



Australian Government
Productivity Commission

NBN Co

Australian Government
Competitive Neutrality
Complaints Office

Investigation No. 14

© COMMONWEALTH OF AUSTRALIA 2011

ISBN 978-1-74037-380-7

This work is copyright. Apart from any use as permitted under the *Copyright Act 1968*, the work may be reproduced in whole or in part for study or training purposes, subject to the inclusion of an acknowledgment of the source. Reproduction for commercial use or sale requires prior written permission from the Productivity Commission. Requests and inquiries concerning reproduction and rights should be addressed to Media and Publications (see below).

This publication is available from the Productivity Commission website at www.pc.gov.au. If you require part or all of this publication in a different format, please contact Media and Publications.

Publications Inquiries:

Media and Publications
Productivity Commission
Locked Bag 2 Collins Street East
Melbourne VIC 8003

Tel: (03) 9653 2244
Fax: (03) 9653 2303
Email: maps@pc.gov.au

General Inquiries:

Australian Government Competitive Neutrality Complaints Office

Tel: (02) 6240 3327
Fax: (02) 6240 3322
Email: cnoffice@pc.gov.au

An appropriate citation for this paper is:

Australian Government Competitive Neutrality Complaints Office 2011, *NBN Co*, Investigation No. 14, Canberra, November.

The Australian Government Competitive Neutrality Complaints Office

The Australian Government Competitive Neutrality Complaints Office is an autonomous unit within the Productivity Commission. It was established under the Productivity Commission Act 1998 to receive complaints, undertake complaint investigations and advise the Treasurer on the application of competitive neutrality to Australian Government business activities.

Further information on the Productivity Commission can be obtained from the Commission's website (www.pc.gov.au) or by contacting Media and Publications on (03) 9653 2244 or email: maps@pc.gov.au



Australian Government
Productivity Commission

**Australian Government Competitive
Neutrality Complaints Office**

Level 2, 15 Moore Street
Canberra ACT 2600
GPO Box 1428
Canberra City ACT 2601
Telephone 02 6240 3327
Facsimile 03 6240 3322
www.pc.gov.au/agcnco

24 November 2011

The Hon. Bill Shorten MP
Assistant Treasurer
Parliament House
Canberra ACT 2600

Dear Assistant Treasurer

In accordance with section 21 of the *Productivity Commission Act 1998* and the Commonwealth Competitive Neutrality Policy Statement, I have pleasure in submitting the results of the Australian Government Competitive Neutrality Complaints Office's investigation of NBN Co.

Yours sincerely

A handwritten signature in black ink that reads "Mike Woods".

Mike Woods
Commissioner
Competitive Neutrality Complaints

Competitive neutrality policy

Competitive neutrality is a policy which aims to promote efficient competition between public and private businesses. The Australian Government's approach is set out in its *Competitive Neutrality Policy Statement* (Australian Government 1996):

Competitive neutrality requires that government business activities should not enjoy net competitive advantages over their private sector competitors simply by virtue of public sector ownership. (p. 4)

In particular, competitive neutrality policy:

... requires that governments should not use their legislative or fiscal powers to advantage their own businesses over the private sector. (p. 5)

While the policy recognises that there are a number of advantages and disadvantages of government ownership, it does not seek to ameliorate all of these. Instead, it focuses specifically on those competitive advantages enjoyed by government businesses that are widespread and relatively easy to observe and correct (Australian Government 1996, p. 6), including:

- exemptions from various taxes (taxation neutrality)
- access to borrowings at concessional interest rates (debt neutrality)
- exemptions from complying with regulatory arrangements imposed on private sector competitors (regulatory neutrality)
- other benefits associated with not having to achieve a commercial rate of return on assets (commercial rate of return requirements).

The policy is applied to significant government businesses where the benefits from doing so outweigh the costs. For the purpose of competitive neutrality policy, a business activity is defined as one where:

- there is user charging
- there is an actual or potential competitor (that is, users are not restricted by law or policy from choosing alternative sources of supply)
- managers of the activity have a degree of independence in relation to the production or supply of the good or service and the price at which it is provided.

Competitive neutrality policy deems the following organisations as significant as they have been specifically structured to operate along commercial lines:

- all government business enterprises (listed under the *Commonwealth Authorities and Companies Act 1997*) and their subsidiaries
- other share-limited trading companies
- all designated business units.

Other activities which operate in accordance with the definition of a business and generate in excess of \$10 million in revenue from commercial activities are also considered to be significant.

Contents

Competitive neutrality policy	IV
1 The complaints	1
1.1 The nature of the complaints	1
1.2 About NBN Co	2
1.3 The role of the AGCNCO in investigating complaints	3
2 Background	7
2.1 Some background on NBN Co	7
2.2 NBN Co and new developments	13
3 Assessment of issues	17
3.1 Issues which fall outside competitive neutrality policy	17
3.2 Issues relevant to competitive neutrality policy	23
3.3 Summary of findings and recommendations	37
References	39
Figures	
2.1 Announced timeline for the NBN	13
3.1 WACC estimates over NBN Co roll-out	31
Tables	
3.1 Sensitivity of the internal rate of return	28
3.2 Risk broad-banding estimates	32

1 The complaints

1.1 The nature of the complaints

The Australian Government Competitive Neutrality Complaints Office (AGCNCO) received complaints from three businesses alleging the operations of NBN Co breached the Australian Government's *Competitive Neutrality Policy*. The complainants are existing operators in the wholesale market for broadband infrastructure — OPENetworks Pty Ltd (complaint received 13 April 2011), Converge Networks (complaint received 15 April 2011) and Service Elements Pty Ltd (complaint received 2 June 2011).

The complainants allege that NBN Co is not complying with competitive neutrality policy and has gained a market advantage due to government ownership. The complainants also claim that policy developments have granted NBN Co commercial advantages.

Specifically, the OPENetworks complaint details the following concerns.

- NBN Co was announced as a provider of last resort to greenfield developments (where no commercial operator would operate), but has actively sought business in commercially viable developments.
- NBN Co's pricing of infrastructure in greenfield developments is contrary to competitive neutrality principles. The claim is that NBN Co is providing infrastructure (fibre and active equipment) and connections in new developments at no charge to developers, noting that private providers must charge developers for the capital costs (which are passed on to land buyers) as they are unable to recoup those costs from retail service providers.
- If NBN Co is not charging developers for infrastructure and connections in new developments, then the announced rate of return of 7 per cent (allowing for the cost of commercially raising debt) is not possible.
- There may be competitive neutrality breaches relating to Ministerial determinations of technical specifications. Currently, providers operate under industry codes of practice. It is claimed that Ministerial determinations will favour NBN Co by increasing the cost of private production and thereby make provision by private infrastructure operators an unviable option for developers.

Comverge Networks similarly claimed that:

- NBN Co is using its position as a government business enterprise to promote itself to the development industry as the only option for the provision of fibre to the home networks in new greenfield developments.
- NBN Co did not follow a fair and transparent tender process when seeking contractors to build networks in new developments, which resulted in a ‘capture of intellectual property from their competitors’.
- NBN Co negotiations with Telstra for the transfer of existing and new networks is putting smaller players at a significant disadvantage.
- Operational standards of NBN Co are presented as new industry standards to which other operators must adhere.

