee understands that ACCC approval of the Telstra SSU is a condition precedent for the completion of the Telstra Agreement, and ACCC approval must be given by 20 December 2011. The committee understands parties are continuing to discuss issues as they arise. Further, the committee understands that the ACCC has dedicated considerable resources to its review of the Telstra Agreement and, while it has not guaranteed to hand down its decision within a specified timeframe, the ACCC has stated that it is working to conclude its consideration as quickly as possible.

Non Disparagement Clause in the Telstra and Optus Agreements

- 3.183 The committee understands the non disparagement clause included in the Telstra and Optus Agreements prevents Telstra and Optus from marketing its wireless product against the NBN for periods of 20 and 15 years respectively.
- 3.184 The committee understands the effect of the non disparagement clause would be similar to the immunity which is afforded under trade practices legislation.

179 Mr Harris, DBCDE, Transcript of Evidence, Sydney, 24 October 2011, pp 11-12.

- 3.185 The non disparagement clause appears to try to inhibit Telstra and Optus from competing against the NBN. Optus has, however, stated that this clause will not prevent it from aggressively advertising its wireless services.
- 3.186 The NBN Co stated that the intent of the non disparagement clause is to protect shareholder and taxpayer investment by avoiding any delay which may be experienced from litigation for possible breach of trade practices law in the event the proposed clause was not included in either of the Agreements.
- 3.187 The committee understands the ACCC is reviewing the terms of both the Telstra and Optus Agreements and awaits the ACCC findings on this matter.

Special Access Undertaking

- 3.188 The NBN Co's SAU (while a voluntary undertaking by NBN Co) is an important document which will include the key price and product elements of NBN access, as well as including non price terms and conditions.
- 3.189 The SAU is also the framework which will set out the pricing and non pricing parameters which will impact on the WBA. It is important that the SAU be lodged with the ACCC for its consideration before any WBAs are entered into between the NBN Co and RSPs.

Wholesale Broadband Agreement

- 3.190 The WBA sets out arrangements relating to NBN commercial service delivery by RSPs. Lodgement of the SAU is important to the WBA as the SAU sets the framework that will enable RSPs to enter into WBAs with the NBN Co with certainty.
- 3.191 Concerns have been raised about RSPs signing interim agreements for a five year term because, while, as there is no SAU in place, these RSPs have no recourse to the ACCC if they encounter difficulties as result of the conditions they have signed up to in interim agreements.
- 3.192 In response to industry concerns surrounding regulatory uncertainty in the absence of a SAU, the NBN Co has announced that its interim agreements will have a 12 month term.
- 3.193 The NBN Co has indicated its intention to lodge its SAU with the ACCC for consideration in November 2011. The committee is of the view that the NBN Co should finalise its SAU and lodge it with the ACCC for assessment without further delay.

Competition and pricing for Small Retail Service Providers

- 3.194 The committee again received evidence about the ACCC decision to increase the POIs from 14 to 121. The committee noted the evidence it received on the impact of this decision on small RSPs to provide services in regional and remote areas, where there tends to be either limited or absent backhaul competition.
- 3.195 The committee also understands that in early August 2011, the NBN Co announced it will provide a rebate on capacity charges to alleviate the kind of barrier to entry concerns that were raised by small RSPs.

Basic Package Pricing

- 3.196 The committee notes that only a hand full of RSPs have released NBN pricing packages, with the cheapest of these packages starting at around \$35 per month delivering 12 Mbps of data.
- 3.197 The committee acknowledges that, while this price is comparable to the current cost of packages, the price may still be too high for low income households to gain access to the NBN. The committee also understands from the NBN Co Corporate Plan, that in time as take up of NBN services increases, the cost of these services is likely to decrease.
- 3.198 The committee is unaware of how the NBN Co arrived at its Connectivity Virtual Circuit (CVC) charge, and suggests the calculation of the CVC charge be explained and communicated to industry stakeholders by the NBN Co.

Voice Only Service

- 3.199 Under existing Universal Service Obligation (USO) arrangements, universal service providers are legally obliged to provide access to telephony services. Although they will continue to do so under the reformed USO arrangements, concerns were raised that voice only pricing plans under the NBN were not being offered more broadly by RSPs. Similarly, there are concerns that RSPs are choosing to bundle services and offer pricing on packaged services rather than a stand-alone voice only service. If consumers are only able to access bundled packages, parts of the Australian community may be disadvantaged should they wish to access voice services only.
- 3.200 The committee understands the ACCC will monitor voice only services as it is an important issue which impacts on a potentially large number of consumers.

Commercial-in-Confidence Material

3.201 The committee aims to avoid situations where it might form a view that relevant material was being withheld because it might be commercial-in-confidence. It believes that resolution of what items can be considered validly as commercial-in-confidence would assist in the examination of the rollout of the NBN. The committee noted the DBCDE's undertaking to examine the public interest test to assess whether material is commercial-in-confidence. The committee is yet to receive the DBCDE's advice on this question.

Access to Broadband Services in Regional and Remote Areas

Background

- 4.1 In its Concluding Comments in Chapter 2 of the First Report, the committee noted that improvement of information communication technology was important for economic productivity and growth in Australia. This is particularly the case for remote and regional areas where service delivery and commercial opportunities are often limited.¹
- 4.2 The First Report also included references to:
- Access to Government services in regional and remote Australia
 - Health
 - Education
 - In the longer term, economic development, growth and the vitality of local economies.
- 4.3 The committee recommended that the NBN Co Limited (NBN Co):
- Publish timeframes for the rollout of National Broadband Network (NBN) services to regional and remote areas and communicate these to the areas to which they apply.
 - Investigate the impact of transition to the NBN on currently available levels of service for satellite technology.

¹ Joint Committee on the National Broadband Network, First Report, August 2011, *Review of the Rollout of the National Broadband Network* (JCNBN), p. 54.

- Taking into consideration findings of the committee's investigation, formulate contingency plans against potential reduction of capacity in regional and remote areas as a consequence of the NBN rollout, if required.²
- 4.4 In addition to further discussion on these matters, the following related issues will be considered in this chapter:
- NBN Co's consultation with communities in regional and remote Australia, and
 - Government readiness for the NBN.
- 4.5 Access to the NBN in regional and remote Australia will be explored by outlining, by way of example:
- the views of Ninti One, an organisation based in Alice Springs;³
 - what the NBN will provide for Central Australia and for Julia Creek in Queensland, and
 - what the NBN might mean for the Broken Hill region, particularly in e-health and education.

Current Broadband Access

Ninti One Ltd

- 4.6 Evidence from Ninti One Ltd set out many of the problems facing people, especially Aboriginal people, in remote and regional places.⁴
- 4.7 Ninti One drew attention to the fact that, in the Northern Territory (NT), 'very few communities outside the growth towns have any access at all' to the Internet. This has the effect of severely limiting the capacity to improve health in remote areas because higher bandwidths are required to use tele-conference facilities. Ninti One stated that it was dealing with

2 JCNBN, p. 57.

3 Ninti One Ltd is a not-for-profit company, with headquarters in Alice Springs, working towards eliminating economic disadvantage in remote Australia. It works in the arts, tourism and pastoral industries to provide the knowledge base for the benefit of Australians living in remote areas.

4 Ms Jan Ferguson, Managing Director, Ninti One, Transcript of Evidence, Broken Hill, 27 July 2011, p. 1; Ninti One, *Submission 16*, p. 1. See JCNBN, pp. 47-48, for issues raised by Ninti One.

'abject poverty'. To change this, and increase access to markets and services, high speed, low cost Internet facilities are required.⁵

4.8 There are significant limitations to communications for small communities, despite provisions in the Universal Service Obligation (USO) for telephony and Internet access subsidies. There are also government programs in place to provide Internet access and training to remote Aboriginal and Torres Strait Islander communities. Ninti One noted that, while Internet access and speed are issues for remote Australia, so are:

- Access to basic telephony services, including mobile phones.
- Access to installation and maintenance services.
- High costs of Internet access.
- Access to training to improve digital literacy.⁶

4.9 In 2008, in partnership with the University of Wollongong, Ninti One developed a number of wireless mesh networking prototypes for communications in remote and regional areas, as well as applications to configure the mesh devices. Compatible with satellite technology, these mesh devices would have distributed the Internet at community level. Made with readily available components, the commercial cost would have been \$1000 per unit. At that time, telecommunication providers did not express any interest in this technology because investors were not interested in it.⁷

4.10 Ninti One noted that, while 93 per cent of Australia will have access to speeds of up to 100 megabits per second (Mbps) via fibre, remote Australia will receive speeds of up to 12 Mbps via wireless and satellite solutions. Ninti One believed that this will only provide minimal improvement to the availability of higher bandwidths, and would be unsatisfactory for use in video and multimedia applications. In turn, this could effectively limit opportunities for economic and social development in the arts, tourism and environment sectors.⁸

4.11 Ninti One was concerned that remote Australia was unlikely to experience the obvious social, educational and economic benefits of Internet

5 Ms Ferguson, Ninti One, Transcript of Evidence, Broken Hill, 27 July 2011, pp. 2, 3.

6 Ninti One, *Submission 16*, p. 3.

7 Ninti One, *Submission 16*, p. 7. Ms Ferguson, Transcript of Evidence, Broken Hill, 27 July 2011, pp. 2-3.

8 Ninti One, *Submission 16*, p. 5. See NBN Co, *Corporate Plan 2011-2013*, p. 93.

connectivity if some key issues were not addressed in planning for the NBN.⁹

4.12 Ninti One therefore recommended that the Government and NBN Co should explore all possibilities to provide connectivity to remote Australia, by:

- Exploring alternative technologies to provide information communication technology (ICT) solutions for remote settlements.
- Commissioning a report to establish a program to serve remote Australia to assist with the implementation of cost-effective ICT solutions.
- Including provisions for Internet access in Government assistance programs for shared community Wi-Fi networks, community-level account holders and billing options.
- Providing additional funding for ICT training for Aboriginal and Torres Strait Islander communities.¹⁰

Satellite Services

Interim Satellite Services

4.13 NBN Co's Interim Satellite Service (ISS) was launched on 1 July 2011 using existing commercially available, but limited, KU Band satellite capacity and current ground equipment technology. The ISS covers 100 per cent of the Australian land mass.¹¹ Under the ISS, the satellite equipment and installation will be provided by NBN Co, at no cost to the end-user for a standard installation.¹² These services are available to consumers through NBN Co's Satellite First Release contracts with Optus and IPStar, agreements finalised on 6 May 2011.¹³

9 Ninti One, *Submission 16*, p. 3. Ms Ferguson, Transcript of Evidence, Broken Hill, 27 July 2011, p. 4.

10 Ninti One, *Submission 16*, p. 8.

11 NBN Co, *Submission 2.5* p. 12.

12 Shareholder Ministers (Senator the Hon Penny Wong and Senator the Hon Stephen Conroy), *Submission 19*, p. 6.

13 Shareholder Ministers, *Submission 19*, p. 6.

- 4.14 The ISS aims to offer retail service providers a wholesale broadband service designed for peak access speeds of 6Mbps downlink and 1Mbps uplink.
- 4.15 The Department of Broadband, Communications and the Digital Economy (DBCDE) stated that these services exceed the quality of the product that the Australian Government offered under the Australian Broadband Guarantee.¹⁴ The NBN Co Corporate plan forecasts 33 000 connected end users in the first two years of the launch with approximately 250 000 eligible end users based on current eligibility criteria.¹⁵ The NBN Co stated that over 800 users are accessing the ISS, with positive reports being received.¹⁶
- 4.16 Additional capacity, a wider range of plans and more service providers are expected to be available through the ISS after its development and promotion phase ends in November 2011. The ISS is scheduled to run until 2015, when NBN Co plans to launch two of its own high-capacity satellites to provide a Long Term Satellite Service (LTSS). The LTSS will aim to offer retail service providers a wholesale broadband service, which is designed for peak download access speeds of 12Mbps.¹⁷

Long Term Satellite Services

- 4.17 The Long Term Satellite Service (LTSS) will include features such as increased capacity and return path speeds that are expected to support large file transfers and real time video communications. E-health and e-learning applications, such as interactive distance learning multicast applications will be supported over the LTSS.¹⁸ NBN Co has confirmed that multicast services and commercial grade services will also be available:

Just to put the committee's mind at rest, [the LTSS] is a very capable service. These are satellites ... that can do videoconferencing and multicast so it is a full-functional service.¹⁹

14 Mr Peter Harris, Secretary, Department of Broadband, Communications and the Digital Economy (DBCDE), Transcript of Evidence, Sydney, 24 October 2011, p. 9.

