The Senate

Select Committee on the National Broadband Network

Another fork in the road to national broadband

Second Interim Report

May 2009

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Table of Contents

Abbreviations

ABG	Australian Broadband Guarantee
ACCC	Australian Competition and Consumer Commission
ACMA	Australian Communications and Media Authority
ADSL	Asymmetrical Digital Subscriber Line
ADSL2	Asymmetrical Digital Subscriber Line version 2
ADSL2+	Extended Bandwidth ADSL2
AMPS	Advanced Mobile Phone System
BAF	Building Australia Fund
BCA	Business Council of Australia
BSL	Broadband Service Locator
CAN	Customer Access Network
CCC	Competitive Carriers Coalition
CCF	Cross Connect Facility
CEG	Communications Expert Group
COAG	Council of Australian Governments
CSG:	Customer Service Guarantee
DBCDE	Department of Broadband, Communications and the Digital Economy
DCITA	Department of Communications, Information Technology and the Arts
DOCSIS	Data Over Cable Service Interface Specification
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexer
EFA	Electronic Frontiers Australia
EOI	Expression of Interest
ESA	Exchange Serving Area

FTTH	Fibre-to-the-Home
FTTN	Fibre-to-the-Node
FTTP	Fibre-to-the-Premise
HiBIS	Higher Bandwidth Incentive Scheme
HFC	Hybrid Fibre Coaxial
HSPA	High Speed Packet Access
ICAAN	Internet Corporation for assigned Names and Numbers
ICT	Information and communications technology
ISDN	Integrated Services Digital Network or Isolated Subscriber Digital Network
IP	Internet Protocol
IPA	Infrastructure Partnerships Australia
IPTV	Internet Protocol Television
IRCA	Indigenous Remote Communications Australia
ISP	Internet Service Provider
LTE	Long Term Evolution
LTIE	Long-term interests of end-users
MB	Megabyte – a million bytes; one byte is a unit of binary information comprising 8 bits.
Mbps	Megabit per second – a million bits per second
MHz	Megahertz
NBN	National Broadband Network
NGN	Next Generation Network
OAN	Open Access Network
OECD	Organisation for Economic Co-operation and Development
OPEL	Optus and Elders Communication

POP	Point of Presence
POTS	Plain Old telephone Service
P2P	Point to Point or Peer to Peer
PSTN	Public Switched Telephone Network
RFP	Request for Proposal
RIM	Remote Integrated Multiplexer
RSP	Retail Service Provider
RTIRC	Regional Telecommunications Independent Review Committee
SA	South Australia
SAU	Special Access Undertaking
SMEs	Small and medium sized enterprises
STD	Subscriber Trunk Dialling
STS	Standard Telephone Service
The department	The Department of Broadband, Communications and the Digital Economy
The Panel	The Panel of Experts
TIO	Telecommunications Industry Ombudsman
TPA	*Trade Practices Act 1974*
ULLS	Unconditioned/Unbundled Local Loop Service
USO	Universal Service Obligation
VDSL	Very High Speed Digital Subscriber Line
VoIP	Voice-over-Internet Protocol
WA	Western Australia
WA CCI	Western Australian Chamber of Commerce and Industry
WA DOIR	Western Australia Department of Industry and Resources
WiMAX	Worldwide Interoperability for Microwave Access

Glossary

Access Network

That part of a communications network which connects subscribers to their immediate service provider. It is contrasted with the core network.

Active Optical Network

A network in which the passive splitting point is replaced with an Optical Line Distribution unit which is a powered unit making it possible to have a higher bit rate on individual routes over longer distances than on a passive optical network.

Backhaul

The backhaul portion of the network comprises the intermediate links between the core, or backbone, of the network and the small sub networks at the "edge" of the entire hierarchical network. For example, while cell phones communicating with a single cell tower constitute a local sub network, the connection between the cell tower and the rest of the world begins with a backhaul link to the core of the telephone company's network (via a point of presence).

Bandwidth

The capacity for a given system to transfer data over a connection. It is measured as a bit rate expressed in bits/s or multiples of it (kb/s Mb/s etc.).

BitTorrent

A peer-to-peer (P2P) file sharing protocol designed to reduce the bandwidth required to transfer files. It does this by distributing file transfers across multiple systems, thereby lessening the average bandwidth used by each computer. For example, if a user begins downloading a movie file, the BitTorrent system will locate multiple computers with the same file and begin downloading the file from several computers at once. Since most ISPs offer much faster download speeds than upload speeds, downloading from multiple computers can significantly increase the file transfer rate.

Blackspot

Under-served Premises unable to obtain a Metro-comparable Broadband Service.

Broadband Connect Incentive Program

The Broadband Connect Incentive Program, which operated between 1 January 2006 and 13 March 2007.

Broadband Service Locator

The online application available on the Australian Broadband Guarantee webpage to enable potential customers to determine whether their premises may be able to receive a metro-comparable broadband service on a commercial basis, or be eligible for a service under the Australian Broadband Guarantee.

Brownfield

Abandoned or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contaminations.

Coaxial Cable

An electrical cable consisting of an inner conductor surrounded by an insulating spacer, surrounded by an outer cylindrical conductor. It provides protection of signals from external electromagnetic interference and effectively guides signals from external electromagnetic interference and effectively guides signals.

Core Network

The central part of a telecom network that provides various services to customers who are connected by the access network.

Customer Service Guarantee (CSG)

A performance standard created by the Australian Communications and Media Authority (ACMA). This standard provides financial compensation, of a prescribed amount, to customers who are affected by delays in service connections and fault repairs. It also covers missed appointments. However, some exemptions apply.

Dark Fibre (also unlit fibre)

Unused fibres, available for use. The term was originally used when talking about the potential network capacity of telecommunication infrastructure, but now also refers to the increasingly common practice of leasing fibre optic cables from a network service provider.

Demarcation Point

The point at which the telephone company network ends and connects with the wiring at the customer premises. A demarcation point is also referred to as the demark, DMARC, MPOE, or minimum point of entry.

Digital Loop Carrier (Remote Integrated Multiplexer - RIM)

A system which uses digital transmission to extend the range of the local loop farther than would be possible using only twisted pair copper wires. A DLC digitizes and multiplexes the individual signals carried by the local loops onto a single data stream on the DLC segment.

Firewall

Is a dedicated appliance or software running on another computer, which inspects network traffic passing through it, and denies or permits passage based on a set of rules.

Functional Separation

Imposing an obligation of “equivalence” on a vertically integrated network provider to ensure all retail service providers, including its own downstream business, are treated equally.

Gigabyte

Is a unit of information or computer storage meaning either exactly 1 billion bytes or approximately 1.07 billion bytes. The usage of the word "gigabyte" is ambiguous: the value depends on the context. When referring to RAM sizes and file sizes, it traditionally has a binary definition, of 10243 bytes. For other uses, it means exactly 10003 bytes. In order to address this confusion, currently the International Electro-technical Commission (IEC) promotes the use of the term "gibibyte" for the binary definition. It is commonly abbreviated GB or Gbyte (not to be confused with Gb, which is used for a gigabit).

Greenfield

A term used to describe a piece of undeveloped land, either currently used for agriculture or just left to nature.

Hybrid Fibre Coaxial

A telecommunications industry term for a broadband network which combines optical fibre and coaxial cable.

IPTV

A system where a digital television service is delivered using Internet Protocol over a network infrastructure, which may include delivery by a broadband connection. A general definition of IPTV 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.

Kilobyte

A unit of information or computer storage equal to either 1,024 bytes (210) or 1,000 bytes (103), depending on context. It is abbreviated in a number of ways: kB, KB, K and Kbyte.

Last-mile Infrastructure

The infrastructure used to provide the link from a Customer's premises to the Provider's nearest point of aggregation. For example, a provider offering a wireless broadband service to the Customer would be providing Last-mile Infrastructure using wireless broadband technology.

Local Loop (also referred to as a subscriber line)

The physical link or circuit, that connects from the demarcation point of the customer premises to the edge of the carrier or telecommunications service provider, network.

Megabit

A unit of information or computer storage, abbreviated Mbit (or Mb). 1 megabit = 106 = 1,000,000 bits which is equal to 125,000 bytes. In kilobytes this is either 125 kB (decimal meaning) or about 122 kB (122 KiB) (binary meaning). The megabit is most commonly used when referring to data transfer rates in network speeds, e.g. a 100 Mbit/s (megabit per second).

Megabyte

Is a unit of information or computer storage equal to either 106 (1,000,000) bytes or 220 (1,048,576) bytes, depending on context. In rare cases, it is used to mean 1000×1024 (1,024,000) bytes. It is commonly abbreviated as Mbyte or MB (compare Mb, for the megabit). The term megabyte was coined in 1970.

MiMo

In radio, it is the use of multiple antennas at both the transmitter and receiver to improve communication performance. It has attracted attention in wireless communications, since it offers significant increases in data throughput and link range without additional bandwidth or transmit power. It achieves this by higher spectral efficiency (more bits per second per hertz of bandwidth) and link reliability or diversity (resulting in reduced fading).

Multi-layered broadband infrastructure

A network comprising of wireless, optic-fibre, xDSL, and high-speed satellite service.

Next Generation Networking

A broad term to describe some key architectural evolutions in telecommunication core and access networks that will be deployed over the next 5-10 years. The general idea behind NGN is that one network transports all information and services (voice, data, and all sorts of media such as video) by encapsulating these into packets, like it is on the Internet. NGNs are commonly built around the Internet Protocol, and therefore the term "all-IP" is also sometimes used to describe the transformation towards NGN.

Open Access Network

A horizontally layered network architecture and business model that separates physical access to the network from service provisioning. The same OAN will be used by a number of different providers that share the investments and maintenance cost.

Optical Fibre

A glass or plastic fibre that carries light along its length. Widely used in communication because it transmits over longer distances and at higher data rates than other forms of communication.

Packet

In information technology, a packet is a formatted block of data carried by a packet mode computer network. Computer communications links that do not support packets, such as traditional point-to-point telecommunications links, simply transmit data as a series of bytes, characters, or bits alone. When data is formatted into packets, the bit-rate of the communication medium can better be shared among users than if the network would have been circuit switched.

Pair Gain

A method of transmitting multiple POTS signals over the twisted pairs traditionally used for a single traditional subscriber line in telephone systems. Pair gain has the effect of creating additional subscriber lines. This is typically used as an expedient way to solve subscriber line shortage problems by using existing wiring, instead of installing new wires from the central office to the customer premises. Pair gain has come into disfavour in recent years, as it is detrimental to high speed dial-up modem connections, does not support 56k and is incompatible with Digital Subscriber Line (DSL) systems.

Point of Presence

An Internet point of presence is an access point to the Internet. It is a physical location that houses servers, routers, ATM switches and digital/analogue call aggregators. It may be either part of the facilities of a telecommunications provider that the Internet service provider (ISP) rents or a location separate from the telecommunications provider.

Point to Point

Generally refers to a connection restricted to two endpoints, usually host computers. Point-to-point is sometimes referred to as P2P, or Pt2Pt, or variations of this. Among other things, P2P also refers to peer-to-peer file sharing networks. A traditional point-to-point data link is a communications medium with exactly two endpoints and no data or packet formatting. The host computers at either end had to take full responsibility for formatting the data transmitted between them.

Remote Integrated Multiplexer (RIM)

Also known as a Digital Loop Carrier (DLC) - a system which uses digital transmission to extend the range of the local loop farther than would be possible using only twisted pair copper wires. A DLC digitizes and multiplexes the individual signals carried by the local loops onto a single data stream on the DLC segment.

Satellite Broadband Service

A Service Solution delivered by a two-way satellite service, or other service determined by the Department to be satellite based.

Shaping

The practice of slowing data speed once the monthly data usage limit, as specified in a Service Plan, is reached.

Structural Separation

The creation of separate companies with ownership controls, which prevent retail service providers, including the incumbent's downstream businesses, from having effective control in the NBN infrastructure.

Terabyte

Commonly abbreviated TB is a measurement term for data storage capacity. The value of a terabyte based upon a decimal radix (base 10) is defined as one trillion (short scale) bytes, or 1000 gigabytes.

Terrestrial Broadband Service

Is a Service Solution delivered by ground based networks, including ADSL, cable type services, wireless services, or any other service determined by the Department to be terrestrially based.

Twisted Pair

A form of wiring in which two conductors (two halves of a single circuit) are wound together for the purposes of cancelling out electromagnetic interference (EMI) from external sources; for instance, electromagnetic radiation from unshielded twisted pair (UTP) cables, and crosstalk between neighbouring pairs.

Unbundled Local Loop

Is the regulatory process of allowing multiple telecommunications operators use of connections from the telephone exchange's central office to the customer's premises.

Universal Service Obligation

The 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. No carriage services have been prescribed to date. Telstra is currently the sole universal service provider, but additional universal service providers may be declared in the future. As the universal service provider, Telstra is obliged to have a policy statement and marketing plan approved by ACMA. The policy statement and marketing plan outline how Telstra intends to fulfil its obligations as universal service provider, including fulfilling its obligations to people with a disability, people with special needs and eligible priority customers.

Video on Demand

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

Voice Over Internet Protocol

A protocol optimized for the transmission of voice through the Internet or other packet-switched networks.

WiMax

WiMAX — Worldwide Interoperability for Microwave Access - a wireless technology that provides high-speed broadband connections over long distances. It is not a mobile platform; it is specifically designed for optimum broadband performance. It is internationally recognised as a technology that delivers the highest quality wireless broadband.

Recommendations

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.

Chapter One

Referral of the inquiry

1.1 On 25 June 2008, the Senate established the Select Committee on the National Broadband Network (the committee) to inquire into and report by 30 March 2009 on:

(a) the government's proposal to partner with the private sector to upgrade parts of the existing network to fibre to provide minimum broadband speeds of 12 megabits per second to 98 per cent of Australians on an open access basis; and

(b) the implications of the proposed National Broadband Network (NBN) for consumers 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;

and other related matters.

1.2 The full terms of reference established at that date for this inquiry were extensive and can be found at appendix 1.

Conduct of the inquiry

1.3 The committee advertised the inquiry in *The Australian* and invited written submissions by 12 September 2008; details of the inquiry were placed on the committee's website.

1.4 The terms of reference required the committee to provide a report by 30 March 2009. However, given the broad scope of the terms of reference, the extension of the original closing date for the Request for Proposals (RFP), and the controversial exclusion of the incumbent Telstra from the RFP process, the Senate granted the committee an extension of time to report by the week commencing 22 June 2009.

1.5 Prior to the closing date for the RFP on 26 November 2008, the committee held seven public hearings: one each in Melbourne, Sydney, Perth and Brisbane, and three in Canberra. An Interim Report was tabled in the Senate on 2 December 2008, providing the contextual background leading to the referral of the inquiry, in addition to commentary on the evidence taken and submissions received to the time of reporting.

1.6 In March 2009 another two public hearings were held, one in Sydney and one in Canberra, with witnesses providing their updated commentary on the options before the industry and the government, particularly in the context of the exclusion of Telstra from the RFP process in December 2008.

1.7 In a joint media release on 7 April 2009, the Rudd Government announced 'the establishment of a new company to build and operate a new super fast National Broadband Network.'[1] The announcement signalled the termination of the NBN Request for Proposal process, which had commenced twelve months earlier, almost to the day. The government cited that the decision to abandon the much criticised RFP process was made:

> …on the basis of advice from the independent Panel of Experts that none of the proposals offered value for money. The panel noted the rapid deterioration of the global economy had a significant impact on the [RFP] process.[2]

1.8 Up until 7 April 2009, the committee received a total of 38 written submissions, including a number of supplementary submissions following the RFP closing date and the subsequent exclusion of Telstra from the process. At the time of reporting, a further three submissions had been received.

Purpose of report

1.9 Following the announcement made by the Rudd Government on 7 April 2009, a number of key terms of reference for this inquiry required modification. Consequently this second interim report marks the change in broadband policy direction by the government, providing evidence that reinforces the need for a revision of the current terms of reference that will mirror those changes, and providing a way forward to ensure this new broadband network proposal is subject to the full scrutiny of the Senate inquiry process.

1.10 Chapter 2 of this interim report will consolidate key findings made by the committee up to the date of the Rudd Government's announcement, focusing on the considerations of the committee documented in the first interim report and suggesting where there may have been consideration of the committee concerns within the new NBN proposal. This chapter will also summarise evidence received to date while also detailing events within the telecommunications industry since early December 2008. The now defunct RFP process will be examined, outlining the government's RFP requirements and timelines, the industry criticism of the process and events that lead to the announcement on 7 April 2009.

1.11 Chapter 3 will outline the Rudd Government's announcement, including the revised specifications of the NBN, the company established to roll-out, operate and maintain the NBN, and the responses to the announcement. Chapter 3 also will outline emerging issues and concerns that require further examination, concluding with a recommendation that the current terms of reference be varied to reflect the changes to the government's policy directions and enable this committee to provide its final report to Senate on the NBN.

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1 www.minister.dbcde.gov.au/media/media releases/2009/022, accessed 14 April 2009.

2 www.minister.dbcde.gov.au/media/media releases/2009/022, accessed 14 April 2009.

Acknowledgements

1.12 The committee would like to express its appreciation for the cooperation of all organisations and individuals who continue to make their time available to assist the inquiry, whether by personal appearance at a public hearing or by providing the committee with a written submission. Particular thanks are extended to Mr Jonathan Chowns, from the Parliamentary Library, who provided the committee and secretariat with a wealth of contextual information throughout the inquiry process. The committee would also like to record its appreciation to the officers of the secretariat who assisted with the conduct of the inquiry and the drafting of this second interim report.