Service Elements claimed that:

- NBN Co is able to act as a provider of ‘first resort’ instead of a provider of ‘last resort’ due to financial backing by the Australian Government.
- NBN Co’s pricing of infrastructure in greenfield developments is contrary to current industry practice of charging capital costs to developers (which they pass on to land buyers) rather than to retail service providers.
- NBN Co’s 7 per cent target rate of return does not represent a commercial rate of return as required under competitive neutrality policy.
- NBN Co is afforded regulatory advantages as a consequence of Ministerial determinations and through its role in defining what constitutes the footprint for the national broadband network.
- NBN Co did not follow a fair and transparent tender process when seeking contractors to build networks in new developments. Service Elements claim that this enabled NBN Co to ‘capture intellectual property’ from its competitors.

1.2 About NBN Co

NBN Co was established and incorporated on 9 April 2009 under the *Corporations Act 2001* and was prescribed as a Government Business Enterprise under the *Commonwealth Authorities and Companies Act 1997* on 9 August 2009. The company is wholly owned by the Commonwealth of Australia and the Commonwealth’s shareholding is represented jointly by the Minister for Broadband, Communications and the Digital Economy and the Minister for Finance and Deregulation.

The purpose of NBN Co is to design, build and operate a wholesale-only national broadband network across Australia (Wong and Conroy 2010, p. 1). As stated by the Department of Broadband, Communications and the Digital Economy (DBCDE) in its response to the complaints, the network will address a number of perceived failures in the existing telecommunications market, including:

- an industry failure to invest in high-speed broadband, particularly on a ubiquitous basis;
- a lack of effective competition in the provision of retail broadband services, particularly as a result of Telstra's control of the copper customer access network and its vertical integration; and
- a lack of uniform national wholesale pricing in the supply of broadband.

NBN Co is expected to operate in accordance with a Statement of Expectations from the Government to the company (Wong and Conroy 2010). This document states, in part, that:

The Government's vision for NBN Co is that it operates as a commercial entity. (p. 2)

Consistent with this statement, NBN Co has a Corporate Plan (NBN Co 2010a) and an independent board and management team. The Government 'expects NBN Co's approach to pricing will recognise the importance of maintaining affordability to drive take-up rates' and 'notes and supports the NBN Co product, pricing and service offerings developed to date' (Wong and Conroy 2010, p. 10), but does not set the prices NBN Co can charge.

1.3 The role of the AGCNCO in investigating complaints

The *Productivity Commission Act 1998* empowers the AGCNCO to investigate complaints that:

... a particular Commonwealth Government business or business activity, or a business or business activity competing with a Commonwealth Government business or business activity, is not conducted in accordance with competitive neutrality arrangements that apply to it ... (s. 21(1)(a))

or that such a business or business activity:

... should be required to be conducted in accordance with competitive neutrality arrangements. (s. 21(1)(b))

The Act defines competitive neutrality arrangements that apply to a government business as:

... the arrangements referred to by that name in the *Commonwealth Government Competitive Neutrality Statement* of June 1996 ... (s. 21(5))

In accordance with the Productivity Commission Act and *Commonwealth Government Competitive Neutrality Statement* of June 1996, NBN Co is the type of Commonwealth Government Business to which competitive neutrality arrangements were intended to apply.

In deciding to investigate these complaints, the Office is satisfied, in accordance with the *Productivity Commission Act 1998* (part 4, division 2) and the *Competitive Neutrality Policy Statement* (Australian Government 1996), that the complaints:

- are not better handled by another body
- do not relate to competitive neutrality policies that are being finalised or are currently the subject of review by government
- are not vexatious
- raise issues of substance and with non-trivial resource allocation effects.

The primary role of the AGCNCO in this instance is to assess whether NBN Co is being, or is likely to be, conducted in accordance with competitive neutrality arrangements. This involves assessing NBN Co's actual or intended compliance with the taxation, debt, regulatory neutrality and commercial rate of return requirements of the policy.

Unlike other AGCNCO investigations, this investigation is of a government business activity which is in its infancy. As yet, the business model has not been sufficiently implemented to yield data on what would be viewed as 'normal' costs and revenues. NBN Co's infancy has resulted in the AGCNCO examining, in some respects, whether NBN Co is potentially in *ex ante* breach of competitive neutrality policy. In effect, it is examining whether NBN Co is operating in line with the principles set out in the Australian Government's *Competitive Neutrality Policy* more so than whether the commercial results achieved to date are consistent with this policy.

In conducting the investigation, the AGCNCO held discussions with the three complainants — OPENetworks, Comverge Networks and Service Elements — and with the Department of Broadband, Communications and the Digital Economy (DBCDE), NBN Co, the Department of Finance and Deregulation and the Australian Government Treasury. Written submissions were received from the DBCDE on 9 September 2011 and from NBN Co on 14 September 2011. A draft of

this report was provided to DBCDE and NBN Co on 21 October 2011 for their comment on any matters of fact. Responses were received on 4 November 2011 and 7 November 2011 from DBCDE and NBN Co respectively.

2 Background

On 7 April 2009 the Australian Government announced the establishment of a new company to build and operate a national ‘super fast National Broadband Network’ (Conroy 2009). The National Broadband Network is intended to connect around 93 per cent of all Australian homes, schools and workplaces via fibre-to-the-premise (FTTP)¹, and deliver broadband speeds up to 100 megabits per second. The remaining premises are to be provided with access to fixed wireless and satellite technologies with broadband speeds of at least 12 megabits per second.

The decision to establish a new company, NBN Co, followed an earlier commitment from the Government to provide up to \$4.7 billion in funding to private-sector proponents to roll-out a new open access, high speed, fibre-based broadband network across Australia. The open Request for Proposal process (DBCDE 2008), conducted by the Australian Government to evaluate private-sector proposals for the network, was terminated when an independent panel of experts advised that none of the national proposals offered value for money (Conroy 2009). As stated by the Department of Broadband, Communications and the Digital Economy (DBCDE) in its response to the complaints:

Faced with a significant failure in the telecommunications marketplace with significant long term structural implications for its operation and the wider economy, the lack of an acceptable private sector alternative and private sector difficulty in raising capital because of the 2008-09 global financial crisis, the government decided that it would need to take the leading role in providing a solution.

2.1 Some background on NBN Co

NBN Co’s funding arrangements

The Government expects that NBN Co ‘will be funded with Government equity until NBN Co has sufficient cash flows to support private sector debt without explicit Government support’ (Wong and Conroy 2010, p. 11). The Australian

¹ FTTP is interpreted by DBCDE to mean infrastructure that provides for the connection of single dwellings or individual premises within multi-dwelling units with fibre optic cabling from the optical fibre distribution centre to an optical network terminator (ONT) located at the customers’ premises or similar equipment in multi-dwelling units (DBCDE 2009).