15 NBN Co, *Submission 2.5*, p. 12.

16 Mr Mike Quigley, Chief Executive Officer, NBN Co, Transcript of Evidence, Canberra, 13 October 2011, p. 2.

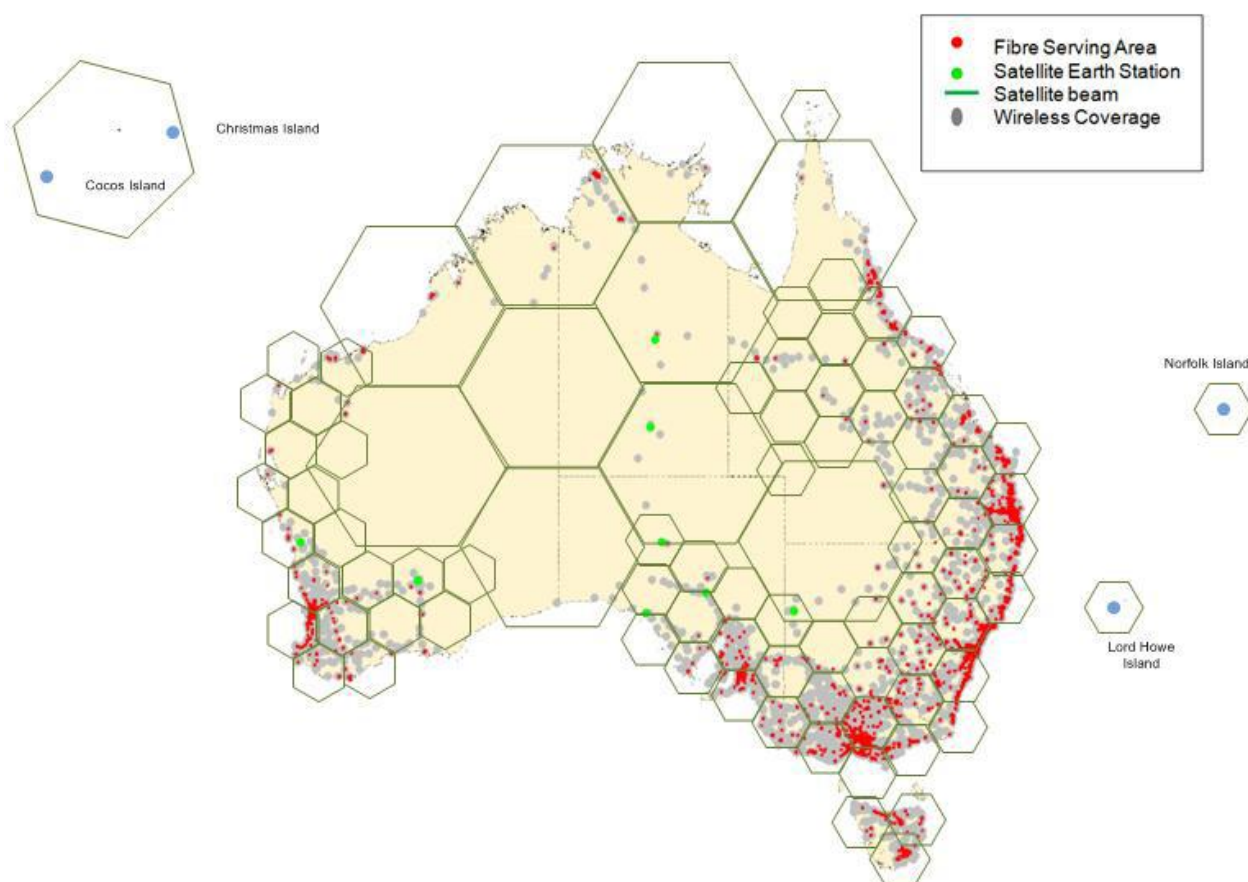
17 NBN Co, *NBN Co launches Interim Satellite Service for rural and remote Australians*, Media Release 1 July 2011.

18 Department of Broadband, Communications and the Digital Economy, *Submission 3.3*, p. 10.

19 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 4.

- 4.18 The NBN Co began the tender process for the space segment of the LTSS on 6 September 2011, with the ground segment tender process commencing 'fairly soon'.²⁰
- 4.19 An illustrative spot beam coverage map provided in Figure 4.1 shows the projected satellite spot beams that match the projected take up distribution. Importantly, no single national beam is planned.

Figure 4.1 Illustrative Satellite Footprint



Source NBN Co, Product Overview – Satellite Access Services, August 2010, p. 16.

- 4.20 Some regional and remote communities expressed scepticism about the delivery and success of promised services.²¹ The Mayor of Central Darling Shire, Mr Paul Brown commented that:

As part of the communications network, we now have fibre cables running past most of our townships. If they are or are not

²⁰ Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, p. 2.

²¹ Mayor Paul Brown, Central Darling Shire Council, Transcript of Evidence, Broken Hill, 27 July 2011, p. 17.

connected to fibre, how will they get greatly improved satellite services when the ones who have been promised already are not operating in many cases?²²

- 4.21 To address such concerns, NBN Co held various information sessions in communities identified for the NBN rollout over a twelve month period. However, Mr Mike Quigley, Chief Executive Officer (CEO) of NBN Co expressed reluctance for NBN Co to provide satellite communities with advice on the costs associated with wireless or fibre connections:

The difficulty we have is that we are getting many requests from people in a satellite footprint asking what it would cost for wireless or fibre instead and from people in a wireless footprint asking what it would cost for fibre. These are not easy exercises to do, and they are all what-if questions. Each time we answer them we take up the resources of a company that is not getting on with planning the actual rollout. That is the difficulty we have.²³

- 4.22 Despite providing some material to the committee about the extension of the NBN to Julia Creek in Queensland in September 2011, Mr Quigley also expressed concerns about providing advice of this kind to the committee in the future. Issues involved in extending the NBN will be addressed later in this chapter.²⁴

- 4.23 Similarly, NBN Co advised that it could not make a decision about using the Central Australian backbone cable running from Western Australia to the east coast to service remote communities with a wireless network as opposed to the identified satellite service. The NBN Co stated, the decision to extend wireless services of this kind 'would be one for the government ... given the likely significant additional investment required to do so'.²⁵ NBN Co stated that the cost in resources

...to examine this technical option would involve a substantial diversion of resources for the company and NBN Co would need to be directed by government to look at this option as it is a policy decision.²⁶

- 4.24 Further, Mr Michael Wilson, of M&S Consultants, commented that the long term satellite's KA bandwidth (in contrast to the current KU

22 Mayor Brown, Central Darling Shire Council, Transcript of Evidence, Broken Hill, 27 July 2011, p. 18.

23 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 13 October 2011, p. 18.

24 NBN Co, *Submission 2.3*.

25 NBN Co, *Submission 2.5*, p. 23.

26 NBN Co, *Submission 2.5*, p. 23.

bandwidth) suffers from 'rain fade'. The KA bandwidth is not therefore recommended for humid regions because it cannot penetrate areas of high precipitation.²⁷ Responding to a question about current bandwidth concerns, NBN Co stated that:

Given NBN Co intends to launch two KA Band satellites to provide NBN wholesale broadband services, current constraints on bandwidth are not relevant.²⁸

4.25 Additional issues relating to the provision of satellite services will be addressed below.

Access to Government Services

4.26 In June 2009, Senator the Hon Stephen Conroy, the Minister for Broadband, Communications and the Digital Economy (the Minister), announced a competitive tender process for the \$60 million Digital Regions Initiative. This program aimed to provide the benefits of digital education, health and emergency services in regional and remote Australia. The Minister announced that:

The National Broadband Network will deliver high-speed broadband to all Australians, no matter where they choose to live or work and the Digital Regions Initiative will drive important developments to enable the productive benefits on offer.²⁹

4.27 Examples of possible initiatives included, but were not limited to:

- Remote medical consultation, diagnosis and treatment to address regional skills shortages and enhance patient care.
- Digital resources and services such as teleconferencing to improve access to educational opportunities for regional, rural and remote students and teachers.

27 Mr Michael Wilson, Director, M&S Consultants Pty Ltd, Transcript of Evidence, Broken Hill, 27 July 2011, p. 12.

28 NBN Co, *Submission 2.4*.

29 Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, '\$60 million to drive digital services for regional, rural and remote Australia', *Media Release*, 15 June 2009.

- Digital technologies to improve emergency and disaster response.³⁰

4.28 Addressing the IBM Smart Government conference, the Minister stated that, as the NBN was rolled out:

...it will allow new and innovative Government service delivery models, reducing costs and increasing consumer satisfaction. Over time, clients in both metropolitan and regional areas will be able to obtain services online instead of travelling to a Government shopfront. By helping people transact with government online, frontline service delivery workers will have more time and resources for tailored and face-to-face services for those who need special assistance. It will free up staff, while allowing clients to choose when and how they interact, in turn freeing them from the constraints of physically attending appointments. This will save them time, money and stress.³¹

4.29 In the *National Digital Economy Strategy*, the DBCDE stated that:

Effective participation in the digital economy by Government can reduce costs, increase customer satisfaction and promote innovation. Encouraging people to access Government services online, and making it easier for them to do so, increases people's digital confidence and digital literacy. This makes it easier for Government to facilitate online engagement and collaboration with citizens to improve service delivery or provide input into policy and regulatory matters.³²

4.30 In July 2011, the Minister announced that the 2011-12 Regional Telecommunications Review (the Review) would examine 'telecommunication services in regional, rural and remote parts of Australia'. The Review will pay particular regard to 'initiatives that will enable regional communities to participate in, and realise the opportunities of, the digital economy.'³³

30 Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, '\$60 million to drive digital services for regional, rural and remote Australia', *Media Release*, 15 June 2009.

31 Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, Address to IBM Smart Government, 22 June 2011, p. 1.

32 *National Digital Economy Strategy: Leveraging the National Broadband Network to drive Australia's Digital Productivity*, Department of Broadband, Communications and the Digital Economy, 2011, p. 7.

33 Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'Rosemary Sinclair to Chair 2011-2012 Regional Telecommunications Review', *Media Release 2011/213*, 8 July 2011.

- 4.31 The Review's terms of reference asked it to report on the adequacy of telecommunications services in regional and remote parts of Australia, as well as 'the opportunities that the NBN creates' in improving the delivery of health and education, growth in local economies, business efficiencies, and government services and programs. The Review is to report to the Minister by 5 March 2012.³⁴

Local Government

- 4.32 The Mayor of Central Darling Shire Council (CD Shire Council) noted that, although the Shire was large in size, none of its towns were large enough to support retail services such as car dealers or television and furniture shops. The Mayor stated that local government needed access to State Government entities, retaining access if service provisions changed. In July 2011, the Council was uncertain whether the Shire would get fibre, wireless or satellite, but it noted that there are concerns about each of these solutions. The Council has installed an optic cable so that its mainframe can work between its facilities.³⁵
- 4.33 The CD Shire Council Mayor also raised the issue of current difficulties with existing Telstra connections, and the provision of both Asymmetric Digital Subscriber Line (ADSL) and mobile phone services. The CD Shire Council highlighted that, while towns in the region had fibre running past them, they would not be connected to it, raising the issue of the availability of the 'greatly improved satellite services'.³⁶
- 4.34 While the Australian Local Government Association has developed and released guidelines for councils about their relationship with the NBN, and how to be ready to receive it, the Broken Hill City (BHC) Council, for example, does not have the resources to be able use this material.³⁷
- 4.35 The BHC Council has been a strong advocate of the construction of the Regional Backbone Blackspots Program (RBBP) backhaul infrastructure (mid to long distance transport of data from different locations back to a more central location). As part of an NBN-enabling rollout, in July 2011,

34 Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'Rosemary Sinclair to Chair 2011-2012 Regional Telecommunications Review', *Media Release 2011/213*, 8 July 2011.

