The Senate

Select Committee on the National Broadband Network

Final report

June 2010

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Table of contents

Recommendations

Recommendation 1

Notwithstanding that the committee, for reasons detailed in its Fourth Interim Report, recommended that the government abandon its NBN proposal in its current form, the committee acknowledges that the government is proceeding with its NBN proposal and accordingly recommends:

2.90 That the government provide the public with:

- **the calculations and underlying workings that were used by the Lead Advisor to generate its total cost estimates for building the NBN; and**
- **a comprehensive statement of what are or will be the alleged and predicted benefits of the government's NBN project.**

2.91 That the government commission a rigorous cost-benefit analysis of its NBN project, or at least in the first instance, accept Professor Henry Ergas' generous offer to conduct a cost-benefit analysis free of charge.

Chapter 1

Context of the inquiry

1.1 The Select Committee on the National Broadband Network (the committee) was established by the Senate on 25 June 2008. The committee's Terms of Reference, as amended, are reproduced in appendix 1.

1.2 The committee has published four interim reports. A list of the recommendations the committee has made in each of its interim reports can be found at appendix 2.

1.3 The Fourth Interim Report was presented out of session on 18 May 2010. That report comprehensively assessed the progress on the National Broadband Network to that date. As originally drafted, that report was intended to be the final report of the committee.[1]

1.4 However, on 12 May 2010, the Senate voted to extend the committee's reporting date to 17 June 2010. The extension was agreed to as a direct result of the government's decision to only publicly release the *Implementation Study for the National Broadband Network* (the Implementation Study)[2] less than one week before the committee was due to table its final report.

1.5 Paragraph 2A of the committee's terms of reference require the committee to:

> examine the findings of the National Broadband Network Implementation Study, the Government's response to the Implementation Study and any subsequent implications of that report for the National Broadband Network policy.[3]

1.6 Although the government had received the Implementation Study on 5 March 2010,[4] it refused to publicly release the document for more than two months. It finally

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1 A fuller overview of the historical context of the inquiry is contained in the committee's interim reports: see Senate Select Committee on the National Broadband Network, *Third Report*, 26 November 2009 ('Third Report'), pp 1–4, www.aph.gov.au/senate/committee/broadband_ctte/third_report/report.pdf; Senate Select Committee on the National Broadband Network, *Fourth Interim Report*, 18 May 2010 ('Fourth Report'), pp 1–3, http://www.aph.gov.au/senate/committee/broadband_ctte/interim4-report/report.pdf.

2 McKinsey-KPMG, *Implementation Study for the National Broadband Network*, 5 March 2010.

3 Paragraph 2A was inserted by the Senate on 26 November, 2009, pursuant to Recommendation 12 of the committee's Third Report. The full Terms of Reference, as amended, is reproduced in appendix 1.

4 Mr Daryl Quinlivan, Deputy Secretary, Infrastructure, Department of Broadband, Communications and the Digital Economy, *Committee Hansard*, Canberra, 15 April 2010, p. 63.

made this important document public on 6 May 2010,[5] on the eve of the committee's reporting date.

1.7 The sole focus of this report is the committee's further public hearings and consultation on the Implementation Study. As at the date of tabling, the government has not yet released its response to the Implementation Study.

Conduct of the inquiry

1.8 On 12 May 2010 the committee decided to conduct further hearings into the Implementation Study.

1.9 The committee advertised its decision to conduct further hearings, calling for submissions by 27 May 2010. The details of the committee's decision were placed on the committee's website and advertised in *The Australian*.

1.10 The committee received an additional 14 written submissions, taking the total number of submissions received by the committee during the life of its whole inquiry to 141. A list of all submissions received can be found at appendix 2.

1.11 The committee held two further public hearings in Sydney and Canberra. Details of those hearings, including a list of witnesses who gave evidence, can be found at appendix 3. When added to the number of previous hearings conducted by the committee, the committee has held a total of 18 public hearings.

1.12 Appendix 4 contains additional material received by the committee during its further hearings, including details of answers received to questions taken on notice.

Acknowledgements

1.13 The committee would like to express its appreciation for the cooperation of all organisations and individuals who made their time available to assist the inquiry, whether by personal appearance at a public hearing or by providing the committee with a written submission.

1.14 The committee is again indebted to Senate officers from the Committee Secretariat for their considerable assistance and advice in conducting all of the work of this select committee and in the preparation of the various reports the committee has published since the inquiry began.

1.15 In particular, we are indebted to Dr Ian Holland, the Secretary responsible for this report, and to Ms Fiona Roughley, who has provided the committee with invaluable assistance and advice in drafting this and the previous report, and in

5 The Hon. Lindsay Tanner, Minister for Finance and Deregulation and Senator the Hon. Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'Landmark study confirms NBN vision is achievable and affordable', Joint media release, 6 May 2010, www.minister.dbcde.gov.au/media/media_releases/2010/040 (accessed 6 May 2010).

understanding some of the complexities involved in an issue which is not easily comprehended. These two officers and their support staff continue the high standard of professionalism, balance and ability for which the Senate Committee Secretariat is rightly renowned.

1.16 The committee would also like to extend its thanks to staff of the Parliamentary Library, and other officers within the committee office, who generously assisted the secretariat. Particular thanks are extended to Ms Alison Kelly and Mr Stephen Palethorpe, former Secretaries to the committee, and Mr Hamish Hansford.

1.17 As the current, and last, Chair of the committee, I want to also pay tribute to my colleague Senator Mary Jo Fisher who so ably chaired the committee during the work of the committee leading up to its first three reports. Mary Jo's unique style, and her understanding of a very complex area of policy, have ensured that the committee, whilst not always agreeing on various points, did work amiably and cooperatively together in providing to the Parliament of Australia with what I believe is very useful work relating to Australia's broadband network.

Note on references

1.18 References to the *Committee Hansard* are to the proof *Hansard*. Page numbers may vary between the proof and the official *Hansard*.

Chapter 2

Implementation Study

Introduction

2.1 In its interim reports, the committee has provided substantial background information and analysis on the Implementation Study. Other than providing a brief overview of the areas already covered, this report will not repeat the committee's previous analysis.

2.2 Instead, this chapter will focus on two matters:

(a) the general attitude of submitters to the Implementation Study and, in particular, the future of high-speed broadband in Australia; and

(b) the consequences flowing from the government's failure to undertake a cost-benefit analysis or release the calculations and detailed workings underpinning the conclusions reached by the Lead Advisor for the Implementation Study. Those consequences are primarily twofold:

- continued uncertainty over key aspects of the government's NBN project; and
- an inability of the public to assess whether the government's NBN project is viable, will provide value for money, and deliver sufficient benefits.

Matters previously addressed in interim reports

2.3 In its Third Report, the committee provided the background to the Implementation Study, including details on the process by which a consortium of McKinsey & Co and KPMG was commissioned to be the Lead Advisor and author an Implementation Study.[1]

2.4 In its Fourth Report, the committee detailed the events preceding the public release of the Implementation Study, including how the government's delayed release of the Implementation Study compromised the relevance of the document, seemingly resulted in duplicated decision-making and consultation processes, and, in the committee's view, unjustifiably left stakeholders, analysts, and the general public in the dark as to crucial matters concerning the design and implementation of the government's NBN project.[2]

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1 Third Report, November 2009, pp 32–34.

2 See Fourth Report, May 2010, Chapter 2, pp 7-30.

2.5 In addition, chapter 2 of the committee's Fourth Report discussed the limitations of the terms of reference for the Implementation Study (which specifically prevented the Implementation Study from evaluating the merit of the government's policy or undertaking a cost-benefit analysis of the project). As the committee observed, restrictions in the terms of reference prevented the Lead Advisor from providing any analysis whatever of whether the NBN is good policy for Australia or whether it should even proceed.[3]

2.6 Finally, chapter 2 of the Fourth Report also outlined the reaction of a number of analysts in the media immediately following the release of the Implementation Study and which strongly questioned underlying assumptions used in the Implementation Study and key conclusions its authors reached.[4]

General response to the Implementation Study

2.7 Submitters were generally in agreement that Australians need super-fast broadband, and that the Implementation Study has not altered their opinions in this respect. For example, the Internet Industry Association 'welcome[d] the release of the Implementation Study' and spoke of the 'fundamental need for Australia to have … fast ubiquitous broadband'.[5]

2.8 Submitters to the committee emphasised the importance of the Implementation Study to the broadband future of Australia. The telecommunications expert, Mr Paul Budde, wrote:

> The [Implementation] Study is an extremely comprehensive report on broadband infrastructure in Australia and its release was eagerly awaited both in Australia and overseas.
>
> BuddeComm is aware that the Study is currently being reviewed worldwide, and will also be considered by the ITU/UNESCO Broadband Commission for Digital Development. This underlines the national and international importance and credibility of the Study. To BuddeComm's knowledge, this is the first time that Australia leads the international telecoms world in relation to government policies and business strategies for the deployment of national infrastructure.[6]

2.9 Another independent expert, Mr Michael S Cox, labelled the Implementation Study a 'comprehensive, in-depth and accurate assessment of the problem space', submitting that:

> Overall the KPMG/McKinsey NBN Implementation Study reflected a very high quality of analysis and detail in the challenging area of advising the

3 See Fourth Report, May 2010, pp 7–9.

4 See Fourth Report, May 2010, pp 13–29.

5 Internet Industry Association, *Submission 130*, pp 1, 5.

6 Mr Paul Budde, Paul Budde Communication Pty Ltd, *Submission 128*, p. 2.

> Government on how best to determine and implement various policies required to support the NBN and NBN Co as well as analysing in depth the potential business case for funding the NBN and achieving an acceptable return on investment.[7]

2.10 Professor Henry Ergas remarked:

> I believe that the implementation study is a useful piece of work and in many respects a very careful piece of work. That does not mean that I agree with everything in it, and there is a great deal that one could discuss and argue about. Taking that as given, I think the Implementation Study team has obviously done a very careful piece of work in trying to look at the issues involved in implementing the NBN proposal.[8]

2.11 Mr Allan Asher, Chief Executive Office of the Australian Communications Consumer Action Network (ACCAN) explained that ACCAN viewed the Implementation Study as a generally helpful document insofar as it oulines further details of what the government's NBN project will actually involve in terms of practical implementation and operation:

> On the whole we think it has filled in a huge number of gaps in our understanding. It has exposed, in a way, the thinking of the models and it has given us for the first time some indications about possible wholesale costs from which one can start to form some views about possible retail prices. There is a lot in there but we also say that there is a lot that is not in there.[9]

2.12 Some witnesses expressed the view that the Implementation Study had resolved some matters of debate and that it is now time to get on with the job of implementing the government's NBN project, subject to the results of the government's consultation process and the final decisions the government will make in its forthcoming formal response to the Implementation Study. For example, Optus labelled the Implementation Study a 'valuable contribution towards resolving the longstanding debate on many …issues' and stated that:

> [f]or too long Australians have been denied the benefits that a competitive and innovative broadband market can deliver by Telstra's self-serving interest in preserving the status quo. Optus agrees with the [Implementation Study's] conclusions that 'the NBN has the power to fundamentally reform the market for all Australians and, more importantly, that this can be done with or without Telstra's participation'. Optus strongly recommends that the government takes on board many of the conclusions and recommendations of the [Implementation Study] to end the debate and get

7 Mr Michael S Cox, *Submission 139,* p. 1.

8 Professor Henry Ergas, *Committee Hansard,* Canberra, 4 June 2010, p. 2.

9 Mr Allan Asher, Chief Executive Officer, Australian Communications Consumer Action Network, *Committee Hansard,* Sydney, 20 May 2010, p. 4.