Government plans to invest \$27.5 billion over the period 2010-11 to 2020-21 so that NBN Co can design, build and operate the National Broadband Network (Treasury 2011). These funds will be sourced collectively from:

- the Building Australia Fund
- the contingency reserve account
- a proposed future issuance of Aussie Infrastructure Bonds to households and institutional investors (through the issue of Australian Government securities as part of the Government's overall debt issuance program) (Dalzell 2010).

A further \$13.4 billion in debt financing (including interest earned on invested funds) is expected to be raised from the private sector over the period 2014-15 to 2020-21, bringing the total expected funding for NBN Co to \$40.9 billion (NBN Co 2010a). Around \$37.3 billion of these funds are expected to be used for capital expenditure (of which \$10.4 billion will be for fibre connections), with the remainder covering net operating expenses.

The Government announced its intention to sell down its interest in the company within five years after the network is built and fully operational, subject to market conditions and national and identity security considerations (Conroy 2009). In this context DBCDE, in its response to the complaints, said:

In the longer term, the government expects NBN Co to be entirely self-funding and able to provide returns to the government.

Following completion of the rollout, the government will consider the optimum capital structure for the company following which private sector debt should be applied to repaying the government's investment, consistent with that structure.²

NBN Co's pricing

The Government's objectives in establishing NBN Co include 'affordable access' to broadband in both metropolitan and regional Australia through the provision of a 'common entry level broadband price structure for all Australian premises across all technologies used in the rollout' (Wong and Conroy 2010, p. 4). To support this objective, NBN Co is required to uniformly charge those seeking access for the entry level product across all platforms (fibre, wireless and satellite). Also, where new technologies become available, NBN Co is to seek to maintain this principle (NBN Co 2010d).

² DBCDE define an optimal capital structure to be one that 'in light of economic, industry and firm specific factors, would provide for an investment grade credit rating, whilst at the same time imposing a discipline on the GBE to optimise efficiency' (DBCDE 2011c).

NBN Co will provide, and therefore charge for, one of the two cost components faced by *retail service providers* in supplying services to customers over the national broadband network (retail service providers will also have a number of other input costs associated with their business operations). NBN Co will charge for access to the network (fibre, wireless or satellite) to the point of interconnection. Retail service providers will then need to transport their data from the point of interconnection to their point of presence — a link known as backhaul.

As such, even with uniform wholesale network access charges, end user prices may vary because of different costs of providing the backhaul link. On backhaul routes where this would have the greatest impact on retail prices, NBN Co is required to provide a ‘transit backhaul’ service (such as a link to connect rural and remote areas of the FTTP network to the main competitive backhaul network) (DBCDE 2009; NBN Co 2010a).

The NBN Co Implementation Study stated that:

NBN Co will have significant influence over the retail prices that end users pay through the prices it charges service providers for its wholesale access and transit services ... By setting its wholesale prices at a level that encourages take-up across the country ... the NBN initiative will help ensure that affordable wholesale prices translate through to affordable retail prices. (KPMG-McKinsey 2010, p. 109)

It also stated that:

... investment in backhaul assets within the fibre footprint is not expected to provide a commercial return and should be seen as a government investment to provide future telecommunication services to regions at an affordable price. (KPMG-McKinsey 2010, p. 340)

NBN Co is preparing a ‘special access undertaking’ to be approved by the ACCC under the *Competition and Consumer Act 2010*, in order to finalise pricing for its part of the National Broadband Network (NBN Co 2011b). The special access undertaking will contain key commitments in relation to prices of NBN Co fibre, wireless and satellite services and a framework for the regulation of these services for a 30 year period.

Regulatory, policy and contractual arrangements

The regulatory framework for NBN Co and the National Broadband Network is established through the *National Broadband Network Companies Act 2011*; the *Telecommunications Act 1997* and its supplement *Telecommunications Legislation Amendment (National Broadband Network Measures – Access Arrangements) Act 2011*; and the *Competition and Consumer Act 2010*. The *National Broadband*

Network Companies Act 2011 and the *Telecommunications Legislation Amendment (National Broadband Network Measures – Access Arrangements) Act 2011* came into effect on 12 April 2011. They amend and add to the existing generic telecommunications regulatory framework.

The *National Broadband Network Companies Act 2011* sets out key obligations that, amongst other things:

- limit NBN Co to wholesale-only telecommunications in terms of the goods and services it supplies and the investments it makes
- establish powers for the functional separation of NBN Co, for Australian Government full ownership of the company until completion of the NBN rollout and for the Government to require NBN Co to transfer or divest assets
- provide for exemptions from state and territory stamp duty for transactions associated with the agreements between Telstra and NBN Co (DBCDE 2011b).

The *Telecommunications Legislation Amendment (National Broadband Network Measures – Access Arrangements) Act 2011* amends (see DBCDE 2011b) the *Competition and Consumer Act 2010*, the *Telecommunications Act 1997* and the *Freedom of Information Act 1982* such that:

- the ACCC will have powers to make access determinations and binding rules of conduct in relation to the services supplied by NBN Co and the company has the option of providing to the ACCC a Special Access Undertaking in relation to its services
- certain conduct (such as refusing to permit interconnection outside listed points of interconnection, bundling of services and cross-subsidising within its charging regime) is allowed by NBN Co where this is necessary to achieve uniform national wholesale pricing
- ‘level playing field’ requirements (set to commence 12 April 2012) apply to fixed-line local access networks or parts of such networks that are built, upgraded, altered or extended from 1 January 2011, requiring such networks to be whole-sale only with the operator of such networks supplying a ‘layer 2’³ service on a non-discriminatory basis.

³ The Open Systems Interconnection Model sub-divides a communication system into seven smaller parts or layers. ‘Layer 1’ is the physical network (for example, provision of light across optical fibre) which provides services to ‘layer 2’, the ‘data link layer’ (for example, encoding and decoding of light into bits). The remaining five layers refer to switching and routing, connections, security, applications and service quality. Provision of these five layers in Australia’s NBN will be left to retail service providers.

To ensure that new developments have access to fibre technology as they are being built, the Government announced that from 1 January 2011:

- NBN Co Limited would be the wholesale provider of last resort in new developments within or adjacent to its long term fibre footprint and would meet the cost of doing so
- developers — and on their properties, property owners — would be responsible for ensuring that pit and pipe (including trenching and ducting, design and third-party certification for development approval purposes) are installed and fibre-ready
- Telstra would have limited infrastructure responsibilities where NBN Co does not provide fibre and would be the retail provider of last resort
- developers may use any fibre provider they choose, provided they meet NBN specifications and open access requirements (DBCDE 2011a).

Some of these requirements were formalised in the Government's 'Fibre in New Developments Policy' announced on 9 December 2010 and, to some extent, were incorporated in further amendments to the *Telecommunications Act 1997* through the *Telecommunications Legislation Amendment (Fibre Deployment) Act 2011*. In particular, this Act which came into effect on 27 September 2011:

- enables the Minister to specify that new developments in which fixed lines are to be installed need to use optical fibre
- requires passive infrastructure such as pit and pipe to be fibre-ready
- imposes penalties on developers that sell property without fibre-ready passive infrastructure
- enables carriers to seek access to passive infrastructure that is owned by a non-carrier
- enables the Australian Communications and Media Authority to make standards for customer equipment and cabling for use with the national broadband network and other superfast networks.