35 Mayor Brown, Central Darling Shire Council, Transcript of Evidence, Broken Hill, 27 July 2011, pp. 21, 22.

36 Mayor Brown, Central Darling Shire Council, Transcript of Evidence, Broken Hill, 27 July 2011, p. 18.

37 Mr Frank Zaknich, General Manager, Broken Hill City Council, Transcript of Evidence, Broken Hill, 27 July 2011, p. 31. See JCNBN, pp. 48-49.

construction of the RBBP backhaul in Broken Hill was expected to be finished by September 2011. Broken Hill is included in the NBN fibre footprint.³⁸

4.36 BHC Council recommended that the committee:

- request the Government and NBN Co to provide funding for partnership for regional and remote local governments to assist them 'to understand, develop and progress' digital economy strategies for particular regions, and
- make representations to NBN Co to consider key strategic locations, including Broken Hill, for the priority rollout of the NBN to properties, not just for backhaul infrastructure.³⁹

4.37 In an effort to address internet availability in the city, the BHC Council has partnered with its local electricity provider (which has its own fibre optic network) to service more remote sites: the airport, swimming pool and library. In addition to these sites, the NBN will also be required to support a whole range of businesses in Broken Hill, including the film studio.⁴⁰

4.38 The BHC Council's operations are limited for its 200 users at various sites by an ADSL2 service as it operates intermittently. Tele-working is also limited, so that the 100 Mbps of the NBN, or even half that amount, would improve the current situation. The possibility of video or teleconferencing would also be of great benefit to the Council.⁴¹

Extending the Fibre Footprint

4.39 The NBN fibre footprint covers 93 per cent of all Australian premises⁴² and includes communities with more than 1000 premises, and communities

38 Mr Zaknich, Broken Hill City Council, Transcript of Evidence, Broken Hill, 27 July 2011, pp 30, 33.

39 Mr Zaknich, Broken Hill City Council, Transcript of Evidence, Broken Hill, 27 July 2011, pp 30, 31.

40 Mr Zaknich, Broken Hill City Council, Transcript of Evidence, Broken Hill, 27 July 2011, p. 32.

41 Mr Zaknich, Broken Hill City Council, Transcript of Evidence, Broken Hill, 27 July 2011, p. 32. 'Tele-working' is work conducted away from a designated place of business, using telecommunications as a substitute for travel.

42 NBN Co, NBN Co Corporate Plan 2011-2013, p. 12.

with greater than 500 premises where transit backhaul passes near such communities.⁴³

- 4.40 The NBN Co has been asked by the Government to consider implementing a process which would provide users, or other entities, such as local and state governments with the opportunity to consider paying to extend the fibre network, based on a costing by NBN Co.⁴⁴
- 4.41 If NBN Co is to go into first and second release sites, it engages directly with interested councils to answer questions from such bodies, and others, on progress on the NBN rollout.
- 4.42 By early September 2011, 284 local government bodies had engaged with NBN Co, either individually, via local regions of council bodies, or through Regional Development Australia committees. While the NBN Co is receiving requests to extend the NBN from suburban councils, most such requests are from regional bodies.⁴⁵
- 4.43 The NBN Co advised that, while there has been 'some general interest' from councils in extending the fibre network, it had not yet established a mechanism for larger expectations that would require building additional fibre access nodes. The NBN Co expected that it would recover the incremental cost of extending the fibre network to premises beyond the planned 93 per cent of premises.⁴⁶
- 4.44 The NBN Co also advised that its NBN rollout schedule is based on a 'complex mix of factors', including Government requirements such as regional focuses, the availability of Telstra's infrastructure, the path of the transit network and the construction capability in any given area.⁴⁷
- 4.45 In its First Report, the committee noted that Julia Creek, Queensland is defined as a 'district rural activity centre'. Julia Creek has educational and health services, and acts as a hub for a 40 000 square kilometre area that supports about 1000 residents. The NBN fibre cable has been laid and passes through Julia Creek, but the town will not be connected to the fibre network.

43 NBN Co, *Submission 2.3*, p. 1. Provision of NBN services to Julia Creek, Queensland, was discussed in JCNBN, pp 51-52.

44 NBN Co, *Submission 2.3*, p. 2.

45 NBN Co: Mr Quigley, Transcript of Evidence, Canberra, 20 September 2011, p. 6; *Submission 2.5*, p. 2.

46 NBN Co: *Submission 2.4*, p. 1; Mr Quigley, Transcript of Evidence, Canberra, 20 September 2011, p. 14.

47 NBN Co, *Submission 2.5*, p. 2.

- 4.46 In correspondence to the committee⁴⁸, Mr Paul Woodhouse, Mayor of the McKinlay Shire Council, put the view that Julia Creek would benefit from inclusion in the NBN fibre footprint as it would enable provision of better health services, and allow for improved communication for the pastoral industry across great distance.
- 4.47 Moreover, Mr Woodhouse provided a list of other small towns in Queensland and the NT that could not be included in the fibre footprint, and would benefit from a fibre or satellite connection to the NBN.⁴⁹
- 4.48 The NBN Co advised that with only 271 eligible premises, Julia Creek does not qualify for the provision of fibre. Subject to final design, premises in Julia Creek would be connected to the NBN by fixed wireless technology. The NBN Co estimated the total cost of providing fibre to premises in Julia Creek to be \$1.14 million. This estimate does not include capitalised leases for access to Telstra ducts, or electricity poles required to complete the build.⁵⁰
- 4.49 Under current policy, if a premise is just outside the fibre footprint, at an additional cost, NBN Co can extend the fibre footprint 'a little further.' As there is no fibre access node covering Julia Creek, a new one would have to be constructed. The implications of this process have not been discussed with the Government, and it would be starting materially to increase the percentage of the continent to be provided with fibre.⁵¹
- 4.50 The NBN Co advised that costings for extensions to the NBN fibre network are not 'trivial' exercises, and that:
- Preparing costings around individual propositions is a significant diversion of resources and NBN Co is therefore only intending to do so for locations contiguous with our rollout and when we receive an application under a properly defined process.⁵²
- 4.51 In later correspondence to the committee, Mr Paul Woodhouse stated that the estimated \$1.14 million to include Julia Creek within the NBN fibre footprint 'is certainly beyond the means' of the shire council 'within the

48 Mr Paul Woodhouse, Mayor, McKinlay Shire Council, Julia Creek, Queensland, Correspondence, 22 March 2011.

49 JCNBN, First Report, August 2011, p. 51.

50 NBN Co, *Submission 2.3*, pp 1, 2.

51 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, pp 7 and 14.

52 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 13 October 2011, p. 18; NBN Co, *Submission 2.3*, p. 2.

short term' and that 'council remains committed to exploring any avenue in order to bring benefit to the community by this advanced technology.'⁵³

- 4.52 Mr Paul Woodhouse asked for consideration to be given to additional modelling for inclusion of Julia creek to the fibre footprint 'to better assess the gap required in financial terms, and so estimate the level of any co contribution.'⁵⁴

Government Readiness for the NBN

- 4.53 The Department of Prime Minister and Cabinet and the DBCDE are working closely with all Government agencies responsible for Digital Productivity Issues, and, to ensure that Australian Government organisations are ready for the rollout of the NBN. Government agencies on other programs and initiatives are also involved in this process.⁵⁵
- 4.54 More generally, the Government recognises that the NBN will be a significant piece of critical infrastructure that will underpin the provision of a range of essential community services. NBN Co has therefore been requested to consult with law enforcement and security agencies to ensure that national security and resilience considerations are taken into account in the design and operation of the network.⁵⁶
- 4.55 In building the network, NBN Co is providing appropriate redundancy in its core and transmission links to maintain service in the event of an accident or power loss. For example, if a fibre transmission link is cut, network traffic can be diverted via a redundant link to maintain services.⁵⁷
- 4.56 To maintain access to phone services for home users and small businesses during blackouts, the Government intends to undertake consultation with stakeholders, including emergency services, on the appropriate way of ensuring access to battery backup for those who need it. In the interim, NBN Co will deploy a mandatory battery backup unit that will support continued provision of voice services via the voice port on the network termination device during a power outage. The battery is expected to last

53 Mr Woodhouse, McKinlay Shire Council, Julia Creek, Queensland, Correspondence, 26 October 2011.

54 Mr Woodhouse, McKinlay Shire Council, Julia Creek, Queensland, Correspondence, 26 October 2011.

55 DBCDE, *Submission 3.3*, p. 7.

56 DBCDE, *Submission 3.3*, p. 5.

57 DBCDE, *Submission 3.3*, p. 5.

for approximately five hours, based on a high level of talk time during that period, to support the provision of voice services for those who need them.⁵⁸

- 4.57 The national telephone-based emergency warning system, Emergency Alert, enables participating States and Territories to issue warnings to telephones linked to addresses within a geographical area affected by an emergency.⁵⁹
- 4.58 Warnings to landline (voice) and mobile (text) telephones are sent using service/customer address information that is drawn from the Integrated Public Number Database (IPND). The Emergency Alert Service will continue to operate over the NBN to warn people of an emergency. The Government is continuing to work to ensure that the national Emergency Alert system remains fully effective, including information provided from the IPND.⁶⁰
- 4.59 The NBN Co's Points of Interconnect, the majority of which will be located within existing Telstra exchange facilities, are secure locations with appropriate backup power to support the continued operation of services to premises in the event of blackouts.⁶¹

Postal Services

- 4.60 In its August 2011 report *Broadening the debate*, the House of Representatives Standing Committee on Infrastructure and Communications (the Infrastructure and Communications Committee) drew attention to the 'transitional and transformational issues' that will result from wider access to broadband. In particular, that Committee flagged the impact of such change on Australia's postal sector.⁶²
- 4.61 The Infrastructure and Communications Committee was told that the Internet, from a platform of access to superfast broadband, is impacting on postal operations world-wide, including in Australia. Businesses, especially those that have traditionally been large users of postal services, are 'actively substituting' physical forms of communication for electronic ones.⁶³

58 DBCDE, *Submission 3.3*, p. 5.

59 DBCDE, *Submission 3.3*, p. 6.

60 DBCDE, *Submission 3.3*, p. 6.

61 DBCDE, *Submission 3.3*, p. 5.

62 See the Infrastructure and Communications Committee: *Broadening the debate: Inquiry into the role and potential of the National Broadband Network*, August 2011, p. 285.

63 Infrastructure and Communications Committee, pp. 285-286.

- 4.62 The Infrastructure and Communications Committee was also told that Australia Post (AustPost) had embarked on a process of organisational restructuring that will see it commit \$20 million over three years to prepare its 40 000 employees for 'repositioning and new areas of business.' That committee noted that there has been a significant decrease in regular mail volumes as a result of Internet services, but that this had been offset to some extent by a significant increase in parcel post stimulated by the increased online purchasing.⁶⁴
- 4.63 The Infrastructure and Communications Committee noted that the Government had been urged to examine actively what measures can be developed to help Australia's postal service to reposition itself in the face of this technological change. That committee recommended:
- That the Government develop a long term strategy to up-skill and/or retrain the existing workforce and develop new training programs to address emerging skills gaps.⁶⁵
- 4.64 These technological changes have already impacted on the approximately 3000 licensed post offices (LPOs) across Australia which account for about 80 per cent of AustPost's network. It is 'quite typical' for a post office in regional Australia to serve people in a 50 or 100 kilometre radius.⁶⁶
- 4.65 Typical manual LPOs are small, serving rural and remote communities. They cannot perform such transactions as:
- Electronic funds transfers.
 - Commonwealth Bank debit card deposits/withdrawals.
 - Mobile phone top-ups.
 - Proof of identity transactions.
 - Local, State or Federal Government services.
 - Business banking.⁶⁷
- 4.66 The Post Office Agents Association Ltd (POAAL) stated that, if the NBN is to be Australia's next major infrastructure project, it should be used to help maintain or improve the existing infrastructure. Of the 3000 LPOs in its retail network, 464 do not have access to AustPost's electronic point-of-

64 Infrastructure and Communications Committee, p. 286.

65 Infrastructure and Communications Committee, Recommendation 16, p. 289.

66 POAAL, *Submission 4*, p. 1; Mr Ian Kerr, Chief Executive Officer, POAAL, Transcript of Evidence, Melbourne, 28 July 2011, p. 5. See JCNBN, pp. 52-53.