> on with the job of building a first-class network that will hasten the critical reform that this industry and our sector so desperately need.[10]

2.13 Other witnesses expressed greater reservations about the content of the government's NBN project and questioned whether matters of market structure and end-user interests have been sufficiently fleshed out. For example, Ms Rosemary Sinclair, Managing Director of the Australian Telecommunications Users Group stated:

> In general terms, when we read the study we see that it is very much focused on the build of those parts of the network that will be built by NBN Co. and not as clearly focused, as we would like, on the long-term interests of end users ongoing—so, for service quality, repair performance and life after the thing is built.
>
> …
>
> We think the study focuses on existing industry structure, and we are not sure that it clearly supports the evolution of the sector's structure to a services based innovation and competition model. It focuses on outcomes for the government, in terms of the coverage objectives and outcomes for NBN Co. in terms of the cost, but again not so clearly on outcomes for end users in terms of take-up retail prices and service performance.
>
> We have a question of how we got back up to peak speeds, average speeds, and regulated price increases. We are not at all sure about the wireless bit of the Implementation Study. We have a clear role for NBN in fibre and satellite, and a more complicated position that we are still working through in terms of a tender for the wireless component—the tenderer being able to offer wholesale and retail services.[11]

2.14 Mr Allan Asher of ACCAN stated:

> To put it another way, there is no recognition in the Implementation Study that how these first decisions are made about structure and rules is going to determine the shape of this market for 10, 20 or 30 years.
>
> Is it going to go down the path of repeating past errors and leaving us with a small number of large operators with market power—in other words, an oligopoly model? Or are we going to deliberately try and move to a much more open model in which access to the system by competing providers, and hence a wider range of consumer choices, is going to be enshrined? We argue that there is very much a need for a government statement of intent that fills that bit out and that it should not be left to simply negotiations by

10 Mr Andrew Sheridan, General Manager, Interconnect and Regulation, Optus, *Committee Hansard,* Canberra, 4 June 2010, p. 65.

11 Ms Rosemary Sinclair, Managing Director, Australian Telecommunications Users Group, *Committee Hansard*, Sydney, 20 May 2010, pp 21–22.

> the NBN Co. and the existing major telecoms operators to decide how that would work.[12]

The importance of a cost-benefit analysis of the NBN

2.15 What the NBN is actually going to cost should be a matter of great concern to all Australians and to the government. That this is a cause for legitimate concern is highlighted by one of the most important results to emerge from the Implementation Study.

2.16 In April 2009, when the government announced its decision to supercede its election commitment of building a Fibre to the Node national broadband network with a $43 billion NBN that would see fibre taken to 90 per cent of Australian premises, the Prime Minister stated that the NBN would be 'built in partnership with private sector' investment.[13]

2.17 The Implementation Study states that although it is possible the NBN might be built within the initial $43 billion cost estimate, private sector investors will not be willing to partner the government to build the network. The commercial returns projected by the Implementation Study would be too low to attract such investors.

2.18 Professor Jock Given, Professor of Media and Communications at Swinburne University's Institute for Social Research, has written:

> [In the Implementation Study, rates] of return come out at 3.6 per cent for low demand, low price, a cost blowout and no sharing of ducts and poles, or 8.3 per cent if it all goes swimmingly. McKinsey and KPMG think 6–7 per cent is a reasonable estimate. When the long-term bond rate is around 6 per cent, that's enough for the government to declare it 'viable' – though it's plainly not for the private sector, from which 'significant investment' was anticipated when the policy was announced a year ago. McKinsey and KPMG deliver this message unflinchingly, though they are only stating what most observers knew from the outset. Despite a lot of talk about spirited investors taking a stake in the country's broadband future and particular companies 'vending in' certain assets in exchange for equity in NBN Co, this is not even close to a commercial proposition given the level of risk.[14]

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12 Mr Allan Asher, Chief Executive Officer, Australian Communications Consumer Action Network, *Committee Hansard*, Sydney, 20 May 2010, pp 3–4.

13 The Hon. Kevin Rudd, MP, Prime Minister, the Hon Wayne Swan MP, Treasurer, the Hon Lindsay Tanner MP, Finance Minister, and Senator the Hon. Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'New National Broadband Network', Joint Press Release, 7 April 2009, www.minister.dbcde.gov.au/media/media_releases/2009/022 (accessed 9 June 2010).

14 Professor Jock Given, 'Inside Conroy's Implement', *Inside Story: Current affairs and culture*, http://inside.org.au/inside-conroys-implement/, 16 May 2010 (accessed 9 June 2010).

2.19 Mr Kevin Morgan, an independent analyst, submitted to the committee that the Implementation Study's findings on the commercial viability of the NBN project have led to the government quietly moving the goalposts on what it means to say that the NBN is commercially viable:

> [I]f nothing else the study puts the lie to the initial announcement by the Prime Minister in April of last year that the NBN would be effectively a Public Private Partnership and would attract private sector equity whilst it was being built. That implied the NBN could be justified on commercial grounds. Faced with the obvious finding of the Study that the NBN investment could never be deemed to be a commercial undertaking the government's rhetoric on the NBN has now changed.
>
> The NBN is now justified by the economy wide benefits it will bring, externalities that cannot be captured on its balance sheet. Regrettably, in the absence of a cost benefit study, we don't know what those benefits are or whether the ability to currently capture the externalities of higher speed broadband are a function of inadequate infrastructure i.e. low speeds and insufficient network capacity or the lack of applications. In essence the NBN has become the answer to an as yet unidentified problem.[15]

2.20 A rigorous cost-benefit analysis would have required the government to do three things:

- cost its NBN project, including laying bare for public critique the assumptions and calculations underpinning its costings;
- comprehensively state and justify the benefits believed to flow from its NBN project; and
- comprehensively plan the design and operating arrangements of the proposed NBN so that it would be able to be costed and the outcomes from its operation be identified and evaluated.

2.21 A cost-benefit analysis for the NBN would also have required consideration of the reasonable commercial rates of return and cash flows for the NBN Co, taking into account the NBN Co's costs of equity and debt and the risk profile of both NBN Co and the market in which it operates.

2.22 Undertaking a cost-benefit analysis would have enabled the public to properly assess for themselves whether the government's NBN project represents value for their money and is the best policy for delivering adequate and affordable broadband services to Australian premises. Central to that analysis would have been a comprehensive articulation of what the government's NBN project actually entails as opposed to a high-level sketch unsupported by details on network architecture, roll-out timetables, rural and regional service availability and pricing.

15 Mr Kevin Morgan, *Submission 133iii*, pp 1–2.

2.23 The matter is not a mere theoretical one. Dr Ian Martin, in an article published in the *Telecommunications Journal of Australia* and provided to the committee as additional information, identified the practical and significant consequences which will result if there is 'a large potential gap between the productivity claim behind the NBN and its likely cost benefit outcome'. Dr Martin wrote:

> [W]here will the shortfall be made up? Four possibilities to make up the financial shortfall are:
>
> - the federal budget,
> - NBN access prices (and therefore access seekers' earnings),
> - higher retail prices (to the extent access price increases may be passed on), and
> - Telstra shareholders through the transfer of value from Telstra to NBN Co.[16]

No cost-benefit analysis conducted

2.24 As is well-known, at no stage has the government undertaken a rigorous, public cost-benefit analysis of its NBN project. The Implementation Study explicitly did not conduct this analysis.

2.25 The Department of Broadband, Communications and the Digital Economy explained to the committee that the Lead Advisor for the Implementation Study was specifically not directed to undertake a cost-benefit analysis because such analysis was seen as superfluous given that the government had made an election commitment to build the NBN regardless of what a cost-benefit analysis might conclude:

> Senator FISHER—Why wasn't McKinsey asked to provide a cost-benefit analysis?
>
> Mr Quinlivan—Because the government had made a policy decision already. The purpose of the cost-benefit analysis is to determine whether there is a case for doing something or not… But the government had made that decision. It was an election commitment. So the practical issue was to work out how best to implement it, and that was the subject of the implementation study. By its very nature it is an implementation study.[17]

2.26 A number of submitters commented on whether it is still important that a cost-benefit analysis be conducted for the government's NBN project.

2.27 The Business Council of Australia maintained its position that a cost-benefit analysis is needed:

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16 Dr Ian Martin, 'The promised land: Costs and benefits of the NBN vision', *Telecommunications Journal of Australia*, vol. 60, no. 2, p. 30.15.

17 Mr Daryl Quinlivan, Deputy Secretary, Department of Broadband, Communications and the Digital Economy, *Committee Hansard*, Canberra, 20 May 2010, p. 67.

> The findings of the NBN implementation study confirm the need for a supporting cost–benefit analysis of the $43 billion National Broadband Network to demonstrate that the project is in the national interest.[18]

2.28 Doctor Mark Harrison, an economist and recent visiting researcher at the Productivity Commission, also stated that a cost-benefit analysis is still needed:

> Usually, when you undertake a project in the private or the public sector, you want to know: is there a net benefit? Do the benefits exceed the cost? If it is so obvious, that should be very easy to show in a cost-benefit analysis. I am saying [the government] have presumed the results of the analysis that has not been done.[19]

> [Whether the government's NBN project is a good thing for Australia] is exactly what should be tested in the cost-benefit study. That is the point; you can say that, but showing it is another thing. The question is: let us try to get estimates of these benefits and see whether they do justify the cost. The cost should be properly measured, which includes the cost of capital and which includes the cost of risks imposed on taxpayers; then you can weigh them up. In essence [the government] claim they know the results of the cost-benefit study without ever doing it.[20]

2.29 Professor Henry Ergas similarly submitted that there is a public policy imperative that a cost-benefit analysis be undertaken, especially in the wake of the analysis undertaken and conclusions reached in the Implementation Study:

> There are a wide range of uncertainties that are involved and I think the [Implementation Study] is quite frank in its recognition of those uncertainties. But they have put an enormous amount of effort into trying to get that right. It seems to me that it would be an enormous shame and a departure from good public policy for all of that work to be excluded from informing a proper cost-benefit appraisal. It would be an enormous waste of the $25 million or $27 million that taxpayers have paid for this study.[21]

2.30 Professor Paul Kerin argued that the government should only proceed with the NBN project:

> if the business case and the cost-benefit analysis stack up. I should firstly distinguish between a business case and a cost-benefit analysis. The Implementation Study did a business case, which really looks at the financial cash inflows and outflows associated with the NBN. That is one issue. The bigger issue for me is the cost-benefit analysis … because we have to look at the benefits of doing this project and also the costs. The benefits should include all the benefits to society through faster broadband, cheaper broadband or greater availability and so on. Yes, there may well be

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18 Business Council of Australia, *Submission 136ii*, p. 4.

19 Dr Mark Harrison, *Committee Hansard*, Canberra, 4 June 2010, p. 9.

20 Dr Mark Harrison, *Committee Hansard*, Canberra, 4 June 2010, p. 8.

21 Professor Henry Ergas, *Committee Hansard*, Canberra, 4 June 2010, p. 16.

> benefits from this project. No-one has looked at whether those benefits exceed the cost of the project—$43 billion.[22]
>
> …
>
> The cost to society is $43 billion. The benefits [asserted] are talking about vision, and how everyone wants high-speed networks that work, [but] quoting a couple of studies is not the sort of rigour that is required when we are spending $43 billion of taxpayers' money, six times as big as the highest previous figures ever for an infrastructure project.[23]

2.31 Professor Kerin went on to explain his view that, in the absence of the government conducting a cost-benefit analysis, it is

> difficult to know, firstly, whether there should be an investment at all by anyone and, secondly, whether the government should do it. I would certainly say that, if a project generates benefits to society that cannot be captured by a commercial business, I am all for the government investing in that project, because the benefits to society may well outweigh the costs. But what we should do is look at what those benefits are and what those costs are rather than understating the cost of the project and not quantifying what the benefits are.[24]

2.32 On the other hand, Professor Reg Coutts expressed a degree of scepticism about whether a cost-benefit analysis would provide much insight:

> On one level, with respect to a discussion about cost-benefit, a broad study would be very helpful, as long as it is helpful in terms of an informed debate rather than an exchange of competitive press releases. In broad terms, yes [there is a need for the government to do a cost-benefit analysis]. The difficulty is that there have been a number of studies in respect of broadband as such and the economic benefits, but it is unclear about particularly the benefits and, to some degree, even the costs of a ubiquitous broadband network. This is what makes it a very contentious issue, because it really does come down to looking at what else is happening and what other countries are doing around the world and a judgment of how the future is going to unfold. I do not mean to be deprecating to my economist colleagues, but they have never filled me with confidence with their ability to predict what is happening next year, let alone in the next five to ten years.[25]

2.33 Further, the Australian Competition and Consumer Commission (ACCC) submitted that if the NBN is to be implemented, the issues relevant to its regulatory assessment of NBN Co's activities and operations will require a cost-benefit analysis of the effect of conduct on competition which is an analysis of a different kind to that

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22 Professor Paul Kerin, *Committee Hansard*, Canberra, 4 June 2010, pp 29–30.