Note on references

1.13 References to the committee Hansard are to the proof Hansard – page numbers may vary between the proof and the official Hansard.

Chapter 2

Progressive summary of inquiry issues and findings

2.1 On 11 April 2008 the Minister for Broadband, Communications and the Digital Economy, Senator the Hon Stephen Conroy, announced the release of a Request for Proposals (RFP) to 'roll-out and operate a new, open access, high-speed, fibre-based broadband network, providing downlink speeds of at least 12 megabits per second to 98 per cent of Australian homes and businesses.'[1]

2.2 Clause 1.3 within the RFP listed the 18 Commonwealth objectives (see appendix 3), for the National Broadband Network (NBN), while clause 1.4 provided the six evaluation criteria (appendix 3) against which each proposal was to be assessed 'within the framework of an overarching value-for-money assessment'.[2] A Panel of Experts was tasked with providing a report to the minister recommending an outcome by the end of January 2009; it was widely anticipated that the minister would announce that outcome shortly after receiving that report.

Key issues and findings

2.3 From the outset, the announcement of government funding of up to $4.7 billion to build and operate the NBN came under criticism from many sectors within the telecommunications industry. These criticisms were widely based, including the coverage footprint, the technology specified, and the RFP process itself; a summary of the main issues detailed in this committee's December 2008 Interim report follows.

Footprint

2.4 The RFP document did not provide specific detail of the coverage modelling that would be used to determine the footprint of the proposed 98 per cent of Australian homes and businesses that the NBN would service. States with large, sparsely populated areas sought assurance from the government that the coverage footprint would not be measured on population densities alone. Typical of such concerns were those expressed by the Queensland Government, which stated that:

> The Queensland Government does not wish the NBN 98 per cent threshold to be allocated in Queensland purely on a population density basis.[3]

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1 http://www.archive.dbcde.gov.au/2009/april/national_broadband_network_request_for_proposals_process , accessed 17 April 2009.

2 Request for Proposals to Roll-out and Operate a National Broadband Network for Australia, p. 6.

3 *Submission* 5, 'Policy and Funding Initiatives to provide Enhanced Broadband to Rural and Remote Areas', p. 6.

2.5 Its submission to the Department of Broadband, Communications and the Digital Economy (the Department) on suggestions for deployment to remote areas provided comparative maps to demonstrate the vast differences in footprint achievable using different coverage modelling. A map of 98 per cent broadband coverage for Queensland, based on population density alone, clearly concentrated coverage along the densely populated eastern coastline, while ignoring the vast majority of the state's regional, rural and remote population centres. In stark contrast, a subsequent map of the 98 per cent footprint was provided that included population centres in far western and northern Queensland, in addition to all educational, health, emergency and government library facilities throughout the state.

2.6 The South Australian Government voiced identical concerns. An evaluation of the 98 per cent NBN coverage footprint, based on that state's population density alone, revealed that 'only 4 per cent of the state's land mass would have been covered.'[4]

2.7 Representatives of the Western Australian Government identified that although the vast majority of that state's population lived in metropolitan Perth, the 'bulk of the wealth of this nation' was generated by a small percentage of Western Australia's population situated in the mineral resource-intensive, remote north-west, which would be excluded from the NBN if coverage were to be based on population density alone. In fact, concern was expressed that, in the extreme, the whole state was at risk of becoming the two per cent that would not be covered by the NBN footprint.[5]

2.8 Criticism was also levelled at what modelling would be used to evaluate a proponent's stated ability to achieve the 98 per cent coverage. The Department resisted attempts to provide any such modelling parameters, despite the substantial uncertainty generated within the industry by the cancellation of the OPEL contract on the basis of disputed coverage modelling.

2.9 On another level, the government was criticised for insisting that fibre technology be utilised to provide broadband services to 98 per cent of Australian homes and businesses, with the view that this was simply not economically viable for any broadband provider within the $4.7 billion funding envelope. Mr Paul Budde stated in evidence to the committee that 91-93 per cent may be feasible, but to attempt 98 per cent was 'just silly'[6].

2.10 Under the government's recently announced proposal for a fibre-to-the-premise (FTTP) NBN, there has been a revision of the 98 per cent fibre footprint, with the government stating the NBN would instead 'connect 90 per cent of Australian homes, schools and workplaces'. However, the government has yet to

4 See South Australian Government, *Submission to the Regional Telecommunications Independent Review Committee (RTIRC),* December 2008, p. 7.

5 See Mr Anson Cheng, WA DOIR, *Committee Hansard*, Perth, 6 November 2008, pp 12-14.

6 Mr Paul Budde, Paul Budde Communications, *Committee Hansard,* Sydney, 7 October 2008, p. 84.

provide any modelling for how they intend to assess that 90 per cent, in particular whether it will be measured on population density alone.

Roll-in or roll-out

2.11 As the RFP did not specify a deployment schedule, concerns were expressed that the successful proponent could easily utilise the $4.7 billion funding to merely upgrade existing metropolitan infrastructure without addressing any of the existing black spots or underserved areas, or at best, with those areas having to wait years before seeing any improvement in their broadband services.

2.12 Several submissions recommended that initial implementation commence in the areas that were unserved or underserved, arguing that the NBN should be rolled-in to the cities, rather than rolled-out from the cities. A typical comment received by the committee was that of Mr Gregory Hicks, from the Adelaide-based company, Adam Internet, when he observed that implementing a roll-in of the NBN '…then puts broadband where it is needed most, and that is to the people who do not have it.'[7]

2.13 A roll-in schedule was repeatedly advocated to this committee by a variety of industry stakeholder groups, including ISPs, telcos, potential bidders and consumer advocates.[8] Comments from Ms Teresa Corbin, Consumers Telecommunications Network, clearly summarised these concerns in her evidence when she commented:

> I cannot urge strongly enough that some of those remote and regional areas that are not getting internet at the moment are the ones that should be prioritised [for deployment of the NBN]. They should not have to wait five years, because they already do not have access.[9]

2.14 The Australian Bureau of Statistics 2006 census noted that Tasmania had the lowest proportion of households able to access the internet and broadband, at just 55 and 29 per cent respectively[10]. This low level of connectivity was almost on a par with the connectivity levels measured in remote areas by the census. Despite high population densities in a number of centres throughout Tasmania, the lack of competitive backhaul across Bass Strait and the consequential high prices for internet and broadband subscriptions are the major causes of this low level of connectivity.

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7 Mr Gregory Hicks, Chairman Adam Internet, *Committee Hansard*, Sydney, 7 October 2008, p. 42.

8 See for example, AAPT, *Submission 4*, p. 7; Terria, *Submission 12*, p. 8; iiNet, *Submission 3*, Regulatory Submission On the Requirements for an Open Access National Broadband Network', June 2008, p. 6.

9 Ms Teresa Corbin, Consumers Telecommunications Network, *Committee Hansard*, Sydney, 7 October 2008, p. 76.

10 *State of the Regions 2008-09*, p. 58.

2.15 In its submission Digital Tasmania, drew attention to the low connectivity levels across Tasmania, arguing that the government should ensure the NBN corrects this anomaly:

> Historically underserved regional and rural areas, including Tasmania [should be] some of the first to receive the benefits of an NBN rollout.[11]

Technology

2.16 The RFP had specified that the successful proponent should deploy 'fibre-to-the-node or fibre-to-the-premises network architecture'.[12] There was general consensus that this was one area where the RFP was actually over-prescriptive, with many stating that a one-size-fits-all (i.e. fibre-based) approach would not meet the demands of Australia's vast, geographically diverse and sparsely populated land mass.

2.17 While fibre is widely acknowledged as technically superior in current technology terms, by prescribing fibre within the RFP, the government precluded solutions offering mixed technology platforms that may have proved more economically viable, particularly in areas where geographical barriers to terrestrial infrastructure exist. An example of this view was provided by AUSTAR:

> Given the vast density and topographical differences between metropolitan and regional Australia, adopting a single, national technology approach is not the most effective solution and is unlikely to be sustainable over the longer term … [broadband] services should be provided with fit-for-purpose network solutions …[13]

2.18 Despite industry consensus that fibre provided superior technology, the committee noted there was a progressive acceptance that a FTTP solution would be unachievable within the $4.7 billion funding package, with the subsequent unspoken assumption that a fibre-to-the-node (FTTN) solution would be selected rather than a FTTP solution.

2.19 However, the committee heard from several witnesses that a FTTN solution would not meet the government's requirement that the technology be 'future-proof'. One such witness told the committee that he believed FTTN would actually be a backward step for Australia:

> I am particularly concerned about the prescription of fibre-to-the-node technology for the national broadband network. I believe that if it is to be prescribed as a fibre to the node … where it makes it difficult for it to go beyond that to fibre to the home, it is a retrograde step.[14]

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11 Digital Tasmania, *Submission 18*, p. 3.

12 Department of Broadband, Communications and the Digital Economy (DBCDE), *Request for Proposals to Roll-out and operate a National Broadband Network for Australia,* 11 April 2008, paragraph 1.3.1.5, p. 5.

13 AUSTAR United Telecommunications, *Submission 16*, p. 9.

14 Dr Ross Kelso, *Committee Hansard,* Brisbane, 21 November 2008, pp 20-21.

2.20 In the Interim Report, this committee stated that the exclusion of wireless or satellite technology in the RFP was a limitation that would prevent the delivery of more affordable high speed broadband services for populations in rural and remote areas, and suggested that the platform should be broadened to include those technologies.[15]

2.21 In his criticism of the requirement for a 'national' solution, Professor Joshua Gans indicated in his submission that solutions needed to be tailored to better meet the local area needs and that consequently a disaggregated approach could be warranted.[16]

2.22 Mr Arthur Price from Axia NetMedia described the technical solution that his company had deployed in the Canadian state of Alberta, where fibre was pushed out as close to the premise as possible in all areas, but that '…wireless links in Alberta are … typically where you actually could not implement fibre for some geographical reason.'[17] There are parallels that can be readily drawn in Australia where rugged and remote terrain makes the deployment of fibre expensive and/or impractical.

2.23 In chapter 3, the committee notes that the government's 2009 broadband initiative is more inclusive of mixed technology platforms. In addition to requiring a FTTP solution to 90 per cent of Australian homes, schools and workplaces, the government has stated it will 'use next generation wireless and satellite technologies'[18] to improve broadband services for those living in more remote areas of Australia, where the committee has heard that it is not economically viable, and is often geographically impossible, to lay fibre.

Funding concerns

2.24 The government's 2008 NBN proposal to provide funding of up to $4.7 billion was generally applauded by the industry, both here and overseas. However, there were strong criticisms regarding the sourcing of the $4.7 billion.

2.25 Concern was expressed that the government had closed the $2 billion Communications Fund, which had been set aside by the previous Howard Government as a 'perpetual' fund for the provision of metro-comparable telecommunication services in regional and remote Australia. Assets from this fund, together with around $2.4 billion from the Telstra 3 sale process, would be rolled into the $20 billion Building Australia Fund (BAF), from where the $4.7 billion would be drawn. Even with this considerable government funding, concern was expressed that prospective proponents would find it difficult to raise the still-significant amount of financial backing required by them to build and operate the NBN.

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15 See National Broadband Network, *Interim Report*, paragraph 4.55, p. 78.

16 Professor Joshua Gans, *Submission 15*, p. 1.

17 Mr Arthur Price, Axia NetMedia, *Committee Hansard*, Canberra, 24 November 2008, p. 13.

18 Joint Media Release, www.minister.dbcde.gov.au/media/media_releases/2009/022, p. 2, accessed 14 April 2009.

2.26 As the Global Financial Crisis evolved during the latter half of 2008, these concerns grew. With the value of the Australian dollar falling substantially, it became apparent that the $4.7 billion would significantly erode the BAF, which had been established to 'provide a funding source for future investment in critical economic infrastructure in transport and communications such as broadband.'[19]

2.27 By early 2009, the 2008-09 budget surplus, which was to be a financial source for the BAF, had been transformed through the government's economic stimulus packages to a substantial budget deficit. During Additional Estimates, Minister Conroy advised that:

> $12.6 billion has already been allocated to BAF and further allocations were subject to budget circumstances. … The lesser figure is due to revisions in budget surpluses. … Of the $12.6 billion, $4.7 billion is for the NBN.[20]

2.28 With the cost of capital continuing to rise it became apparent that proponents would not find it easy to raise their share of the capital needed for the NBN.

2.29 Noting that the $4.7 billion was coming from the taxpayers' pockets, submissions also raised concerns about how the government had determined that figure, and in particular whether there had been a cost/benefit analysis of the proposal. Professor Gans made the comment that '…as an economist, I am concerned as to whether a proper cost-benefit study has been conducted (either within government or industry).[21]

2.30 This issue was taken up directly with the minister at a Senate Estimates hearing; however the minister repeatedly skirted the question, and answered that:

> This is an election commitment and we will deliver on our election commitment. …no ifs, no buts; it will be delivered.[22]

2.31 In direct contrast to this approach, the newly created government agency, Infrastructure Australia, was to examine infrastructure projects of national significance. These projects, although significantly lower in cost, were to be prioritised for implementation against publicised criteria through a process which included scrutiny by a rigorous government cost-benefit analysis. The NBN would not be required to undergo that same scrutiny.

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19 DBCDE, answer to Question on Notice, Question thirteen (a), 10 September 2008 (received 25 September 2008).

20 Senator the Hon. Stephen Conroy, Minister for Broadband, Communications, and the Digital Economy, *Estimates Hansard,* Senate Standing Committee on Rural and Regional Affairs and Transport, Canberra, 24 February 2009, p. 14.

21 Professor Gans, *Submission 15,* p. 2.

22 Senator the Hon. Stephen Conroy, Minister for Broadband, Communications, and the Digital Economy, *Estimates Hansard,* Senate Standing Committee on the Environment, Communications and the Arts, Canberra, 20 October 2008, p. 28.

2.32 The government has provided an estimated costing for the deployment of its new FTTP based network that is some ten times the level of government funding that was to be provided for the now terminated RFP NBN proposal.

2.33 Under the FTTP proposal, the burden of raising the capital must now be borne by the government, and ultimately the Australian taxpayer. The committee is hopeful that the implementation study will undertake and publish a detailed cost/benefit analysis of this massive cost imposition. This clearly would be in the interest of the government, given that the success of the proposed issuance of bonds and the eventual selling down of the government's interest after five years will be dependent on community and industry confidence of the financial viability of this project.

Open access

2.34 One of the eighteen Commonwealth objectives for the RFP was that the NBN:

> …facilitates competition through open access arrangements that ensure equivalence of price and non-price terms and conditions, and provide scope for access seekers to differentiate their product offerings.[23]

2.35 It was widely acknowledged by the industry that the NBN was most likely to become a 'natural monopoly', and it was clear that through this objective the government intended to minimise the potential for anti-competitive behaviour by the NBN operator. The government reiterated throughout the RFP document that it wanted to ensure maximum flexibility for prospective proponents to develop solutions that would create competition and encourage innovation in service product offerings.

2.36 Although this was welcomed by the majority of stakeholders, there was criticism that the actual term 'open access' had not been clearly defined within the RFP, leaving it open to interpretation by individual operators. Many provided the committee with their version of open access arrangements[24], while others outlined the benefits of open access to end-users and service providers alike. For example, Google highlighted the exponential growth of the internet over the last decade, which was facilitated through being founded on open access:

> This open, non-discriminatory architecture [of the Internet] has given rise to fierce competition, constant innovation and unparalleled social benefits … [and] was deliberately designed to empower end-users...[25]

2.37 This would be seen as an optimum outcome for the NBN by the government, all access seekers and all end users alike. However, the uncertainty caused by lack of a definition of open access was apparent. Concerns were raised that a successful bidder may use this lack of clarity to its advantage in relation to network access.

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23 DBCDE, *Request for Proposals to Roll-out and operate a National Broadband Network for Australia*, 11 April 2008, paragraph 1.3.1.10, p. 5.

24 See for example Optus, *Submission 19,* iiNet *Submission 3,* Regulatory Submission, pp9-10; WA DOIR, *Submission 2,* pp 1 & 3; Vodaphone, *Submission 9*, pp 12-19.

25 Google, *Submission 29,* p. 14.

Critics of Telstra, for example, raised allegations of non-equivalent treatment of existing network access seekers and raised concerns that without a clear definition of 'open access', similar conflict would carry across to a new network.[26]

2.38 This concern was substantiated in a submission that quoted Mr Donald McGauchie stating that Australia should move:

> …away from "open access" type requirements, in which competitors can free ride or cheap ride on incumbent's networks … to one based on competition between fully vertically and horizontally integrated rivals…[27]

2.39 From the weight of evidence received on this issue, the committee urged the government to provide clarification of the term 'open access arrangements' to ensure that no proponent could interpret the term to the detriment of their competitors.

2.40 The government has stated that the new NBN will overcome these access issues because:

> …it delivers separation between the infrastructure provider and retail service providers. This means better and fairer infrastructure access for service providers, greater retail competition, and better services for families and businesses.[28]

2.41 As noted in chapter 3, this measure has been welcomed by most in the industry, although the existing shortcomings of the access regime clearly need to be addressed in the interim. To this end, the Department has issued another Discussion Paper on regulatory reform that alludes to the reform of Part XIC of the *Trade Practices Act 1974* (TPA), which deals with the access regime, in the foreseeable future.