Although policy details are yet to be finalised, if an area is already adequately served with fibre, the Government has indicated that it can declare it 'adequately served', thus exempting NBN Co from its provider of last resort responsibilities (Quigley 2011).

To facilitate the development of the National Broadband Network and its adoption across Australia, NBN Co has entered into commercial arrangements with Telstra and Optus to provide access to fibre facilities and infrastructure and migrate customers to the new network respectively. Under the Telstra agreement

(announced on 23 June 2011 and approved by Telstra shareholders on 18 October 2011), Telstra will be paid \$9 billion (in net present value terms) to provide much of the infrastructure required to build the fibre network including:

- lead-in conduits through which fibre will be connected to each premise
- underground ducts and pits through which fibre will run
- dark fibre
- rack spaces in Telstra exchanges.

Telstra has also agreed to progressively decommission its copper and hybrid fibre coaxial (HFC) customers (other than HFC pay-TV customers) to enable its customers to be moved to the national broadband network. NBN Co will be Telstra's preferred fixed-line network for wholesale fixed line services. The agreement includes a minimum lease of Telstra's infrastructure for 35 years (to 2047).

Optus will similarly be paid (\$800 million in net present value terms) to begin transferring its customers from hybrid fibre coaxial cable to the national broadband network from 2014 (AAP 2011). Optus will also decommission parts of its network.

NBN Co's roll-out

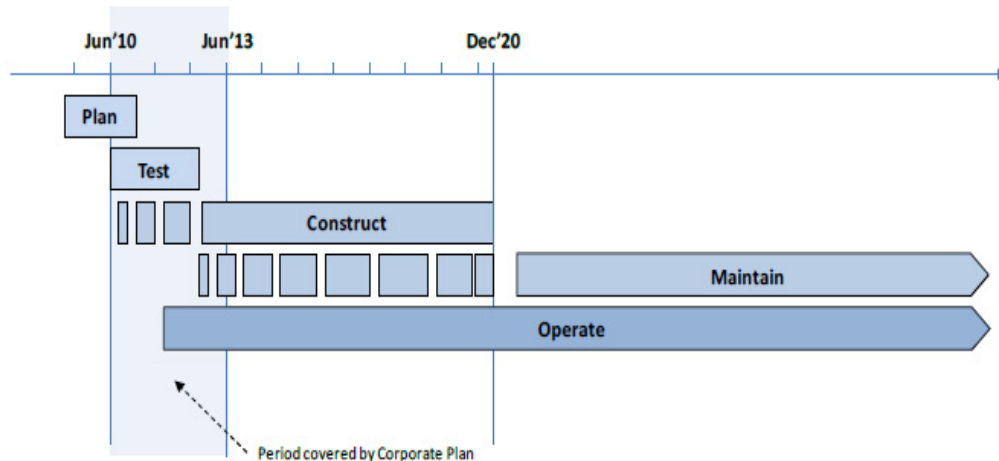
Rollout of the fibre network for the National Broadband Network across Australia is a multi-stage process, with the construction phase of the network expected to continue until 2020 (figure 2.1).

As part of the initial rollout (between 2009 and 2011), the Government invested up to \$250 million to address 'backbone blackspots' throughout regional Australia (DBCDE 2011d). The backbone infrastructure consists of almost 6000 kilometres of fibre optic transmission links to selected regional centres. Nextgen Networks was awarded the Government's tender to build, operate and maintain each of the backbone links for a five year operational period following completed construction. To date, four of the five links have been completed.

Rollout of the FTTP network was trialed by NBN Co in selected sites — firstly in Tasmania and then in five mainland locations. For the rollout in Tasmania, the Government established NBN Tasmania Limited as a subsidiary of NBN Co, to build and operate the National Broadband Network in that state. Also trialling in Tasmania is a fibre network extension. This is an extension of the fibre footprint to premises which would otherwise not be included in the planned 93 per cent coverage, but are willing to pay for fibre access. These additional premises will pay

the difference between what it would cost to provide them with fibre to their premises and the cost of fixed wireless or satellite (Quigley 2011).

Figure 2.1 Announced timeline for the NBN



Source: NBN Co (2010a).

Although the trials are not yet complete in the mainland sites, locations for later stages of the rollout around Australia have been progressively announced by NBN Co. NBN Co has developed a fibre footprint to illustrate the proposed location of the NBN coverage across Australia (NBN Co 2010b). As at mid-July 2011, there were 2500 active services on the network across Tasmania and mainland first release sites (NBN Co 2011d). NBN Co plans for around 250 000 premises in greenfield developments to have an active FTTP service by June 2013 (NBN Co 2010a). A further 70 000 greenfield premises will be passed or covered (but not yet connected) by that date. In October 2011, NBN Co was building fibre infrastructure in over 90 new developments spread across 65 locations nationally (NBN Co 2011f).

NBN Co has experienced a number of delays in implementing its planned rollout. Some of these have been attributed to issues with contractor tendering processes and negotiations with Telstra for the use of its existing infrastructure (Lee and Hepworth 2011; Lee 2011; Yeates 2010).

2.2 NBN Co and new developments

The Government considers that new developments across Australia should have access to fibre technology as they are being built (Wong and Conroy 2010). As noted by Conroy (2010):

While the NBN is being constructed, an estimated 1.9 million new premises will be built. Connecting these premises to fibre will provide occupants with ready access to next generation broadband and reduce rollout costs by avoiding costly retrofitting.

The private sector is installing FTTP networks in greenfield developments across Australia. There are more than 10 operators installing FTTP in greenfield estates and a number of service providers are using FTTP infrastructure to offer services at the retail level (DBCDE 2009). These existing providers vary in terms of the extent to which they offer wholesale services on an open access basis (KPMG-McKinsey 2010). They range from providers who operate wholesale only, open access networks, to others who provide access only to their own or an affiliated retail provider (for example, the largest FTTP provider, Telstra, does not offer wholesale access to competitors).

As at May 2009, FTTP was deployed in around 120 greenfield estates. There were an estimated 7500 homes connected at that time, with these deployments expected to eventually connect around 150 000 homes (DBCDE 2009). The Aurora estate in Victoria, the Fernbrooke estate in Queensland, the Marina Hindmarsh Island estate in South Australia and the suburb of Forde in the ACT are examples of new developments with FTTP networks (DBCDE 2009).

Following extensive consultation and consideration of the NBN Implementation Study, the Government announced that NBN Co would play the role of infrastructure provider of last resort in new developments. The roles and responsibilities of NBN Co and other market participants in new developments are described in a Government policy statement released on 22 June 2011 (DBCDE 2011a) which further develops earlier policy announcements made by the Government (DBCDE 2010a; 2010b; 2011a).