23 Professor Paul Kerin, *Committee Hansard*, Canberra, 4 June 2010, p. 32.

24 Professor Paul Kerin, *Committee Hansard*, Canberra, 4 June 2010, p. 36.

25 Professor Reg Coutts, *Committee Hansard*, Canberra, 4 June 2010, p. 26.

which might be used by economists attempting to assess the government's NBN project pursuant to economic cost-benefit models:

> [T]he costs that [the ACCC] look at are the costs to competition rather than the benefits to the public interest. It is off a little bit to the side and above a pure cost-benefit analysis. Pure cost-benefit analysis would miss a lot of the qualitative public issues. A cost-benefit analysis would miss the 'with and without' test. It could be a bit misleading in terms of the competition analysis.[26]

Committee view

2.34 The committee's interim reports have continually expressed the committee's frustration that the government's NBN project is being implemented in breach of the government's own guidelines for assessing whether infrastructure projects of national significance should proceed.

2.35 In its Third Report the committee explained how the failure to conduct an 'accurate and justifiable Cost-Benefit Analysis' breaches the agency guidelines of Infrastructure Australia, as well as the principles and criteria of the Building Australia Fund (BAF) evaluation processes. The BAF processes, including the undertaking of a rigorous cost-benefit analysis, are made mandatory by s 52(2) of the *Nation-Building Funds Act 2008*.[27] As the committee wrote over six months ago:

> The committee is appalled that … almost eight months after the announcement of this commitment to a massive investment of $43 billion for the FTTP NBN, the government still refuses to comply with its own legislative requirements that the NBN must undergo a rigorous cost-benefit analysis.[28]

2.36 In its Fourth Report the committee stated:

> In the absence of a cost-benefit analysis proving to the contrary, the committee believes the NBN is not justifiable policy. Too much public money is at stake to be thrown away without transparent, accountable, independent assessment of the merit of starting, let alone progressing, the project.
>
> All in all the committee does not accept that the Implementation Study, nor other evidence given to the committee, supports the NBN in its current form.[29]

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26 Mr Mark Pearson, Australian Competition and Consumer Commission, *Committee Hansard*, Canberra, 4 June 2010, p. 50.

27 Third Report, November 2009, pp 64-66.

28 Third Report, November 2009, p. 66, [6.18].

29 Fourth Report, May 2010, p. 8 [2.10] – [2.11].

2.37 The committee repeats its view that the Implementation Study is not a substitute for a rigorous cost-benefit analysis being conducted into the government's NBN project, and that the lack of such an analysis remains a significant barrier to being able to assess whether the project will provide value for taxpayers' money.

No certainty on key aspect of the NBN project

2.38 The Implementation Study provides advice to the Government. It makes 84 recommendations, and many other statements (titled 'Advice') of 'significant counsel to the NBN Co Board'[30] on matters relating to the technology, financing, ownership, policy framework, and market structure arrangements for the government's NBN project.

2.39 The recommendations and counsel to NBN Co Board provided by the Implementation Study reflect the Lead Advisor's view on how the government's policy objectives 'can be implemented over time';[31] they do not necessarily reflect what the government, NBN Co or any other party will actually decide to do when the NBN is implemented on the ground.

2.40 Evidence to the committee indicated witnesses' general agreement that the Implementation Study is an important document and that it is comprehensive in identifying what are or may be key issues if the government's NBN project is implemented. The evidence on that point was extracted above.

2.41 Evidence to the committee also indicated that there are a number of topics, many of which are canvassed in, but not resolved by, the Implementation Study, for which uncertainty remains. These are matters relating to key aspects of the NBN project's design, operating arrangements, and regulatory framework. The evidence indicated that decisions made on each of these aspects will ultimately affect whether the government's NBN project achieves the policy benefits the government has continually stated (but not proved) as justifying the cost of building the NBN.

2.42 Some of the key areas of uncertainty or concern identified were:

- services for the final 7-10 per cent;
- future of the Universal Service Obligation;
- end-user interests, including complaints handling, end-user premises equipment, Quality of Service, migration arrangements and pricing; and
- framework for future privatisation of NBN Co.

30 McKinsey-KPMG, *Implementation Study for the National Broadband Network*, 5 March 2010, p. v.

31 McKinsey-KPMG, *Implementation Study for the National Broadband Network*, 5 March 2010, p. i.

Services for the final 7-10 per cent

2.43 The Implementation Study recommends that the fibre component of the NBN should be extended to 93 per cent of premises and cover the 1.3 million new premises expected to be built by 2017-18.[32] It also recommends that the government conduct a commercial tender process for the provision of fixed-wireless network to provide 12 Mbps peak (as opposed to 'committed' or 'average') data rates for premises within the 94th to 97th percentiles,[33] and that NBN Co be required to provide a next-generation satellite service providing at least 12 Mbps peak data rates for premises beyond the fibre footprint.[34]

2.44 Finally, the Implementation Study provided significant counsel to government that NBN Co should also be required to provide transit backhaul to existing towers and new tower sites needed by the fixed-wireless network operator.[35] The significance of backhaul for wireless services is twofold. First, that 'whereas base stations in metropolitan areas frequently connect via fibre links, most towers in the final 10 per cent connect via microwave backhaul, which offers lower capacity and performance characteristics', and moreover, 'market prices for backhaul capacity remain very high in regional and remote areas'.[36]

2.45 A number of submitters commented on these recommendations and matters relating to service delivery for regional, remote, and currently under-serviced premises.

2.46 The Regional Telecommunications Independent Review Committee, chaired by Dr William Glasson AO, stated that it:

> Questions the proposal for a tender to construct and operate a wireless network with top speeds of 12 Mbps for the 94th to 97th percentiles. According to the Committee's understanding of existing infrastructure, this proposal duplicates a number of fixed and wireless platforms that already offer similar, or greater, top speeds. Given that the Study recommends the wireless network should not be required to operate as a wholesale-only network the benefits to regional Australians of this proposal require further explanation.
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> …

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32 McKinsey-KPMG, *Implementation Study for the National Broadband Network*, 5 March 2010, p. 10.

33 McKinsey-KPMG, *Implementation Study for the National Broadband Network*, 5 March 2010, p. 281, recommendation 45.

34 McKinsey-KPMG, *Implementation Study for the National Broadband Network*, 5 March 2010, p. 293, recommendation 43.

35 McKinsey-KPMG, *Implementation Study for the National Broadband Network*, 5 March 2010, p. 317, recommendation 47.

36 McKinsey-KPMG, *Implementation Study for the National Broadband Network*, 5 March 2010, p. 317.

> While recognising that the geographic size and population density of regional Australia means that it is not viable to deploy identical technologies to all Australians, any differences should be minimised. Accordingly, the Committee would like to better understand the potential implications of recommendations relating to differences in services and pricing structures between the NBN platforms.[37]

2.47 In contrast, Professor Reg Coutts expressed enthusiasm for the conclusions of the Implementation Study in terms of its wireless solutions:

> Again, it was only a start, but I was gratified to see in the [Implementation Study] the significant focus on the role of backhaul in a number of ways. It was not just about providing a competitive backhaul to the points of interconnect but also providing backhaul, for example, to fixed wireless providers, and also mentioning the importance of backhaul even for the satellite side. Because of the nature of the industry structure to date, the focus of the industry has been on the highly urbanised centres of Australia, as you are well aware. So I was very gratified to see in the Implementation Study a significant emphasis and quite a hefty proposed budget allocation against backhaul. So, firstly, backhaul to me is crucial to the NBN as a whole, but particularly for regional and remote communications competitive backhaul is an absolutely key.[38]

2.48 However, Professor Coutts identified that the competitive backhaul arrangements will still involve 'a number of challenging issues'. Professor Coutts expressed the view that many key issues for regional Australia and those premises located in the last 10 per cent have been insufficiently addressed given that the government has already commenced rolling out the network:

> Senator FISHER—I hear you saying that, in terms of a credible NBN looking after the last 10 per cent, you are not yet prepared to pin your hopes on the implementation study.
>
> Prof. Coutts—I am a bit of an optimist, as you probably know, so I am hopeful with the things I see and hear are happening—not at the pace that I would like. But, there again, I recognise the size of the task. I come back to the original statement. I think that, until the government really is clear how it is going to address that 10 per cent and who the 10 per cent are, the plan, shall we say, is not complete in the same way that the optical footprint—
>
> Senator FISHER—Who are the 10 per cent? What will they get? When will they get it? How will they get it? How much will it cost them? Are they the questions that need answering?
>
> Prof. Coutts—And probably a few more from there. We are just over one year into a more than eight-year program. My focus is that I and the people

37 Regional Telecommunications Independent Review Committee, *Submission 135ii*, p. 3.

38 Professor Reg Coutts, *Committee Hansard*, Canberra, 4 June 2010, p. 22.

> who talk to me from regional communities would like to see when broadband is comin' to town, so to speak.[39]

Future of the Universal Service Obligation

2.49 The Universal Service Obligation (USO) is an obligation placed on universal service providers to ensure that standard telephone services, payphones and prescribed carriage services are reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business. Telstra is currently the sole universal service provider by virtue of its ownership of the ubiquitous copper network. The Implementation Study explains that Telstra currently fulfils its USO:

> with long copper loops, except for around 20,000 premises where fixed radio solutions are deployed, and an even smaller number where voice is delivered via satellite.[40]

2.50 The Implementation Study explained how a wholesale-only NBN Co will differ from the vertically-integrated Telstra and that, because network services will be separated from retail services over the NBN, 'Treatment of the USO will need to be re-examined in the context of such a market evolution…[but] some form of retail voice USO will need to be retained even after completion of the NBN'.[41] The Implementation Study concluded that a 'detailed examination of [the USO] topic is beyond the scope of the Implementation Study' but nevertheless identified several options the government may wish to consider in the coming period.[42]

2.51 In its Fourth Report the committee identified the significant concerns already expressed to it about the future of the USO and calls, particularly from consumer groups, that the USO be addressed and a minimum retail service obligation also be developed.[43]

2.52 During the committee's most recent further hearings, the USO continued to be a matter of significant concern for submitters. The Internet Society of Australia, the Australian Communications Consumer Action Network (ACCAN), and Mr Michael Cox all identified the matter as being critical, and one for which there is currently no certainty for the public or stakeholders.[44]

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39 Professor Reg Coutts, *Committee Hansard*, Canberra, 4 June 2010, p. 25.

40 McKinsey-KPMG, *Implementation Study for the National Broadband Network,* 5 March 2010, p. 119.

41 McKinsey-KPMG, *Implementation Study for the National Broadband Network,* 5 March 2010, p. 120.

42 See McKinsey-KPMG, *Implementation Study for the National Broadband Network,* 5 March 2010, p. 120, Exhibit 2-21.

43 Fourth Report, May 2010, pp 104–106.

44 Internet Society of Australia, *Submission 140,* p. 4; Australian Communications and Consumer Action Network, *Submission 138ii,* pp 5–7; Mr Michael S Cox, *Submission 139,* p. 17.

2.53 Mr Karl Hampton MLA, Minister for Information, Communications and Technology Policy for the Northern Territory Government submitted that the matter is particularly urgent for premises located in the NT:

> While supporting recommendation 30 to determine how the Universal Service Obligation may apply to NBN Co, I don't believe it can wait until the end of 2011. As you are aware there are substantial parts of the Northern Territory that rely on the cross subsidisation inherent in the Universal Service Obligation and the comfort that is brought to consumers by the Customer Service Guarantee.
>
> Whilst I understand the proposed legislation strengthens the Universal Service Obligation requirements on Telstra, I believe there is a need for further discussion with a broad audience as to how the Universal Service Obligation and Customer Service Guarantee will apply once the National Broadband Network has a presence. Market failure for equivalent services is an issue for remote areas for many years to come and it is my view that the Northern Territory will require access to the Universal Service Obligation and Customer Service Guarantee for some time to come.[45]

End-user interests: complaints handling, end-user premises equipment, Quality of Service, migration arrangements and pricing

2.54 A number of submitters made comments about matters relating to end-users that are yet to be finally determined. The resolution of each of these issues will impact on the extent to which the NBN-as-implemented will actually realise benefits for end-users. Particular topics addressed by submitters included:

- Complaints-handling arrangements, specifically the need for clear delineation of NBN Co and Retail Service Providers' responsibilities for handling customer complaints and service failures;[46]
- Capabilities of equipment located at end-user premises, specifically whether the Optical Network Terminal boxes (ONTs) at each end-user's premises will have a sufficient number of physical ports to enable multiple providers to offer services to each premises,[47] and also the arrangements for back-up batteries to be fitted for ONTs;[48]

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45 Mr Karl Hampton MLA, Minister for Information, Communications and Technology Policy, Northern Territory Government, *Submission 132,* p. 2.