67 POAAL, *Submission 4*, p. 4.

sale (EPOS) system. The 'vast majority' of these are in regional and remote Australia. EPOS has not been installed because these LPOs process a small number of transactions per year: typically, less than 2500. If there are under 10 000 transactions per year, the owner/operator pays a 'shortfall fee' to AustPost.⁶⁸

4.67 According to AustPost, the approximate cost of installing EPOS in an LPO is \$20 000. Costs associated with the facility include:

- Installing and maintaining the data connection, which is the major cost.
- Computer hardware.
- Training.
- Ongoing help and support.⁶⁹

4.68 As a result of AustPost's guidelines, licensees without EPOS have to be prepared to put up funds to have it installed themselves and hope that their businesses will provide returns.⁷⁰

4.69 The POAAL noted that AustPost is in the process of upgrading its EPOS network to a system that needs more bandwidth than the existing system. The POAAL's members complain that the new system is too slow and that it lacks bandwidth for high speed data communications.⁷¹

4.70 The POAAL stated that access to high speed data connections at low cost by the NBN would reduce a significant cost barrier to the installation of EPOS in small LPOs. This would be 'of immediate and enduring benefit' to local communities, and the owners/operators of LPOs.⁷²

4.71 The POAAL believed that communities served by LPOs without EPOS are not able to access the full range of AustPost services, including financial services. It also believed that LPOs in regional and remote Australia are still viable business options, provided that they can offer a full range of products.⁷³

4.72 Without access to AustPost's electronic network, and all its products and services, it is unlikely that the numbers of transactions of a manual LPO

68 POAAL, *Submission 4*, p. 4; Mr Kerr, POAAL, Transcript of Evidence, Melbourne, 28 July 2011, pp. 3, 4.

69 POAAL, *Submission 4.1*, p. 3; *Submission 4*, p. 4.

70 Mr Kerr, POAAL, Transcript of Evidence, Melbourne, 28 July 2011, p. 3.

71 Mr Kerr, POAAL, Transcript of Evidence, Melbourne, 28 July 2011, p. 4.

72 POAAL, *Submission 4*, pp. 4-5.

73 POAAL, *Submission 4.1*, p. 3; Mr Kerr, POAAL, Transcript of Evidence, Melbourne, 28 July 2011, p. 3.

would ever increase sufficiently to meet the minimum criteria for the installation of EPOS.⁷⁴

- 4.73 The greater the range of services offered by LPOs, the more viable they are as businesses. Manual LPOs are at greater risk of closure than those with EPOS and, if they close, communities can lose more than the services they provide. This includes the jobs of those who worked there and the 'knock-on' effects for other businesses and services. In very small communities, the post office is often the only shop in town.⁷⁵
- 4.74 Postal services are evolving with advances in technology and the growth of e-commerce. As they do not have EPOS, manual LPOs are not part of AustPost's 'track-and-trace' network. Remote and regional communities do not have easy access to many retailers and, where products are not available locally, customers increasingly use the internet to find them. LPOs are often involved in delivering these products.⁷⁶
- 4.75 The POAAL drew attention to the changing nature of postal services, noting that the greater availability of broadband internet has been linked to falling numbers of letters posted. Nevertheless, addressed mail continues to be important for businesses, and parcel services are becoming an increasingly important distribution channel for businesses, especially those online. It was estimated that parcel numbers have grown about 10 per cent per year over the last six years. POAAL suggested that increased broadband access would 'probably stimulate e-commerce, resulting in increased numbers of parcels.'⁷⁷
- 4.76 Major banks have closed many of their smaller branches outside major centres, so that communities have come to rely on the post office to withdraw cash. The POAAL believed that access to a greater range of banking options would have positive effects on other local businesses.⁷⁸
- 4.77 The POAAL was in favour of strengthening the network of post offices by reducing the cost of installing EPOS as this would provide AustPost with 'a true electronic network' across the country. This would enable communities to benefit from the NBN, even if individuals do not have access to the internet. If this electronic network became more widely
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74 POAAL, *Submission 4*, p. 4.

75 POAAL, *Submission 4*, p. 5; Mr Kerr, POAAL, Transcript of Evidence, Melbourne, 28 July 2011, p. 5.

76 POAAL, *Submission 4*, p. 5.

77 POAAL, *Submission 4.1*, p. 3; Mr Kerr, POAAL, Transcript of Evidence, Melbourne, 28 July 2011, p. 3. The Infrastructure and Communications Committee also noted the 'significant increase' in parcel post from the increase in online purchasing: *Broadening the debate*, p. 286.

78 POAAL, *Submission 4*, p. 5.

available because the NBN reduced installation costs, it would assist in removing some of the disparities between metropolitan and regional/remote areas.⁷⁹

Health

4.78 In an address to the Ehealth summit in 2010, the Minister noted that the NBN:

...will revolutionise the way health services can be delivered to people in their homes whether by their GPs, specialists and other health professionals, or as outpatients from the hospital system. Telehealth can assist aged people to stay in their homes longer, thereby reducing admissions to aged care facilities and improving their quality of life.⁸⁰

4.79 In the Digital Strategy, the DBCDE noted that the NBN will provide:

...a platform that allows homes, doctors' surgeries, pharmacies, clinics, aged-care facilities and allied health professionals to connect to affordable, reliable, high-speed and high-capacity broadband. This is a major opportunity to improve the way healthcare is delivered in Australia.⁸¹

4.80 According to the Digital Strategy, the NBN will also:

...assist in improving health service delivery, delivering care to the home, enabling innovation in healthcare, facilitating widespread adoption of electronic records and reducing funding pressures on the health system. The NBN will also enable the connection of health clinics and facilities in regional Australia with major metropolitan health institutions, increasing the availability of remote consultation services.⁸²

79 POAAL, *Submission 4*, pp. 5-6.

80 Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, Address to Ehealth summit, 1 December 2010, p. 1.

81 The Digital Strategy, p. 33.

82 The Digital Strategy, p. 33.

- 4.81 The Digital Strategy quoted an Access Economics study from 2010 that analysed the potential impacts of tele-health⁸³ under the NBN, identifying a range of benefits including:
- Medical effectiveness.
 - Decreased travel to attend medical appointments.
 - Increased employment.
 - Ongoing benefits to Australia of between \$2 billion to \$4 billion per year.⁸⁴
- 4.82 With its partner, the University of New England, NBN Co has already been able to demonstrate remote medical training, with positive responses.⁸⁵
- 4.83 In its August 2011 report, the Infrastructure and Communications Committee commented that health 'is undoubtedly seen as the sector that will benefit most from the NBN'.⁸⁶
- 4.84 The Infrastructure and Communications Committee noted various tele-health applications that already exist or that will become feasible via the NBN. These include:
- Remote consultations, diagnostics and treatment.
 - Electronic storage and transmission of medical data.
 - In-home monitoring.
 - Rehabilitation and preventative health.
 - Aged care.
 - Mental health.⁸⁷

83 'The term Tele-health refers to healthcare delivery, or closely related processes (such as education), when some of the participants are separated by distance and information and communications technologies are used to overcome that distance ... Tele-health is usually considered to be a subset of e-health, which refers to the use of Information and Communications Technologies (ICT) in healthcare. A primary focus of e-health is the implementation and use of Electronic Medical Records.' See the Infrastructure and Communications Committee, *Broadening the debate*, p. 23.

84 The Digital Strategy, p. 33.

85 NBN Co, *Submission 2.5*, p. 11.

86 The Infrastructure and Communications Committee, p. 23.

87 See the Infrastructure and Communications Committee, Chapter 3, pp. 37-45, for details of these applications.

- 4.85 The Infrastructure and Communications Committee also noted that other benefits would also follow from the rollout of the NBN, including:
- Improved service in regional areas.
 - Attraction, retention and use of health professionals in regional and remote areas.
 - Continued development of e-health records.
 - Improved medical education.⁸⁸
- 4.86 In addition, the Infrastructure and Communications Committee commented that the availability of 'fast and ubiquitous broadband' will change the delivery of health services in Australia by enabling more efficient delivery of services. This would result in savings of costs and time for both citizens and providers. It would also enable better access to services for those isolated by distance or incapacity, 'resulting in improved health outcomes and enhanced quality of life.'⁸⁹
- 4.87 The Infrastructure and Communications Committee observed that the ability to deliver health services more efficiently is extremely important for an ageing population, and for related increases in healthcare spending. It referred to estimates of possible savings, including a report by the United Nations Educational, Scientific and Cultural Organisation (UNESCO), indicating that savings of between 10 and 20 per cent were possible in a range of ways, from reduced hospital admissions to more productive use of the stretched medical workforce.⁹⁰
- 4.88 Capgemini Australia Ltd, a Melbourne consulting, technology and outsourcing company, noted that use of e-technologies could lower health costs and could be achieved through:
- appropriate patient monitoring in the home to reduce service delivery costs and overcrowding;
 - use of the Personally Controlled Electronic Health Record;
 - implementation of joint ventures for driving back office efficiencies, and
 - changes to the performance model of funding for hospitals and clinicians.⁹¹

88 See the Infrastructure and Communications Committee, Chapter 3, pp. 45-54, for details of these benefits.

89 Infrastructure and Communications Committee, p. 57.

90 Infrastructure and Communications Committee, p. 57.

91 Capgemini Australia Ltd, *Submission 15*, p. 3.

- 4.89 Capgemini suggested that, through the use of high speed symmetrical broadband, patients with diabetes, kidney disease, heart disease and asthma could be monitored in their homes in consultation with their practitioners.⁹²
- 4.90 This would require the development of specific applications to enable:
- patient and practitioner to connect;
 - secure transportation of results and supporting images;
 - provision of referrals, and
 - connections to local practitioners for support.⁹³
- 4.91 Capgemini made reference to concerns of medical practitioners in remote South Australia that the full benefits of e-health will not be available because of a reliance on satellite services. The NBN Co stated that it was seeking to provide a good high speed satellite service, one that is capable of high definition videoconferencing. The NBN Co added that, through its satellite service, the special e-health needs of regional and remote communities were being addressed.⁹⁴

Workforce Issues in ICT Education

- 4.92 Capgemini stressed that ICT professionals must be available to undertake development and implementation of applications within Australia. They must also be able to live and work within governance frameworks for privacy and security. The firm was therefore concerned that a shortage of ICT skills could have an impact on the benefits of the NBN for e-health.⁹⁵
- 4.93 In this context, Capgemini noted that, while it used to have the largest intake of ICT students in Australia, Monash University had halved the size of its ICT department three years ago. Only two Australian universities are now providing specific ICT e-health development programs, leading to concerns that insufficient graduates might be available to meet the markets' needs. The firm provided information that, between 2000 and 2004, university ICT places declined in South Australia by 50 per cent and in Western Australia by 38 per cent. Capgemini noted

92 Capgemini, *Submission 15*, p. 3.

93 Capgemini, *Submission 15*, p. 3.

94 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, pp. 20-21.

95 Capgemini, *Submission 15*, p. 3; Mrs Shelley Oldham, Vice-President, Head of Public Sector, Transcript of Evidence, Melbourne, 28 July 2011, p. 9.

that graduates from this period would have been entering the workforce by 2008 at the latest.⁹⁶

Far West Local Health District Board

- 4.94 The Far West Local District Health Board (FWLDHB) is based in Broken Hill and looks after approximately 35 000 people. It has state-of-the-art equipment: Internet connections and facilities for videoconferencing, so that it does a lot of its business by video link. While Medicare benefits are now available to support video-conferencing from remote locations, FWLDHB cannot support all the tertiary services that are needed. Outside expertise is brought in, and much can be done by video-conferencing, but high quality connections are required.⁹⁷
- 4.95 Wilcannia and Broken Hill were pilot sites for the NSW tele-health initiative at a time when FWLDHB was struggling to provide services to remote communities. Tele-health was introduced to bridge the gap between metropolitan and remote and regional sites. In 1995, FWLDHB was able to provide services between Broken Hill and Wilcannia, so that there were at least 54 video-conferencing tele-health service and facilities that have been maintained. Since then, technology has advanced significantly.⁹⁸
- 4.96 As FWLDHB cannot presently connect its videoconference facilities to its metropolitan partners, it is losing access to clinical services for its communities. Almost every videoconference is interrupted in some way by either image degradation or interruptions to connections or the sound. FWLDHB cannot retain its reputation in medicine if it cannot keep up its technological connections.⁹⁹
- 4.97 There has also been degradation of professional medical education because connections are not adequate for peripheral sites in FWLDHB's area to participate in interactive environments. More generally, FWLDHB has found that if quality services are not provided, participants tend to drop out. FWLDHB commented that if it cannot deliver a service that

96 Mrs Oldham, Capgemini Australia Ltd, Transcript of Evidence, Melbourne, 28 July 2011, pp. 9, 8; Capgemini, *Submission 15.1*, p. 1.

97 Dr Stephen Flecknoe-Brown, Chairman, Far Western Local Health District Board (FWLHDB), Transcript of Evidence, Broken Hill, 27 July 2011, pp. 41, 40. See JCNBN, p. 46.

98 Ms Sharyn Cowie, Manager, Tele-health, and Acting Manager, Electronic Medical Record Support Team, FWLHDB, Transcript of Evidence, Broken Hill, 27 July 2011, p. 41.

99 Dr Flecknoe-Brown, FWLHDB, Transcript of Evidence, Broken Hill, 27 July 2011, p. 41.

engages the participants, 'then it is almost as bad' as not being able to access the service anyway.¹⁰⁰

Royal Flying Doctor Service, South Eastern Section

4.98 The Royal Flying Doctor Service, South Eastern Section (RFDS SE) provides health care to some of the most isolated people and communities, with some of the worst health indicators, in the country. The RFDS SE commented that:

To say that our clients are disadvantaged in health is an understatement. And the difference in health outcomes in these populations lies primarily in access to, and the use of, health services.¹⁰¹

4.99 The RFDS SE is committed to providing the best possible health care to Australians living, working and travelling throughout far-west NSW, south-west Queensland and north-east South Australia. Its headquarters are in Broken Hill, and access to fast and reliable broadband is crucial to all aspects of its operations.¹⁰²

4.100 The RFDS SE also works closely with the University of Sydney's Department of Rural Health in Broken Hill (UDRH) to support the training and education of current health professionals, remote health workers and the future health workforce.¹⁰³

4.101 Rurally based research, needed to determine how best to reduce the gap in health outcomes, is also dependent on broadband services. Researching rural health, access problems and new service models requires teams of experts working collaboratively. UDRH staff based in Broken Hill work closely with teams in Sydney, Newcastle, Orange, Lismore, Moree, Bendigo, Alice Springs and overseas. The ability to work collaboratively, to supervise PhD students, to attract and retain post-doctoral researchers, and to undertake research that is both competitive and practical, 'depends on good, reliable and fast internet services: services that are taken for granted in the city.'¹⁰⁴

100 Dr Flecknoe-Brown, FWLHDB, Transcript of Evidence, Broken Hill, 27 July 2011; p. 42; Ms Sharyn Cowie, FWLHDB, Transcript of Evidence, Broken Hill 27 July 2011, p. 42.