Regulatory regime

2.42 Stakeholder discussion of the open access interpretation was generally linked to what was seen as the urgent need for regulatory reform in the telecommunications industry. In a parallel process to the RFP, the government had invited submissions on suggested changes to the regime that might facilitate the implementation of the NBN. Over eighty submissions were provided within approximately ten weeks to the Department, in a clear affirmation of the need for regulatory change.

2.43 The industry welcomed the government's initiative, seeing the implementation of the NBN as a unique opportunity for the government to address the failings of the existing regime. An example of the common sentiment was expressed by Terria in their submission:

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26 See for example iiNet *Submission 3,* Regulatory Submission, pp9-10.

27 Competitive Carriers Coalition, *Submission 8(c),* 'A Critique of Telstra's Regulatory Model for Broadband Networks Since 2005", p. 14.

28 Joint Media Release, www.minister.dbcde.gov.au/media/media_releases/2009/022, p. 2, accessed 14 April 2009.

> This unique opportunity is not simply about technology or consumer, it is first and foremost about setting up an industry environment where competition and, therefore, consumer benefits come first. … [I]t needs to provide investor certainty and an effective regulatory framework.[29]

The fatal impact of regulatory uncertainty

2.44 However, not establishing the regulatory framework prior to the release of the RFP disadvantaged prospective bidders. In order to develop a clear business case within a viable proposal, a basic pre-requisite would be to possess an understanding of the legal requirements of the network being designed, particularly as the RFP required bidders to demonstrate their return on investment.

2.45 The RFP stated that one of the six evaluation criteria for proposals was:

> The nature, scope and impact of any legislative and/or regulatory changes that are necessary to facilitate the Proposal;[30]

2.46 Consequently, prospective proponents had to risk basing their bid on what they believed to be a facilitative regulatory regime, unsure of whether the direction they proposed would be the one preferred by the government. Considering the cost of formulating and submitting a proposal, this was a considerable gamble bidders were forced to take. Mr Kevin Morgan summarised the risk aspect when giving evidence in Melbourne:

> How can you possibly objectively assess a tender where the key regulatory inputs are not known? Regulation goes to the issue of risk and you cannot build a business case without understanding the risk because no-one will give you money. …Until you have regulatory reform [and] have set regulatory rules you cannot go ahead.[31]

2.47 Also supportive of this view was the submission by iiNet, which strongly advocated the establishment of a new regulatory regime prior to the implementation of the NBN, pointing out that:

> …the recent High Court judgement in Telstra Corporation v The Commonwealth (6 March 2008) reinforces the critical importance of setting in place a statutory access regime in advance of awarding any consortium the rights to build the National Broadband Network.[32]

2.48 The submission went further, predicting that the success of the NBN would be dependent on the government's ability to appropriately address the regulatory issues:

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29 Terria, *Submission 12*, p. 4.

30 DBCDE, *Request for Proposals to Roll-out and operate a National Broadband Network for Australia,* 11 April 2008, paragraph 1.4.1.3, p. 6.

31 Mr Kevin Morgan, *Committee Hansard,* Melbourne, 28 October2008, p. 85.

32 iiNet, *Submission 3,* 'Access Seeker Requirements' 30 March 3008, pp 3-4.

> The future access and regulatory regime will be a key determinant of the ability of the Federal Government to successfully implement its election policy and deliver on its commitment…[33]

2.49 Questions were also asked of the government as to how any contract for building the NBN could be signed without the successful bidder knowing the legislative framework under which their build would be operated, given that the RFP stated that there would be regulatory change to facilitate the NBN. The minister was closely questioned on this issue at Senate Estimates, with the most revealing answer being merely that:

> …let us be clear: we will reach an agreement [with the winning proponent] and we will put forward – depending on the outcome of that [agreement] – any regulatory changes.[34]

2.50 The issue left unanswered was that even if this occurred, any changes to legislation still had to undergo the process of parliamentary scrutiny, with no guarantee that the legislative changes agreed between the government and the proponent would be agreed in parliament.

Suggested changes

2.51 This inquiry received a wealth of evidence on the changes required to telecommunications regulations and legislation. The main suggestions focused on Parts XIB and XIC of the TPA, the significant market power of the incumbent provider, Telstra, and how to remove the incentive for anti-competitive behaviour.

2.52 Some submitters went into great detail as to how the government should resolve the regulatory issues; however almost every submission received by this inquiry advocated some form of separation of Telstra, with the minimal requirement being to prevent Telstra from acting as both a wholesale and a retail provider of telecommunication services. Vertical integration had resulted in Telstra being able to increase and leverage its significant market power.

2.53 Despite the strong criticism of Telstra's alleged anti-competitive behaviour, many acknowledged that the fact that Telstra was legally conflicted lent a reasonable explanation for their position. As a service provider, Telstra was obligated to act in the best interests of its customers, both the Australian public and access seekers. Conversely, Telstra was now totally owned by its shareholders, with a consequential legal obligation to act in the best interests of its shareholders. Separation was seen by competitors as the logical solution to resolve this conflict.

2.54 Telstra itself stated throughout their submission to the Department that the current legislation was fundamentally flawed; however their resolution involved a

33 iiNet, *Submission 3,* 'Access Seeker Requirements' 30 March 3008, p. 4.

34 Senator the Hon. Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, *Estimates Hansard,* Senate Standing Committee on Environment, Communications and the Arts, Canberra, 20 October 2008, p. 18.

softening of legislative requirements, or indeed their removal, including that the role and powers of the Australian Consumer and Competition Commission (ACCC) be weakened. Like other industry stakeholders, Telstra claimed that the uncertainty created by the current regime is problematic; however few would agree with what they claim as being the cause:

> The central problem is regulatory uncertainty. The cause of this uncertainty is the excessive discretion vested in the ACCC in both determining its own remit by declaring which services will be regulated and then in determining the terms of access.[35]

2.55 Under Part XIC, the current process for access seekers to have their terms of access determined uses a negotiate/arbitrate model. A common complaint was that this model assumed that both parties would strive toward the ideal win/win outcome, but due to Telstra's legal conflict, it was not in their interest to readily negotiate. This led to a practice that was referred to as 'gaming' the regulatory regime, which resulted in lengthy delays to finalising access conditions, including prices. The consequence of this was added uncertainty for service providers, and some evidence identified that this in turn stifled investment and innovation throughout the industry. As Optus commented:

> The negotiate/arbitrate model under Part XIC has proven to be a failure. It has provided Telstra with both the incentive and the means to game the system to its advantage.[36]

2.56 The provisions of Part XIB that empowered the ACCC with alternative mechanisms to address anti-competitive behaviour were also widely criticised as being ineffective. Even when Telstra was issued with an anti-competitive notice, any monetary amount that they may be required to pay would have been small, likened by Optus to a 'minor speeding ticket.' Due to the convoluted processes involved under Parts XIB and XIC, which ultimately have little or no deterrent effect, Optus claimed that the ACCC's powers to regulate access were:

> …often ill-defined and limited by various rights of appeal. … The legal strait jacket within which the ACCC has to operate is demonstrated by the ACCC's recent revelation that it is currently involved in 47 legal actions initiated by Telstra.[37]

2.57 Predictably, this totally contradicts claims by Telstra that the ACCC is the causal factor creating delays and consequential uncertainty for the industry.

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35 Telstra, *Public submission on the roll-out and operation of a National Broadband Network for Australia,* 25 June 2008, p. 23.

36 Optus, *Submission 19,* p. 22.

37 Optus, *Submission 19,* p. 24.

Separation and underpinning principles for regulation

2.58 A more objective submission from outside the telecommunications industry recommended that a number of basic principles should guide the development of any new NBN regulatory framework. The submission stated that the objective for such a framework should be to achieve a 'reasonable balance between protection and regulatory cost', should achieve 'competitive neutrality, transparency and have minimal overlap and duplication', and that 'regulation should be outcomes based rather than process based.'[38]

2.59 Throughout this inquiry it has been stated repeatedly that the issues of open access, appropriate regulation and vertical separation were closely inter-related. As one witness stated:

> …it is the structure of the industry rather than simply the regulatory settings that we have at the moment that makes it difficult, if not impossible, to have open access. … It is not so much the regulatory settings as it is the structure of the industry that militates against open access arrangement.[39]

2.60 The prime objective and major component of the current regulatory regime is to promote competition through open access and prevent anti-competitive behaviour. It was commonly held that by structurally separating Telstra, their incentive for non-competitive behaviour would be removed, resulting in open access on equivalent price and non-price terms, with the consequential reduction in the amount and extent of regulation required.

2.61 The Chief Executive Officer (CEO) of Axia NetMedia had a different perspective on how to resolve the current regulatory issues without forcing any separation and without any regulatory change. His company has implemented broadband networks in Alberta Canada, France and is about to deploy fibre in Singapore. All three networks have been based on a simple but powerful principle, which is: 'Competing With Your Customer Does Not Work'.[40]

2.62 The reasoning is that, if a network owner is also supplying network services, they are in direct competition with their own customers, i.e. other service providers, which provides the incentive for anti-competitive behaviour against those customers. This is a business model that clearly would not work in mainstream retail businesses. However, a network company that does not also offer retail services does not need to compete with other service providers; on the contrary, their success would then depend on the ongoing business of service providers. Mr Price concluded that:

> …to get a high performing end result and choice for the end users, the party who has the next generation network should not be competing with its own customers.

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38 Western Australian Chamber of Commerce and Industry (WA CCI), *Submission 17,* p. 2.

39 Mr Matthew Healy, Chair, Competitive Carriers Coalition (CCC) *Committee Hansard,* Canberra, 8 October 2008, p. 2.

40 Axia NetMedia, *Submission 33,* p. 1.

> That is quite different to saying that the incumbent must structurally separate. …if you think of the three places we did this, the government did not require the incumbent in any of those places to structurally separate, but they got a structurally separated outcome … from a party other than the incumbent.[41]

2.63 This principle seems to underscore views commonly stated to this committee that separation of the operator from upstream retail services would reduce the need for, and extent of, regulation of the industry.

2.64 As mentioned earlier, the government has moved to comprehensively address the 'shortcomings and inherent limitations'[42] of the current regulatory regime in a two-pronged approach. First, the new NBN company will provide wholesale-only services, ensuring there is separation between the infrastructure provider and service providers, which will consequently remove the incentive for anti-competitive behaviour by any NBN operator. The second measure is the promise of regulatory reform to relieve the existing industry stresses caused by these regulatory 'shortcomings' while the NBN is being implemented.

RFP process and timeframes

A flawed process

2.65 The RFP process itself was criticised in a number of diverse areas that were detailed in the Interim Report of this inquiry, which was tabled in the Senate on 2 December 2008.

Lack of transparency

2.66 Most notable and damaging for the government was the widely perceived lack of transparency of the process, despite the earlier claim by the government to the contrary. The proclaimed probity constraints by the minister, his department and the ACCC to provide additional detail of the process and underlying policy development drew ongoing criticism, with stakeholders and the industry in general expressing great concern that the government was providing insufficient detail on how such a large portion of taxpayer funds would be spent.

2.67 This unwillingness was legally underpinned by what became referred to as the 'gag order' within the RFP, which effectively prevented any prospective proponents from providing the committee with details of their proposals or discussions with the Department. The RFP stated that:

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41 Mr Price, Axia NetMedia, *Committee Hansard*, 24 November 2008, pp7-8.

42 Joint Media Release, www.minister.dbcde.gov.au/media/media_releases/2009/022, p. 2, accessed 14 April 2009.

> Proponents should not communicate with or solicit information in relation to the RFP process from any government employee (or contractor), Minister or Minister's adviser other than the Contact Officer.
>
> The Commonwealth may preclude a Proposal from further consideration if the Proponent does not comply with any requirement of this clause 10.7, or based on any investigation carried out under this clause 10.7.[43]

2.68 Criticisms representative of views expressed to the committee include those from Dr Ross Kelso when he commented:

> A prime goal in selecting the NBN provider and managing ongoing deliverables should be to ensure full transparency of process and public accountability for outcomes. … [t]ransparency and accountability are crucial factors.[44]

2.69 Following the closure of bids for the RFP, the Senate called for the reports of the Panel of Experts and the ACCC to be made public on the first day of sitting following the announcement of a winning bid.[45]

2.70 Since the Rudd Government announcement that the RFP process was being terminated, the Opposition has called for there to be a full review of the failed RFP process by the Auditor General. On 7 May 2009 *the Australian*[46] reported that there would be a 'preliminary review' of the government's terminated RFP process.

2.71 While the committee welcomes this preliminary review, the committee urges the government to ensure a full review of the terminated RFP process is conducted by the Auditor General, to be commenced before the end of 2009.

Evolving timeframes

2.72 The original timeframes quoted in the RFP for achievement of the proposed project milestones were quickly superseded; difficulties arose in the obtaining of proponent network information, which was designed to allow proponents access to equivalent network information in order to determine their network infrastructure requirements. The delay in obtaining this information pushed back the closure date for the RFPs from 25 July to 26 November 2008, one month after the originally scheduled date for the government's final decision, making the government's promise of a roll-out commencing by the end of 2008 impossible to fulfil.

2.73 Criticism was also levelled at the timeframe for the evaluation of the bids following the closure date on 26 November 2008. The RFP provided that the assessment process would be undertaken over an eight week period, which would

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43 DBCDE, *Request for Proposals to Roll-Out and Operate a National Broadband Network for Australia*, 11 April 2008, paragraphs 10.7.5-6, p. 38.

44 Dr Kelso, *Submission 24*, p 8.

45 See Senate Journal No 54, 4 February 2009, p. 1542.

46 *The Australian*, 7 May 2009, p. 23.

include a parallel assessment process and report by the ACCC to the Panel of Experts within six weeks of the closure date.

2.74 Following evaluation of the proposals, the Expert Panel was to present the minister with a report before the end of January 2009. The industry expectation was that the minister would make an announcement shortly after Parliament resumed for 2009. However, the waiting game was to continue for several months.

2.75 After holding the industry in limbo for almost twelve months, the minister participated in the recent joint announcement of the new NBN initiative on 7 April 2009, terminating what many had complained was a flawed RFP process.

Transition planning

2.76 Concerns have been expressed to this committee that the transition to a new broadband network would be risk-laden, requiring thorough planning and consideration of all stakeholders involved, regardless of who the new operator would be and/or the technology platform that might be utilised.

2.77 The possibility that a FTTN deployment would result in a switch-over that would bypass the local exchange was very real, particularly if the incumbent were to build and operate the NBN. One of the consequences would be that competitor equipment installed in those exchanges would become 'stranded assets', with the possibility of the government having to compensate equipment owners for their losses.

2.78 iiNet noted that a managed transition plan could mitigate many transition concerns, stating that '[t]ransitional arrangements are essential and should be aimed at meeting public policy objectives rather than shoring up anti-competitive structures.'[47] Mr Hicks from Adam Internet also advocated for a migration plan with a specified period of time before the switchover would be mandated:

> …there would have to be a migration period, so that we all agree that,…everyone will be on the new network in, say seven years time. The option of changing is up to the customer any time in that seven years. … It would be a managed migration.[48]

2.79 This period would also allow companies time to depreciate and retire their assets in a commercially viable manner. Another solution with similar results would be if the NBN was rolled-in from the unserviced areas, again allowing competitors with equipment in exchanges to retire their assets over the period of time before the NBN reached the metropolitan areas.

2.80 Stranding assets was not the only transitional issue. The physical, manually-intensive process required to transfer customers from one network to the NBN was

47 iiNet, *Submission 3, Regulatory Submission on the Requirements for an Open Access National Broadband Network', June 2008, p. 6.*

48 Mr Hicks, Adam Internet, *Committee Hansard,* Sydney, 7 October 2008, p. 45.

mentioned by Mr Hicks, highlighting that there was a human intervention factor to be considered:

> …there are an awful lot of customers who have to have their database physically changed and their records moved. There is hard wire [involved]. There is human intervention. Every time someone changes one of those, you end up with the possibility of stranding customers as well.[49]

2.81 A critical factor in successful transition planning was stated to be the need for improved coordination of infrastructure planning across the three tiers of government, with particular references to the economic efficiencies that could be gained through effective synchronisation of efforts. Professor Walter Green called for each state to have a telecommunications plan identifying future development needs and infrastructure requirements, so that, as a minimum, the conduits for fibre deployment can be included in future developments. Professor Green advocated for there to be 'some kind of regulatory and legal support' to ensure this coordinated planning of development occurs:

> The attitude that telecommunications legislation or telecommunications is only a federal issue needs to be changed … The Federal government is not there to do state planning.[50]

2.82 In order for this coordination to be fully effective and successful there is a need for increased consultation between all three levels of government, industry and consumers. The *State of the Regions Report 2008-09*, produced by National Economics for the Australian Local Government Association (ALGA), was critical of the lack of coordination across jurisdictions in all economic development and infrastructure planning. This report provided contemporary references to the Global Financial Crisis, highlighting a 'troubling convergence of factors that will have an impact on regional economic development'.[51]

2.83 One of these factors was stated to be the 'lack of progress in developing the National Broadband Network'[52], with the report urging that a more holistic approach is required by governments and regions when seeking resolutions to what may otherwise seem quite disparate issues. This clearly echoes the sentiments of Professor Green, among others.