Developer obligations

The *Telecommunications Legislation Amendment (Fibre Deployment) Act 2011* and Government policy statements specify that in all types of new developments, developers are required to install and ensure that pit and pipe — including trenching and ducting, design and third-party certification for development approval purposes — are fibre-ready to NBN Co's specifications. Developers are expected to meet the costs of these requirements. The Government has advised that 'in the absence of the developer meeting the cost of providing pit and pipe, NBN Co is not required to provide services to these developments' (Conroy 2010, p. 4).

Developers can source infrastructure from any provider. Where a developer chooses a provider other than NBN Co, pending the development of industry specifications,

these providers can apply their own fibre-ready specifications, but they must be national broadband network consistent (NBN Co 2011c). These specifications apply until fibre-ready specifications are otherwise agreed by industry through a Communications Alliance process or determined by the Australian Communications and Media Authority (these were released for public consultation in September 2011).

Where a developer seeks active infrastructure from NBN Co (or from Telstra as a provider of last resort), then the pit and pipe infrastructure must meet NBN Co's requirements (or in the case of Telstra, NBN Co's specifications pending the development of industry specifications) (Conroy 2010). In these instances, NBN Co (and Telstra) requires ownership of pit and pipe infrastructure to be transferred to it as a commercial condition of providing active infrastructure. Where private fibre providers are used, NBN Co may seek to acquire both the active and pit and pipe infrastructure, if it meets NBN Co specifications and acquisition is in NBN Co's commercial interests (Conroy 2010). Providers who fail to meet the NBN Co specifications risk being overbuilt when NBN Co rolls out the network in their area (DBCDE 2011a).

In the event that developers are unable or unwilling to source fibre infrastructure from a private provider, NBN Co or Telstra (depending on the size and location of development)⁴ are required to act as providers of last resort for the development (DBCDE 2011a). NBN Co does not charge developers for its provision of fibre infrastructure in premises that are located within the NBN Co fibre footprint (NBN Co 2011c). In contrast, other providers of FTTP typically seek to recover a greater proportion of installation costs up-front from developers (DBCDE 2009).

However, while developers are free to choose between private sector infrastructure providers and NBN Co, many have sought NBN Co to provide infrastructure in their developments. NBN Co reported to the National General Assembly of Local Government in June that since 1 January 2011, the company has received over 200 applications from developers of greenfield estates (Bremner 2011).

Scope of NBN Co's responsibilities in fibre installation

The scope of NBN Co's responsibilities as provider of last resort for the installation of fibre in new developments have been detailed by the Government

⁴ In small developments and those which applied to Telstra for services prior to 1 January 2011, the developer is expected to meet the cost of installing pit and pipe infrastructure and transfer ownership of such infrastructure to Telstra in exchange for Telstra's provision of fixed-line infrastructure within that pit and pipe. Historically, Telstra has recovered the costs of providing of its copper-based network through its connection/installation and ongoing service charges.

(DBCDE 2011a) to cover new developments for all premises within the NBN Co's fibre footprint and explicitly include:

- new developments of 100 or more premises (houses or units released over a three year period), whether broadacre or infill, which have received Stage 5 (relating to civil works) planning approval after 1 January 2011 and for which three months' notice has been given (by the developer to NBN Co)
- developments, irrespective of size or type, in areas where NBN Co has already rolled out fibre and the fibre is ready and capable of connection
- developments in areas where NBN Co has publicly identified the area as a rollout region — this is on the basis that rollout regions will be announced 12 months prior to the ready-for-service date (DBCDE 2011a).

NBN Co may also provide infrastructure in smaller developments where it is practical for it to do so.

In developments for which it is responsible, NBN Co will install the fibre infrastructure in the development, including a link to a point of interconnect. NBN Co may use whatever operational arrangements it chooses to service new developments, including sub-contracting and build-operate-transfer arrangements (Conroy 2010).

For developments of less than 100 premises, whether broadacre or infill, Telstra will be responsible for delivering infrastructure and services, pending NBN Co being ready to provide a fibre service in that area that is capable of connection to the premises.⁵

⁵ In the event that Telstra is paid by a developer to install the pit and pipe infrastructure into a new development where NBN Co is to provide fibre, Telstra will transfer ownership of the pit and pipe to NBN Co.

3 Assessment of issues

This investigation is about a government business activity which is in its infancy and has yet to produce ‘business as usual’ costs and revenues. Indeed, much of NBN Co’s pricing model is still being investigated by the Australian Competition and Consumer Commission’s (ACCC) in relation to the approval of its special access undertaking (NBN Co 2010a).

As such, the AGCNCO has examined whether NBN Co is, *ex ante*, pursuing a business model which could place it in breach of competitive neutrality policy. The AGCNCO has placed greater emphasis on whether NBN Co has been established and operated in line with the principles set out in the Australian Government’s *Competitive Neutrality Policy*, rather than on whether the current commercial results are consistent with this policy. The AGCNCO has drawn on a range of evidence, including:

- the three complaints
- the responses to the complaints from NBN Co and the Department of Broadband, Communications and the Digital Economy (DBCDE)
- publicly available information, including the NBN Co Corporate Plan (NBN Co 2010a), NBN Co’s Business Case Summary (NBN Co 2010b) and Statement of Corporate Intent 2011-2013 (NBN Co 2011e)
- the Australian Government’s Statement of Expectations (Wong and Conroy 2010)
- evidence presented during consultations by DBCDE, Department of Finance and Deregulation and the Australian Government Treasury.

Some of the issues raised by the complainants fall outside competitive neutrality policy and are outside the purview of the AGCNCO. These issues are discussed in section 3.1. Substantive alleged breaches are discussed in section 3.2.

3.1 Issues which fall outside competitive neutrality policy

Issues raised by OPENetworks, Comverge Networks and Service Elements that do not fall within competitive neutrality policy include NBN Co’s:

-
- status as the provider of last resort in greenfield developments and the use of its profile to promote its business
 - long term contracts with Telstra
 - tender process to establish a panel of infrastructure providers.

Provider of last resort and associated marketing strategy

The complainants allege that NBN Co has acted contrary to the statements made by the Minister for Broadband, Communications and the Digital Economy that NBN Co would be a provider of last resort in new developments. On 9 December 2010, the Minister, Senator the Hon Stephen Conroy, stated that:

... NBN Co would be the wholesale provider of last resort in new developments within or adjacent to its long term fibre footprint and meet the costs of doing so ... (2010, p. 1)

The complainants allege that, rather than only providing wholesale infrastructure in instances where no other supplier will do so at a commercial price, NBN Co has actively sought business in commercially viable developments.

OPENetworks stated that at a recent Urban Development Institute of Australia (UDIA) conference in Sydney, NBN Co represented their position as a provider in greenfield developments rather than as one limited to the provider of last resort:

... NBN Co and Telstra presented their new mandates from Government to the UDIA who represent all of the national developers of Greenfields in Australia. NBN Co announced that in relation to developments with 100 lots or more, NBN Co was the sole provider and for under 100 lots Telstra was the sole provider. They said that developers had to register with them for connection of telecommunications. It was only when one of the members of the Greenfield Fibre Operators of Australia stood up and pointed out that there are other providers did they concede that there are private providers with whom developers may contract for FTTP networks.