101 Royal Flying Doctor Service, South Eastern Section (RFDS SE), *Submission 17*, p. 1. See JCNBN, pp. 46-47, 48.

102 RFDS SE, *Submission 17*, p. 1.

103 RFDS SE, *Submission 17*, p. 1.

104 RFDS SE, *Submission 17*, pp. 4-5.

- 4.102 A key focus for both RFDS SE and UDRH is the medical education of undergraduate health students and junior medical officers. The UDRH provides extensive clinical training for medical, nursing and allied health students in Broken Hill and surrounding communities. Placements in regional and remote areas provide students with valuable clinical experience, and help inform metropolitan providers about practice in those areas and the needs of residents in those areas. They promote appropriate practices for remote areas to future health professionals, so helping increase the future health workforce in such areas.¹⁰⁵
- 4.103 Fast and reliable broadband enables the continuation of close links with their universities during these clinical placements, ensuring students can continue to have access to formal course content. It also enables access to other world-class educational resources.¹⁰⁶
- 4.104 As it operates in remote areas, the RFDS SE has had to embrace new technologies to provide essential medical and health services in far-west NSW and beyond. Before the term was invented, the RFDS SE provided tele-health consultations by conducting consultations over the radio, initially by Morse Code. The RFDS SE pioneered radio medical calls and provided station properties with access to the outside world.¹⁰⁷
- 4.105 In 2007, the RFDS SE began a project to provide its clinicians with electronic medical records. The database was centralised and clinicians were provided with access remotely to patients' records. Remote access was provided using wireless USB broadband and a company system to log on. This is 'no longer acceptable.'¹⁰⁸
- 4.106 The introduction of iDevices such as tablets and smart phones with NextGen capability, and the resultant reduction in bandwidth, means that there has been an adverse effect on clinical services provided by the RFDS SE. At the current rate of decline of the broadband system, if nothing is done, a point will be reached when it will be unusable for RFDS SE and its clinicians. The RFDS SE believed that the Broken Hill area needed the NBN, or there will be 'a very serious impact' on the health of its people.¹⁰⁹
- 4.107 The RFDS SE provides consultations to remote people by telephone, but tele-health has been identified as a future direction and a growing need to

105 RFDS SE, *Submission 17*, p. 4.

106 RFDS SE, *Submission 17*, p. 4.

107 RFDS SE, *Submission 17*, p. 1.

108 Mr Gary Oldman, Information Technology Manager, Royal Flying Doctor Service, South Eastern Section (RFDS SE), Transcript of Evidence, Broken Hill, 27 July 2011, p. 34.

109 Mr Oldman, RFDS SE, Transcript of Evidence, Broken Hill, 27 July 2011, pp. 34-35.

provide timely access to appropriate medical care. It would like to offer consultations not only by telephone but by using videoconferencing, as well as improved capabilities for data transmission of clinical information.¹¹⁰

4.108 The health centre in Broken Hill is installing high definition video cameras in the emergency assessment areas of its clinics. The RFDS SE needs to be able to access this technology to enable it to assist rural nurses in providing emergency care.¹¹¹

4.109 The RFDS SE also flies into 18 isolated communities on a regular basis in far-west NSW, south west Queensland and north-east South Australia to provide clinics. For coordinated care, it needs to be able to access centralised medical records and, for this, it needs reliable broadband.¹¹²

4.110 The NBN is planned to pass through Wilcannia, a regular RFDS SE clinic location accounting for approximately 25 per cent of its workload. A fibre access node has not been planned there: one node at Broken Hill is proposed for the 640,000 square kilometres covered by RFDS SE. An additional node at Wilcannia would significantly improve broadband capacity in the region, allowing it to implement a range of initiatives that would improve and enhance health services and outcomes.¹¹³

Maari Ma Health Aboriginal Corporation

4.111 The Maari Ma Health Aboriginal Corporation (Maari Ma) is involved in research and evaluation, focussing on Aboriginal issues in the region and leading 'inter-agency work on child development and well-being.'¹¹⁴

4.112 The Maari Ma was of the view that resources are needed to put programs in place to address Aboriginal health in remote Australia. Remote Australia is often a 'poor cousin' to metropolitan areas in the provision of

110 Dr Michael Hill, Senior Medical Officer, Royal Flying Doctor Service, South Eastern Section (RFDS SE), Transcript of Evidence, Broken Hill, 27 July 2011, p. 35.

111 Dr Hill, RFDS SE, Transcript of Evidence, Broken Hill, 27 July 2011, p. 35.

112 Dr Hill, RFDS SE, Transcript of Evidence, Broken Hill, 27 July 2011, p. 35.

113 RFDS SE, *Submission 17*, p. 2.

114 Maari Ma Health Aboriginal Corporation (Maari Ma) is an Aboriginal community-controlled, regional health service providing health services for less than 3000 Aboriginal people across almost 200,000 square kilometres of far-western NSW. Maari Ma manages mainstream services funded by NSW Health, under the Lower Western Sector Agreement, in Tibooburra, Wilcannia, Menindee, Ivanhoe, Dareton, Wentworth and Balranald.

Ms Cathy Dyer, Director Corporate Services, Maari Ma, Transcript of Evidence, Broken Hill, 27 July 2011, p. 25. See JCNBN, pp. 53-54.

the infrastructure needed to close the gap between Aboriginal and non-Aboriginal Australians.¹¹⁵

- 4.113 To use the available technology effectively at Maari Ma's regional office in Broken Hill, two ADSL2 connections have to be used. Maari Ma commented that, because its office is only a few hundred metres from the exchange, 'decent' ADSL2 speeds are available.¹¹⁶
- 4.114 Ten young aboriginal health workers earned TAFE Certificates through a block study program in Broken Hill and holding weekly videoconferences with teachers in Dubbo. Maari Ma now has ten new clinicians.¹¹⁷
- 4.115 Maari Ma has also implemented innovative service deliveries, such as an outback vascular service. While specialists in kidney disease, cardiology and endocrinology from the Royal Prince Alfred Hospital in Sydney visit quarterly, Maari Ma holds monthly videoconferences to receive these services.¹¹⁸
- 4.116 In more remote areas, higher speeds for both uploading and downloading are required because, at present, only the bare minimum of technology is used. The emphasis is on access to patient records and appointments are often recorded on paper, rather than using the available software. Maari Ma pointed out that, if using mobile phones around Broken Hill was difficult, it was 'ten million times worse' in Wilcannia.¹¹⁹
- 4.117 For the past three years, doctors in Menindee and Wilcannia have used a variety of technologies to get connections for the available software. Maari Ma has invested in ICT in 'the last 12 to 18 months' to enable it to be ready to receive the NBN.¹²⁰

Central Australia

- 4.118 The committee received evidence that, apart from Alice Springs and some other remote communities, Central Australia will be served by satellite. Telstra has an east west fibre link from WA to the east coast which passes through or close to some of the larger communities. They have asked whether, if they are not going to be served with fibre to the premises, they could receive terrestrial wireless connections.

115 Ms Dyer, Maari Ma, Transcript of Evidence, Broken Hill, 27 July 2011, p. 26.

116 Mr Michael Hanley, Manager Information Technology, Maari Ma, Transcript of Evidence, Broken Hill, 27 July 2011, p. 28.

117 Ms Dyer, Maari Ma, Transcript of Evidence, Broken Hill, 27 July 2011, p. 26.

118 Ms Dyer, Maari Ma, Transcript of Evidence, Broken Hill, 27 July 2011, p. 26.

119 Ms Dyer, Maari Ma, Transcript of Evidence, Broken Hill, 27 July 2011, p. 28.

120 Mr Hanley, Maari Ma, Transcript of Evidence, Broken Hill, 27 July 2011, pp. 27, 28.

- 4.119 The committee was also informed that medical practitioners in the Anangu Pitjantjatjara Yankunytjatjara lands in the far north of northern South Australia are concerned that the full benefits of e-health with the NBN will not be accessible because they will have to rely on satellite.
- 4.120 The NBN Co stated that, as the satellite service was being finalised, it was negotiating to provide a high speed service capable of high-definition video-conferencing. NBN Co undertook to provide information about what is underway to ensure that the health needs of regional and remote Australia are met.¹²¹

Education

- 4.121 In May 2011, the Government announced the provision of \$27.2 million for a four year NBN-Enabled Education and Skills Services Program, to support the development of online and interactive education and training projects. The sponsoring Ministers observed that:

The NBN will support the delivery of online learning through the video and web-conferencing platforms needed for 21st century education, training and skills development...We will look at innovative education and training projects, which have the potential to deliver high quality, accessible and sustainable online tools to Australian schools, TAFEs, universities, workplaces and homes...The program will focus on projects which help Australians to study, learn and develop skills no matter where they live or work around Australia.¹²²

- 4.122 In the Digital Strategy, the DBCDE stated that:

The availability of ubiquitous, high-speed broadband has the potential to significantly extend the reach, availability and quality of education services, particularly in regional areas, to help meet these needs. This can be achieved by supplementing teaching and training with access to subject matter experts and teachers outside of the local area. In addition, the greater data capacity of the NBN (both download and upload) can enable more intensive and

121 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, pp. 20, 21.

122 The Hon Peter Garrett MP, Minister for School Education, Early Childhood Education and Youth, Senator the Hon Chris Evans, Minister for Tertiary Education, Skills, Jobs and Workplace Relations, Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'Improving education and skills development through the NBN, *Media Release*, 31 May 2011.

immersive online interactions, resulting in higher-quality learning outcomes for students.¹²³

4.123 These interactions can occur through:

- greater use of the increasing array of online educational materials, or
- access to video-conferencing with other classrooms or institutions in Australia or overseas, or
- the increased use of bandwidth intensive applications, such as high definition video, for interactive instruction or learning.¹²⁴

4.124 As part of the first switch on event on the mainland at Armidale, NSW, NBN Co had demonstrated high definition video conferencing between high school choirs in Tasmania and Armidale. NBN Co's retail service providers (RSPs) and university partners, Telstra, Internode, iPrimus, iiNet, had also demonstrated educational activities, multi-way business video-conferencing, high speed broadband entertainment through T-Hub and Fetch TV. NBN Co advised that the feedback in response to these demonstrations had been 'positive'.¹²⁵

4.125 Capgemini believed that technology had changed the pedagogical model by creating environments where students can lead their own learning, undertake research and interact on a daily basis with other students across the globe. While the NBN will provide a mechanism for high value content for schools and homes, specific applications will be required to make full use of the capability. Overseas examples demonstrated the value of specific applications, online tools for collaboration, standards-based curriculums and teacher training skills, especially for disadvantaged communities.¹²⁶

4.126 Capgemini noted that the Government had released \$27.2 million for the NBN-Enabled Education and Skills Services Program for innovative proposals to support project development and deployment trials for communities targeted to benefit early from the NBN. Capgemini also noted the Government's opportunity to increase the capacity of the Australian ICT industry. Capgemini will be able to increase the value of locally designed and developed applications by guiding recipients of

123 The Digital Strategy, p. 36.

124 The Digital Strategy, p. 36.

125 NBN Co, *Submission 2.5*, p. 11.

126 Capgemini, *Submission 15*, p. 4.

funding to work with the ICT sector to design, develop and commercialise suitable applications.¹²⁷

- 4.127 Capgemini was also concerned that a shortage of ICT skills could have an impact on the benefits of the NBN for education.¹²⁸

M&S Consultants Pty Ltd

- 4.128 Mr Michael Wilson of M&S Consultants noted that:

The currently proposed and offered NBN satellite solution does not support distance education as it does not support video-conferencing or have multicast functionality.¹²⁹

- 4.129 Mr Michael Wilson commented that for the past five years the NT School of the Air (SOTA) has been delivering successful Interactive Distance Learning lessons to students wherever they are located. The SOTA uses technology that does not support video-conferencing and does not have multicast functionality, but delivers education that is resource and cost effective.