2.84 The Rudd Government already has in place a number of agencies and means by which this greater level of coordination should be readily achievable. Apart from the Council of Australian Governments (COAG) forum, the Rudd Government has established Infrastructure Australia, tasked with developing a national infrastructure priority list that is to be provided to COAG for consideration. National infrastructure

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49 Mr Hicks, Adam Internet, *Committee Hansard*, Sydney, 7 October 2008, p. 44.

50 Professor Walter Green, Director, Communications Expert Group and ATUG *Committee Hansard*, Perth, 6 November 20008, p. 58.

51 *State of the Regions 2008-09*, p. (i).

52 *State of the Regions 2008-09*, p. (i).

investment is to be monitored, and routinely reported to COAG, by Infrastructure Australia.

2.85 Within Infrastructure Australia itself, the Major Cities Unit has been established in the recognition that:

> The issues surrounding the infrastructure and governance of our major cities are complex and require the input of Local, State and Federal government, the integration of services and infrastructure bodies, and industry and community participation. The Unit will provide a more coordinated and integrated approach to the planning and infrastructure needs of major cities. … It will be central to the development of a strong relationship across the Commonwealth Government, all levels of government and the private sector. [53]

2.86 In addition, ALGA has extensive and widely dispersed expertise in their membership, and no doubt there are other similar conduits that could increase coordination across jurisdictions. The committee urges the government to fully leverage the existing forums of coordination to ensure the NBN initiative is given optimal opportunity for effective and economically efficient implementation throughout the life of this project.

Consultation process

2.87 Throughout the inquiry process witnesses have called upon the government to increase the level of consultation across the industry and across jurisdictions. The committee acknowledges that a substantial submission process was an integral component of the RFP process. Although this enabled comment to be made, it did not provide for any government responses to the submission process and consequently did not fully substantiate the government's repeated declaration that the RFP process was open and transparent.

2.88 Dr Kelso reiterated his concerns at the Brisbane hearing in relation to the lack of opportunity for industry input, particularly in relation to the changes to the regulatory regime, which were (and still are) likely to be substantial:

> Until now, all the changes that the telecommunications have undergone … have been supported by significant public disclosure and discussion.
>
> The only time at which there will be public exposure about the regulatory framework will be when parliament resumes next year [2009] and presumably changes to the legislation will be sought.[54]

2.89 The committee's Interim Report concluded that the government needed to 'incorporate appropriate and timely opportunities for consultation with the industry'[55] and across all jurisdictions, to ensure full consideration of stakeholder concerns that

53 http://www.infrastructureaustralia.gov.au/mcu.aspx , accessed 2 May 2009.

54 Dr Kelso, *Committee Hansard*, Brisbane, 21 November 2008, pp 18-19.

55 *National Broadband Network – Interim report*, p. 65.

could then inform both the drafting of final legislation and the development of transitional planning and implementation of the NBN.

2.90 Consultation is essential in planning the deployment of the NBN. As mentioned above, the deployment of an infrastructure project of this proportion and national significance calls for the highest degree of coordination and collaboration across all jurisdictions and also across all stakeholder businesses within the telecommunications industry.

2.91 Again, the committee urges the government to ensure agencies such as Infrastructure Australia, its Major Cities Unit and the extensive and diverse membership of ALGA, together with representation from business, are involved to their fullest capacity, to allow seamless coordination and cooperation across jurisdictions, industry and businesses impacted by the deployment of the NBN.

Evidence and events post RFP closure

2.92 The now terminated Request for Proposals (RFP) closed at noon on 26 November 2008, with six bidders lodging their proposals for assessment over the following eight weeks by the Panel of Experts, which would incorporate advice received from the ACCC. Six bids were lodged; the four bidders proposing a national solution were (in alphabetical order): Acacia; Axia NetMedia; Optus; and Telstra; the Tasmanian Government and TransACT lodged bids for state solutions, covering Tasmania and the Australian Capital Territory (ACT) respectively.

Controversial exclusion of Telstra

2.93 Due to the requirement for all proponents and all government personnel involved with the RFP not to discuss details of their proposal at the risk of exclusion from the RFP process, very little was known about five of the proposals that was not already in the public arena. On the other hand, when Telstra submitted their proposal, they provided a Media Release and published their twelve page letter to the minister that outlined basic objectives of their proposal.

2.94 This letter provided what Telstra referred to as a 'compelling proposition' for the government's consideration, but reiterated their concerns in relation to the RFP process that they believed had not been considered by the government, stating that:

> Unfortunately, these issues have not yet been able to be addressed in a manner that would enable Telstra to submit its fully detailed bid under the RFP today.[56]

2.95 The remainder of Telstra's letter to the minister elaborated on these concerns and set out what virtually amounted to 'conditions of participation' that the government would need to meet before Telstra would submit their full proposal.

56 *National Broadband Network – Telstra Proposal*, p. 2.

2.96 Telstra referred to these conditions of participation as 'key enablers' that would be required to be in place before Telstra would commit to building the NBN; these key enablers were listed as:

- no further separation of Telstra (including no sub-loop unbundling) over the life of the project;
- certainty of NBN build footprint, rollout regulations and technology commitments;
- Telstra retaining all its Intellectual Property, ownership and management of its network across Australia;
- regulatory certainty (of wholesale pricing, services and processes) in practical terms for the life of the project;
- there being no further dislocation in financial markets or an economic contraction;
- more rigorous confidentiality arrangements;
- agreement to high level negotiations with key decision makers; and
- a fresh contractual starting point.[57]

2.97 No one in the industry would deny that Telstra's highly skilled workforce and extensive existing infrastructure made it highly qualified as a builder of the NBN. Telstra concluded that these capabilities ensured that it would not require the 'Commonwealth as a joint venture partner', but that it was 'ready to self-fund the NBN (at a cost of up to $5 billion)', to build the NBN in 'essentially the 5 major cities'. However, Telstra noted that if the government were to provide the $4.7 billion 'as a loan at concessional interest rates'[58], then Telstra could extend the NBN footprint to reach between 80 and 90 per cent of the Australian population.

2.98 Some detail of their proposal was provided by Telstra in this document, making it apparent to all that their final proposal would not meet the RFP requirement of 98 per cent fibre, but would instead aim for a footprint reaching 80 to 90 per cent of the Australian population. Telstra provided a basic pricing plan for a maximum 1 Mbps broadband service at $29.95 per month for existing Telstra voice customers, or $39.95 for non-customers. Australians were left to wonder what price brackets would be applied for the RFP's requisite minimum download speed of 12 Mbps, as details of the higher download speed prices were not provided.

2.99 However, as a result of Telstra's failure to submit a small and medium participation plan in compliance with Clause 10.9 of the RFP, the Commonwealth announced on 15 December 2008 that they would be excluding Telstra from further consideration in the RFP evaluation and assessment process.

57 See *National Broadband Network – Telstra Proposal,* p. 3., and subsequent discussion.

58 *National Broadband Network – Telstra Proposal,* p.3.

Reaction to Telstra's exclusion

2.100 Telstra's subsequent Media Release disagreed with the government's reason for its exclusion:

> Telstra considers it has fully complied with the RFP requirements (which did not require a SME Plan to be lodged as part of the RFP Proposal itself) and that the Commonwealth has used a peripheral issue to exclude Telstra. …Telstra provided its SME Plan to the Government in early December and, in Telstra's view, in accordance with the RFP. The Commonwealth could hardly have dreamed up a more trivial reason to exclude Telstra from the NBN. This is a process that seemingly excludes bidders on such trivial and legally questionable technicalities but doesn't take any action [on other bidders] on material issues such as financing and having the technical capability to build the network. [59]

2.101 As could be predicted, the government's decision was heralded by Telstra's competitors as a bold but appropriate response to what was seen generally by the industry as a very inadequate response by Telstra to the RFP.

2.102 The committee heard from both Telstra and their main competitor, Optus, at the public hearing held in Sydney on 3 March 2009. Mr Maha Krishnapillai, the Director of Government and Corporate Affairs for Optus, indicated that the government was correct in their decision to exclude Telstra from the NBN, stating that the fixed broadband market in Australia:

> …is tilted heavily in favour of the incumbent and has been for many years. … It is time for the firm hand of the government to put the national interest above private shareholder interest and create the conditions necessary for a vigorously competitive fixed line market.[60]

2.103 This comment was obviously directed at Telstra's conflict between the best interests of their customers and those of their shareholders, with the latter clearly the favoured party in recent years.

2.104 However, the exclusion of Telstra caused an immediate vote of no-confidence in Telstra's stance by their shareholders, with share prices falling dramatically by 11.6 per cent that day, the biggest one-day percentage fall since its listing in 1997. Share prices have continued to tumble, at one point falling for the first time below the $3.00 mark. Even the announcement by Telstra of the $250 million investment in the Hybrid Fibre Coaxial (HFC) network, failed to significantly rally the share price.

2.105 There is of course public interest in Telstra's share price, with the Future Fund holding a 16 per cent share in Telstra. The committee notes that there have been discussions between the executives of the Future Fund and Telstra since the government's decision to exclude Telstra.

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59 Mr Donald McGauchie, Telstra Chairman, Media Release, 15 December 2008.

60 Mr Maha Krishnapillai, Optus, *Committee Hansard*, Sydney, 3 March 2009, p. 35.

2.106 At the March Sydney hearing, the committee put to Mr Krishnapillai that, as Telstra was the incumbent carrier, their exclusion on what was termed as 'something of a technicality', surely meant that the RFP process could no longer be 'properly described as a competitive tendering process'.[61] Mr Krishnapillai was quite emphatic in his disputation of that suggestion:

> …I categorically disagree, with respect, that Telstra needs to be part of this process. It had its opportunity. It chose to submit a 12-page media release, compared to the 1,500-page proposal [Optus] have put forward … Telstra had its chances; it chose not to participate. The Government cannot, in our view, and should not have any accord with a party who wants to put its interests above the national interests, which is clearly what Telstra has chosen to do.[62]

2.107 Over the Christmas-New Year holiday period, media speculation continued as to what the NBN winning bid might comprise. With the few details available, the concept of a consortium being formed by the remaining three national bidders was touted and debated by the media:

> …another emerging option is that the panel could suggest taking the best elements of all bids – including state-based bids in Canberra and Tasmania – and bring them together as one consortium to deliver the best network.[63]

2.108 It was suggested that this may be a face-saving opportunity for the government in that it could, under the guise of forming a consortium, bring Telstra back into the NBN negotiation tent. Meanwhile, Telstra continued its defiant stance, with the CEO, Mr Sol Trujillo, seen to threaten the commercial viability of the NBN; *The Australian* stated that Mr Trujillo had made comments that:

> Telstra would effectively deny the owners of the NBN a customer base by migrating its retail customers to its own networks before the [NBN] project could be completed.[64]

The Panel's report

2.109 On 20 January 2009 the Panel of Experts provided their much anticipated report to the government containing their assessment of the remaining five bids. Speculation mounted in anticipation of the government announcement and whether the contents of the Panel's report, or that of the ACCC, would ever receive public scrutiny.

2.110 On the same day, there came the surprise resignation of one of Mr Trujillo's key advisors, who would return to the United States of America. Mr Greg Winn was

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61 See *Committee Hansard*, Sydney, 3 March 2009, pp 35 & 36.

62 Mr Krishnapillai, Optus, *Committee Hansard*, Sydney, 3 March 2009, p. 36.

63 www.australianit.news.com.au/story/0,25197,24942087-15306,00.html, accessed 21 January 2009.

64 *The Australian*, Wednesday 14 January 2009, p. 19.

the second Trujillo-appointed advisor to exit Telstra, following Mr Phil Burgess' departure in late August 2008. There was almost immediate speculation over the tenure of the CEO himself.

2.111 Although Telstra believed it had been wrongfully excluded from the NBN process, it quickly moved to demonstrate that they would not be impacted as a business by this decision through a number of self-promotional announcements. These included their intention to immediately commence an upgrade of their existing HFC network, commencing in Melbourne and extending to other major capital cities. At the end of January 2009, Telstra announced that it would deploy Ethernet backhaul upgrades to its Next G wireless network. With its entire Next G network already capable of maximum download speeds of 21 Mbps, Telstra confirmed plans to have speeds incrementally increased to 42 Mbps by 2010. With the remarkable increase in uptake of wireless broadband across Australia, even in the last six months of 2008, this was a strategically-timed announcement.

2.112 Telstra's rival, Optus, was quick to pour water on this initiative, remarking in *Communications Day* that:

> This is another example of Telstra misleading Australian businesses and consumers … The fact is customers will need to buy a new modem and live/work … to take advantage of these 'theoretical' speeds. For all the hype that Telstra has made … not a single customer has benefited from these speeds as modems haven't been available.[65]

2.113 There was comment in the New Year that Telstra was perhaps softening its defiant stance. This was particularly noted following the announcement that Mr Trujillo would be stepping down as Telstra's CEO by 30 June 2009, a year shy of his five year term. This was considered by some to be a risky announcement due to the fact that there was no clear successor leaving Telstra with what could be termed a lame duck leader for over five months. The issue was resolved when Telstra announced its new CEO was Mr David Thodey, who brings extensive experience in the ICT and telecommunications sectors, and has been with Telstra since 2001.

2.114 In his speech to the National Press Club on 26 February 2009, Mr David Quilty, Managing Director of Public Policy and Communications, presented a more conciliatory stance by Telstra. Mr Quilty stressed the need for governments, the ICT sector and business sectors to develop a new mindset that would facilitate 'the economy-wide enabling powers of information technologies.'

> Increasingly the world's largest Telecoms companies and governments are now entering into pragmatic win-win partnerships to bring on investment in next generation networks. … win-win partnerships use government regulatory, fiscal, tax and spectrum levers to both the supply and demand sides to stimulate and maximise commercial investment. …[66]

65 Mr Andrew Buay, Optus Managing Director, *Communications Day*, 18 February 2009, p. 1.

66 Mr Quilty, Telstra, Address to the National Press Club (NPC Address), 26 February 2009.

2.115 At the end of his speech, Mr Quilty received the inevitable question relating to Telstra's exclusion from the NBN. In response, Mr Quilty reiterated that Telstra had 'moved on', but that Telstra would continue to compete strongly in the market. However, in an indication that, although they were perhaps now ready to negotiate for a win-win outcome, it would be no easy battle for the government:

> By moving on means that we would continue to compete vigorously in all markets for all customers. So anyone who builds an NBN who thinks there is some decree or there is some certainty that Telstra can be relied upon as an anchor tenant I think needs to rethink their business case. [67]

Further public hearings

2.116 The tragic and devastating Victorian bushfires in February 2009 may have provided an additional and understandable need for the NBN announcement to be delayed further, as there was still no announcement when the Senate Estimates hearings commenced on 23 February 2009. However, potential questions regarding the evaluation process were headed off by the minister making an opening statement that:

> Discussion of the contents of proposals, release of information relating to the evaluation and the evaluation methodology or speculation on the possible outcomes from the process prior to a public announcement could be misconstrued and could undermine the integrity of the process.[68]

2.117 The minister did confirm his 'ambition' to provide an outcome of the process in March and that the government 'will deliver on our election promise in full.'[69] The Estimates committee closely questioned the minister on the process leading to Telstra's exclusion, but were able to extract little detail apart from the fact that advice from five separate legal counsels led to the Chair of the Panel of Experts, Ms Patricia Scott, in her role as Secretary of the Department, making that decision.

2.118 Early in March this committee held two additional public hearings, gathering evidence in the main from previous witnesses to determine their opinions and options following the exclusion of Telstra from the RFP process. With the appearance of both Optus and Telstra publicised, these hearings received significant media attention.

2.119 Mr Maha Krishnapillai took the opportunity to advocate the four key pillars that Optus believes should underpin any regulatory changes, which were listed as 'structural separation, open access, true cost based pricing and a clear and

67 Mr Quilty, Telstra, NPC Address, 26 February 2009.

68 Senator the Hon. Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, *Estimates Hansard,* Senate Standing Committee on Environment, Communications and the Arts, Canberra, 23 February 2009, p. 102.

69 Senator the Hon. Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, *Estimates Hansard,* Senate Standing Committee on Environment, Communications and the Arts, Canberra, 23 February 2009, p. 103.

unambiguous oversight role for the ACCC.'[70] Apart from being highly supportive of the decision to exclude Telstra from the NBN process, Mr Krishnapillai strongly stated that the Optus bid would fully comply with the requirements of the NBN, but added that Optus believed that:

> A country of Australia's size with its population, in our view, cannot support multiple fibre networks. … The alternative I believe we have in the Australian context is to have one utility rate of return, a fibre network that achieves 98 per cent coverage, or a couple of smaller networks that achieve coverage in metropolitan areas.[71]

2.120 Mr Krishnapillai went on to explain the consequent need for the ACCC to have a clear oversight role:

> …if you are going to have a monopoly network, and the economics and commercial rationale justify that, then you must have a genuine open access, regulated by the ACCC, in the national interest, with a utility rate of return for that network.[72]

2.121 When asked his views on whether the advice from the Panel of Experts and the ACCC should be made public, Mr Krishnapillai answered in the affirmative:

> We have certainly said quite clearly we believe it is appropriate that the minister should release the expert panel report and the ACCC report.[73]

2.122 Mr Krishnapillai restated that it was their preference to roll-in the deployment of the NBN to the cities to 'address those areas of Australia that either do not have broadband or need broadband competition.' [74] Another witness in Sydney, Ms Deanne Weir from AUSTAR, concurred with this view when she spoke of the difficulties her company had encountered when attempting to build wireless access networks into regional areas.