46 Australian Competition and Consumer Action Network, *Submission 138ii,* 'Response to NBN Implementation Study', p. 3.

47 Australian Competition and Consumer Action Network, *Submission 138ii,* 'Response to NBN Implementation Study', p. 6; Mr Karl Hampton MLA, Minister for Information, Communications and Technology Policy, Northern Territory Government, *Submission 132,* p. 1.

48 Australian Competition and Consumer Action Network, *Submission 138ii,* 'Response to NBN Implementation Study', pp 7–8.

- Quality of Service (QoS) matters,[49] specifically what standards will apply and what will be the mechanisms for ensuring that services over the NBN have sufficient QoS to support the bandwidth-hungry requirements of advanced services such as IPTV,[50] Video on Demand,[51] and VoIP;[52]
- Aerial versus underground cabling,[53] specifically the assumption used in the Implementation Study's cost modelling that 55 per cent of the NBN should be deployed using aerial cabling and infrastructure;[54]
- The roll-out timetable for the NBN across the country[55] and the nature of arrangements to ensure smooth transition experiences for end-users.[56] Individual submitters emphasised in particular that currently under-serviced premises should be prioritised for the receipt of NBN-broadband services and expressed dissatisfaction that this was not sufficiently addressed in the Implementation Study;[57] and
- Pricing arrangements, including the viability and desirability of discriminatorily pricing services higher for business as opposed to residential premises, and pricing and service arrangements for government and government-owned networks.[58]

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49 Mr Michael S Cox, *Submission 139,* p. 2–3; Internet Society of Australia, *Submission 140,* p. 3.

50 Internet Protocol Television is television content that, instead of being delivered through traditional broadcast and cable formats, is received by the viewer through the technologies used for computer networks.

51 A system that allows users to select and watch or listen to video or audio content on demand.

52 Voice over Internet Protocol is a protocol optimised for the transmission of voice through the internet.

53 Internet Society of Australia, *Submission 140,* p. 3.

54 McKinsey-KPMG, *Implementation Study for the National Broadband Network,* 5 March 2010, p. 214.

55 Mr Karl Hampton MLA, Minister for Information, Communications and Technology Policy, Northern Territory Government, *Submission 132,* p. 3; Mr Michael S Cox, *Submission 139,* p. 16.

56 Australian Competition and Consumer Action Network, *Submission 138ii,* 'Response to NBN Implementation Study', p. 6.

57 Professor Reg Coutts, *Committee Hansard,* Canberra, 4 June 2010, p. 25; Mr Karl Hampton MLA, Minister for Information, Communications and Technology Policy, Northern Territory Government, *Submission 132,* p. 3; Mr Michael S Cox, *Submission 139,* p. 16.

58 Mr Michael S Cox, *Submission 139,* p. 12; Dr Ross Kelso, *Submission 137ii,* p. 5.

Framework for future privatisation

2.55 Whether the NBN Co should be privatised in the future has been a matter previously addressed by members of the committee in the committee's interim reports.[59]

2.56 The framework for privatisation, including the safeguards built into the model, are integral to the question of whether the government's NBN project is in the national interest and will actually provide value for money.

2.57 Presently there is still uncertainty about what the framework for privatisation and the arrangements to govern that process will look like: final decisions have not yet been made.

2.58 The Implementation Study recommends that it is vital that a review into market structure and competition safeguards be conducted prior to any privatisation of NBN Co, that it may be that NBN Co should be split into a Layer 1 business (the ducts, poles and physical fibre) to be privatised separately from a Layer 2 business (the active equipment that lights the fibre), and that NBN Co's backhaul assets may be better kept under public ownership for good and not privatised at all:

> In the lead-up to privatisation, Government should seek independent advice about the competition safeguards that need to be in place to privatise NBN Co, and what form that privatisation should take from a competition perspective. The independent advice could reasonably be that strict equivalence is insufficient to safeguard competition once NBN Co is in private hands, and that the Layer 1 business (the ducts, poles and physical fibre) should be privatised separately to the Layer 2 business (the active equipment that lights the fibre). However, telecommunications is a dynamic industry and committing to an inquiry by an independent agency such as the Productivity Commission prior to privatisation would avoid locking in a particular solution today.
>
> The situation for backhaul assets is different—uncontested backhaul will remain a bottleneck asset that is very difficult to regulate. Volume will be constantly increasing thus requiring upgrades in active equipment to increase data throughput, without being able to raise prices sufficiently to achieve economic returns. Stand-alone commerciality of backhaul will always be challenging while ensuring affordability, so a commercial owner will rationally under-invest. Government should therefore have a bias not to privatise NBN Co's backhaul assets, although it could allow private operators (including a privatised NBN Co) to tender for their operations. The independent review into competition prior to privatisation should start with a rebuttable presumption to keep backhaul under public ownership.[60]

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59 Fourth Report, May 2010, pp 89–95. See also: Fourth Report, May 2010, Additional comments of Australian Greens, p. 146.

60 McKinsey-KPMG, *Implementation Study for the National Broadband Network*, 5 March 2010, p. 53.

2.59 The Implementation Study also recognised that privatisation arrangements should be established in advance of implementation as opposed to being created on-the-run:

> privatisation safeguards should be set today in the NBN legislation. This will make it more difficult to undermine competition outcomes in the future by seeking to maximise privatisation proceeds—and therefore will be an important component in safeguarding the NBN's competition legacy.[61]

2.60 Submitters emphasised the importance of privatisation arrangements to the viability and desirability of the government's NBN project. The Regional Telecommunications Independent Review Committee submitted:

> Given the importance of developing competition in regional, rural and remote Australia, the Committee agrees that an independent review into market structure and competition safeguards prior to any privatisation of NBN Co is vital. The review should include consideration of impacts in rural, regional and remote Australia as part of its terms of reference.[62]

2.61 Optus also commented on privatisation arrangements:

> [B]efore there is ultimately a government sell-down of its interest in the National Broadband Network, we think it would be appropriate to have a look at the competitive environment at that point in time. We have reached that conclusion because of the unique nature of this network. It will be the owner and operator of a bottleneck infrastructure. Therefore we think that it is important to have a look at the competition implications of any sell-down before that occurs. I think we have probably gone a little bit further and said that we think some of the competition issues are so critical that there should be some limits imposed in terms of retail telecommunications providers taking a stake in the National Broadband Network on privatisation. We have certainly supported the study's recommendation for a 15 per cent equity cap on retail telecommunications investment in the National Broadband Network Company.[63]

2.62 The Australian Telecommunications Users Group submitted:

> Our thinking about [privatising NBN Co and the timetable for privatisation] is modelled on history. We like the Implementation Study's recommendation that there be a public inquiry at that time to determine whether in fact that is the best thing to do. We would like the criteria to be the long-term interests of end users. We are a bit of a broken record on that particular point…

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61 McKinsey-KPMG, *Implementation Study for the National Broadband Network,* 5 March 2010, p. 53.

62 Regional Telecommunications Independent Review Committee, *Submission 135ii*, p. 3.

63 Mr Andrew Sheridan, General Manager, Interconnect and Regulation, Optus, *Committee Hansard*, Canberra, 4 June 2010, pp 69–70.

> The other interesting thing … is this notion that you might structurally separate NBN Co before you sell it, assuming that it has got into active service delivery in competition with other people. I thought that was quite interesting. I think we are comfortable with the caution that has come out of the study [on this] particular issue. Rather than just do it, we think about it and then maybe do it.[64]

Committee view

2.63 The committee is of the view that many of the issues identified above will have a serious impact on the government and NBN Co's ability to implement the NBN project on time and to budget, and just as importantly, on whether the NBN project will achieve the benefits the government has mooted as justification for it.

2.64 The committee believes that the detail of the operating arrangements, network design, and regulatory matters should have been determined prior to implementation of the NBN commencing. As it is, the NBN has been substantially rolled-out in Tasmania, retail services have recently commenced there, and yet there is still no resolution of issues as important as the future of the Universal Service Obligation, the complaints handling mechanism that will apply and when and what type of broadband services are going to 'come to town' for Australian premises located on the mainland.

2.65 The 2010-2011 Budget allocated $16 million over two years to the Department for a national advertising campaign focused on 'raising public awareness of the value of super-fast broadband which will be delivered to Australian households, businesses and organisations through the rollout of the NBN'.[65] The committee questions how the value of the NBN can be quantified or even proclaimed in the absence of a cost-benefit analysis or the details of the NBN actually being finalised. The NBN is a government project yet to receive the endorsement of Parliament. Since the government announced its Fibre to the Premises NBN project, no Bill relating to the governing, operating, and regulatory arrangements for the NBN Co, nor any Bill relating to the future of Telstra and its assets, has been agreed to by the Senate.

2.66 It is not possible to make an assessment of whether the government's NBN project will be a policy success because too much of the most important detail of the network's design and future operating arrangements remains outstanding. There is no detail, and no demonstrated proof (as opposed to untested assertion) of value for money. The Australian public simply has not been given the means to test for themselves whether the government's NBN project is good policy for Australia.

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64 Ms Rosemary Sinclair, Managing Director, Australian Telecommunications Users Group, *Committee Hansard*, Sydney, 20 May 2010, pp 23–24.

65 Australian Government, *Budget measures: budget paper no. 2: 2010-2011*, Commonwealth of Australia, Canberra, 2010, pp. 117-118.

Information needs to be put in the public domain

2.67 The government has stated, based on the conclusions of the Implementation Study, that the NBN can be built for a total cost in the order of some $43 billion and that there will be social, economic and policy benefits realised by building the NBN. When releasing the Implementation Study to the public, the Hon Senator Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, stated:

> After months of detailed and rigorous analysis, the Implementation Study confirms that the Government's National Broadband Network is achievable, viable and will transform life and business in Australia.[66]

2.68 But those are largely untested government statements. The public do not have:

- the calculations and underlying workings that were used by the Lead Advisor to generate its total cost estimates for building the NBN; nor
- a comprehensive statement of what are or will be the alleged and predicted benefits of the government's NBN project.

2.69 Submitters differed in the extent to which they viewed the Implementation Study as justifying the government's NBN policy.

2.70 Industry players and telecommunications experts were generally in agreement as to the importance of the Implementation Study and submitted that the priority should now be to implement the NBN as opposed to questioning whether it can or should be implemented.

2.71 Other analysts, the Business Council of Australia, and expert economists providing evidence to the committee, submitted that it remains premature to implement the government's NBN project before subjecting the workings of the Lead Advisor for the Implementation Study to public scrutiny and conducting a cost-benefit analysis into whether the project should even proceed.

Attitude of industry players and telecommunications experts

2.72 The Internet Society of Australia explained that, following the release of the Implementation Study, it:

> continues to applaud the Government's 2009 commitment to the NBN. High speed broadband will be the main driver not only for new, faster communications services, but a critical factor in the delivery of Government services such as e-health and online education and training. It

66 The Hon. Lindsay Tanner, Minister for Finance and Deregulation and Senator the Hon. Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'Landmark study confirms NBN vision is achievable and affordable', Joint media release, 6 May 2010, www.minister.dbcde.gov.au/media/media_releases/2010/040 (accessed 8 June 2010).

> will also be a critical factor for innovation and economic growth in a digital economy.[67]

2.73 Optus submitted that the publication of the Implementation Study had resolved a number of 'long running' debates and that it is time to move on to actually implementing the NBN:

> Optus strongly supports the overall conclusion of the Study, that a wholesale-only, equivalent open access network, providing 21st super-fast century broadband services to all Australians, is indeed viable… Optus strongly recommends that the Government takes on board many of the conclusions and recommendations of the Study to end the debate on the NBN and get on with the job of building the network to hasten the critical reform this industry so desperately needs.[68]

2.74 Mr John Hilvert, Communications Director of the Internet Industry Association – an association representing major suppliers, content creators, developers and lawyers – put that Association's position as follows:

> [The Internet Industry Association has] one message for you guys: Australia deserves broadband and we need it now. We have one shot. Please do not blow it.[69]

Attitude of economic experts, Business Council of Australia, and other telecommunications experts

2.75 Independent economists were more sceptical of the merit of rushing headlong into implementing the government's NBN project without subjecting it to the same cost-benefit analysis testing required of all major infrastructure projects.