- 4.130 Mr Michael Wilson believed that the NBN's satellite solution is 'inferior and inadequate' for the needs of students who will receive education via satellite. If this solution is rolled out in its present form, students will be 'severely disadvantaged and forced to take a retrograde step' in their education.¹³⁰

- 4.131 Mr Michael Wilson believed that the currently available level of multicasting would not be available via the NBN's satellite service 'for the next five years', and that it was not clear what would be provided then. Mr Michael Wilson also believed that the NBN would not support current requirements for video-conferencing, and will not therefore be able to accommodate future developments in either field.¹³¹

- 4.132 Mr Michael Wilson stated that under the NBN 'probably about 50 per cent' of the NT population would be serviced by satellite or wireless. Mr Michael Wilson stated that people in regional and remote Australia were promised that the NBN would provide communications that would
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127 Capgemini, *Submission 15*, p. 4.

128 Mrs Shelley Oldham, Capgemini, Transcript of Evidence, Melbourne, 28 July 2011, p. 9.

129 M&S Consultants Pty Ltd, *Submission 7*, p. 1; Mr Wilson, Transcript of Evidence, Broken Hill, 27 July 2011, p. 10. See JCNBN, p. 48.

130 M&S Consultants: *Submission 7*, p. 1; Mr Wilson, Transcript of Evidence, Broken Hill, 27 July 2011, pp. 10, 12.

131 M&S Consultants: *Submission 7*, pp. 3-4; Mr Wilson, Transcript of Evidence, Broken Hill, 27 July 2011, p. 13; 5-6.

be superior to what they had. Mr Michael Wilson believed that what has been offered by NBN Co 'is not even comparable to what currently exists', because current solutions take no account of the needs of people that rely on satellites for communications in remote areas.¹³²

- 4.133 In response to these concerns, NBN Co advised that the interim satellite service was put in place at the Government's request to upgrade the existing Australian Broadband Guarantee. It was launched on 1 July 2011, but it was not intended to meet the needs of SOTA. The interim service is scheduled to run until 2015 when NBN Co plans to launch two high capacity satellites. This long term 'very capable service' will provide videoconferences and multicast facilities.¹³³
- 4.134 The DBCDE confirmed that multicast and commercial grade services will be available over the long term satellite service. E-health and e-learning, such as the interactive distance learning multicast application used by SOTA will be supported by the long term satellite solution.¹³⁴
- 4.135 The NBN Co did not agree with the estimate that 'about 50 per cent' of the Territory would be served by satellite. The percentage of premises in the NT fibre footprint will be 'substantially higher' and likely to approximate the national average. As NBN Co intends to launch two KA band satellites to provide wholesale broadband services, it did not believe that current bandwidth constraints will be relevant.¹³⁵

Regional development

Regional Development Australia Far West NSW

- 4.136 Regional Development Australia Far West NSW (RDFW) stated that existing broadband services in Broken Hill did not meet customer expectations in terms of price or product quality, and that test results showed deficiencies in speed and consistency of service. The RDFW drew attention to 'the tremendous disadvantages' faced by residents in the

132 M&S Consultants: *Submission 7*, p. 7; Mr Wilson, Transcript of Evidence, Broken Hill, 27 July 2011, p. 14;

133 Mr Quigley, NBN Co, Transcript of Evidence, Canberra, 20 September 2011, pp. 4, 2.

134 DBCDE, *Submission 3.3*, p. 10.

135 NBN Co, *Submission 2.4*, p. 6.

region, and to plans to improve the regional economy through sector diversification.¹³⁶

- 4.137 The RDFW wishes to pursue opportunities in eco-tourism and creative industries, through proposals to nominate the Menindee Lakes area as a Ramsar site and the completion of the film studio in Broken Hill respectively. Both industries are seen as 'heavily dependent' on improved technology.¹³⁷
- 4.138 In 2010, it was understood that NBN's Mildura-Broken Hill cable was expected to be ready to be switched on in September 2011. In July 2011, the RDFW was aware that there had been confusion between switching the cable on and rolling out the fibre to premises, and was waiting for advice about when the cable would be switched on.¹³⁸
- 4.139 The NBN Co noted that, at the hearing in Broken Hill in July 2011, there was some confusion between the Government's RBBP, scheduled for completion in Broken Hill in 2011, and the rollout of the NBN. This confusion has since been 'resolved'. A 12-month rollout plan was released in mid October 2011 which will be 'followed by a three-year indicative rollout plan early' in 2012.¹³⁹

Mining

- 4.140 Internet access and communications generally are seen as ways of resolving problems in recruiting and retaining people in the mining industry in Broken Hill. The industry relies on technology with remote access to software, so that it needs the capacity for external contractors to be able to dial in to assist with trouble-shooting.¹⁴⁰
- 4.141 The distance of the Perilya mine from Broken Hill 'severely' limits the ability of the available technology to meet the mine's requirements economically. Thus, although technology has been increased to allow for online purchasing, the mine has difficulties in sending photos or large files externally. It has a videoconferencing facility it cannot use. As the NBN will not be available for some time, Perilya has had to commission Telstra to install a fibre link at a much greater cost than would have been incurred

136 Regional Development Far West Inc (RDFW), *Submission 8*, p. 1. See JCNBN, pp. 49-50.

137 Mrs Linda Nadge, Executive Officer, RDFW, Transcript of Evidence, Broken Hill, 27 July 2011, pp. 17, 22.

138 Mrs Nadge, RDFW, Transcript of Evidence, Broken Hill, 27 July 2011, p. 21.

139 NBN Co, *Submission 2.4*, pp. 7, 8. The 12-month rollout plan was launched on 18 October 2011.

140 Mr Lance Duggan, Commercial Services Manager, Perilya Broken Hill Ltd, Transcript of Evidence, Broken Hill, 27 July 2011, p. 19.

via the NBN. The lack of a reliable service will force the mine to use more resources from its head office in Perth, thus limiting its ability to assist businesses to create business within the Broken Hill area.¹⁴¹

- 4.142 The mine has some ageing infrastructure, mainly copper lines, and has installed number of underground fibre links that struggle for access through Telstra's exchange. The current mine data link is an inadequate single ADSL line. Perilya has expanded overseas and around Australia, and staff has difficulty performing their duties because links are non-existent or too slow.¹⁴²
- 4.143 The Perilya mine has 67 houses with fixed radio access (FRA), providing a telephone service through 56 kilobytes per second dial-up modems. There is an additional cost on top of the FRA service: a dying technology, with 'only a few' Telstra personnel available in Australia to service it. Telstra is installing NextGen services, still only able to handle a finite amount of data, but only into occupied houses. When houses are occupied later, the occupants will have to pay to install NextGen. Access to the NBN will be provided probably via fibre to the node for all 67 houses but it is required soon as, when support for FRA is removed, there will be no service for all or some of these houses.¹⁴³

Consultation with Regional and Remote Communities

NBN Co's Plans

- 4.144 The NBN Co's Information Pack stated that effective engagement with Communities and stakeholders in the NBN was 'a key priority' for NBN Co. It had established a dedicated group whose task it is to engage with communities and stakeholders 'throughout the project rollout.' A structured program of community and stakeholder engagement activities had been 'designed and articulated.'¹⁴⁴
- 4.145 The NBN Co said that it would:

141 Mr Duggan, Perilya Broken Hill, Transcript of Evidence, Broken Hill, 27 July 2011, pp. 19, 20.

142 Mr Duggan, Perilya Broken Hill, Transcript of Evidence, Broken Hill, 27 July 2011, p. 19.

143 Mr Duggan, Perilya Broken Hill, Transcript of Evidence, Broken Hill, 27 July 2011, pp. 20, 24.

144 NBN Co, *National Broadband Network Information Pack*, 15 April 2011, Chapter 13.

...endeavour to keep key local stakeholders such as local councils and other regulatory authorities well informed throughout the rollout program...¹⁴⁵

4.146 The NBN Co's key community relations objectives are:

- To ensure that all key stakeholders are identified and engaged in an appropriate, timely and consistent manner, and their need and interests are recognised.
- To foster open and ongoing channels of communication with stakeholders during each project phase.
- To understand issues and concerns and resolve or escalate them in an appropriate manner.
- To provide stakeholders with information about construction and/or environmental impacts that will affect them, and create awareness of mitigation measures to minimise these impacts.
- To educate the community and key stakeholders about the benefits of the NBN.¹⁴⁶

Public Education Activity

4.147 The NBN Co drew the committee's attention to its communications and stakeholder activities 'prior to during and after rollout in each area, in line with the Government requirement to provide Public Information on Migration (PIM).' The Government is committed to providing these activities for each fibre serving node, roughly 3000 premises.¹⁴⁷

4.148 The PIM activities are primarily to enable the smooth migration of customers to the NBN. They will be developed in consultation with the Government, Telstra and the wider industry, covering fundamental questions relating to continuity of service, such as:

- when and how to migrate services from the copper network to an NBN-based service;
- what equipment and wiring (if any) is needed, and

145 NBN Co, *National Broadband Network Information Pack*, 15 April 2011, Chapter 13.

146 NBN Co, *National Broadband Network Information Pack*, 15 April 2011, Chapter 13.

147 NBN Co: *Submission 2.4*, p. 9; Mr Quigley, *Transcript of Evidence*, Canberra, 13 October 2011, p. 3.

- the nature of services to become available, and what these will enable.¹⁴⁸
- 4.149 A public education activity is planned to provide information to ensure, to the greatest practical extent, that Australians maintain the continuity of their telecommunication services during the move to the NBN. This public education activity will:
- provide advance notice of service rollout;
 - explain the actions people need to take to connect to the NBN, and
 - encourage people to start the migration process onto the NBN before their old service is retired.¹⁴⁹
- 4.150 Increasing resources will therefore be put into providing educational material and information, and material will also be available on the NBN Co website which is regularly updated. The NBN Co will focus its community engagement around the rollout of the Network. The NBN Co is putting in place a unit to go ahead of the rollout to hold town meetings and information days, as well as using electronic means, to spread information about the network.¹⁵⁰
- 4.151 The NBN Co also makes information available through media announcements, community-run forums, ongoing liaison with stakeholders and speaking engagements. The NBN Co has put in place a Solutions Centre, and a free 1800-series phone number to answer questions.¹⁵¹
- 4.152 The 1800 number for its Solutions Centre is widely displayed on the NBN Co website and business cards that field staff, contractors and management hand out to end-users. This number is also on all case studies, community information documents and all documentation that goes out to members of the public alerting them of any work in their area. Since commencing operations on 19 April 2011, the call centre has received 11 348 calls from the public, 1474 of which were from regional and remote areas.¹⁵²
- 4.153 The NBN Co noted that PIM is a major undertaking and a core activity. The PIM will inform more than 13 million premises until the NBN rollout

148 NBN Co: *Submission 2.4*, p. 10; Mr Quigley, Transcript of Evidence, Canberra, 13 October 2011, p. 1.

149 NBN Co, *Submission 2.5*, p. 7.

150 NBN Co, *Submission 2.4*, p. 7; Mr Quigley, Transcript of Evidence, Canberra, 20 September 2011, pp. 7, 8.

151 NBN Co, *Submission 2.4*, p. 7.

152 NBN Co, *Submission 2.5*, p. 13.

is complete. Further details of these activities are still the subject of discussions among NBN Co, the Government, and industry stakeholders.¹⁵³

- 4.154 A wide range of issues have already been raised with NBN Co as it engages with stakeholders across the country, including the timing of the rollout, what actions property owners need to take and the benefits of the NBN. The NBN Co seeks to deal with issues during consultation sessions and, where appropriate, has made contact after events with people who have raised issues.¹⁵⁴
- 4.155 The NBN Co employees have visited or talked with representatives from ‘hundreds’ of communities across Australia. These have included small meetings in Aboriginal communities through to large national conferences. The NBN Co has also consulted with national peak bodies, such as the National Farmers’ Federation, the Australian Local Government Association and the Broadband Today Alliance. These discussions have covered all aspects of the NBN rollout, and what it can mean to communities.¹⁵⁵
- 4.156 Community information sessions have been held in the following locations in Tasmania:
- Triabunna on 14 May 2011.
 - Sorell on 15 May 2011.
 - Deloraine on 6 August 2011.
 - Kingston Beach on 2 July 2011.
 - George Town on 24 September 2011.
 - South Hobart on 29 October 2011.¹⁵⁶
- 4.157 Attendance at these sessions varied, but ranged from approximately 200 to 350 people for most sessions. Discussion covered a range of issues relating to the timing and other aspects of the rollout, and the capabilities of broadband more generally.¹⁵⁷
- 4.158 On 18 October 2011, an NBN Co media release advised the ‘public education activity’ will be launched ‘next year’:
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153 NBN Co, *Submission 2.4*, p. 10.