> We should really be focusing on where the true need is for these services, and the true need is in regional and rural areas where there just is not necessarily a [commercially viable business] case.[75]

2.123 When Telstra appeared before the committee in Sydney, rather than provide the customary opening statement, Mr Quilty presented the committee with a previously unseen, seven-page document, entitled *Critical issues to be addressed in the NBN decision*. Stating that, despite its exclusion from the NBN process, 'Telstra

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70 Mr Krishnapillai, Optus, *Committee Hansard*, Sydney, 3 March 2009, p. 35.

71 Mr Krishnapillai, *Committee Hansard*, Sydney, 3 March 2009, pp 38-39.

72 Mr Krishnapillai, *Committee Hansard*, Sydney, 3 March 2009, p. 39.

73 Mr Krishnapillai, *Committee Hansard*, Sydney, 3 March 2009, p. 47.

74 Mr Krishnapillai, *Committee Hansard*, Sydney, 3 March 2009, p. 43.

75 Ms Deanne Weir, Group Director, Austar United Communications Limited, *Committee Hansard*, Sydney, 3 March 2009, p. 58.

retains a vital interest' in the project, Mr Quilty explained that the purpose of their tabled document was:

> To inform people who are interested in this issue about what we see as the range of key matters that should be considered and deliberated upon in terms of the decisions that are being taken.[76]

2.124 Among the 'key matters' expanded upon in the document were the risks relating to the technical experience, knowledge and skill levels required to design and build the NBN; the financial risks in the current global economic climate; operation and technology risks; possible security risks; and regulation, pricing and competition risks.[77]

2.125 When Mr Quilty was asked what Telstra was anticipating as a likely outcome of the NBN process, although he stated that Telstra had had no contact with the government since their exclusion in December, his response was rather prophetic:

> In terms of what particular models might be, one possible model I see is one where an alternative wholesale network is committed to by the government. The equity owners may well be the government and a number of, if not all, the remaining bidders through the RFP.[78]

2.126 Mr Quilty went further to explain that:

> …you would envisage that such a network would involve a combination of fibre, wireless, or backhaul for wireless, and satellite and that a number of those who might be investing in a wholesale only network, particularly Optus, would also be retailing off that network …[79]

2.127 Mr Quilty also elaborated on what he believed were the risks of any further separation of Telstra:

> Our view is that structural separation increases costs, reduces investment incentives, makes it more complex to provide reliable end-to-end services and it has not been demonstrated to work anywhere in the world. … We see it as largely a campaign by others in the industry to do harm to Telstra. We do not see any benefit for end-users…[80]

2.128 Dr Tony Warren added that in his view, now that Telstra has been excluded from the NBN process, 'the separation of Telstra is off the agenda.'[81]

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76 Mr David Quilty, Managing Director, Public Policy and Communications, Telstra, *Committee Hansard,* Sydney, 3 March 2009, p. 85.

77 See *Critical issues to be addressed in the NBN decision.*

78 Mr Quilty, Telstra, *Committee Hansard,* Sydney, 3 March 2009, p. 86.

79 Mr Quilty, Telstra, *Committee Hansard,* Sydney, 3 March 2009, p. 87.

80 Mr Quilty, Telstra, *Committee Hansard,* Sydney, 3 March 2009, p. 90.

81 Dr Tony Warren, Executive Director, Regulatory Affairs, Telstra, *Committee Hansard,* Sydney, 3 March 2009, p. 92.

2.129 Mr Paul Budde used his second appearance before the committee to highlight the need for greater coordination of planning and infrastructure development in all areas. Mr Budde said that, in this current climate where governments were tending to provide economic stimulus funding for large infrastructure projects, they should be looking for the 'multiplier effect'. He believed that governments could leverage the opportunities now existing and explore:

> …how we can solve more problems with one investment. … The government needs to think trans-sector and start addressing issues not in silos but as an overarching model.[82]

2.130 When asked by the committee how the government should provide leadership in such trans-sector thinking, Mr Budde suggested that the government should provide the vision for innovative trans-sectoral projects, but then step back and allow industry to work out appropriate solutions:

> If you [the government] have got the vision and you say, 'Guys, infrastructure, $40 million: do something with water, do something with electricity, do something with broadband … But we miss the vision from the government. The government is thinking in silos … But if you turn around and say, 'The infrastructure will have to be used to get a multiplier effect,' then suddenly you will find that these people … will start working together.[83]

2.131 Professor Walter Green also reappeared before the committee, commenting that the NBN should be technologically neutral, and advocating FTTP in greenfield developments:

> …in terms of public policy goals … the provider or the NBN should be allowed to use a combination of all technologies. However, regarding greenfield sites, I have been involved in a number of projects where we found it cheaper to provide fibre to the premises in residential estates. We have been doing this for more than four years in Western Australia.[84]

2.132 Professor Green supported the previously discussed Axia principle that the successful NBN provider should not be able to compete with its retail customers, pointing out that this is ultimately in the long-term interest of end-users. There were several other interesting issues raised by Professor Green, in particular the issue of establishing a mediator to deal with day-to-day interconnection issues that will arise during the transition to the new network. Highlighting that the successful NBN builder will be required to work with multiple carriers, including Telstra, Professor Green explained that:

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82 Mr Paul Budde, *Committee Hansard*, Sydney, 3 March 2009, p. 61.

83 Mr Budde, *Committee Hansard*, Sydney, 3 March 2009, pp 65-66.

84 Professor Green, Director, CEG and ATUG, *Committee Hansard*, Sydney, 3 March 2009, p. 15.

> If there are these grey access interconnection issues then it is important that the government establish a mediator who has the authority to issue a quick resolution …[85]

2.133 When questioned on what mechanism the mediator would be able to utilise to enforce their decisions on what, by his own admission, are 'grey access interconnection issues', Professor Green stated it should be:

> The threat of structural separation … much along the same lines as New Zealand and in a few other countries. Secondly, … [w]e need a stronger reinforcement, … a condition of licence … [of] the carrier … [with] penalties for not doing so. … if you do not have mediation plus the ability to deal with it case by case you are going to have great problems delivering the NBN.[86]

2.134 On the issue of separation, Professor Green noted that structural separation removes the incentive for an incumbent to manipulate prices and conditions in their favour, commenting that:

> …when you have something structurally separated you actually get better and more efficient use of your infrastructure, because the provider is not dealing with customers. All he needs is to focus on getting as many customers as possible and as much traffic. That is the successful {NBN] business model. [87]

2.135 Mr Ed Willett also appeared in Sydney, but pointed out that as a Commissioner of the ACCC, he was constrained as to the questions he could answer due to the live RFP process. However, Mr Willett did provide the committee with a useful comparison between structural and functional separation:

> …full structural separation … is designed to remove all incentives on behalf of the bottleneck owner to favour a particular downstream competitor. It is the only way to do that. …[F]unctional separation, some lesser form of structural separation, does not serve the same purpose … it never deals with that basic incentive to deal with its affiliate downstream on more favourable terms … The only way to deal with that affiliate problem is to get rid of that affiliation.[88]

2.136 The hearing in Canberra on 4 March 2009 opened with a teleconference with Mr Peter McCarthy-Ward, the Director East of England, from the incumbent telco in the United Kingdom, BT (formerly known as British Telecom). Mr McCarthy-Ward provided the committee with a very open and informative account of the relevant experience of the functional separation process that BT has been undergoing for the

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85 Professor Green, Director, CEG and ATUG, *Committee Hansard*, Sydney, 3 March 2009, p 18.

86 Professor Green, Director, CEG and ATUG, *Committee Hansard*, Sydney, 3 March 2009, p. 20.

87 Professor Green, Director, CEG and ATUG, *Committee Hansard*, Sydney, 3 March 2009, p. 21.

88 Mr Ed Willett, Commissioner, ACCC, *Committee Hansard*, Sydney, 3 March 2009, p. 77.

past several years. During the discussion he made reference to the establishment of a mediator to oversee the transition process, a role that Professor Green had been advocating the previous day.

2.137 As part of the functional separation, BT created the Equality of Access Board (EAB) that was responsible for overseeing and reporting on BT's delivery of its undertakings:

> This was a board committee of BT PLC board, but with a majority of non-BT members appointed in consultation with the [industry] regulator and the industry.[89]

2.138 Mr McCarthy-Ward commented that this mediator was still in place and 'had actually been quite a valuable asset':

> If I may be completely honest, when we agreed to do it we felt it was a bit heavy handed of our regulator. … But the practice has been that we have an internal body that is unpolluted by the sorts of conventional wisdoms that can arise within a large organisation. … with hindsight it has been a better outcome…[90]

2.139 Mr McCarthy-Ward outlined several of the key difficulties experienced by BT during the separation process, particularly noting that the requirement in the undertaking to both logically and physically separate their management information systems was one of the most complicated areas of the undertakings. In perhaps a cautionary note, he commented that:

> … we underestimated the complexity of this operation at the outset… logical separation systems are much more consistent with the way that modern systems architecture is developed and is a relatively painless and cheap way of achieving the necessary separation of the systems.
>
> … it is moot whether or not the full cost of physical separation is proportionate.[91]

2.140 Mr McCarthy-Ward noted that the process of drafting the undertaking with which it had to comply took approximately six months, negotiating with the regulator and their competitors 'until we had crafted not only what we were willing to offer but what we knew our regulator and our industry would be willing to accept.'[92]

2.141 Mr Arthur Price from Axia NetMedia also made an appearance before the committee in Canberra. Mr Price again provided an external perspective of the complex issues that the NBN was attempting to resolve, commenting that Axia had provided a proposal that he believed was 'transformational in character'. Mr Price

89 Mr Peter McCarthy-Ward, BT Director, East of England, *Committee Hansard*, Canberra, 4 March 2009, p. 3.

90 Mr McCarthy-Ward, BT, *Committee Hansard*, Canberra, 4 March 2009, p. 3.4.

91 Mr McCarthy-Ward, BT, *Committee Hansard*, Canberra, 4 March 2009, p. 5.

92 Mr McCarthy-Ward, BT, *Committee Hansard*, Canberra, 4 March 2009, p. 11.

noted that most digital economies were moving to high quality of service as opposed to purely focusing on quantity or speed of service provision. Mr Price commented that the NBN provided Australia with the opportunity to make a similar move while simultaneously addressing the problematic structure of the industry:

> The industry, structured the way it is today, is full of disputes and conflicts … I would say that in the broader context that nobody has been able to create a high-performing value chain based on a supplier competing with their customers… What competing with your customer actually does is create the ultimate conflict…[93]

2.142 Mr Price reiterated that to remove that conflict there is no need to force separation on the incumbent, rather:

> If you can create an alternative [network] that does not have that conflict, that creates the normal value chain of a supplier not competing with their customer and leaves the incumbent to compete however they want…[94]

2.143 Mr Price elaborated on Axia's broadband initiatives in Alberta, Canada, in France and in Singapore, where each of the three business models, although different, was based on the same principle of 'do not compete with your customer'. Mr Price stated that situation in Australia came down to two alternatives:

> You end up at that fork in the road and every regulator and policy maker does, that is, you must either change the incumbent, break them up, get them out of that conflict position, because regulation does not do it; you cannot regulate them well enough…. You either break him up or we take the other fork in the road and make him compete. …Axia never advocates a regulatory change for the incumbent. We simply give the government an alternative that makes the incumbent compete.[95]

2.144 A new witness to this inquiry, Mr Dermot Cox, appeared in Canberra to provide a different perspective on the broadband issue. Mr Cox was strongly in favour of upgrading the existing HFC cable network, which he believed could 'deliver the lowest cost broadband infrastructure to major cities and towns around Australia'.[96] He expressed concern that 'the current policy mix seems to have caused a dire lack of investment in cable broadband over too many years' and questioned whether the

93 Mr Arthur Price, Chairman and CEO, Axia NetMedia Corporation, *Committee Hansard,* Canberra, 4 March 2009, p. 31.

94 Mr Arthur Price, Axia NetMedia Corporation, *Committee Hansard,* Canberra, 4 March 2009, p. 32.

95 Mr Arthur Price, Axia NetMedia Corporation, *Committee Hansard,* Canberra, 4 March 2009, p. 38.

96 Mr Dermot Cox, Marketing Director, C-Cor broadband Australia Pty Ltd, *Committee Hansard,* Canberra, 4 March 2009, p. 63.

government was aware of 'how simple and cost effective it would be to make existing cable broadband networks deliver super-fast speeds'.[97]

2.145 Although the upgrade was clearly addressing metropolitan areas in the main, Mr Cox did explain that it would be possible to:

> Modernise those [HFC] networks and save the effort and investment dollars for the people who are underserved … Put the bucket of money there, as distinct from replacing perfectly good broadband [HFC] infrastructure.[98]

2.146 Mr Cox also made reference to the need for consultation with communities and local government, which he stated has been 'completely overlooked'. This was particularly in relation to the physical dimensions and locations of the nodes involved in an FTTN build, which would be not only significant in size but would also require a power supply and cooling systems. Mr Cox commented that 'I think some people will take an offence at the impact on their streetscape'[99] of the nodes.

2.147 By the time of the CommsDay Summit in Sydney on 31 March and 1 April 2009, there was heightened anticipation that the opening key note address by the minister would include an announcement of the winning bid. Although this was not the case, commentary and speculation on the outcome was rife among participants over those two days.

2.148 Despite the diversity of industry speakers at the summit, they were united in their view that the government should not restrict the NBN build to 98 per cent fibre, particularly not a FTTN build that was seen as a limiting technology, but rather to offer opportunities for mixed technology platforms that could optimise affordable service provisions in underserved areas throughout Australia.

2.149 The final announcement was made on 7 April 2009 by not just the minister, but by the Prime Minister Kevin Rudd, accompanied by the Treasurer, Wayne Swan, the Minister for Finance, Mr Lindsay Tanner and the Minister for Broadband, Communications and the Digital Economy, Stephen Conroy. Details of the announcement follow in chapter 3.

Conclusion

2.150 The six final bidders to the RFP process responded in good faith, complying with the level of detail required by the government to qualify for further consideration and evaluation by the Panel of Experts. The committee has no doubt that the financial

97 Mr Cox, C-Cor broadband Australia Pty Ltd, *Committee Hansard,* Canberra, 4 March 2009, pp 65-66.

98 Mr Cox, C-Cor broadband Australia Pty Ltd, *Committee Hansard,* Canberra, 4 March 2009, p. 68.

99 Mr Cox, C-Cor broadband Australia Pty Ltd, *Committee Hansard,* Canberra, 4 March 2009, p. 69.

and staffing resources that this exercise must have consumed would have been significant for all bidders.

2.151 The RFP process has been the subject of ongoing criticism from all industry sectors from its very announcement in April 2008, with the 'probity' requirements imposed within the RFP preventing any substantial detail being released to the industry or the Australian public in general. The committee strongly urges that there be a full audit of the entire RFP process, to be conducted by the Auditor General. Although the committee welcomes the announcement on 7 May 2009 that the Auditor General will commence a preliminary review of the RFP, the committee recommends that this review must be seen to be thorough and comprehensive. Therefore the committee makes the following recommendation:

Recommendation 1

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

2.153 The committee acknowledges the critical need for high level cross-jurisdictional coordination and collaboration during the planning, implementation and throughout the life of this nationally significant infrastructure project. Consequently, the committee also urges the government to fully explore all avenues to facilitate and ensure this coordination, particularly utilising those avenues the government already has in place, such as Infrastructure Australia.

Recommendation 2

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

Chapter 3

Delivering the National Broadband Network

The Announcement

3.1 On 7 April 2009, the Government announced that it would establish a new company to build and operate a 'superfast' fibre-to-the-premise (FTTP) National Broadband Network (NBN). Describing it as the 'largest nation building infrastructure project in Australian history', the government has promised a network connecting 90 percent of all Australian homes, schools and workplaces with broadband services at speeds of up to 100 megabits per second (Mbps), with remaining premises connected with next generation wireless and satellite technologies delivering broadband speeds of 12 Mbps.[1]

3.2 While seeking private sector investment, capacity and expertise, the government advised that ownership restrictions would be established to protect the objective of a wholesale, open access network.[2]

3.3 Under the government's FTTP NBN proposal, every house, school and workplace is to 'get access to affordable fast broadband'.[3] The government has also claimed that the NBN will directly support up to 25,000 local jobs every year, on average, over the eight year life of the project.

3.4 Key elements of the government's NBN proposal are:

- the government will be the majority-shareholder in the new joint public-privately-owned company;
- the government will sell down its interest in the company within five years of the completion of the network;
- the government, in partnership with the private sector, will invest up to $43 billion over eight years to build the NBN;
- the government will fund its investment through the Building Australia Fund (BAF)and Australian Infrastructure Bonds (AIBs);
- the NBN will provide fibre optic transmission links between cities, major regional centres and rural towns;
- the NBN will be a national wholesale-only, open access broadband network;

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1 *New National Broadband Network*, Joint Media Release, the Prime Minister, the Treasurer, the Minister for Finance, the Minister for Broadband, (NBN Joint Media Release), 7 April 2009.