2.76 The committee has extracted above the evidence of experts such as Professor Henry Ergas, Dr Mark Harrison, and Professor Paul Kerin that a cost-benefit analysis is still required in order to justify whether this project should proceed. Those economists stated that it is not possible to take the Implementation Study's costings at face value because the underlying workings underpinning the Lead Advisor's work have not been released for public scrutiny.

2.77 Professor Henry Ergas explained to the committee the limitations of the Implementation Study absent its assumptions and calculations being laid bare:

> I believe it would be highly desirable for the detailed workings that underpin the results that are presented in the implementation study to be public. It is often very difficult in reading the report to understand precisely what has been done and why it has been done that way. I cannot imagine

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67 Internet Society of Australia, *Submission 140,* p. 1.

68 Optus, *Submission 134iii,* pp 1–2.

69 Mr John Hilvert, Communications Director, Internet Industry Association, *Committee Hansard,* Sydney, 20 May 2010, p. 11.

> that there are significant issues of commercial confidentiality and, to the extent to which there are such issues, they could be dealt with by requiring those having access to confidential information to fill in the appropriate undertakings or to commit to the appropriate confidentiality undertakings. Having access to the underlying material would be helpful in both assessing the implementation study and coming to a more well-founded assessment of its strengths and weaknesses, but also in terms of informing the broader public debate. As a result, I would urge the committee to do all it can to ensure that the detailed workings that underpin this study are made public in a timely and comprehensive way.[70]

2.78 The Professor went on to explain that the public release of the calculations is even more important given the considerable doubt that exist as to the validity of some of the assumptions made:

> [T]he study makes a number of assumptions that seem to me optimistic. It is very difficult to test those assumptions without access to the detailed workings, but as best as one can tell from the summary that is given in the report, there are a number of areas where the study team's approach is rather optimistic in terms of the prospects for NBN Co. One area that I have signalled in that respect, and it is not the only one, is the assumptions with respect to price trends over time. The study, as you know, assumes that prices that are received by NBN Co. for its services increase steadily and continuously over time. That, of course, is in complete contrast to the experience of Australian telecommunications over the period from the 1980s to the present and is also in contrast to the experience internationally, as well as to current trends.[71]

2.79 In response to a related question on notice to the department about the feasibility of NBN Co being able to increase its wholesale access pricing over time, the department had explained:

> The Study models an indicative price architecture for a range of likely services that the NBN Co will offer. It assumes that real revenues per user will naturally trend higher over time (although at a modest rate of less than 2% p.a), before levelling off. There are two primary reasons that the Study takes this approach.
>
> Firstly, it expects that over time users will gradually move to higher value bitstream products as they increasingly demand greater average speeds on the network. For example a customer who takes an introductory 20 Mbps bitstream product initially, may find over time that they require greater bandwidth to run the latest in applications and therefore upgrades to a faster plan with higher speeds. These premium products will produce higher average revenues per user for the NBN Co.

70 Professor Henry Ergas, *Committee Hansard*, Canberra, 4 June 2010, p. 2.

71 Professor Henry Ergas, *Committee Hansard*, Canberra, 4 June 2010, p. 2.

> Secondly, the Study expects that over time the ACCC will allow access prices to rise gradually to enable the NBN Co to achieve a reasonable return on network assets. Any increases in access charges allowed by the ACCC would have to meet strict criteria including affordability and only allow a fair return on a regulatory asset base, over which the ACCC will have complete transparency.[72]

2.80 To that, Professor Ergas responded:

> comments about price assumptions from the department … point out that the assumption of increasing prices over time reflects a mix of factors, in particular there is an assumption that over time NBN Co. will be selling a progressively higher speed or otherwise higher price range of services, so there is some change in the composition of the services it sells, but also that prices across the board will be increasing. That is entirely correct, but the study itself is very cautious in terms of the prospects for the composition of NBN Co. services to change to higher priced services over time. It cautions against assuming that such upgrading will occur or that it will occur at any point early in the deployment and operation of the new network. As a result, in terms of the factors that affect the commercial and broader economic liability of the new network, one has to assume that the bulk of the work, in terms of the per-unit revenue change, comes from this pure increase in prices over time. Again, it would be highly desirable for NBN Co. or the department to disclose the detailed workings that underpin those price projections so that analysts can look at whether those projections are in fact reasonable.[73]

2.81 Mr Kevin Morgan also submitted that it is important that the underlying charts and spreadsheets generating the Lead Advisor's conclusions are provided for public debate:

> [T]he business case [posited by the Implementation Study] itself is contingent. This is the problem. There is so little data there. There are a few headline charts that draw together what is obviously an enormous amount of work, but in the absence of the underlying charts, you cannot really see how that chart is put together.[74]

2.82 For Mr Morgan, the issue is not so much about examining the accuracy of the calculations, but the assumptions that have been used and that underpin the results:

> I find the study a bit less than persuasive. When you look at the take-up rates that are posited, you would basically have to have all of the URL players come across pretty quickly and some of Telstra's customers come across too. Telstra would have to be selling fibre on behalf of NBN Co. which, if they are at war, is an unlikely scenario. I do not doubt that the

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72 Department of Broadband, Communications and the Digital Economy, answer to question on notice, 20 May 2010 (received 3 June 2010).

73 Professor Henry Ergas, *Committee Hansard*, Canberra, 4 June 2010, p. 3.

74 Mr Kevin Morgan, *Committee Hansard*, Sydney, 20 May 2010, p. 38.

> underpinnings of this study and those spreadsheets will all add up. You do not hire McKinsey and get spreadsheets and numbers that do not add up. The critical issue is the assumptions. The assumption that Telstra, if it is not on board, will not engage in some kind of competitive response is a bit of a big ask. The other issue is—and I know it was canvassed quite widely this morning—whilst we have relatively high rates of broadband take-up for the lower speed ADSL1—1.5 megabit—services, it has grown for the ADSL2 services. We have seen this enormous explosion of wireless broadband and there has been a rather misguided debate, mis-focused debate perhaps, that wireless broadband can displace fixed line broadband. For most users that is not the case.[75]

2.83 Finally, Professor Paul Kerin stated that he believes the numbers in the Implementation Study, even taken at face value, do not 'stack up':

> My concern, from a finance perspective, is that even if you believe the McKinsey-KPMG numbers it does not stack up. I am also concerned about process, because it is pretty pointless doing a business case after you have already decided to spend $43 billion of taxpayer money, because you know what the answer is going to be.[76]

2.84 The idea that the figures used in the Implementation Study are a reverse-engineered effort to retrospectively justify the government's initial pie-in-the-sky guesstimates of costs was also canvassed by Mr Kevin Morgan:

> The study says itself it is not a cost-benefit analysis, it does not tell us whether this is value for money, it does not tell us whether there are alternatives that could be invested into to deliver high-speed broadband. The study, I think, and I do not think they would be too coy about it, backs in to the $43 billion cost envelope. It puts a business plan within that cost envelope. Very conveniently; I think it is quite amazing that it came out with $42.8 billion.[77]

2.85 Although not necessarily as sceptical of the Implementation Study's analysis and conclusions, the Business Council of Australia was in agreement that, if anything, release of the Implementation Study has only enhanced the need for a cost-benefit analysis to be conducted:

> While the study findings are in some areas based on ‘conservative’ assumptions, it nevertheless makes a number of critical assumptions about costs, take-up rates and competitor behaviour that are subject to a high degree of variability. As the study acknowledges, seemingly small decisions have a substantial impact on the results of the business case. This would make any final NBN Co. business case based on the recommendations of the study subject to a high degree of uncertainty.

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75 Mr Kevin Morgan, *Committee Hansard*, Sydney, 20 May 2010, p. 37.

76 Professor Paul Kerin, *Committee Hansard*, Canberra, 4 June 2010, p. 28.

77 Mr Kevin Morgan, *Committee Hansard*, Sydney, 20 May 2010, p. 33.

> The study's findings and recommendations also raise a number of questions about the application of competition policy and the potential for wider market impacts, discussed in more detail below.
>
> The government should now take the opportunity to produce a cost–benefit analysis to unequivocally demonstrate the proposed investment is in the national interest and to dispel any concerns about broader impacts of the NBN and the operations of NBN Co. on competition in the telecommunications sector.[78]

An offer to conduct a cost-benefit analysis

2.86 During the committee's final hearing, Professor Henry Ergas stated his belief that a cost-benefit analysis of this project would be in the national interest, and further, offered to conduct that analysis himself and free of charge to the government if the detailed workings and underpinnings of the Implementation Study are released:

> [I]f the government is willing to disclose the information and the detailed workings that underpin this study, I would be happy to use those in the model that we already have in place to generate a cost-benefit appraisal at no cost to the taxpayer. All that is required is that we be given access to the underlying workings. If, for whatever reasons, the government does not want to do that, there are many people in government and in the major departments who are capable of taking these results and transforming them into a cost-benefit appraisal of the project. I see no reason whatsoever why Treasury or Finance could not undertake such a cost-benefit appraisal now that the information required is fully available and indeed has been paid for by the taxpayer.

2.87 Professor Ergas indicated that so long as the workings underpinning the Implementation Study were 'provided in a form that is understandable, readily documented and easily usable', then the cost-benefit analysis could be concluded 'in a matter of days'.[79]

Committee view

2.88 The committee believes that the public must be provided with:

- the calculations and underlying workings that were used by the Lead Advisor to generate its total cost estimates for building the NBN; and
- a comprehensive statement of what are or will be the alleged and predicted benefits of the government's NBN project.

2.89 In the absence of that information, the public are simply not in a position to judge for themselves whether the cost projections are realistic. They have no way of knowing whether in fact the government's NBN project will leave them with a

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78 Business Council of Australia, *Submission 136ii*, pp 4–5.

79 Professor Henry Ergas, *Committee Hansard*, Canberra, 4 June 2010, p. 5.

taxpayer-funded company that will be unable to attract private-sector investment and will drain taxpayers of enormous sums of money well into the future.

2.90 The committee does not doubt that Australians need a broadband future. But the committee believes the public are not in a position to test whether the government's NBN project is the most appropriate model for delivering effective, affordable broadband services to Australians. The government claims benefits will flow from its NBN, but those benefits have not been articulated in sufficient detail. Nor have they been pitted against the benefits that would flow from implementing an alternative model for delivering broadband services to Australians.

Recommendation 1

Notwithstanding that the committee, for reasons detailed in its Fourth Interim Report, recommended that the government abandon its NBN proposal in its current form, the committee acknowledges that the government is proceeding with its NBN proposal and accordingly recommends:

2.91 That the government provide the public with:

- **the calculations and underlying workings that were used by the Lead Advisor to generate its total cost estimates for building the NBN; and**
- **a comprehensive statement of what are or will be the alleged and predicted benefits of the government's NBN project.**

2.92 That the government commission a rigorous cost-benefit analysis of its NBN project, or at least in the first instance, accept Professor Henry Ergas' generous offer to conduct a cost-benefit analysis free of charge.

Senator Ian Macdonald

Chair

Government Senators' Report

At the conclusion of this protracted inquiry, Government Senators endorse the remarks of the committee in its acknowledgement of those who assisted the committee in its task including the secretariat and other committee officers, witnesses and the researchers in the Parliamentary Library.

Government Senators agree with the admission of Opposition Senators that they do 'not doubt that Australians need a broadband future', and are pleased that Opposition Senators have reluctantly acknowledged that 'submitters were generally in agreement that Australians need super fast broadband'.

Yet Opposition Senators represent a party that offers no genuine pathway to a broadband future. Indeed, they have promised to shut down the National Broadband Network. The truth is, after 2 ½ years in opposition they have no alternative broadband plan that will deliver the outcome needed for all Australians.

This follows their track record in government. The Howard government had 18 failed broadband plans in 11 ½ years which left Australia falling behind most developed countries.

The faith of Opposition Senators in the capacity of the sector to co-operatively deliver an acceptable broadband future fails to acknowledge the structural problems of the industry which have held the Australian communications sector back.

Given how important affordable high-speed broadband will be for growth and productivity across the economy, the Opposition’s plan to shut down the National Broadband Network puts at risk Australia’s economic future.

Government Senators know that the only way that Australia will have a broadband future – one in which all Australians are connected with affordable services wherever they live — is if it builds a national, wholesale only, open access network on which competition and innovation can flourish.