As put by OPENetworks:

There is no issue with NBN Co acting as ‘provider of last resort’ in greenfield developments. That is where no alternative builder/provider/operators will deploy FTTP networks and, in that case, also providing the fibre and active equipment needed to operate the networks. However, where that is not the case and other builder/provider/operators will deploy FTTP networks on commercial terms NBN Co is still offering to deploy the fibre and active equipment and connect premises without charge to the developer. Clearly this undermines the market in greenfields and breaches the Competitive Neutrality Policy of government.

In its 17 December 2010 Statement of Expectations, the Government advised NBN Co of its view of what is meant by ‘provider of last resort’ (Wong and Conroy 2010):

The Government has now finalised the following expectations regarding NBN Co’s role as wholesaler provider of last resort within its fibre footprint:

- NBN Co will provide fibre in all new ‘broadacre’ developments;
- NBN Co will provide fibre in all infill developments in which 100 or more premises are built within a 36 month period in areas where NBN Co has not yet rolled out its network; ...
- NBN Co may use whatever operational arrangements it chooses to service new developments, including sub-contracting and build-operate-transfer arrangements; ...

These arrangements will not prevent developers from using other companies to roll out fibre networks in new developments if they wish ... (p. 6)

An ordinary understanding of the term ‘provider of last resort’ would suggest that NBN Co is limited to being the provider only in instances where no commercial alternative is available to a developer. However, the DBCDE in its response claims that the Government did not state that NBN Co’s role was limited to being a provider of last resort:

From the time it announced the NBN in April 2009, the government consistently left open the question of what role NBN Co would play in new developments. The government has not suggested NBN Co would be excluded from new developments or be limited to the role of provider of last resort.

Decisions by government businesses as to where and with whom they conduct their business arrangements must accord with commercial law, but do not constitute a breach of competitive neutrality policy if they do not rely on a competitive advantage by virtue of their government ownership. Competitive neutrality policy states:

Competitive neutrality does not imply that government businesses cannot be successful in competition with private businesses. Government businesses can achieve success as a result of their own merits and intrinsic strengths, but not as a consequence of unfair advantages flowing from government ownership. (Australian Government 1996, p. 5)

FINDING 3.1

NBN Co's decision to be an alternative provider of fibre in greenfield developments (rather than only the provider of last resort) is not dependent on a competitive advantage by virtue of its government ownership and is not a breach of competitive neutrality policy.

The complainants also argue that NBN Co's profile, due to the size of the government's commitment and media attention, places it at a competitive advantage over private suppliers. Comverge Networks, for instance, alleges that NBN Co is using its market position to promote itself to the property development industry as the only option for new fibre to the premises (FTTP) infrastructure:

NBN Co is using its market position under the umbrella of the Department of Broadband, Communications and the Digital Economy (DBCDE) to engage the industry as the only option for FTTP in new Greenfield developments.

Competitive neutrality policy does not make specific reference to advantages conferred by such factors as market position. The policy is directed at those advantages of government ownership that are widespread and relatively easy to observe and correct. As stated in the *Competitive Neutrality Policy Statement* (Australian Government 1996):

Some of the competitive advantages enjoyed by government businesses are widespread and relatively easy to observe and correct. The Commonwealth's competitive neutrality arrangements will directly address: exemptions from various taxes, access to borrowings at concessional interest rates, exemptions from complying with regulatory arrangements imposed on private sector competitors and other benefits associated with not having to achieve a commercial rate of return on assets. (p. 6)

Other advantages are not specifically addressed in the policy. The policy statement leaves these to be subject to the continuing development of commercialisation policies (including corporatisation):

Other advantages (and disadvantages) tend to vary across government businesses, and are more difficult to identify and correct. These distortions will be reviewed through the continuing development of the Commonwealth's commercialisation policies which, among other things, address the need to establish appropriate organisational structures for government business activities. (p. 6)

Some business characteristics can confer advantage in the marketplace, but are not the direct consequence of government ownership. Matters relating to business type, size, location and market position can be exploited by all businesses. This is explicitly recognised in the *Competitive Neutrality Guidelines for Managers* (Treasury and DFA 2004):

... CN [competitive neutrality] policy does not consider (nor is it concerned with) efficiency issues which are inherent with all competitors — such as size, skills, equipment, managerial competence or culture. (p. 4)

FINDING 3.2

NBN Co's use of its profile to promote itself to the development industry as a provider of fibre to the home in greenfield developments is an operational decision, and is not a breach of competitive neutrality policy.

NBN Co's long term contracts with Telstra

The complainants raised concerns that NBN Co's contractual relations with Telstra give NBN Co a competitive advantage over smaller telecommunications infrastructure providers. As Comverge Networks said:

NBN Co is engaging in commercial negotiations with Telstra for the ongoing transfer of all existing and new FTTP Greenfield sites, which is putting the other smaller players at a significant disadvantage.

NBN Co has begun to finalise the process of entering into a number of long term contracts with Telstra (Conroy 2011b). These contracts, although not yet executed, will assist NBN Co to build the national broadband network. They are also a means of pursuing the Government's policy objective of structural separation between infrastructure ownership and retail service provision in the telecommunications industry. As put by the DBCDE in its response to the complaints:

The NBN addresses concerns about the lack of effective competition in the provision of retail broadband services, particularly as a result of Telstra's control of the copper customer access network and its vertical integration. It does this because it has been established as a wholesale-only, open access, non-discriminatory service provider, operating at a low level in the Open System Interconnection (OSI) model. These key principles are enshrined in law in the National Broadband Network Companies Act 2011 and the Statement of Expectations.

Through the migration of operations from existing integrated networks like those of Telstra and Optus as a result of agreements with NBN Co, a structurally separated telecommunications industry will be established in Australia.

As stated in the DBCDE response to the complaints, the use of government equity funding for NBN Co is intended, at least in part, '... to enable it to enter into long term contracts to deliver the government's policy objectives'.

NBN Co's long term contracts with Telstra are a deliberate decision by the Government to establish a company of sufficient size and balance sheet strength to achieve the scale of reform required to create a structurally separated

telecommunications industry in Australia. From a competitive neutrality viewpoint, the advantage is one of size, which other large businesses could also possess, rather than of government ownership as such.

FINDING 3.3

NBN Co's long term contracts with Telstra are enabled by the size of the corporation and are not a breach of competitive neutrality policy.

Tender process for greenfield network providers

The complainants expressed concerns about the tender process used to establish a '... panel of appropriately qualified and experienced providers who can build and install fibre on its behalf' (Conroy 2010, p. 3). As put by Service Elements in its complaint:

Under the guise of working in collaboration with the commercial providers, NBN Co and the Government have had commercial operators participate as unpaid advisers through the provision of proposals to NBN Co to build operate and transfer to NBN Co the FTTP networks in Greenfield developments (including network designs, specifications, operational information and pricing which was confidential market sensitive information) over the next few years, when NBN Co says it will not have the capacity to do so. ...