2 NBN Joint Media Release, 7 April 2009.

3 NBN Joint Media Release, 7 April 2009.

- the NBN will be built and operated on a commercial basis by a company at arms length from the government; and
- the NBN is expected to be rolled out simultaneously in metropolitan, regional and rural areas.[4]

3.5 The government stated that it would invest in this infrastructure to 'stimulate jobs in the short-term and pay a dividend to the Australian people through enhanced productivity and innovation in the long-term.'[5]

3.6 The $43 billion preliminary estimate for the cost of the network was developed 'taking into account advice from specialist technical advisers'.[6]

3.7 The Government indicated that its next steps in delivering the FTTP NBN would be:

- commencing an implementation study to determine operating arrangements for the NBN, network design, ways to attract private sector investment, and ways to provide procurement opportunities for local businesses;
- commencing negotiations with the Tasmanian Government on an expanded proposal to enable the NBN roll-out in Tasmania by July 2009;
- implementing measures to roll out fibre optic transmission links addressing broadband blackspots;
- Introducing legislation that will govern the NBN company and to facilitate the roll-out of fibre networks;
- making an initial $4.7 billion investment in the network; and
- commencing consultations on reforms to the existing telecommunications regulatory regime.[7]

3.8 At the time of writing, all of these measures were in train. Although it is apparent that the 'initial $4.7 billion investment' is a carryover from the proposed funding for the now terminated RFP NBN proposal, it is unclear how, or over what timeframe, the $4.7 billion will be allocated.

4 NBN Joint Media Release, 7 April 2009.

5 NBN Joint Media Release, 7 April 2009.

6 NBN Joint Media Release, 7 April 2009.

7 NBN Joint Media Release, 7 April 2009. The Minister, Senator the Hon Stephen Conroy, advised in an address to the National Press Club on 28 April that the implementation study would also examine the appropriate pricing levels on the NBN.

Establishment of NBN Company

3.9 On 28 April 2009, the Minister for Broadband, Communications and the Digital Economy, Senator the Hon Stephen Conroy, announced that the NBN Company (the Company) had been established[8] and that an executive search firm would soon be appointed to assist in the selection of a Chief Executive Officer (CEO) and board members for the Company.[9]

3.10 Details about the final make-up, governance and operating arrangements of the Company are still to be determined, however the Company's Constitution includes an initial, albeit rather basic framework.

3.11 Rule 4.1.1 of the Company's Constitution states that the object of the company is to 'roll-out, operate and maintain a national broadband network'.[10]

3.12 The share capital of the company is $100,000, with the issued share capital being $10. There are ten shares to be subscribed for by the Commonwealth valued at $1 each.[11] The Company currently has three Board members, directors who are officers of the Department of Broadband, Communications and the Digital Economy, the Department of Treasury and the Department of Finance and Deregulation.[12]

3.13 The Company Constitution provides these directors with significant powers, including the ability to appoint the CEO of the company, following consultation with the Minister for Broadband, Communications and the Digital Economy, and the Minister for Finance and Deregulation.[13]

3.14 Proposed legislation relating to the operation and governance of the network Company, development of strategies to maximise the scope of private investment in, and the optimal capital structure for, the Company, and how to structure the company to facilitate its privatisation, will all be considered during the implementation study, details of which are examined in paragraphs 3.29 to 3.35 in this chapter.[14]

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8 The company is registered with the Australian Securities and Investment Commission as A.C.N. 136 533 741 LIMITED and is a public company limited by shares, incorporated in the Australian Capital Territory.

9 Minister for Broadband, Communications and the Digital Economy, Senator the Hon Stephen Conroy, Address to the National Press Club (NPC Address), 28 April 2009.

10 Constitution of ACN 136 533 741 Limited (Company Constitution), p. 2.

11 See Company Constitution, Rules 10.2 and 10.3, p. 6.

12 See Company Constitution, Rule 6.3.2, p. 3.

13 See Company Constitution, Rule 13.1.1, p. 8.

14 See Department of Broadband, Communications and the Digital Economy, *Request for Expression of Interest number DCON/09/23 for Provision of Lead Advisory Services relating to the Implementation Study for the National Broadband Network* (REOI), p. 27.

Roll-out of NBN in Tasmania

3.15 On 8 April 2009, the Federal and Tasmanian Governments announced that the first phase of the NBN would be launched in Tasmania. Acknowledging the proposal submitted by the Tasmanian Government under the earlier RFP process, the government noted that while the RFP process had been terminated, the Panel of Experts had 'encouraged further negotiation' on the development of the Tasmanian proposal. The ACCC had also advised that the proposal 'raised no issues from a competition perspective'.[15]

3.16 While the implementation study to determine coverage issues for the NBN as a whole is yet to be completed, the Tasmanian proposal promises a FTTP network to reach 200,000 Tasmanian households and businesses, all hospitals and almost 90 per cent cent of schools.[16] The remainder of the state will be covered by a combination of a Tasmanian Government-built wireless network and the Australian Government's NBN satellite solution.[17] While the minister has referred to government funding for two new satellites, the committee notes with concern that there are scant details on the government's proposed NBN satellite solution.

3.17 The Tasmanian NBN build is expected to take five years and create 'hundreds of local jobs'.[18] However, this timeframe seems unduly lengthy, as the government has also stated that negotiations between the Federal and Tasmanian Governments have already begun with a view to rolling out the Tasmanian FTTP and next generation wireless networks by July 2009.[19] Work on the remainder of the NBN build is scheduled to commence in early 2010.[20]

3.18 The committee also notes that plans for the integration of the Tasmanian component of the NBN into the overall network are to be developed as part of the implementation study.[21]

Regulatory Reform for 21st Century Broadband

3.19 On 7 April 2009, in response to continuing concerns expressed by stakeholders, the government also released a discussion paper detailing options to improve the effectiveness of the existing telecommunications regulatory regime.[22]

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15 *Tasmania first to receive superfast broadband*, Joint Media Release, Prime Minister, Premier of Tasmania, Minister for Broadband (Tasmanian Media Release), 8 April 2009.

16 Tasmanian Media Release, 8 April 2009.

17 Tasmanian Media Release, 8 April 2009.

18 Tasmanian Media Release, 8 April 2009.

19 NPC Address, 28 April 2009.

20 NBN Joint Media Release, 7 April 2009.

21 REOI, p. 27.

3.20 The discussion paper traverses a range of issues, many of which have been the subject of debate for some considerable years. These include:

- options to address deficiencies in the current negotiate-arbitrate access model contained in Part XIC of the *Trade Practices Act 1974* (TPA);[23]
- the need to strengthen telecommunications sector-specific anti-competitive conduct provisions contained in Part XIB of the TPA;[24]
- whether existing facilities access arrangements should be amended or integrated into Part XIC of the TPA;[25]
- the appropriate separation arrangements for Telstra;[26]
- the need for Telstra to divest its interests in Foxtel;[27]
- opportunities to remove unnecessary regulation;[28]and
- the adequacy of the current consumer safeguard framework, including the desirability of replacing the existing Universal Service Obligation, Customer Service Guarantee and possibly the Network Reliability Framework with a Communications Service Standard as recommended by the Glasson Review.[29]

3.21 Submissions to the review are due by 3 June 2009. Following the consultation process, the government has stated that it anticipates legislation will be introduced before the end of the year.[30]

3.22 The government also stated that the discussion paper would formally commence the review of conditions relating to the operational separation of Telstra required by section 61A of the *Telecommunications Act 1997*, which provides that the minister must cause to be conducted a review of these requirements before 1 July 2009.

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22 *Regulatory Reform for 21st Century Broadband*, Joint Media Release, Prime Minister, Treasurer, Minister for Finance, Minister for Broadband (Regulations Media Release), undated (released 7 April 2009).

23 *National Broadband Network: Regulatory reform for 21st Century Broadband*, Discussion Paper (Regulatory Reform Paper), April 2009, pp 12-16.

24 Regulatory Reform Paper, pp 16-17.

25 Regulatory Reform Paper, pp 25-26.

26 Regulatory Reform Paper, pp 17-25.

27 Regulatory Reform Paper, pp 23-25.

28 Regulatory Reform Paper, April 2009, p. 45.

29 Regulatory Reform Paper, April 2009, pp 28-47.

30 NPC Address, 28 April 2009.

Backhaul for Regional Australia

3.23 As part of its NBN proposal, the government also announced that it would immediately address the issue of regional backhaul blackspots by investing $250 million in fibre optic transmission links. Another consultation paper, which was released on 23 April 2009, sought stakeholder views to identify and prioritise locations for investment, technical parameters for the backhaul network, the funding and service delivery arrangements, and the ownership of the infrastructure.[31]

3.24 Submissions relating to the consultation paper were due by 12 May 2009. The consultation paper outlines indicative timing for the implementation of the backhaul initiative. A Request for Tender (RFT) is to be issued in May, with responses due in June. The evaluation of the RFT and the negotiation and award of contract(s) are to be finalised in July, with construction of the transmission links to commence in September 2009.[32]

3.25 The committee notes that along with feedback from stakeholders as part of this consultation process, plans for the integration of the backhaul network into the overall NBN are to be developed as part of the implementation study.[33]

Fibre access and fibre in greenfields estates

3.26 The government is also conducting a parallel consultation process relating to fibre in greenfield estates, and improving access to certain facilities and network information to facilitate roll-out of fibre optic networks (*Facilitation of Fibre Roll-out*). In order to participate in this consultation process, interested parties are required to register on the Department's website.

3.27 The Department's website indicates that these consultations will commence shortly, but no specific timeframe has been announced. However, the government has stated its intention to introduce enabling legislation for both measures in the 2009 Winter sittings.[34]

The NBN implementation study

3.28 On 7 April 2009, the government advised that, while its objective is to achieve, within the $43 billion funding envelope, a 90 per cent coverage FTTP network, with the remaining coverage delivered through wireless and satellite

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31 *Fast-track for National Broadband Network in regional Australia*, Media Release, Minister for Broadband, Communications and the Digital Economy (Backhaul Media Release), 23 April 2009.

32 Department of Broadband, Communications and the Digital Economy, *Backhaul Blackspots Initiative, Stakeholder Consultation Paper*, April 2009, p. 3.

33 REOI, p. 27.

34 NPC Address, 28 April 2009.

technologies, this estimate would be subject to the outcome of an implementation study.[35]

3.29 On 24 April 2009, the government released a Request for Expressions of Interest (REOI) for the provision of lead advisory services relating to the NBN implementation study. Short-listed applicants would then be given the opportunity to participate in a Request for Tender (RFT) process to deliver these services.[36]

3.30 The REOI provided additional information on the issues to be examined by the implementation study, namely:

- proposed legislation relating to the operation and governance of the NBN Company;
- the regulatory regime;
- ownership restrictions for retail telecommunications providers, and appropriateness of any foreign ownership restrictions for the NBN Company;
- funding requirements for the network roll-out beyond the initial $4.7 billion investment;
- development of strategies to maximise the scope of private ownership in the NBN Company;
- the optimal capital structure for the NBN Company over time;
- development of detailed commercial/financial and engineering analysis of the network roll-out;
- the best structure of the NBN to facilitate the Government's long term privatisation objectives;
- development of plans to integrate the Tasmanian and backhaul initiatives into the overall network;
- network design consistent with the Government's objectives;
- development of strategies to provide procurement opportunities for local business;
- development of a detailed implementation plan and risk management strategy for the NBN; and
- stakeholder consultation.[37]

3.31 The committee notes the number of significant issues pertaining to the implementation of the NBN that will require resolution through this process.

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35 NBN Joint Media Release, 7 April 2009.

36 REOI, p. 7.

37 REOI, p. 27.

3.32 The REOI is the first of a two step selection process to engage a Lead Adviser to the implementation study. More than one party may be appointed to perform this role. Following the REOI, a select tender process is proposed.[38]

3.33 The Lead Adviser is to be contracted to provide advisory services on all relevant issues arising throughout the implementation study, provide sign-offs, work with other advisers to the Department, and provide a report on the study in February 2010, with one or more interim reports on specific issues to be available from August 2009.[39]

3.34 The committee notes with interest that the Department is 'not seeking fully developed proposals for the conduct of the implementation study in response to this REOI' and that it is not necessary for respondents to provide a pricing structure in the EOI.[40]

3.35 The Department released an indicative timetable for the process, subject to variation at its discretion, with responses to the REOI due by 19 May and notification to short-listed applicants in the week commencing 25 May. The RFT documents are scheduled to be provided to short-listed applicants on 29 May, with the RFT closing on 16 June. Work on the implementation study is due to commence in the week of 6 July 2009, with a final report due in early 2010. [41]

The Response

3.36 The initial response from industry, business and other stakeholders to the government's announcement was enthusiastic; however, there were almost immediate calls for further detail to be revealed.

3.37 The Australian Local Government Association (ALGA) applauded the government's decision as allowing 'local communities to realise enormous economic and social opportunities' and 'expanding Australia's productive capacity and educational frontiers'. However, they also cautioned that the unprecedented nature of the project required a close working relationship between Federal and local governments to ensure that 'the interests of the 21 million residents living throughout Australia are taken into account.'[42]

3.38 While recognising the need for an expedited delivery model, ALGA observed that 'a fast broadband network …and sensitivity to local community interests are not

38 REOI, p. 7.

39 REOI, pp 26-27.

40 REOI, p. 9.

41 NPC Address, 28 April 2009.

42 *Local Government welcomes NBN expansion*, Media Release, Australian Local Government Association, (ALGA Media Release), 7 April 2009.

mutually exclusive'.[43] ALGA also welcomed the decision to mandate FTTP in all new greenfield developments by 1 July 2010.[44]

3.39 The committee notes ALGA's earlier criticism of the lack of cross-jurisdictional coordination in development and planning projects (see chapter 2 paragraphs 2.82 to 2.83).

3.40 The Australian Greens welcomed the government's announcement, stating that the NBN was 'an important plank in building Australia's new green economy and had the potential to help the fight against climate change', but noted that 'it must be achieved while protecting the environment and taxpayer funds'.[45]

3.41 Australian Greens' Leader, Senator Bob Brown, highlighted areas of the plan that required scrutiny, including the timetable for the roll-out, the needs of rural/regional communities, local government and the not-for-profit sector, in addition to the impact of the roll-out on existing environmental and planning laws.[46] The committee notes that the government is planning to fast-track legislation to streamline arrangements for access to certain facilities as part of its NBN roll-out, although it is unclear at this stage whether the Federal Government will include provisions to override local planning laws (see paragraphs 3.26 to 3.27 above). The Australian Greens also supported the decision to commence the NBN roll-out in Tasmania.[47]

3.42 Dr Bill Glasson, who chaired the 2008 review into rural telecommunications services, supported the announcement and stated that:

> If we are to grow rural and regional Australia we have to make sure these telecommunications services extend into the heart of rural Australia as far as we can get them.[48]

3.43 Noting that the government's decision would allow Telstra to be involved in the project, he added that the decision would allow the government 'the opportunity to go back to the major infrastructure players like Telstra and work with them to deliver this infrastructure in a way that fits with the people of Australia.'[49]

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43 ALGA Media Release, 7 April 2009.

44 ALGA Media Release, 7 April 2009.

45 *Greens Will Scrutinise Broadband Network in Senate*, Media Release, Australian Greens Leader Senator Bob Brown, (Greens Media Release), 7 April 2009.

46 Greens Media release, 7 April 2009.

47 *Broadband for Tasmania: Our ticket to a clean, green, clever jobs boom?*, Media Release, Australian Greens Deputy Leader – Senator Christine Milne, 7 April 2009.

48 *Broadband network 'must accommodate rural needs'*, ABC News Online, accessed 7 April 2009.

49 *Broadband network 'must accommodate rural needs'*, ABC News Online, accessed 7 April 2009.

3.44 The Nationals expressed concern about the network's cost and also the number of regional towns that would miss out on the 100Mbps fibre roll-out.

3.45 While noting that the government's announcement marked a 'significant departure from its previous commitments' and noting the 'difficulties faced by private operators seeking funds for investment in the present economic climate'[50], the Business Council of Australia (BCA) stated that the decision 'provides leadership and a road ahead for the telecommunications sector and for users of broadband services' and 'has the potential to contribute to the productivity and economic growth in the coming decades'[51]. The BCA indicated that further business and community support for the project could be garnered by:

> …providing publicly and in full the investment case for the planned rollout, including the broader consumer, productivity and economic benefits identified from this investment.[52]

3.46 The BCA also supported the government's regulatory review as providing a:

> …timely opportunity to update telecommunications policy settings to ensure we both encourage investment and meet the needs of consumers as technology and market conditions evolve in the years ahead.[53]

3.47 The benefits of the government's proposal to patients in rural and regional areas were highlighted by the Australian Medical Association (AMA). The AMA stated that:

> [t]o improve medical care in the bush, broadband services should be rolled out as far as possible into rural and regional Australia and be able to support the transmission of high-quality images thousands of kilometres' [thereby speeding up] diagnosis and perhaps reduce the need for some patients to travel long-distances for specialist consultations.[54]

3.48 However, while noting that improved broadband was 'a tool' to be utilised in patient care, the AMA cautioned that this would not eliminate the need for more doctors and nurses in regional areas, properly funded and staffed rural hospitals and increased funding for e-health infrastructure.[55]

3.49 Telstra welcomed the government's announcement and the opportunity to provide input into the regulatory reform process. While stating that it would work

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50 *Broadband rollout holds productivity potential*, Media Release, Business Council of Australia (BCA Media Release), 7 April 2009.

51 BCA Media Release, 7 April 2009.

52 BCA Media Release, 7 April 2009.

53 BCA Media Release, 7 April 2009.

54 *AMA: Better broadband good for patients*, Media Release, Australian Medical Association, (AMA Media Release), 7 April 2009.