154 NBN Co, *Submission 2.4*, p. 9.

155 NBN Co, *Submission 2.5*, p. 6.

156 NBN Co, *Submission 2.5*, p. 6.

157 NBN Co, *Submission 2.5*, p. 6.

...to explain what the rollout will mean for every Australian, how to connect to the network and why it is important that the nation upgrades its telecommunications infrastructure.¹⁵⁸

- 4.159 The media release also announced the rollout of the NBN network for 28 new locations, passing 485 000 premises, where construction is expected to commence over the next 12 months. This schedule will be updated quarterly to include additional locations. Early in 2012, the NBN Co will release a three-year 'indicative view' of the rollout that will be updated annually until the anticipated completion of the rollout, in ten years' time.¹⁵⁹

Consultations in the Broken Hill region

- 4.160 Evidence taken at Broken Hill repeatedly demonstrated the need and wishes for reliable, fast broadband to improve education, health, employment, economic development, local government and businesses in the region. Unfortunately, this evidence also seemed to reveal the limits of NBN Co's engagements with organisations and businesses in the region, and the confusion about the RBBP.
- 4.161 For example, RDFW said that it had contact with NBN Co for 'general consultation in the region for over a year'. RDFW stated that there had been two public consultations in Broken Hill in May and June 2010, focussing on education and the regional business community respectively. These sessions were followed up by a technology evening. After several attempts to contact NBN Co, in July 2011, RDFW was still waiting to find out when the Mildura-Broken Hill cable would be switched on.¹⁶⁰
- 4.162 The Perilya mine had received 'next to zero feedback' in its attempts to establish when fibre would be available.¹⁶¹
- 4.163 The Mayor of Central Darling Shire Council said that there had been no engagement with the NBN Co on NBN rollout in the area and that the Council did not expect to be linked to the NBN in the early stages. The council was uncertain whether the area would be connected by fibre, wireless or satellite to the NBN.¹⁶²

158 NBN Co, 'NBN Co releases 12-month national rollout plan', *Media Release*, 18 October 2011.

159 NBN Co, 'NBN Co releases 12-month national rollout plan', *Media Release*, 18 October 2011.

160 Mrs Nadge, RDFW, Transcript of Evidence, Broken Hill, 27 July 2011, pp. 20, 21.

161 Mr Duggan, Perilya Broken Hill, Transcript of Evidence, Broken Hill, 27 July 2011, p. 22.

162 Mayor Brown, Central Darling Shire Council, Transcript of Evidence, Broken Hill, 27 July 2011, p. 21.

4.164 The General Manager, Broken Hill City Council, Mr Frank Zaknich stated that, although the backhaul was expected to be completed in Broken Hill by September 2011, beyond that the Council had no indication or expectation supported by any information from the NBN Co.¹⁶³

Digital Divide

4.165 The Australian Communications Consumer Action Network (ACCAN) referred to a study by the Australian Communications Management Authority (ACMA) that showed that 2.6 million Australians did not have access to the internet, either via mobile phones or a fixed service at home. This study also showed that, of the people studied:

- 62 per cent of the total had incomes of less than \$25 000 per year.
- 53 per cent were aged 55 years or more.
- Most lived in rural or remote areas.
- One third accessed the internet outside their homes.
- Forty-two per cent reported that cost was a factor, and that connecting the internet at home was too expensive.¹⁶⁴

4.166 The Asia Pacific Consulting Group (APCG) stated that the digital divide in Australia is economic, not geographic. The APCG's submission put the view that higher socioeconomic groups will embrace the NBN because:

- They will recognise productivity benefits: information, savings of time, inclusion, access to retail opportunities.
- There is an attractive cost/benefit trade-off.
- Their rapid adoption of ADSL, mobile phones and dial-up.¹⁶⁵

4.167 The APCG believed that the take-up of the NBN is likely to be magnified in favour of the higher socioeconomic households and discriminate against lower socio-economic households. The NBN may not be as positive for the latter because costly pricing programs may limit

163 Mr Zaknich, Broken Hill City Council, Transcript of Evidence, Broken Hill, 27 July 2011, p. 31.

164 Ms Teresa Corbin, Chief Executive Officer, Australian Communications Consumer Action Network (ACCAN), Transcript of Evidence, Sydney, 25 October 2011, p. 16. ACCAN is the peak body representing consumers on telecommunications, broadband and emerging new communications services.

165 Asia Pacific Consulting Group (APCG), *Submission 22*, pp. 1, 3.

participation and further marginalise them. There will, therefore, be a greater challenge for the NBN to create benefits for such households, because:

- The productivity benefit is not easily identified, e.g. time savings compared with the access costs.
- The cost/benefit trade-off is likely to be challenging in difficult economic circumstances.
- Their adoption of ADSL, mobile phones and dial-up is slower.¹⁶⁶

- 4.168 The APCG noted that households at the top income levels have 'consistently high' rates of broadband access, regardless of whether they are metropolitan, regional or remote. The APCG also observed that regional and remote households with higher income levels have higher rates of broadband access than lower income metropolitan households.¹⁶⁷
- 4.169 The APCG noted that, where funds were available, there was a willingness to purchase broadband. Investment in broadband by some regional and remote households becomes 'a natural part of existence.' While speed is a 'major concern' to all users, the gains in speed in moving from dial-up to broadband was such that most consumers are willing to make the investment, and suggested, the satellite option was also 'gaining traction.'¹⁶⁸
- 4.170 The APCG suggested that there would be differences between income groups in their approach to fast broadband. Households with the highest incomes 'would be interested' in 100 Mbps and while they could afford to pay for it, the APCG believed that 'only a minority' would be likely to use the full bandwidth regularly. The next income level would be interested in faster bandwidth, but may see 30 to 50 Mbps as satisfactory and affordable. Lower income households do not need, and could not afford, 100 Mbps, and are likely to be satisfied with inclusion at current speeds at lower price points.¹⁶⁹
- 4.171 The APCG recommended the establishment of a 'basic broadband account', similar to public transport concession and seniors' cards. Such an

166 APCG: *Submission 22*, p. 3; Mr Gill, Director, Transcript of Evidence, Sydney, 24 October 2011, p. 32. Households with lower broadband take-up can be characterised as having lower incomes and levels of education, single parents, Aboriginal background and recipients of some types of welfare: APCG, *Submission 22*, p. 2.

167 APCG, *Submission 22*, p. 4.

168 APCG, *Submission 22*, p. 4.

169 APCG, *Submission 22.1*, p. 2.

account would need to be a simple card; means tested and designed to promote inclusion.¹⁷⁰

- 4.172 The ACCAN noted that there had been 'a lot of statements about affordability' of the NBN. The ACCAN believed that ICT affordability was not about cheap services, but about making sure that the digital divide was not increased, especially for people on low incomes. The ACCAN believed that internet access is 'a practical necessity in daily life.'¹⁷¹
- 4.173 The ACCAN's assessment was that entry level offers for access to the NBN would be comparable to what is currently available, and that download speeds would improve. If people have problems affording the Internet now, these would 'probably' continue under the NBN. The ACCAN stated that 15 per cent of people chose to have a mobile service only, but it did not provide a breakdown of why those people made that choice. The ACCAN believed that 'a significant proportion' of those people had only mobile services because of cost.¹⁷²
- 4.174 The ACCAN was interested in developing a 'broadband low income measures scheme', somewhat like the low income measures for phone services that Telstra is required to provide. Such a scheme could involve NBN Co providing a discounted wholesale price to RSPs who would then retail a cheap internet service targeted at low income earners. Under this proposal, people with health care cards, for example, would be able to access these services.¹⁷³
- 4.175 As well as special price packages, the ACCAN's proposed broadband low income scheme included the provision of public access points especially for people with lower incomes. There is a need for a greater understanding about where such access points are used.¹⁷⁴
- 4.176 The ACCAN noted that, after the rollout of the NBN, the home line budget service would continue at the current price. Expansion of services for low income consumers would allow them to choose a supplier, where at present they have to go to Telstra for access to benefits.¹⁷⁵
- 4.177 The ACCAN also noted that it receives demands for information about the NBN. The response to a guide it has prepared demonstrated 'a great hunger' for clear information, and it has been observing NBN Co's plans
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170 APCG: *Submission 22*, p. 3; Mr Gill, Transcript of Evidence, Sydney, 24 October 2011, p. 31.

171 Ms Corbin, ACCAN, Transcript of Evidence, Sydney, 25 October 2011, p. 15.

172 Ms Corbin, ACCAN, Transcript of Evidence, Sydney, 25 October 2011, pp. 15, 16.

173 Ms Corbin, ACCAN, Transcript of Evidence, Sydney, 25 October 2011, p. 15.

174 Ms Corbin, ACCAN, Transcript of Evidence, Sydney, 25 October 2011, p. 17.

175 Ms Corbin, ACCAN, Transcript of Evidence, Sydney, 25 October 2011, p. 18.

for a public information campaign. There are clearly matters of importance to consumers that are 'not very well explained, so that, at present, most of the public lack important information.'¹⁷⁶

- 4.178 In February 2011, the ACCAN had raised with NBN Co a proposal for a quarterly, high level consumer round table including peak bodies of consumers and end users. The ACCAN was 'keen' to establish such a body, because of the preparations for the public education campaign. The ACCAN believed that it had 'significant expertise' in this area and wanted to participate in the development and rollout of that campaign to ensure that it was managed effectively.¹⁷⁷

Concluding Comments

- 4.179 The NBN's importance for regional and remote Australia is so great that the committee believes it is necessary to draw attention to issues that have been raised, including some that were included in the First Report.

Benefits for Regional and Remote Australia

- 4.180 The committee was impressed by evidence taken at Broken Hill, particularly about likely benefits for that region from the NBN. Several organisations emphasised the technological disadvantages under which people in the region live and work, providing valuable insights into potential benefits from the NBN for regional and remote Australia.
- 4.181 Potential benefits in health and education, especially in remote and regional Australia, have been expressed to the committee many times already in this review process. Such expressions were often tempered, for example, by uncertainties about the timing and likely quality of both interim and permanent satellite services.

Satellite Services

- 4.182 A number of issues are yet to be resolved about the provision of satellite services, including:
- The reliability of these services in differing climatic conditions.

176 Ms Corbin. ACCAN, Transcript of Evidence, Sydney, 25 October 2011, p. 19; Mr Jonathan Gadir, Senior Policy Adviser, ACCAN, Transcript of Evidence, Sydney, 25 October 2011, p. 19.

177 Ms Corbin, ACCAN, Transcript of Evidence, Sydney, 25 October 2011, pp. 15-16.

- The priority to be given to the 7 per cent of users who will receive fixed wireless or satellite services.
- The timing of access to this service for regional and remote communities.
- Any processes to enable these services to be replaced by fixed wireless or fibre technologies.

Government Readiness for the NBN

4.183 While the committee is aware that its development is not complete, limited information was available on subjects such as Government readiness for the NBN.

4.184 The POAAL presented a case for the extension of EPOS facilities to small LPOs that, because of insufficient transactions, are prevented from installing them. It would undoubtedly assist small communities if their post offices were able to provide a comprehensive range of services. The committee is aware of the importance to their local communities of small LPOs but, just as these are restricted by local commercial realities, so AustPost must consider the potential to upgrade these facilities at each location.

Extending the Fibre Footprint

4.185 Communities are understandably interested to know when the NBN will be connected in specific areas. The committee notes the NBN Co's view that costing of extensions to the NBN rollout divert valuable resources from planning the overall rollout, and that it would only provide costing for locations close to its rollout via a 'properly defined process'. Such a process does not yet seem to have been addressed. The committee believes that it would assist both NBN Co and interested parties if an effective process were to be defined and publicised widely.

Community Consultations

4.186 The committee noted NBN Co's plans for community consultations, and the material subsequently provided by NBN Co on its PIM activities. It believes that, at least until July 2011, NBN Co's consultations with organisations in the Broken Hill region were deficient. This was demonstrated by the confusion between the rollout of the Network and the RBBP.

4.187 The committee notes NBN Co's advice that this confusion has been resolved, but is concerned that similar confusions may have arisen, or may

arise in the future, in other regional and remote communities. The release of the 12-month rollout plan, and the three-year indicative view of the rollout, may reduce uncertainty in some areas.

- 4.188 Comments by the ACCAN about the lack of important information about the NBN support the committee's concerns about the lack of consultation by NBN Co, and the need for an effective public education program.
- 4.189 The NBN Co stated that it has plans to inform communities about the Network 'prior to, during and after' its rollout. The NBN Co must have been aware of confusion about the rollout of the Network in some regional and remote communities. The committee is concerned that there will be more unnecessary, and perhaps widespread, confusion if detailed and appropriate plans for consultations are not devised and released promptly, especially for remote and regional communities. To this point in the rollout, there seems to have been more planning than action in this important area of NBN Co's operations.
- 4.190 The release of the 12-month national NBN rollout plan in October 2011, in addition to the public education program (to be launched in 2012), show that the NBN Co is undertaking activities that, perhaps belatedly, will provide basic information about the rollout. The committee believes that it is regrettable that more information was not provided to communities earlier in the rollout process. While it would probably have been subject to changes for operational reasons, earlier publication of a program of consultations would have been useful, especially for remote and regional communities.