Service Elements along with other providers have been left with nothing to show for their submitted business proposals but the loss of confidential commercially sensitive information to a competitor GBE. NBN Co is now free to use our business information, which would not otherwise have been made available to them without the written encouragement of the Minister for us to provide that information to NBN Co, who can now further exploit their competitive advantage by virtue of Government ownership.

Similar concerns were expressed by the other complainants.

Again, competitive neutrality policy does not directly address the issue raised by the complainants. Rather, with regard to tendering processes it prescribes that:

All agencies conducting a tendering process must include a requirement for public sector bidders to declare their tenders are compliant with CN [competitive neutrality] principles. (Treasury and DFA 2004, p. 43)

The policy also covers the market testing of activities to ensure that no advantage is available to public sector bids or in-house provision (with compliance to be achieved through baseline costing exercises). In this respect, the policy seeks to ensure that when government businesses submit tenders, their pricing reflects a commercial return to a cost base that has been determined in line with competitive neutrality policy. Similarly, for activities which were previously conducted in-house

(which was not the case in the tender process in question conducted by NBN Co), the policy seeks to ensure that the baseline costing used to evaluate bids (and the decision to take on external suppliers) is determined in accordance with competitive neutrality policy.

On the issue raised by the complainants, NBN Co advised the AGCNCO that the tender was conducted in accordance with its terms and the Government's requirements:

Contrary to the assertions made by the complainants, the Request for Proposal process conducted between December 2010 and March 2010 by NBN Co to invite proposals for FTTP solutions in new developments was conducted properly and in accordance with its terms and the Government's requirements. All information received during the course of that process has been handled in accordance with the confidentiality restrictions imposed on it.

FINDING 3.4

NBN Co's tender process for establishing a panel of appropriately qualified and experienced providers who can build and install fibre on its behalf is not a breach of competitive neutrality policy.

3.2 Issues relevant to competitive neutrality policy

Three issues raised by the complainants are relevant to competitive neutrality policy:

- the pricing of infrastructure in greenfield developments
- the expected rate of return and related issues
- NBN Co gaining advantages through Ministerial determinations.

Pricing in greenfield developments

Competitive neutrality policy requires government businesses to set their prices such that they earn a commercial rate of return from their overall business activities. As stated in the *Competitive Neutrality Guidelines for Managers* (Treasury and DFA 2004):

CN [competitive neutrality policy] requires that significant government businesses price their goods and services on a comparable basis to private sector organisations. This involves:

- identifying costs attributable to the business activity; and

-
- setting prices that take into account all relevant costs (including allowances for a commercial RoR [rate of return]) that would apply to private sector competitors. (p. 4)

It is not the price of any specific product or service that is at issue, but rather whether a commercial rate of return is achieved from the overall activities of a business. This provides the same flexibility for government businesses in setting prices for individual products as applies to private sector businesses. A pricing model that has adverse impacts on competition in particular market segments, therefore, would not represent a breach of competitive neutrality policy (though it would be subject to general competition law).

For greenfield developments, the complainants observed that NBN Co will be supplying the fibre and active equipment at no cost to the developer, with developers obligations being limited to meeting the costs of ‘pit and pipe’ construction. NBN Co’s cost of fibre and active equipment is to be recovered from retail service providers. DBCDE advised that the reason for this approach is so that pricing between existing ‘brownfield’ and greenfield markets will be consistent:

NBN Co will install fibre in new developments at no charge to developers, consistent with the government’s policy direction, and recover the cost from operations. This is a fairly common model for paying for large infrastructure installations, and is similar to the method Telstra has used for its copper network.

That NBN Co does not charge upfront for the provision of fibre is consistent with its national mission to provide fibre. That NBN Co can do this reflects its equity funding by the Commonwealth on a national basis and over an extended time horizon. NBN Co’s operations in new developments are consistent with NBN Co’s commercial operation generally and its provision of a return as a national operation.

NBN Co’s pricing model is different to that adopted by private providers. Private providers charge developers so as to recover the capital costs, and then provide access for retail service providers on a basis which is competitive with other telecommunications mediums (such as copper, coaxial and wireless). As put by OPENetworks:

A commercial alternative builder/provider/operators can only deploy FTTP networks by charging the developer for that capital cost because the retail service providers that access the FTTP networks will not pay more than the operating costs.

Similar sentiments were expressed by Service Elements:

It has transpired that even where there are competitors willing and able to provide the FTTP networks on commercial terms NBN Co is still offering to deploy the FTTP network and connect premises without charge to the property developer. This is clearly a competitive advantage to NBN Co, which is not available to commercial businesses who must recoup their costs from developers.

The differences in the approaches to pricing in greenfield developments between NBN Co and private providers will clearly have an effect on competition in that market segment. If NBN Co actively seeks business in these markets (rather than limit its operation to being a supplier of fibre as the provider of last resort), then developers have a clear incentive to use NBN Co to reduce their costs. The complainants argue that they would not be able to follow a similar pricing model given the need for greater financial backing and the risks of not being able to attract retail service providers to their networks if they were to recover full infrastructure costs from those providers when competing (and cheaper) mediums for service delivery are available (copper, coaxial and wireless).

The AGCNCO notes that the charging of developers for the capital costs of other economic infrastructure, such as water, sewerage, drainage, electricity, gas and roads is not unusual. Indeed, as the Productivity Commission noted in its report on first home ownership (PC 2004), developer contributions for these infrastructure items have increased over the past 20 years:

For at least 20 years ... the trend has been to install infrastructure [economic and social] from the outset, with more of the initial funding burden shifted onto developers through upfront charges. Developers have in turn sought to pass the charges on in higher prices for serviced lots and house and land packages. (p. 156)

In the home ownership study, the Commission said that such upfront charging was an efficient way to fund such service provision. The level of upfront charges would need to be determined in a manner that takes into account the mix of local and shared (more diffuse and community wide) benefits (PC 2004). But even in instances of shared infrastructure (such as network infrastructure), upfront charging was efficient:

... the Commission sees considerable merit in the use of upfront charging to finance major infrastructure where the incremental costs can be well established and, in particular, where such increments are likely to vary across developments (because of location and terrain). (p. 169)

The principles set out in the Commission's 2004 report suggest that while there is a measure of developer contribution (in the form of pit and pipe costs), efficiency improvements, viewed from an economy-wide perspective, could arise from NBN Co varying its pricing strategy in greenfield developments.

That said, the DBCDE, in its response to the complaints, advised the AGCNCO that the pricing model reflected the Government's objective of achieving a common entry level broadband price structure for all Australian premises across all technologies used in the rollout:

The return being sought from NBN Co is determined on a national product basis which is consistent with its mission of developing a ubiquitous national network providing superfast broadband services to all premises.