The government is committed to providing high speed and affordable broadband to all Australian premises. This includes our regional areas that, for too long, have had to put up with inferior services.

The NBN is crucial economic infrastructure for Australia’s economic future and all consumers. It is important that Australian businesses have the essential communications infrastructure necessary to compete with other countries in our region that have, or are investing in, high speed broadband.

The rollout of the NBN is already well underway, with first services due in Tasmania in July, and NBN Co having announced its five first release sites and the rollout of around 6000km of fibre optic backbone links to 100 regional locations.

In the committee's Final report, Opposition Senators return to an earlier claim: that there has been a lack of transparency and that the Implementation Study did not articulate the benefits of the NBN.

The purpose of the Implementation Study was to provide expert advice on a range of matters that will guide the rollout of the NBN and the policy settings around it. Whilst the Study was commissioned by the Government, it represents the expert, independent views and advice of the Lead Advisor, McKinsey and Company and KPMG.

The Study is a comprehensive report addressing the government's policy objective – it runs to more than 500 pages with 84 recommendations. In preparing it, the Lead Advisor consulted with over 140 key stakeholders and drew on international experience and research.

The Implementation Study indicates that high speed broadband for all Australians is achievable, and can be built on a financially viable basis with affordable prices for consumers. In fact, the Study finds that in a number of areas it is possible to exceed the government's original objectives.

Government Senators reject any notion that there has been a lack of transparency. The government published the Implementation Study, in full, on 6 May 2010. The Study contains detailed cost estimates and the assumptions that underpin them. The government has sought to consult interested stakeholders on its findings and recommendations. Moreover, at the request of the committee, the Lead Advisor made itself available to brief the NBN Senate Select Committee in person.

The Government notes the recommendation of Opposition Senators that the Government accept the offer by Professor Henry Ergas to conduct a cost-benefit analysis using the data of the Implementation Study. It is relevant in the context of this inquiry that Professor Ergas has well-known opinions on the NBN and has undertaken consultancy work for both Telstra and the Liberal Party.

As the Government clearly stated at the time of the Implementation Study's release, it was not intended as a cost-benefit analysis.

The Study undertook a detailed financial analysis, including detailed revenue and cost modelling, and this analysis indicates that under a range of realistic scenarios, NBN Co can build a strong and viable business case.

While the broader economy-wide benefits of investment in high speed broadband based on fibre infrastructure – including productivity benefits and social benefits – were not explicitly modelled in this study, they are well known and are endorsed by the OECD and in a range of other studies.

In conclusion, Government Senators recommend that all outstanding legislation relating to telecommunications be passed by the Senate.

Senator Kate Lundy

Senator Glenn Sterle

Additional Comments – Australian Greens

The majority report reads as a balanced summary of the evidence submitted to the Committee, and the Australian Greens are largely in agreement with it. We are even reasonably comfortable with the majority's sole recommendation concerning the public release of the underlying assumptions and calculations that resulted in the Implementation Study, and their use in a cost-benefit analysis. Putting these details in the public domain would be a worthwhile exercise in transparent governance and would facilitate a more informed public debate.

As we have made clear in the committee's previous reports, we do not subscribe to a view that a cost-benefit analysis would result in an unequivocal answer about the value of the government's plans for the NBN. It would involve some highly speculative predictions of benefits and their arbitrary and abstract monetisation. Provided that these leaps and assumptions were explicitly acknowledged and explained however, such an analysis could be a useful articulation of precisely what considerations have informed the government's decision to proceed with this project. Those considerations would then undoubtedly be endorsed, challenged, re-evaluated, augmented, etc in the public debate, which is a healthy symptom of an open and democratic political culture and may well give rise to useful new insights and suggestions.

In our contributions to the committee's previous reports, we raised the issue of the geographic and socio-economic 'digital divide' and the importance of building bridges across it. During the most recent round of submissions and hearings, some interesting comment was made on the ubiquity of online services that is relevant to this issue. ACCAN remarked, in the context of endorsing the Implementation Study's recommendation that the Universal Service Obligation (USO) be reviewed, that we are already well on our way toward ubiquity:

> Online services are already a practical necessity in everyday life because there are so many basic transactions that are exclusively or preferentially performed online. Access to the internet is already a matter of social inclusion.[1]

The Northern Territory Minister for Information, Communications and Technology Policy urged the Government to pursue ubiquity to make the NBN 'a truly visionary and transformational nation building initiative'. The Minister cautioned against the Implementation Study's cost-saving recommendation that premises only be connected to the NBN on demand, commenting that:

> The fundamental value proposition of the National Broadband Network isn't so much its speed (although important), but its potential ubiquity…

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1 Australian Communications Consumer Action Network, *Submission 138ii*, pp 5–6.

> It could connect the 25-30 per cent of homes that are not internet connected and enable a whole range of services, including some government services, to be delivered to householders regardless of whether they have subscribed to a retail broadband service or not.
>
> …every child's school computer could be substantially enhanced if they could all use them on an education internet at home.
>
> …governments and other organisations could deliver services to homes, rather than continually expanding hospitals, prisons and schools…
>
> To ensure the success of Smartgrids and government delivered services to the home, I would welcome an exploration for ubiquitous National Broadband Network connections.[2]

If we place these two contributions side-by-side, it is clear that ubiquitous access to a national broadband network is in the interests of social inclusion and it enables the more transformational benefits the Government hopes to achieve with the NBN. A truly ubiquitous network offers the potential for significant government savings on service delivery, better demand management in our energy sector, enhanced education outreach, and many other benefits, while simultaneously ensuring that the socio-economically disadvantaged are not left behind. We strongly recommend that the government gives due consideration to this fortunate alignment of interests. This might be achieved through a revamped USO, or via some other mechanism. The outcome is obviously the important point.

Senator Scott Ludlam

2 Mr Karl Hampton MLA, Minister for Information, Communications and Technology Policy, Northern Territory Government, *Submission 132*, p. 2.

Appendix 1

Terms of Reference

(Revised by the Senate on 26 November 2009, 17 March 2010 and 12 May 2010: revisions shown in bold)

1. That a select committee, to be known as the Select Committee on the National Broadband Network, be established to inquire into and report by **17 June 2010** on:

    a. the Government's decision to establish a company to build and operate a National Broadband Network (NBN) to:

        i. connect 90 per cent of all Australian homes, schools and workplaces with optical fibre to the premise (FTTP) to enable broadband services with speeds of 100 megabits per second;

        ii. connect all other premises in Australia with next generation wireless and satellite technologies to deliver broadband speeds of 12 megabits per second or more;

        iii. directly support up to 25,000 local jobs every year, on average, over the eight year life of the project.

    b. the implications of the NBN for consumers and taxpayers in terms of:

        i. service availability, choice and costs,

        ii. competition in telecommunications and broadband services, and

        iii. likely consequences for national productivity, investment, economic growth, cost of living and social capital.

2. That the committee's investigation include, but not be limited to:

    a. any economic and cost/benefit analysis underpinning the NBN;

    b. the ownership, governance and operating arrangements of the NBN company and any NBN related entities;

    c. any use of bonds to fund the NBN;

    d. any regulations or legislation pertaining to the NBN;

e. the availability, price, level of innovation and service characteristics of broadband products presently available, the extent to which those services are delivered by established and emerging providers, and the prospects for future improvements in broadband infrastructure and services (including through private investment);

f. the effects of the NBN on the availability, price, choice, level of innovation and service characteristics of broadband products in metropolitan, outer-metropolitan, semi-rural and rural and regional areas and towns;

g. the extent of demand for currently available broadband services, the factors influencing consumer choice for broadband products and the effect on demand if the Government's FTTP proposal proceeds;

h. any technical, economic, commercial, regulatory, social or other barriers that may impede attaining the Government's stated goal for broadband availability and performance in the specified timeframe;

i. the appropriate public policy goals for communications in Australia and the nature of any necessary regulatory settings to continue to develop competitive market conditions, improved services, lower prices and innovation;

j. the role of government and its relationship with the private sector and existing private investment in the telecommunications sector;

k. the effect of the NBN on the delivery of Universal Service Obligations services;

l. whether, and if so to what extent, the former Government's OPEL initiative would have assisted making higher speeds and more affordable broadband services available.

2A That the committee is to examine the findings of the National Broadband Network Implementation Study, the Government's response to the Implementation Study and any subsequent impact of that report for the national Broadband Network policy.

3. That, in carrying out this inquiry, the committee will:

a. expressly seek the input of the telecommunications industry, industry analysts, consumer advocates, broadband users and service providers;

b. request formal submissions that directly respond to the terms of reference from the Australian Competition and Consumer Commission, the Productivity Commission, Infrastructure Australia, the Department of the Treasury, the Department of Finance and Deregulation, and the Department of Infrastructure, Transport, Regional Development and Local Government;

c. invite contributions from organisations and individuals with expertise in:

   i. public policy formulation and evaluation,

   ii. technical considerations including network architecture, interconnection and emerging technology,

   iii. regulatory framework, open access, competition and pricing practice,

   iv. private sector telecommunications retail and wholesale business including business case analysis and price and demand sensitivities,

   v. contemporary broadband investment, law and finance,

   vi. network operation, technical options and functionality of the 'last mile' link to premises, and

   vii. relevant and comparative international experiences and insights applicable to the Australian context;

d. advertise for submissions from members of the public and to the fullest extent possible, conduct hearings and receive evidence in a manner that is open and transparent to the public; and

e. recognise the Government's NBN proposal represents a significant public sector intervention into an increasingly important area of private sector activity and that the market is seeking openness, certainty and transparency in the public policy deliberations.

Appointment of the Committee

4. That the committee consist of 7 senators, 2 nominated by the Leader of the Government in the Senate, 4 nominated by the Leader of the Opposition in the Senate, and 1 nominated by any minority party or independent senators.

5. a. On the nominations of the Leader of the Government in the Senate, the Leader of the Opposition in the Senate and any minority party and independent senators, participating members may be appointed to the committee;

   b. participating members may participate in hearings of evidence and deliberations of the committee, and have all the rights of members of the committee, but may not vote on any questions before the committee; and

   c. a participating member shall be taken to be a member of the committee for the purpose of forming a quorum of the committee if a majority of members of the committee is not present.

6. That the committee may proceed to the dispatch of business notwithstanding that all members have not been duly nominated and appointed and notwithstanding any vacancy.

7. That the committee elect as chair one of the members nominated by the Leader of the Opposition in the Senate.

8. That the chair of the committee may, from time to time, appoint another member of the committee to be the deputy chair of the committee, and that the member so appointed act as chair of the committee at any time when there is no chair or the chair is not present at a meeting of the committee.

9. That, in the event of an equally divided vote, the chair, or the deputy chair when acting as chair, have a casting vote.

10. That the committee have power to appoint subcommittees consisting of 3 or more of its members, and to refer to any such subcommittee any of the matters which the committee is empowered to examine.

11. That the committee and any subcommittee have power to send for and examine persons and documents, to move from place to place, to sit in public or in private, notwithstanding any prorogation of the Parliament or dissolution of the House of Representatives, and have leave to report from time to time its proceedings and the evidence taken and such interim recommendations as it may deem fit.

12. That the committee be provided with all necessary staff, facilities and resources and be empowered to appoint persons with specialist knowledge for the purposes of the committee with the approval of the President.

13. That the committee be empowered to print from day to day such papers and evidence as may be ordered by it, and a daily Hansard be published of such proceedings as take place in public.

Appendix 2

Previous recommendations of the committee

Recommendations of Fourth Interim Report

Report tabled 18 May 2010

Recommendation 1

2.14 That the Government abandon the National Broadband Network project.

2.15 That if, in the alternative, the Government insists on progressing the NBN, it be progressed in accordance with the recommendations contained in the remainder of this report.

Recommendation 2

2.75 That the Government require the Department of Finance and Deregulation (the DoFD) to calculate the net present value of the NBN, using the data and assumptions contained in the Implementation Study, and based on a calculation of the weighted average cost of capital in accordance with the usual principles applied by the DoFD in relation to public capital expenditure.

Recommendation 3

2.80 That the Government provide a comprehensive response to the Implementation Study as soon as possible.

2.81 That the response clearly articulate in detail:

- a mandate for NBN Co and when, how and where that mandate will be formally recorded;
- the proposed funding arrangements for NBN Co, including a statement of all intended future equity contributions to NBN Co or NBN Co subsidiaries, the quantum and timing of each, and the arrangements the Government will make to formalise its funding agreement with NBN Co;
- a business plan for the NBN, where necessary developed in consultation with NBN Co, and including a cost-benefit analysis;
- the proposed timetable for the roll-out of the NBN to all Australian premises, including the type of services that will be available in particular, identified locations;

- the future of the Universal Service Obligation and how services will be guaranteed and funded for regional and remote Australian premises.