Digital Divide

- 4.191 Ensuring that lower socioeconomic groups have access to the NBN does not seem to have received the attention it deserves, and needs. Choosing between a basic broadband account or a broadband low income measure may not be the only or the best way of ensuring that lower socioeconomic groups have increased access to the NBN. The committee believes, however, that increasing the access of such groups to the services to be provided by the NBN requires attention early in the rollout.
- 4.192 Such a scheme may be the only way to make adequate provision for the inclusion of lower socioeconomic groups in the benefits of the NBN. Unless there is a mechanism to do this, the digital divide may increase during the rollout of the NBN.

Continuing Review

4.193 Based on the concerns set out above, the committee intends to include the following issues in its continuing review of the rollout of the NBN:

- The provision of satellite services, interim and long term, to regional and remote Australia.
- The adequacy of Government preparations for use of the NBN to deliver services to the community.
- The policy and process for extending the NBN fibre network.
- The adequacy of NBN Co's consultations and its public education campaign, especially in regional and remote areas, during the rollout of the NBN.

Recommendation 3

4.194 **The committee recommends that, as a matter of urgency, the NBN Co formalise and publicise its policy for the provision of costing extensions to its planned National Broadband Network fibre footprint, especially for regional and remote Australia.**

Recommendation 4

4.195 **The committee recommends that NBN Co:**

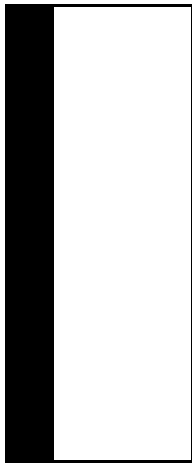
- **finalise and publicise its plans for community consultation with regional and remote Australia;**
- **in its report to the committee include:**
 - ⇒ **details of the progress of its consultation plans;**
 - ⇒ **issues raised; and**
 - ⇒ **numbers of participants.**

Recommendation 5

- 4.196 **The committee recommends that the Department of Broadband, Communications and the Digital Economy and the NBN Co:**
- **undertake a study of methods to improve access for low income households and other disadvantaged groups to the National Broadband Network and report its findings to the committee;**
 - **in conducting the study, include examination of community proposals for measures which would support a basic broadband account and a broadband low income measure scheme.**

**Robert Oakeshott MP
Chair**

22 November 2011



Dissenting Report - Australian Greens

The Australian Greens dispute the meaning conveyed in paragraph 3.164 of the majority report, which is a substantial misrepresentation of Division 2 of Part 3 of the Companies Act.

The majority report indicates that privatisation is *expected* to occur. In fact privatisation *may* occur if it is the will of the Executive, supported by a vote in Parliament and an independent study conducted by the Productivity Commission and a Parliamentary Inquiry.

This will help ensure any decision on privatisation is guided by the public interest.

The primary overriding purpose of the publicly owned NBN is to serve as an open access wholesale telecommunications provider to the entire Australian population. When problems occur, the taxpayers have the right, through the Parliament, to call the management before budget Estimates Committees, and to amend its parent acts to bring it back into line.

Privatise it, and by law, its primary purpose under Australian law is to maximise its return to shareholders. It will do this by doing what Telstra did, leveraging the benefits of incumbency into other markets, explore scope creep and push the boundaries. There was no market outcry when the Greens negotiated these provisions into NBN Co's enabling legislation (quite the reverse).

The market, and many analysts, understand that as natural monopoly infrastructure it is appropriate for an entity accountable to the public to operate the hardware, while market forces predominate at the retail service layers.

There is therefore no expectation of eventual privatisation – there is simply a mechanism to do so should a future government choose to do so.

A handwritten signature in black ink, consisting of a stylized 'S' followed by 'Ludlam' and a long horizontal line extending to the right.

Senator Scott Ludlam



Appendix A – Submissions and Exhibits

Submissions

- 1 Australia On Line Pty Ltd
- 1.1 Australia On Line Pty Ltd
- 1.2 Australia On Line Pty Ltd
- 2 NBN Co Limited
- 2.1 NBN Co Limited
- 2.2 NBN Co Limited
- 2.3 NBN Co Limited
- 2.4 NBN Co Limited
- 2.5 NBN Co Limited
- 3 Department of Broadband, Communications and the Digital Economy
- 3.1 Department of Broadband, Communications and the Digital Economy
- 3.2 Department of Broadband, Communications and the Digital Economy
- 3.3 Department of Broadband, Communications and the Digital Economy
- 3.4 Department of Broadband, Communications and the Digital Economy
(Confidential)
- 4 Post Office Agents Association Limited
- 4.1 Post Office Agents Association Limited
- 5 Broken Hill City Council
- 6 Mr Dan O'Halloran
- 7 Mr Michael Wilson

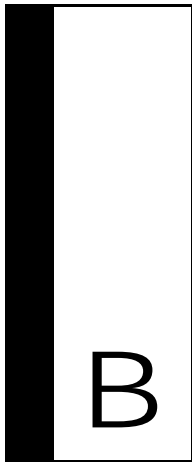
- 8 Regional Development Australia Far West NSW
- 9 Mr Jason King
- 10 Mr Andrew Chapman
- 11 Tibooburra Village Committee
- 12 Mr Steve McDermott
- 13 Edgnett Regional Computer Services
- 14 Maari Ma Health Aboriginal Corporation
- 15 Capgemini Australia
- 15.1 Capgemini Australia
- 16 Ninti One Limited
- 17 Royal Flying Doctor Service
- 18 Networked Infrastructure National Architecture Pty Ltd
- 19 Shareholder Ministers (Senator the Hon Penny Wong, and, Senator the Hon Stephen Conroy)
- 20 eBay Australia and New Zealand
- 21 Initiative for a Competitive Online Marketplace
- 22 Asia Pacific Consulting Group
- 22.1 Asia Pacific Consulting Group
- 23 DVB Rao

Exhibits

- 1 Department of Broadband, Communications and the Digital Economy
Submarine Cable Map, 2011
- 2 Department of Broadband, Communications and the Digital Economy
Regional Backbone Blackspots Program Maps:
 - (1) Darwin, Emerald and Longreach
 - (2) Broken Hill
 - (3) Victor Harbour
 - (4) South West Gippsland
 - (5) Geraldton
 - (6) All Routes

Fact Sheets:

- (1) Regional Backbone Blackspots Program – fast facts
 - (2) FAQs
 - (3) Indicative Route Details
- 3 M&S Consultants
NBN Co Limited Traffic Classes, excerpts from the NBN Co *Corporate Plan 2011-2013*, dated 2011
- 4 Regional Development Australia Far West
Submission from the Central Darling Shire Council to the House Standing Committee on Infrastructure and Communications Inquiry into the role and potential of the National Broadband Network, 27 July 2011
- iStreet dLux Lab 2011, Broken Hill Art Exchange, Compact Disc, 27 July 2011
Development Update: Far West Region NSW, statistical information, August 2010.
- 5 Royal Flying Doctor Service
Royal Flying Doctor Service Annual Report 2009-10
Map – NBN Co Limited New South Wales
Photographs



Appendix B – Hearings and Witnesses

Monday, 16 May 2011 - Sydney

Australian Competition and Consumer Commission

Mr Mark Pearson, Deputy Chief Executive Officer, Regulation

Mr Michael Cosgrave, General Manager, Communications Group

Mr Richard Home, General Manager, National Broadband Network Engagement and Group Coordination

Dr Robert Nicholls, General Manager, Convergence and Mobility Branch

Department of Broadband, Communications and the Digital Economy

Mr Peter Harris, Secretary

Mr Philip Mason, Assistant Secretary, National Broadband Network Implementation Division

NBN Co Limited

Mr Mike Quigley, Chief Executive Officer

Telstra

Mr James Shaw, Director, Government Relations

Ms Yolanda Chorazyczewski, Group Manager, Regulatory Social Policy

Tuesday, 5 July 2011 – Canberra

NBN Co Limited

Mr Mike Quigley, Chief Executive Officer

Department of Broadband, Communications and the Digital Economy

Mr Daryl Quinlivan, Deputy Secretary, Infrastructure Group

Wednesday, 27 July 2011 – Broken Hill

Central Darling Shire Council

Mr Paul Brown, Mayor

Far West Health Local Health District

Dr Stephen Flecknoe-Brown, Chairman

Ms Sharyn Cowie, Manager, Telehealth, and Acting Manager, Electronic Medical Record Support Team

Maari Ma Health Aboriginal

Ms Cathy Dyer, Director, Corporate Services

Mr Michael Hanley, Manager, Information Technology

Ninti One Ltd

Ms Jan Ferguson, Managing Director, Cooperative Research Centre for Remote Economic Participation

Ms Apolline Kohen, Senior Research Officer

Perilya Broken Hill Limited

Mr Lance Duggan, Commercial Services Manager

Royal Flying Doctor Service of Australia

Adjunct Professor Clyde Thomson, Director, South-East Section

Dr Michael Hill, Senior Medical Officer

Mr Gary Oldman, Information Technology Manager

University of Sydney

Associate Professor David Perkins, Director, Research, Broken Hill University, Department of Rural Health

Regional Development Australia Far West New South Wales Inc

Mrs Linda Nadge, Executive Officer

Councillor Darriea Turley, Acting Chair

Broken Hill City Council

Mr Frank Zaknich, General Manager

M & S Consultants Pty Ltd

Mr Michael Wilson, Director

Individuals

Mr Hugh Gough

Mr Gary Looney

Thursday, 28 July 2011 – Melbourne**Australia On Line Pty Ltd**

Mr Michael Bethune, Chief Executive Officer

Post Office Agents Association Limited

Mr Ian Kerr, Chief Executive Officer

Capgemini Australia

Mrs Shelley Oldham, Vice President, Head of Public Sector

Tuesday, 20 September 2011 – Canberra**NBN Co Limited**

Mr Mike Quigley, Chief Executive Officer

Department of Broadband, Communications and the Digital Economy

Mr Daryl Quinlivan, Deputy Secretary, Infrastructure Group

Thursday, 13 October 2011 – Canberra**NBN Co Limited**

Mr Mike Quigley, Chief Executive Officer

Department of Broadband, Communications and the Digital Economy

Mr Daryl Quinlivan, Deputy Secretary, Infrastructure Group

Mr Daniel McCarthy, Assistant Secretary, National Broadband Network Implementation Division

Ms Pip Spence, First Assistant Secretary, National Broadband Network Implementation Division

Department of Finance and Deregulation

Ms Stacie Hall, First Assistant Secretary

Ms Jan Mason, Deputy Secretary

Mr Philip Smith, Assistant Secretary, National Broadband Network Policy and Shareholder Branch

Monday, 24 October 2011 – Sydney

NBN Co Limited

Mr Mike Quigley, Chief Executive Officer

Department of Broadband, Communications and the Digital Economy

Mr Peter Harris, Secretary

Mr Daryl Quinlivan, Deputy Secretary, Infrastructure Group

Mr Rohan Buettel, First Assistant Secretary, Networks Policy and Regulation Division

Ms Joanna Grainger, Assistant Secretary, National Broadband Implementation Division

Mr Brian Kelleher, Assistant Secretary, Networks Policy and Regulation Division

Mr Philip Mason, Assistant Secretary, National Broadband Implementation Division

Ms Pip Spence, First Assistant Secretary, National Broadband Network Implementation Division

Productivity Commission

Mr Michael Woods, Deputy Chairman

Asia Pacific Consulting Group

Mr Baldeep Gill, Director

Singtel Optus Pty Ltd

Mr Maha Krishnapillai, Director of Government and Corporate Affairs
Mr Andrew Sheridan, General Manger, Interconnect and Regulations

Internode

Mr John Lindsay, General Manager, Regulatory and Corporate Affairs

Vodafone Hutchison Australia

Mr Matthew Lobb, General Manger, Industry Strategy and Public Policy
Mr Klass Raaijmakers, Head of Broadband Strategy

Tuesday, 25 October 2011 – Sydney

Australian Competition and Consumer Commission

Mr Michael Cosgrave, General Manager, Communications Group
Mr Richard Home, General Manager, National Broadband Engagement and
Group Coordination
Dr Robert Nicholls, General Manger, Convergence and Mobility Branch
Mr Mark Pearson, Deputy Chief Executive Officer, Regulation

Australian Communications Consumer Action Network

Ms Teresa Corbin, Chief Executive Officer
Mr Jonathan Gadir, Senior Policy Adviser