55 AMA Media Release, 7 April 2009.

with the government to assist with the implementation of its proposal, Telstra noted that it would 'remain at all times committed to ensuring the best interests of our shareholders, employees and customers.'[56]

3.50 Optus also welcomed the government's announcement, stating that the proposed model had 'the potential to fundamentally change the competitive landscape and create a truly level playing field'. Stating that the announcement was a 'clear indication that the NBN will not be built without fundamental regulatory reform', Optus also called for regulatory reform to be expedited and associated legislation to be introduced as soon as possible. Optus noted that the success of the NBN model would be judged on 'whether a competitive market structure is established, offering broadband at attractive prices to as many Australians as possible.'[57]

3.51 The committee notes the recent Federal Court ruling that confidential Optus wholesale information had been shared by Telstra with their own retail arm, in breach of the Access Agreement. Justice Edmonds concluded that Telstra had:

> Used traffic information of Optus, or Communications Information of Optus for the purposes of the Access Agreement, both in the preparation of market share reports and in distributing those reports among Telstra personnel. [58]

3.52 Citing this ruling, Optus has renewed its call for Telstra to be separated.[59]

3.53 The Australian Industry Group emphasized the need to ensure domestic suppliers are given 'fair access' to opportunities to contribute to the roll-out. The Australian Industry Group also noted that there were still a number of questions that needed to be answered in relation to the public private partnership model proposed, the regulatory arrangements governing access to and involvement in the network, and the eventual sell-down of the Government's holding in the NBN company.[60]

3.54 While stakeholders were generally supportive of the government's announcement, the proposal also has attracted criticism.

3.55 Claiming that the announcement was an acknowledgment of the 'complete failure of the Rudd Government's broadband strategy'[61], Leader of the Opposition, the

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56 *Telstra welcomes opportunity to engage Government on broadband rollout*, Media Release, Telstra, 7 April 2009.

57 *Optus welcomes the end of Telstra's fixed line monopoly*, Media Release, Optus, 7 April 2009.

58 Optus Networks Ltd v Telstra Corporation Ltd (No. 2) [2009] FCA 422

59 *Communications Day*, 4 May 2009, p. 2.

60 *Broadband network: A foundation for productivity*, Media Release, Australian Industry Group, 7 April 2009.

61 *Rudd's broadband gamble*, Joint Press Release, Hon Malcolm Turnbull MP, Leader of the Opposition, Senator the Hon Nick Minchin, Shadow Minister for Broadband, Communications and the Digital Economy (Opposition Press Release), 7 April 2009.

Hon Malcolm Turnbull MP, provided a long list of criticisms. Mr Turnbull stated that the government had not provided any evidence of:

- the economic viability of the NBN proposal or the return that would be required;
- the cost to families to use the network;
- whether there will be sufficient demand to make the network commercially viable;
- the impact of competing technologies on the viability of the network;
- what the business plan for the project is; or
- the risks that taxpayers will bear.

3.56 The Opposition also condemned the time and money spent on the terminated FTTN RFP tender process and sought a more detailed explanation from the government as to why the tender had failed.[62] The Committee notes that the Auditor-General has announced that a preliminary audit of the RFP process will be commenced by mid-May (see chapter 2, paragraph 2.70)

3.57 Family First Senator Steve Fielding sought greater accountability for the proposed expenditure of taxpayer's money and understandably queried the choice of Tasmania rather than Victoria as the starting point of the NBN roll-out.[63]

3.58 Concerns were also raised by stockbroking analysts about the large upfront cost, the commercial viability of the proposed network and the extent to which productivity would be enhanced.[64]

Issues for further consideration

3.59 While the committee welcomes the government's decision to improve access to FTTP for 90 per cent of households, workplaces and schools, a substantial proportion of the proposal detail is yet to be revealed, including: how the NBN will be funded; the ownership, governance and operating arrangements of the new NBN company; and the design and implementation of the network. These issues will be further explored in the remainder of this chapter.

Funding

3.60 The committee is concerned at the mixed signals coming from government on the likely cost of the network. For example, the Finance Minister conceded that there may be a cost blow-out, while the Broadband Minister claimed that the estimated

62 Opposition Press Release, 7 April 2009.

63 *Rudd's broadband plan flawed*, Media Release, SF/456, Senator Steve Fielding, Leader of Family First, 7 April 2009.

64 *Broadband price rise tipped under $43b plan,* ABC News Online, 7 April 2009.

combined public-private investment of $43 billion 'is at the top end of what it would cost to build' the NBN, and that the government may not even be required to contribute $22 billion.[65]

3.61 While the government's Expert Panel concluded that none of the proposals made in response to the earlier RFP process presented a 'value-for-money outcome', no supporting evidence has been provided by the government on what original costing analysis led to this conclusion. The committee highlights previous calls from across the industry for the government to release details of the report by the Panel of Experts together with the advice provided by the ACCC.

3.62 On the other hand, the government has also not provided any detail as to the commercial viability of its alternative FTTP network, nor details of the advice received upon which the $43 billion cost was estimated. The committee strongly urges the government to release its cost/benefit analysis, particularly with regard to its viability compared to proposals provided under the terminated RFP process.

3.63 The level of speculation and confusion is a reflection of the government's limited detail and transparency about the implementation of the FTTP NBN, and in particular, the way in which it will be financed. The committee is interested in knowing whether Expert Panel provided a comparative analysis of the costs associated with deploying a FTTP vs a FTTN network.

3.64 While advice on the technical aspects of the network are best left to the telecommunications experts, including the Lead Advisor to the implementation study, the manner in which the project is to be financed is the direct responsibility of the government under the current proposal.

3.65 The committee questions the government's assertion that private investment will be forthcoming, given that the strategies in which to attract and maximise private investment are still to be developed by the implementation study, and also given the Expert Panel's conclusion on the current recession's impact on access to debt and equity funding.

3.66 Of additional interest is the proposed issuance of Australian Infrastructure Bonds (AIBs) to help finance the NBN. The use of AIBs to fund other infrastructure projects has also been mooted. However the way in which money, raised through a general issuance of AIBs, will be allocated to various infrastructure projects including the NBN, has not been clarified.

3.67 As previously noted in chapter 2, the very success of raising funds through AIBs is a risky assumption in this current financial climate, particularly when the government has not provided any cost/benefit analysis of this proposal that might provide investor confidence in the AIBs.

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65 *Conroy plays down NBN cost*. Australian Financial Review, 29 April 2009.

Ownership

3.68 The committee notes the government's intention to sell down its shareholding in the NBN Company in the five years after the completion of the network.

3.69 While the issue of how to structure the NBN Company to facilitate such a sell down will be addressed during the implementation study, the committee considers that there are a number of complexities associated with this decision, including:

- what completion means in this context, given the open ended nature of such infrastructure;
- what rationale there is to re-privatise the network;
- the lack of detail on the conditions which the government would set as a trigger to sell off the network; and
- the problematic nature of essential public services being offered on a for-profit basis, where shareholders interests do not always coincide with the public interest.

3.70 The committee considers that issues relating to the proposed initial and any future changes to the ownership arrangements for the NBN require further detailed examination.

Regulatory framework

3.71 Despite industry criticisms throughout the RFP process of lack of regulatory clarity, the government has again failed to provide regulatory certainty – as opposed to regulatory promises – prior to seeking further input from industry and other stakeholders.

3.72 The committee notes that its conclusion (in the December 2008 Interim Report) that the failure to include a basic regulatory framework, upon which bidders could build their business case as part of the terminated RFP, was a prescient one.[66] The committee is again concerned that, without a confirmed regulatory framework, any input into the current implementation study process may again be compromised and thereby possibly further delaying the mainland roll-out of the network.

3.73 The future role of the ACCC and the nature of the access regime, while raised in the discussion paper as areas for separate stakeholder consultation, appear to have been relegated to part of an all-encompassing 'regulatory regime' item, upon which the Lead Adviser to the implementation study is to provide advice 'as required'.[67]

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66 See Senate Select Committee on the National Broadband Network, Interim Report, December 2008, p. 47.

67 See Regulatory Reform Paper, pp 8-9 and REOI, p. 27.

Consumer safeguards

3.74 The committee acknowledges the government's emphasis in the Regulatory Reform Discussion paper on consumer safeguard issues, particularly the implications of the NBN for the Universal Service Obligation (USO) and the proposal to replace a number of measures with an overarching Communications Service Standard.[68]

3.75 However, the committee remains concerned that the major consumer issue associated with the NBN, both in terms of the long-term viability of the network and the impact on end-users, is the future cost to customers of broadband services. The committee notes that there have been widely different claims about the prices that would be required to ensure a return on investment.[69]

Digital divide

3.76 Increasing concern about the potential of the proposed NBN to entrench rather than close the digital divide between metropolitan and rural and regional Australia, warrants further examination. While Tasmania will receive two imminent boosts to its broadband capability – the backhaul Basslink cable and the first phase of the NBN roll-out – other states have expressed concern that comparable services will not be delivered to their smaller regional and rural towns.[70]

3.77 In addition, there is now a government-confirmed basis for a potentially greater digital divide than now exists; this is due to the commitment to provide 90 per cent of homes, schools and workplaces with 100 Mbps, while the remaining 10 per cent will only receive 12 Mbps. The committee acknowledges the government's commitment to the provision of 12 Mbps access in many regional and remote areas now matches that promised under the previous OPEL initiative. However this disparity highlights that metro-comparability will continue to be beyond the reach of regional and remote communities.

Other technologies

3.78 The implications of the NBN in relation to the convergence of technologies raised during the committee's inquiry seem to have been put into the 'too hard basket'. The government has postponed consideration of this issue until 2011, after the next election, despite acknowledging that 'current regulatory frameworks have not always kept pace with convergence and in some cases are challenged by such developments'[71]

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68 Regulatory Reform Paper, pp 28-47.

69 See for example, Henry Ergas; Paul Broad, AAPT; stockbroking analysts; Optus.

70 See if there is something in the COAG communiqué or use newspaper article to ref.

71 Regulatory Reform Paper, p. 48.

3.79 The committee also notes that the critical issue of spectrum allocation, already subject to a consultation process conducted by ACMA, will be subject to consultation as part of the regulatory reform options paper.

3.80 While the committee acknowledges the government's decision to include wireless and satellite technologies as part of its NBN, the committee notes that the regulatory reform discussion paper states that the 'relative roles of satellite and wireless in the National Broadband Network will be determined by the government following the implementation study'.[72] As previously mentioned (see paragraph 3.16), the committee has concerns that, at the time of writing, details relating to the significant proposal to deploy two new satellites as part of the government's NBN proposal, including funding thereof, had not been released.

Process

3.81 The committee notes that the REOI states that the 'Department does not warrant or guarantee that any RFT will be released by the Department in respect of the Services.'[73] Given the outcome of the RFP process, the committee is concerned that there is little assurance for prospective respondents that this process will go ahead.

3.82 Once submitted, an EOI will become the property of the Department and may be copied and used for various purposes; these include:

> …complying with governmental and parliamentary reporting requirements including requests for information by Parliament or Parliamentary Committees'.[74]

3.83 However, the committee considers that this provides little assurance that the government will ensure an open and transparent process, particularly in view of the requirements that short-listed respondents sign a Deed of Confidentiality even before they can receive the RFT documents.[75]

3.84 The extent to which the Department and the minister accede to requests from this committee for information about the NBN and the various processes associated with it, will demonstrate whether the government has taken on board industry concerns about the lack of transparency during the previous RFP process.

Conclusion

3.85 The committee supports the government's objective of providing an open access network, delivering high speed broadband through fibre, wireless and satellite

72 Regulatory Reform Paper, p. 26.

73 REOI, p. 5.

74 REOI, pp 23-24.

75 REOI, p. 10.

technologies at affordable prices to all Australians. However, the difference between this vision and reality will be the way in which it is implemented.

3.86 While acknowledging the government's commitment to consult with industry and other stakeholders on various aspects of the current and future telecommunications regimes, the committee is concerned that the apparent lack of coordination between these numerous processes may confuse rather than complement each other, and certainly have potential to further delay the deployment.

3.87 The committee is also deeply concerned at the number of outstanding issues that go to the heart of the viability and deployment of the NBN that still need to be resolved through the implementation study and other processes (see paragraph 3.59). The committee is particularly concerned that the government has made a commitment to invest a significant amount of public money in a project before these important parameters have been determined.

3.88 Given the level of stakeholder engagement the committee has already undertaken, the committee considers it is best placed to provide a single avenue for stakeholders to comment on all issues relating to the proposed NBN, and seeks the opportunity to submit a consolidated set of recommendations to the government during the pre-implementation phase of the NBN roll-out.

3.89 Having regard to the need for greater clarity and detail about the basis upon which the decision to deploy a FTTP/wireless/satellite NBN was made, the committee proposes that its terms of reference be revised to reflect the Government's change in direction for delivering the NBN. The committee will table a Notice of Motion containing the revised terms of reference, a draft of which can be found at appendix 2.

3.90 Also, in the light of the government's announcement that it would introduce NBN-related legislation during the Winter sittings, the committee is seeking an extension of its reporting date to the 26 November 2009 to enable it to examine this legislation.

3.91 The committee considers it has a continuing role to play in holding the government to account over its NBN proposal, particularly during the pre-implementation phase. However, the committee also is of the view that the size and nature of the project requires regular implementation progress reports and therefore makes the following recommendation:

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.**

3.93 To ensure that the committee and, subject to confidentiality provisions, the public, who will be the largest stakeholders in the proposed NBN, are kept appraised of developments in the roll-out of the network, the committee also recommends:

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.**

3.95 Finally, the government advised that its decision to proceed with its investment in optical fibre technology was informed by advice from the Panel of Experts, and the Australian Competition and Consumer Commission's endorsement of the use of FTTP in preference to FTTN.[76]

3.96 An extract from the Expert Panel's report to the minister is available on the Department's website.[77] It remains unclear whether or how much more of the Expert Panel's Report, or the ACCC's report, will be publicly released. The committee therefore recommends:

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.**

76 Joint Media Release, 7 April 2009.

77 To access the Expert Panel Report extract, go to: http://www.dbcde.gov.au/communications_for_business/funding_programs_and_support/national_broadband_network

3.98 In particular, the committee questions whether any analysis by the ACCC or the Panel of Experts of the regulatory review submissions provided to the Department could be considered to have dealt with commercial-in-confidence information. It therefore makes the following recommendation:

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.

3.100 The RFP process was roundly criticised for putting the cart before the horse with respect to the regulatory framework that would underpin the proposed NBN; the current government proposal may be similarly criticised for putting the vision before the analysis.

3.101 The mixed signals coming from government on the regulatory arrangements to apply once the NBN is in operation and those that will apply during the transition period, as well as the funding and likely future costs to consumers of the proposal, leave many questions unanswered. This leads the committee to speculate on the adequacy or even existence of sound evidence upon which this proposal has been based.

3.102 The committee considers that there is a need for continuing scrutiny of a proposal upon which rests not only the country's future technological capacity but also that of its economy.

Senator Mary Jo Fisher
Chair

May 2009

Government Senators Minority Report

1.1 On April 7, 2009, the Government announced that it had terminated the National Broadband Network (NBN) Request for Proposals (RFP) process on the basis of advice from the independent Panel of Experts that none of the national proposals offered value for money for the Commonwealth. The Government committed to a robust process and all proposals received were evaluated in accordance with the process set out in the RFP. The Panel noted the rapid deterioration of the global economy had a significant impact on the process.

1.2 The Panel of Experts encouraged the Government to invest in optical fibre technology, supplemented by next-generation wireless and satellite technologies. The Australian Competition and Consumer Commission also endorsed the use of FTTP as a superior technology to FTTN.

1.3 The Panel of Experts also highlighted the need to improve competition in backhaul supply, particularly in regional areas, as well as the need for improved regulation of the telecommunications industry.

1.4 In response the Government announced the establishment of a new company that will invest up to $43 billion over eight years to build and operate a new super fast National Broadband Network that will:

- connect 90 percent of all Australian homes, schools and workplaces with broadband services with speeds of 100 megabits per second—100 times faster than those currently used by many households and businesses;
- connect all other premises in Australia with next generation wireless and satellite technologies that will deliver broadband speeds of 12 megabits per second;
- directly support up to 25,000 local jobs every year, on average, over the eight year life of the project.

1.5 The National Broadband Network will be the single largest infrastructure investment made by an Australian Government. It will be a key nation-building project, stimulate the economy and help drive Australia's productivity, improve service delivery in key areas such as health and education, and connect our big cities and regional centres.

1.6 The program for implementing this policy has already begun. The National Broadband Network company was incorporated on 9 April 2009 as a wholly Commonwealth owned public company limited by shares, and is currently registered with its Australian Company Number as its name.

1.7 The Commonwealth Government has fast-tracked negotiations with the Tasmanian Government, as recommended by the Panel of Experts, to build upon its NBN proposal to begin the rollout of a FTTP network and next generation wireless services in Tasmania.

1.8 The Department of Broadband, Communications and the Digital Economy is currently seeking expressions of interest from firms for the lead adviser role for the implementation study. Responses are on Tuesday 19th May.

1.9 The Regulatory Reform discussion paper, seeking public comment on ways to improve telecommunications regulations to make it work more effectively during the transition to the NBN, in the interest of consumers and businesses, was announced on April 7 2009. The Government is seeking submissions by 3 June 2009, before making final decisions and introducing legislation into the Parliament.