Recommendation 4

3.33 That NBN Co consult with local councils at the earliest possible stage as to the most appropriate local roll-out plan and local planning requirements.

3.34 That each local roll-out plan seek to coordinate the roll-out of the NBN with other activities occurring in the local government area so as to best realise potential synergies, cost savings, and benefits to local residents and businesses.

3.35 That the Government favour underground cabling in the remainder of the 90 per cent Fibre to the Premises footprint, ensuring long-term, future proof benefits for the network, its investors and its consumers.

Recommendation 5

3.47 That the Government clarify whether NBN Co (and its subcontractors) will be exempt from development consent and landowner consent requirements in all States and Territories.

Recommendation 6

3.48 That Commonwealth, State and Territory environmental and planning legislation, and State and local government planning policies concerning development and landowner consent requirements, be reviewed to ensure that fibre and related infrastructure can be effectively and efficiently deployed both to the premises and within premises.

Recommendation 7

4.56 That the Government detail its understanding of the likelihood that there might be failure in the Layer 3 wholesale market, and what it understands would be the consequences of any such failure for service delivery and innovation potential.

Recommendation 8

4.75 That NBN Co formally engage consumer groups in its industry consultation processes. That such consultation be in addition to the involvement of consumer groups in NBN Co's information sessions.

Recommendation 9

4.98 That the Department immediately consider whether potential decisions on network architecture will create a risk that NBN Co and/or the Government will be liable to pay compensation to third parties, and the likely quantum of any compensation.

Recommendation 10

4.103 That NBN Co release a detailed implementation plan describing how and when services will be provided to specified regional and remote locations, and what the cost of connection will be for regional householders.

4.104 That the implementation plan prioritise the servicing of regional and remote locations so that the network is 'rolled-into' urban areas from regional and rural areas.

Recommendation 11

4.113 That priority assistance customers, like the elderly, hospitals, and emergency services, have access to a working landline telephone service in the event of a mains power failure to the premises.

4.114 That there be a mass-education campaign to alert end-users to the consequences of a non-copper telephony service in the event of a mains failure to their premises.

Recommendation 12

5.26 That the NBN Co Bill be amended so that NBN Co can only provide services at Layer 2 and below.

5.27 That, in the event that a competitive market for the supply of unbundled Layer 3 services does not develop, the Government consider arrangements for a Universal Service Obligation to address this failure, particularly in regional and remote areas.

Recommendation 13

5.37 That provisions of the NBN Co Bill relating to the future privatisation of NBN Co be amended to clarify what is meant by 'built and fully operational'.

Recommendation 14

5.38 That the NBN Co Bill be amended so that a declaration by the Communications Minister that the NBN should be treated as built and fully operational is a disallowable instrument. That is, that clause 22(8) of the NBN Co Bill stating that such a declaration is 'not a legislative instrument' be deleted.

Recommendation 15

5.39 That the NBN Co Bill be amended so as to expressly require NBN Co to meet minimum service obligations after the cessation of Commonwealth majority ownership. Those obligations must include that:

- NBN Co retain its capacity to provide broadband services to 100 per cent of Australian premises;

- NBN Co retain its capacity to service 90 per cent of Australian premises with Fibre to the Home services with speeds of up to 100 Mbps;
- NBN Co retain its capacity to service the remaining 10 per cent of Australian premises with broadband connections of speeds of at least 12 Mbps;
- NBN Co develop and maintain its capacity to supply Layer 2 services to 100 per cent of Australian premises; and
- NBN Co maintain its open-access network, providing wholesale services on an equitable basis.

Recommendation 16

5.40 That the Government consider ways to 'future-proof' NBN Co's services. This must include a specific requirement that NBN Co report to the ACCC every five years on developments in broadband services in other comparable advanced economies, and that if the report demonstrates that NBN Co's services are falling behind those available to a majority of end users in other comparable advanced economies, lay out a plan to close the gap.

Recommendation 17

5.41 That the NBN Co Bill be amended so as to explicitly require NBN Co to publicly disclose its service performance even after the cessation of majority Commonwealth ownership.

Recommendation 18

5.49 That the NBN Co Bill be amended to explicitly set out the basis on which minority equity owners can request access to any information provided by NBN Co to the Government.

Recommendation 19

5.55 That the Government establish a consumer advisory group dedicated to the NBN. That the NBN Co Bill be amended to require NBN Co to have regard to the advice of that consumer advisory group when performing its functions.

Recommendation 20

5.56 That the Government and NBN Co prepare a strategy to address how end-user complaints are to be handled, and review the sufficiency of current resourcing and processes of the Telecommunications Industry Ombudsman to handle the expected future workload.

Recommendation 21

6.20 That the Access Bill be amended so as to provide guidance on what is meant by 'efficiency' for the purpose of the equivalence provisions. The amendments should also ensure that volume considerations cannot be counted as matters which 'aid efficiency' for the purpose of obtaining an exemption to the non-discrimination obligations on NBN Co.

Recommendation 22

6.21 That the Access Bill be amended so that ACCC pre-approval is required of any agreement to which NBN Co is a party and under which an access seeker is granted access on discriminatory terms on the basis of the 'efficiency' exception.

Recommendation 23

6.30 That the Government make public its intentions as to the future of Telstra's USO in relation to telephony services.

Recommendation 24

6.31 That the Government make public its intentions as to whether and how there will be a future universal service obligation to provide broadband services, and the associated cost implications for the Australian people.

Recommendation 25

7.45 That the Government, in consultation with NBN Co, immediately undertake a skills audit for the NBN to ensure there is a fully skilled workforce ready to deploy the NBN in each region. The audit should detail:

(a) the training courses required;

(b) the training timeframes involved; and

(c) the training institutions available.

Recommendation 26

7.46 That the Government, in consultation with industry groups and NBN Co, develop national standards and national training modules and accreditation processes to ensure the NBN workforce is appropriately skilled.

7.47 That such modules and accreditation processes be tailored to suit the differing needs of workforce participants who will come to the NBN with varied levels of prior relevant experience.

Recommendation 27

8.26 That the Government and NBN Tasmania create a single public document, to be released as soon as possible, which sets out all remaining stages in the planned roll-out of the NBN in Tasmania, including the expected timetable for the roll-out, and the expected timing and quantum of any future Government-funded equity injections.

Recommendation 28

8.27 That NBN Co make widely available, for all prospective end-users across Australia, information on:

- when NBN services will be offered in their region;
- how the NBN-based products will differ from their current services;
- what preparation of their premises they need to, or should do, prior to installation;
- what potential property disruption could be caused to their premises or surrounding areas during the deployment of the NBN or the internal installation of equipment within their premises; and
- how much the services will cost them to purchase from a retailer.

Recommendations of Third Report

Report tabled 26 November 2009

Recommendation 1

1.54 That the Implementation Plan clearly states the government's intention to prioritise the needs of underserviced communities, particularly those in regional, rural and remote areas, over those with comparatively well-serviced urban areas.

Recommendation 2

5.40 That the government releases a detailed Business Plan for Tasmania by 31 December 2009 that includes: an implementation plan that details which towns will be connected by fibre and which will miss out; Commonwealth funding details for the Tasmanian roll-out; pricing details for Tasmanian consumers; and the percentage of aerial vs underground fibre connections to the premises.

Recommendation 3

5.46 That the government expediently bring forward the legislation that will provide the governance and funding framework for the NBN Co Ltd.

Recommendation 4

6.188 That the government conducts a rigorous cost-benefit analysis of its NBN proposal before the NBN Co enters into any new asset purchasing agreements for the mainland deployment.

Recommendation 5

6.189 That the government provides an Interim Implementation Study Report by 31 December 2009. This must provide a progress account of the planning of the NBN, including the progress of the deployment in Tasmania and lessons learned from that deployment.

Recommendation 6

6.190 That the government immediately undertakes a skills audit for the NBN, detailing the training course required, the training timeframes involved and the training institutions available to ensure there is a fully skilled workforce ready to deploy the NBN in each region.

Recommendation 7

6.191 That the cost-benefit analysis, the Interim Implementation Study Report and the Final Implementation Study, are all released for public scrutiny within 14 days of completion.

Recommendation 8

6.192 That the government commissions the Productivity Commission to undertake an annual ongoing evaluation of the impact on productivity resulting from broadband uptake, across all community, business and industry sectors, with the first report to be tabled in parliament before the last sitting day in 2010.

Recommendation 9

6.193 That if the Implementation Study concludes the NBN project specifications are unrealistic, not practical or uneconomical, that the government must reassess its overall policy approach.

Recommendation 10

7.91 That the government provide greater opportunities for commercial viability of broadband networks by advocating the development of new applications that will facilitate economic development and improvements in health, education and energy efficiency outcomes.

Recommendation 11

8.83 That further consideration of the bill not proceed until after the NBN Implementation Study has been completed, the government has tabled its response to the Implementation Study and the Senate has certainty about the network structure of the NBN Co and the regulatory framework which will surround it.

Recommendation 12

9.18 That the Senate agree to extend the Select Committee on the National Broadband Network, under the following revised terms of reference:

> a) That the resolution of the Senate of 25 June 2008, as amended, appointing the Select Committee on the National Broadband Network, be further amended:
>
> - to omit "25 November 2009", and substitute "30 April 2010"; and
>
> - to add the following paragraph to the committee's terms of reference:
>
> (2A) The Committee is to examine the findings of the National Broadband Network Implementation Study, the Government's response to the Implementation Study and any subsequent implications of that report for the National Broadband Network policy.

Recommendations of Second Interim Report

Report tabled 12 May 2009

Recommendation 1

2.152 That the Auditor General conducts a full review of the RFP process, to be commenced before the end of 2009.

Recommendation 2

2.154 That Infrastructure Australia be involved in the NBN process to the fullest capacity.

Recommendation 3

3.92 That the government:

- provides the committee with the Final and any Interim Reports prepared by the Lead Advisor to the implementation study.
- table a progress report in the Senate on the implementation of the NBN by no later than 17 September 2009, and that this progress report detail timeframes, benchmarks and milestones for specified deliverables against which the implementation of the project can be measured, including costings; and
- table further progress reports by the end of the Winter and Spring Sittings until such time as the NBN company's annual reports are available, which include evidence that the timeframes, milestones and benchmarks have been reached, the reasons for any failure to do so and remedial action to be taken.

Recommendation 4

3.94 That the government provide the committee with a copy of:

- the detailed implementation plan for the roll-out of the National Broadband Network, to be developed as part of the implementation study, on the first sitting day after it is provided to the Department; and
- the risk management strategy for the NBN roll-out.

Recommendation 5

3.97 That, as soon as possible, but no later than the last sitting day of the Winter sittings, the government provide to the committee the following:

- the Australian Competition and Consumer Commission's formal report on the National Broadband Network (NBN) proposals to the NBN Panel of Experts

- the final report provided to the government from the NBN Panel of Experts on submissions to the NBN process.

Recommendation 6

3.99 That those aspects of the Expert Panel and the ACCC reports that discuss or make any conclusions or recommendations about the existing regulatory framework and options for its reform be provided to the committee as soon as possible, but no later that the last sitting day of the Winter sittings.

Comments and conclusions of Interim Report

Report tabled 2 December 2008

Comments: chapter 2

2.14 The committee acknowledges that broadband benefits will facilitate the government's social inclusion agenda, particularly for those Australians living in isolation. However, the committee also acknowledges that the extent to which these benefits are felt will be highly dependent on the extent to which the NBN will be accessible by those in regional and remote Australia.

Conclusion 1

2.26 The committee is of the opinion that, in order to prevent a difference of measurement modelling, similar to that which occurred with the assessment of the OPEL bid, possibly resulting in a consequential delay to the NBN implementation, it would be beneficial for all stakeholders to know which modelling the department will use to assess the coverage footprint.

2.38 It is the committee's view that it would be an extremely unsatisfactory result for the NBN, such a significant government investment, which has been contributed to by all Australian taxpayers, to reach only a small percentage of a state's geographical area while leaving a very high proportion of rural and remote citizens without access to the NBN.

Conclusion 2

2.42 At the time of this report going to print, neither the department nor the Australian Government had provided any guidance or further clarification of the composition of the 98 per cent NBN coverage footprint. The committee believes that the government needs to provide this clarification to proponents and stakeholders alike to ensure a level of confidence that the significant $4.7 billion funding will benefit in particular those Australians that are already underserved or unserved. Particular attention is required to address the needs of those remote areas that are currently generating a large percentage of Australia's wealth yet are in the most underserviced areas.

Conclusion 3

2.73 The committee believes that submissions received and evidence taken to date strongly support the need for the term 'open access arrangements' to be more clearly defined. The committee calls on the government to provide a clarification of this term, which is critical to encouraging ongoing competition in the industry. This would ensure that there is no potential for a successful bidder to interpret the term to its own competitive advantage.

2.109 The committee acknowledges concerns of affordability and service provision, which have the potential to impact on the long-term sustainability of the NBN operator in providing a viable return of investment.

Conclusion 4

2.127 The committee questions the appropriateness of the timeline for the evaluation of the RFP, believing it will not permit the necessary level of scrutiny by either the Expert Panel or the ACCC to select the successful proponent for the NBN.

Comments: chapter 3

3.48 The committee considers that the government should have provided a regulatory framework within the RFP; this would have provided proponents with greater certainty in building their business case for the NBN, while also providing a legal framework for the assessment of proposals.

Conclusion 5

3.56 The committee concludes that omitting to specify the structure of the new network has caused confusion and uncertainty among potential bidders and industry stakeholders.

3.88 The committee supports the general consensus that any new regulations that underpin the NBN should ensure that any operator/owner of the new network cannot participate in anti-competitive behaviour.

3.112 The committee encourages the government to effectively utilises this historic opportunity for regulatory change.

Conclusion 6

3.124 The committee believes that it is in the interest of the government, the industry and the Australian people to ensure that delays to the timeframe for implementation of the NBN are kept to a minimum. Notwithstanding this, the committee considers that the government should incorporate appropriate and timely opportunities for consultation with the industry on suggested regulatory changes.

Conclusion 7

3.125 The committee also believes that the government could easily remove several avenues of possible legal challenge by incorporating industry consultation into the process, even at this late stage.

Comments: chapter 4

Conclusion 8

4.55 The committee believes that the requirement in the RFP for the NBN design to be based on a FTTN or FTTP platform should be broadened to enable a greater level of technology convergence where this is more appropriate than fibre.

Conclusion 9

4.76 The committee acknowledges the complexity of the deployment of the NBN. However, the committee concludes that the most effective use of this substantial expenditure would be to ensure that those Australian homes and businesses that are currently most disadvantaged should be prioritised for initial deployment of the NBN. That is, areas that are currently underserved or unserved should have broadband deployed first, with infrastructure subsequently rolled-***IN*** towards the cities from those underserved areas, which are generally in regional, rural and remote communities.

Conclusion 10

4.77 The committee concludes that the best model for planning the deployment schedule would incorporate high levels of coordination and ongoing involvement by local and state governments with the Commonwealth Government. This would also provide assurance of support through appropriate regulatory changes within each tier of government.

Conclusion 11

4.78 The committee also concludes that there needs to be a carefully considered transition plan to migrate both existing service providers and their customers to the new network over the five year period specified in the RFP. The aim of this transition would be to ensure that it occurs seamlessly, with a no disadvantage test over the five years and that it minimises the issue of stranded assets and stranded customers.

Appendix 3

Submissions received

Note on numbering

During the extended term of its inquiry, the committee held a number of further hearings into specific aspects of the NBN and invited further submissions relating to those topics. As a result, a number of submitters made numerous submissions to the committee.

- Alphabetical suffixes have been used to indicate that two or more submissions by the same author are related.
- Roman numeral suffixes have been used to number multiple submissions made by the same author during the extended term of the committee's inquiry.

Submission No.	Submitter
1	Paul Budde Communication
1a	Paul Budde Communication
2	WA Department of Industry and Resources
3	iiNet Ltd
4	AAPT
5	QLD Government
6	Internet Society of Australia
7	Australian Telecommunications Users Group Ltd
8	Competitive Carriers Coalition
8a	Competitive Carriers Coalition
8b	Competitive Carriers Coalition
8c	Competitive Carriers Coalition
8d	Competitive Carriers Coalition
8e	Competitive Carriers Coalition
8f	Competitive Carriers Coalition
8g	Competitive Carriers Coalition
9	Vodafone Australia
10	Australian Federation of Deaf Societies/ Australian Communication Exchange
11	Infrastructure Partnerships Australia
12	Terria Ltd
13	Professor Trevor Barr
14	Mr Doug McArthur
15	Professor Joshua Gans
16	AUSTAR United Communications Ltd
17	Chamber of Commerce and Industry WA
18	Digital Tasmania
18a	DigitalTasmsania
18b	Digital Tasmania

19	Optus
19a	Optus
19b	Optus
20	Primus Telecom
20a	Primus Telecom
21	Mr Gregory Schiemer
22	Mr Kevin Morgan
22a	Mr Kevin Morgan
23	Electronic Frontiers Australia
24	Dr Ross Kelso
25	Adam Internet
26	Torres Shire Council
26a	Mr Russell Barkus in conjunction with Torres Shire Council
27	Northern Territory Government
28	Consumers' Telecommunication Network
29	Google
30	GetUp!
31	Communications Experts Group Pty Ltd
31a	Communications Experts Group Pty Ltd
31b	Communications Experts Group Pty Ltd
32	Australian Industry Group
33	Axia NetMedia
34	BT Global Services
34a	BT Global Services
35	Attorney General's Department, Territories and Native Title Division
36	C-COR Broadband
36a	C-COR Broadband
37	Communications Law Centre, University of Technology Sydney
38	Mr J Scott Marcus
39	Juniper Networks
40	ADTRAN Networks Pty Ltd
41	Mr Fraser Swift
41a	Mr Fraser Swift
42	Professor Joshua Gans
43	Mr Serge Jean Noel Perombelon
44	Optical Network Engineering
45	Mr Malcolm Moore
45a	Mr Malcolm Moore
45b	Mr Malcolm Moore
46	Australian Institute for Commercialisation
47	Professor Trevor Barr
48	The Hon. Bob Such MP JP
49	Creative Commons Clinic
50	Southern Cross Equities
51	Alcatel-Lucent

52	Business Council of Australia
53	Optus
54	National e-Health Transition Authority
55	C-COR
56	Market Clarity
57	Australian Information Industry Association
58	Indigenous Remote Communications Association
59	VERNet
60	Mr Richard Hockey
61	Energy Networks Association Ltd
62	Australian Mobile Telecommunications Association (AMTA)
63	Mr Russell Barkus
64	INTELSAT Asia Pty Ltd
65	Australian Federation of Deaf Societies (AFDS)
66	Australian Industry Group
67	Fibre to the Home Council Asia Pacific
67a	Fibre to the Home Council Asia Pacific
68	Mr Patrick Kelso
69	NICTA
70	Office of the Privacy Commissioner
71	Australian Library and Information Association
72	Australian Institute of Family Studies
73	AUSTAR United Communications Limited
74	Australian Office of Financial Management
75	Australian Local Government Association
76	Deutsche Bank Australia
77	Standards Australia
78	Department of Commerce WA
79	AusCERT
80	CSIRO
81	Infrastructure Partnerships Australia
82	03b Networks
83	Google
84	Mr Francis Young
85	Northern Territory Government: Department of Business and Employment
86	Bullseye
87	Productivity Commission
88	AC3 Australian Centre for Advanced Computing and Communications
89	Chief Minister's Department
90	Axia NetMedia
91	iSoft Group Ltd
92	Mr Kevin Morgan
93	Government of Western Australia
94	Dr Ross Kelso & Mr Peter Downey

95	Cables Downunder
95i	Cables Downunder- Attachment A
95a	Mr Greg Bleazard
95b	Mr Peter Downey
95c	Mr Peter Downey
96	The Haberfield Association Inc
97	Senetas
98	Adelaide Hills Regional Development
99	Mr Henry Ergas
100	Eckermann & Associates
100a	Eckermann & Associates
101a	Mr David Fagan
101b	Mr David Fagan
102	Mr Wijitha Gunaratne
103	Urban Taskforce
103a	Urban Taskforce
104	Mr Michael Blake Roet
105	Paul Budde Communication Pty Ltd
106	Optical Network Engineering
107	Business Council of Australia
108	Mr Allan Horsley
109	C-COR Broadband
110	Indigenous Remote Communications Association
111	Communications Law Centre, University of Technology, Sydney
112	Australian Telecommunications Users Group (ATUG)
113	De Ridder Consulting Pty Ltd
114	Optus
115	Chamber of Commerce and Industry WA
116	AUSTAR United Communications Ltd
117	Primus Telecom Australia
118	Internet Society of Australia (ISOC-AU)
119	Ms Lucy Cradduck
120	Regional Telecommunications Independent Review Committee (RTIRC)
120a	Attachment to RTIRC's submission
120b	Attachment to RTIRC's submission
121	Australian Communications Consumer Action Network (ACCAN)
122	Mr Kevin Morgan
123	Northern Territory Government
124	Dr Ross Kelso and Mr Peter Downey
125	Cables Downunder
125a	Cables Downunder
126	Communications Experts Group Pty Ltd
126a	Attachment to Communications Experts Group Pty Ltd's submission

127	Communications & Information Technology Training Limited
127a	Communications & Information Technology Training Limited
128	Paul Budde Communication Pty Ltd
129	Phillip J Moodie & Associates
130	Internet Industry Association
131iii	C-COR Broadband
132	Northern Territory Government, Office of Karl Hampton MLA
133iii	Mr Kevin Morgan
134iii	Optus
135ii	Regional Telecommunications Independent Review Committee
136ii	Business Council of Australia
137ii	Dr Ross Kelso
138ii	Australian Communications Consumer Action Network
139	Mr Michael S Cox
140	Internet Society of Australia
141	Mr Brendan Scott

Appendix 4

Public hearings

Hearings conducted since committee's Fourth Interim Report

Thursday, 20 May 2010 – Sydney, NSW

ASHER, Mr Allan
Chief Executive Officer
Australian Communications Consumer Action Network

CULLEN, Mrs Marianne
First Assistant Secretary
Department of Broadband, Communications and the Digital Economy

FREEMAN, Ms Elissa
Director, Policy and Campaigns
Australian Communications Consumer Action Network

HEAZLETT, Mr Mark
Assistant Secretary
Department of Broadband, Communications and the Digital Economy

HILVERT, Mr John
Communications Director
Internet Industry Association

MORGAN, Mr Kevin
Private capacity

QUINLIVAN, Mr Daryl
Deputy Secretary
Department of Broadband, Communications and the Digital Economy

SINCLAIR, Ms Rosemary
Managing Director
Australian Telecommunications Users Group

SPENCE, Ms Pip
First Assistant Secretary
Department of Broadband, Communications and the Digital Economy

Friday, 4 June 2010 – Canberra, ACT

COUTTS, Professor Reginald
Private capacity

ERGAS, Professor Henry
Private capacity

HARRISON, Dr Mark
Private capacity

KERIN, Professor Paul
Private capacity

PEARSON, Mr Mark
Executive General Manager, Regulatory Affairs Division
Australian Competition and Consumer Commission

RIORDAN, Mr Sean
General Manager, NBN Engagement and Industry Compliance Branch
Australian Competition and Consumer Commission

SHERIDAN, Mr Andrew
General Manager, Interconnect and Economic Regulation
Optus

STANTON, Mr John Leslie
Chief Executive Officer
Communications Alliance Ltd

WAGG, Dr Michael
General Manager, National Broadband Network
Optus

Appendix 5

Additional materials

Answers to questions on notice from public hearing (Sydney, 20 May 2010)

Australian Telecommunications Users Group (received 2 June 2010)

Department of Broadband, Communications and the Digital Economy (Part 1 and Part 2) (received 3 June 2010)

Answers to questions on notice from public hearing (Canberra, 4 June 2010)

Australian Competition and Consumer Commission (received 16 June 2010)

Internet Industry Association (received 10 June 2010)

Communications Alliance Ltd (received 6 June 2010)

Additional information received

Dr Ian Martin, 'The promised land: Costs and benefits of the NBN vision', *Telecommunications Journal of Australia*, vol. 60, no. 2, pp. 30.1–30.23