1.10 The Minister for Broadband, Communications and the Digital Economy has announced steps to fast-track the National Broadband Network in regional Australia, through an initial $250 million investment in backbone fibre optic inter-regional transmission links.

1.11 To this end, the current reference to the Broadband Select Committee has been superseded by policy announcements by the Government. For this reason, Government Senators believe that the reference ought to conclude with the tabling of this Report.

1.12 With the Senate Committee system soon to have both References and Legislative Committees again, Government Senators believe any future reference relating to legislation or policy implementation that is considered by the Senate is most appropriately dealt within one or the other of these Committees, as the Senate sees fit.

1.13 The recommendations contained in the Non-Government Senators (Majority) Report illustrate how the role of this committee has become one of providing a commentary of NBN policy developments as policy announcements are made and government decisions acted upon.

1.14 In this way, the Committee's capacity to provide constructive input to Government in the development or implementation of their policy is diminished, a point made by the Government at the inception of the original terms of reference and the establishment of the Senator Select Committee on Broadband.

1.15 For this reason, Government Senators do not support the recommendations as they imply that there is inadequate scrutiny of the processes described by the Government to date relating to the implementation of the NBN. We do not believe this is the case and believe that this view is, by definition, the view of the Opposition and their continued attempt to delay the implementation of the NBN policy.

1.16 The Government remains committed to full consultation with all stakeholders, including consumers, and has processes in place to ensure this is so. The Government is also committed to ensuring that adequate time is provided to ensure full Parliamentary scrutiny for any legislative changes required to facilitate the rollout of the NBN.

1.17 Government Senators would like to acknowledge that despite our concern regarding the recommendations, the input by the range of witnesses has been interesting and valuable. Many issues raised by witnesses were the same issues that informed the Government's decision to proceed with a FTTP network, rather than a FTTN network, as well as the wholesale nature of the NBN.

1.18 This is a validation of the Government's policy and thus demonstrates the strength in the strategy and vision of the Federal Labor Government.

Senator Kate Lundy
May 2009

Senator Glenn Sterle
May 2009

APPENDIX 1

Terms of Reference

(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 30 March 2009 on:

(a) the Government's proposal to partner with the private sector to upgrade parts of the existing network to fibre to provide minimum broadband speeds of 12 megabits per second to 98 per cent of Australians on an open access basis; and

(b) the implications of the proposed National Broadband Network (NBN) for consumers 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) 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, the likely future improvements in broadband services (including the prospects of private investment in fibre, wireless or other access networks) and the need for this government intervention in the market;

(b) the effects on the availability, price, choice, level of innovation and service characteristics of broadband products if the NBN proceeds;

(c) the extent of demand for currently available broadband services, what factors influence consumer choice for broadband products and the effect on demand if the Government's fibre-to-the-node (FTTN) proposal proceeds;

(d) what technical, economic, commercial, regulatory and social barriers may impede the attainment of the Government's stated goal for broadband availability and performance;

(e) the appropriate public policy goals for communications in Australia and the nature of regulatory settings that are needed, if FTTN or fibre-to-the-premise (FTTP), to continue to develop competitive market conditions, improved services, lower prices and innovation given the likely natural monopoly characteristics and longevity of the proposed network architecture;

(f) the possible implications for competition, consumer choice, prices, the need for public funding, private investment, national productivity, if the Government does not create appropriate regulatory settings for the NBN;

(g) the role of government and its relationship with the private sector and existing private investment in the telecommunications sector;

(h) the effect of the NBN proposal on existing property or contractual rights of competitors, supplier and other industry participants and the exposure to claims for compensation;

(i) the effect of the proposed NBN on the delivery of Universal Service Obligations services;

(j) whether, and if so to what extent, the former Government's OPEL initiative would have assisted making higher speed and more affordable broadband services to areas under-serviced by the private sector; and

(k) the cost estimates on which the Government has based its policy settings for a NBN, how those cost estimates were derived, and whether they are robust and comprehensive.

(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.

(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

Draft Terms of Reference

(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 26 November 2009 on:

(a) the Government's decision to establish a company to build and operate a new 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.

and

(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) The 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, the likely 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

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metropolitan, outer-metropolitan, semi-rural, 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 and social barriers may impede the attainment of 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 regulatory settings that are needed, 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 proposed NBN on the delivery of Universal Service Obligations services; and

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

(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;

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(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

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(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.

(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.

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(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.

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(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 3

Commonwealth's Objectives for the National Broadband Network

The evaluation criteria in clause 10.3 include the extent to which the Proposal meets the Commonwealth's objectives for the NBN project. The Commonwealth's objectives for the NBN project are to establish a national broadband network that:

1. covers 98 per cent of Australian homes and businesses;
2. is able to offer broadband services with a minimum 12 Mbps dedicated downlink transmission speed over each connection provided to a premises;
3. supports symmetric applications such as high-definition video-conferencing;
4. is able to support high quality voice, data and video services;
5. uses fibre-to-the-node or fibre-to-the-premises network architecture;
6. enables uniform retail prices on a national basis;
7. is rolled out and made operational progressively over five years from the date of execution of a contract between the Commonwealth and successful Proponent;
8. continues to promote the long-term interests of end-users;
9. has sufficient capacity to meet current and foreseeable demand and has a specified upgrade path within clear timeframes, consistent with international trends;
10. facilitates competition through open access arrangements that ensure equivalence of price and non-price terms and conditions, and provide scope for access seekers to differentiate their product offerings;
11. enables low access prices that reflect underlying costs while allowing Proponents to earn a rate of return on their investment commensurate with the risk of the project;
12. provides benefits to consumers by providing choice to run applications, use services and connect devices at affordable prices;
13. provides the Commonwealth with a return on its investment of up to $4.7 billion;
14. is compatible with the Government's related Fibre Connections to Schools initiative;
15. meets Government requirements for the protection of Australia's critical infrastructure;

16. is consistent with national security, e-security and e-safety policy objectives including compliance with laws relating to law enforcement assistance and emergency call services;
17. is consistent with Australia's international obligations; and
18. facilitates opportunities for Australian and New Zealand small and medium enterprises (SMEs) to provide goods and services to the project.

National Broadband Network Evaluation Criteria

The evaluation process is outlined at section 10 of this RFP. Within the framework of an overarching value-for-money assessment, the evaluation criteria against which Proposals will be assessed are:

1. the extent to which the Proposal meets the Commonwealth's objectives for the NBN project (as set out in clause 1.3);
2. the capacity of the Proponent to roll-out, maintain, upgrade and operate the network;
3. the nature, scope and impact of any legislative and/or regulatory changes that are necessary to facilitate the Proposal;
4. the cost to the Commonwealth of the Proposal;
5. the acceptability to the Commonwealth of the contract terms and conditions proposed by the Proponent and the extent to which the Proposal departs from the Commonwealth's notified commercial terms (if any); and
6. the extent of the Proponent's compliance with the RFP.

The criteria are not listed in order of importance. Subject to clauses 10.4 to 10.9, the Panel will evaluate each Proposal against each of these criteria and then undertake a comparative assessment of all Proposals in order to make a recommendation to the Minister for Broadband, Communications and the Digital Economy ('the Minister') as to which Proposal(s) offer the best overall value for money to the Commonwealth. The Minister, following consultation with Cabinet, will be the final decision maker.

APPENDIX 4

Submissions Received

Submission No.	Submitter
001	Paul Budde Communication
001a	Paul Budde Communication
002	WA Department of Industry and Resources
003	iiNet Ltd
004	AAPT
005	QLD Government
006	Internet Society of Australia
007	Australian Telecommunications Users Group Ltd
008	Competitive Carriers Coalition
008a	Competitive Carriers Coalition
008b	Competitive Carriers Coalition
008c	Competitive Carriers Coalition
008d	Competitive Carriers Coalition
008e	Competitive Carriers Coalition
008f	Competitive Carriers Coalition
008g	Competitive Carriers Coalition
009	Vodafone Australia
010	Australian Federation of Deaf Societies/
010	Australian Communication Exchange
011	Infrastructure Partnerships Australia
012	Terria Ltd
013	Professor Trevor Barr
014	Mr Doug McArthur
015	Professor Joshua Gans
016	AUSTAR United Communications Ltd
017	Chamber of Commerce and Industry WA
018	Digital Tasmania
018a	DigitalTasmsania
018b	Digital Tasmania
019	Optus
019a	Optus
019b	Optus
020	Primus Telecom
020a	Primus Telecom
021	Mr Gregory Schiemer
022	Mr Kevin Morgan
022a	Mr Kevin Morgan
023	Electronic Frontiers Australia
024	Dr Ross Kelso
025	Adam Internet

026	**Torres Shire Council**
026a	**Mr Russell Barkus in conjunction with Torres Shire Council**
027	**Northern Territory Government**
028	**Consumers' Telecommunication Network**
029	**Google**
030	**GetUp!**
031	**Communications Experts Group Pty Ltd**
031a	**Communications Experts Group Pty Ltd**
031b	**Communications Experts Group Pty Ltd**
032	**Australian Industry Group**
033	**Axia NetMedia**
034	**BT Global Services**
034a	**BT Global Services**
035	**Attorney General's Department, Territories and Native Title Division**
036	**C-COR Broadband**
036a	**C-COR Broadband**
037	**Communications Law Centre, University of Technology Sydney**
038	**Mr J Scott Marcus**
039	**Juniper Networks**
040	**ADTRAN Networks Pty Ltd**
041	**Mr Fraser Swift**
041a	**Mr Fraser Swift**

APPENDIX 5

Witnesses Who Appeared Before the Committee

Sydney, Tuesday 7 October 2008

BREALEY, Mr Michael, Manager, Public Policy
Vodafone Australia

BUDDE, Mr Paul, Managing Director
Paul Budde Communication Pty Ltd

CHAPMAN, Mr Alexander, Executive Officer, Policy and Strategy Coordinator
Australian Federation of Deaf Societies

CORBIN, Ms Teresa, Chief Executive Officer
Consumers Telecommunications Network

HICKS, Mr Gregory, Chairman
Adam Internet Pty Ltd

POOLMAN, Mr Clive, General Manager Strategy
AAPT

SCHUBERT, Ms Georgia Kate, General Manager, Public Policy
Vodafone Australia

WALTERS, Ms Sheena, Manager, Interpreting and Advocacy
Deaf Society of New South Wales

WEIR, Ms Deanne, Group Director, Corporate Development and Legal Affairs
AUSTAR United Communications Ltd

Canberra, Wednesday 8 October 2008

COBCROFT, Mr Simon, Acting Assistant Secretary, Broadband Infrastructure Branch
Department of Broadband, Communications and the Digital Economy

COSGRAVE, Mr Michael, Group General Manager, Communications Group
Australian Competition and Consumer Commission

DIMASI, Mr Joe, Executive General Manager, Regulatory Affairs Division
Australian Competition and Consumer Commission

EGAN, Hon. Michael Rueben, Chairman
Terria Pty Ltd

FORMAN, Mr David, Executive Director
Competitive Carriers Coalition

HEALY, Mr Matthew, Chair
Competitive Carriers Coalition

KING, Ms Marianne, Assistant Secretary, National Broadband Network Taskforce
Department of Broadband, Communications and the Digital Economy

LYON, Mr Brendan Curtis, Executive Director
Infrastructure Partnerships Australia

LYONS, Mr Colin, Deputy Secretary, National Broadband Network Taskforce
Department of Broadband, Communications and the Digital Economy

SIMMONS, Mr Michael John, Managing Director
Terria Pty Ltd.

WAGG, Dr Michael, General Manager, Networks Strategy
Terria Pty Ltd.

WINDEYER, Mr Richard, Acting First Assistant Secretary, National Broadband Network Taskforce
Department of Broadband, Communications and the Digital Economy

Melbourne, 28 October 2008

BARR, Professor Trevor Frank, Media and Telecommunications
Swinburne University of Technology

BHATIA, Mr Ravi, Chief Executive Officer
Primus Telecom

CONNOR, Mr Andrew, Spokesperson
Digital Tasmania

GANS, Professor Joshua
Private capacity

HORAN, Mr John, Regulatory and Legal Counsel
Primus Telecom.

KRISHNAPILLAI, Mr Maha, Director, Government and Corporate Affairs
Optus

MORGAN, Mr Kevin
Private capacity

RAICHE, Ms Holly, Executive Director
Internet Society of Australia

SHERIDAN, Mr Andrew, General Manager, Economic Regulation
Optus

SINCLAIR, Ms Rosemary Anne, Managing Director
Australian Telecommunications Users Group

WHITE, Mr Gerry, Director
Internet Society of Australia

Perth, Thursday 6 November 2008

BAIN, Mr Martin, Member and Representative
Chamber of Commerce and Industry Western Australia

BUCKINGHAM, Mr David, Chief Financial Officer
iiNet Ltd

CHENG, Mr Anson, Manager, Broadband Infrastructure
Western Australian Department of Industry and Resources

DALBY, Mr Stephen, Chief Regulatory Officer
iiNet Ltd

de JONG, Mrs Julie, Director for Innovative Industries
Western Australian Department of Industry and Resources

DIGNARD, Mrs Sharon Anne, Senior Adviser Industry Policy
Chamber of Commerce and Industry Western Australia

FRONTINO, Mr Anthony, Managing Director
CipherTel Pty Ltd

GREEN, Professor Walter Battman, Director
Communications Experts Group Pty Ltd

GROCOTT, Mr Stephen, General Manager, ICT, Biotechnology and Trade Services,
Western Australian Department of Industry and Resources

HAILES, Ms Allison, Executive Manager
Western Australian Local Government Association

HILL, Mr Christopher Richard, Member and Representative
Chamber of Commerce and Industry Western Australia

MALONE, Mr Michael, Managing Director
iiNet Ltd

McGUIGAN, Mr Philip
Western Australian Local Government Association

MONKS, Mr Peter, Acting Chief Executive Officer
City of Perth

Canberra, Tuesday 11 November 2008

GALLAGHER, Mr William David, General Counsel, Public Policy & Communications,
Telstra Corporation Limited

QUILTY, Mr David, Group Managing Director, Public Policy
Telstra Corporation Limited

WARREN, Dr Tony, Executive Director, Regulatory Affairs
Telstra Corporation Limited

Brisbane, Friday 21 November 2008

CHELLEW, Ms Linda, Manager
Indigenous Remote Communications Association

CLAPPERTON, Mr Dale, Spokesperson
Electronic Frontiers Australia Inc

JACKSON, Mr David Gavin, Manager, Economic Development
Brisbane City Council

KELSO, Dr Ross
Private capacity

McCARTHY, Mr Bernie, Chief Executive Officer
Torres Shire Council

STEPHEN, Councillor Pedro, Mayor
Torres Shire Council

SUZOR, Mr Nicolas, Vice Chair
Electronic Frontiers Australia Inc

Canberra, Monday 24 November 2008

PRICE, Mr Arthur, Chairman and Chief Executive Officer
Axia NetMedia Corporation

Sydney, Tuesday 3 March 2009

BUDDE, Mr Paul
Private Capacity

CONNOR, Mr Andrew, Spokesperson
Digital Tasmania

GALLAGHER, Mr Bill, General Counsel, Public Policy and Communications
Telstra Corporation Ltd

GREEN, Professor Walter Battman, Director
Communications Experts Group Pty Ltd

HORAN, Mr John, General Counsel
Primus Telecom

KELSO, Dr Ross
Private Capacity

KRISHNAPILLAI, Mr Maha, Director, Government and Corporate Affairs
Optus

QUILTY, Mr David, Group Managing Director, Public Policy and Communications
Telstra Corporation Limited

SHERIDAN, Mr Andrew, General Manager, Economic Regulations
Optus

WARREN, Dr Tony, Executive Director, Regulatory Affairs
Telstra Corporation Ltd

WEIR, Ms Deanne, Group Director, Corporate Development and Legal Affairs
AUSTAR United Communications Ltd

WILLETT, Mr Edward, Chair, Communications Committee and
Commissioner, Australian Competition and Consumer Commission

Canberra, Wednesday 4 March 2009

BROCKMAN, Mr David, Manager, Planning and Stakeholder Engagement
Telecommunications Industry Ombudsman

BRYANT, Mr Simon, Acting First Assistant Secretary, Broadband Division
Department of Broadband, Communications and the Digital Economy

COX, Mr Dermot, Managing Director
C-COR Broadband Australia Pty Ltd

FORMAN, Mr David, Executive Director
Competitive Carriers Coalition

KING, Ms Marianne, First Assistant Secretary, National Broadband Network Taskforce
Department of Broadband, Communications and the Digital Economy

LYONS, Mr Colin, Deputy Secretary, National Broadband Network Taskforce
Department of Broadband, Communications and the Digital Economy

MARCUS, Mr J Scott,
Private Capacity

MASON, Mr Philip, Assistant Secretary, National Broadband Network Taskforce
Department of Broadband, Communications and the Digital Economy

McCARTHY-WARD, Mr Peter, BT Director East of England
BT

MORGAN, Mr Kevin
Private Capacity

O'DONNELL, Ms Deidre, Ombudsman
Telecommunications Industry Ombudsman

PETRESKI, Dr Bill, Principal Adviser – ICT, Electronics and Electrical Sectors
Australian Industry Group

PRICE, Mr Arthur, Chairman and Chief Executive Officer
Axia NetMedia Corporation

SHARP, Mr Roger, Principal Adviser, Public Policy
Australian Industry Group