Consistent with achieving this objective, the DBCDE noted that the developer charging strategy reflected:

... concern that end-users in new developments could face costs in being connected to fibre that would not be charged in established areas and the need to maximise access to nationally consistent outcomes, including service performance and uniform national wholesale pricing. (p. 4)

As noted earlier, in relation to competitive neutrality policy, at issue is whether the business earns a commercial rate of return overall (discussed in the following section). Consideration of the impacts on competition of different pricing for particular market segments is not a matter for competitive neutrality policy.

FINDING 3.5

NBN Co's pricing model for individual goods or services in particular market segments, in itself, is not a breach of competitive neutrality policy.

The expected rate of return on assets and related issues

The complainants allege that NBN Co's targeted (internal) rate of return of 7 per cent (referred to in some documents as a rate of return of 7.04 per cent), and the timeframe over which it is expected to be achieved, represents a breach of competitive neutrality policy. Specifically, they claim that it is:

- not achievable under the planned pricing structure
- not a commercial rate of return
- not achievable within a reasonable timeframe
- not representative of the cost of meeting NBN Co's shareholder loans.

An internal rate of return represents the rate at which the net present value of costs and revenues is equal to zero. It does not account for the opportunity cost of capital employed. Although not stated in the publicly available information about NBN Co's internal rate of return, the DBCDE informed the AGCNCO that the published 7 per cent internal rate of return is net of estimated tax payments made after 2028, and on a pre-tax basis could be closer to 8 per cent.

From a commercial planning perspective, an internal rate of return is a useful metric as projects that yield rates of return greater than the weighted average cost of capital

(WACC) are wealth creating. It is a separate question as to whether alternative investments could produce greater returns on the assets that are employed. Thus, at issue is whether the return from the project that NBN Co has undertaken to complete (building the national broadband network) will deliver a commercial return commensurate with its WACC. As the building of the national broadband network constitutes NBN Co's entire operations, this return will also approximate the company's expected commercial rate of return from all activities.

As noted earlier, competitive neutrality policy requires government businesses to account for all costs and to charge prices such that they earn a commercial rate of return over a reasonable timeframe. The *Competitive Neutrality Policy Statement* (Australian Government 1996) establishes the relevant criteria:

GBEs [government business enterprises] are specifically required to achieve, over time, as a minimum benchmark, economic rates of return on assets for their commercial operations equivalent to the long-term bond rate plus an appropriate margin for risk. (p. 18)

Is the targeted rate of return achievable under the pricing model?

Unlike other investigations relating to rates of return (such as the investigation into the Australian Valuation Office, Investigation Report no. 11 (AGCNCO 2004)), there is no data on NBN Co's financial performance to date to verify the achievement or otherwise of a commercial rate of return. Given that NBN Co is in its infancy, the AGCNCO has examined the processes used by NBN Co to determine its forecast revenues and costs. In this *ex ante* context, important considerations in relation to the pricing model are:

- the presence of sound processes for setting cost estimates and pricing
- the presence of appropriate sensitivity testing around the assumptions that underpin the business case
- recognition that NBN Co has adopted a 'cross-subsidy' pricing model in order to achieve the Government's stated objective of offering a common entry level broadband price structure.

NBN Co's summary business case (NBN Co 2010b) and corporate plan (NBN Co 2010a) state that the company expects to achieve an internal rate of return of 7 per cent. This is based on a 30 year planning model which sets out assumptions of demand, revenues and costs. In recognition of significant uncertainties, NBN Co has undertaken to update its corporate plan annually (NBN Co 2010b):

The assumptions made by the Company, which underpin the Plan, together with the business strategies and development of capabilities of the business, how the Company

will measure its achievement of the financial and operational objectives, and the risk management and its mitigation strategies, will be reviewed on a regular basis to take into account the latest major developments; it is anticipated that the Plan will be updated at least once a year. (p. 14)

DBCDE, in its response, referred to an independent report which assessed NBN Co's Corporate Plan:

An independent report on NBN Co's Corporate Plan by Greenhill Caliburn (executive summary released in April 2011) considered key assumptions underlying revenue and cost projections in the Corporate Plan appear to be in line with a range of available domestic and international benchmarks, and are consistent with the stated policy objectives of the government with respect to the NBN.

NBN Co has conducted a number of sensitivity tests to clarify, in part, the impact of these uncertainties. The tests centre around the two major influences on the expected rate of return — the demand for services and construction costs (table 3.1).

Table 3.1 Sensitivity of the internal rate of return

<i>Scenarios</i>	<i>High construction costs</i>	<i>Mid construction costs</i>	<i>Low construction costs</i>
	%	%	%
Mid demand with high average revenue per user	7.6	8.3	8.8
Mid demand with mid average revenue per user	6.3	7.0	7.6
Low demand with low average revenue per user	5.3	6.1	6.7

Source: NBN Co (2010a, p. 25).

The planning approach, updates and sensitivity testing represent efforts by NBN Co to help identify its cost base and therefore set prices that can achieve its targeted rate of return.

NBN Co's pricing model is also subject to further scrutiny, by the ACCC, in order to gain approval for its a special access undertaking (SAU). As NBN Co states in its Corporate Plan (NBN Co 2010a):

It is proposed that NBN Co's SAU will cover key price and product aspects of access to NBN Co's fibre, wireless and satellite networks, as well as a limited range of non-price terms and conditions.

... When the SAU is lodged with the ACCC, the ACCC is required to assess the SAU against a series of statutory criteria (known as the 'reasonableness' criteria). These criteria include the promotion of competition, encouraging economically efficient investment in and use of infrastructure, the legitimate business interests of access providers, the interests of access seekers and direct costs. (pp. 106-7)

Such scrutiny will test NBN Co assumptions and provide greater clarity on whether the proposed pricing model is likely to achieve NBN Co's targeted rate of return.

The AGCNCO notes that the assumptions used by NBN Co to develop its corporate plan, business case and pricing have been subject to scrutiny and sensitivity testing. NBN Co is taking steps to be satisfied that its targeted rate of return is achievable under its pricing model.

Does the targeted rate of return represent a commercial return?

Competitive neutrality policy allows for commercial rates of return to be determined in a number of ways. One way is for the rate of return to be agreed to by the government (through its shareholder ministers). The *Competitive Neutrality Guidelines for Managers* (Treasury and DFA 2004) state:

GBEs [government business enterprises] already have specific arrangements in place to determine their RoR [rate of return]. These are agreed by the Minister for Finance and Administration and the responsible portfolio Minister. The Treasurer is also consulted. (p. 30)

As discussed in chapter 1, in the case of NBN Co, the Government's Statement of Expectations (Wong and Conroy 2010) states that:

The Government's vision for NBN Co is that it operates as a commercial entity. (p. 2)

The DBCDE in its response to the complaints also advised that:

In pursuing the objectives set by the government, NBN Co has been established to operate on a commercial basis.

That the government expects NBN Co, subject to GBE requirements, to operate as a commercial entity is reiterated in the Statement of Expectations.

The DBCDE noted that no specific rate of return has been stipulated by the shareholders. As set out in NBN Co's Corporate Plan, the direction regarding the rate of return is that:

The expected rate of return should, at a minimum, be in excess of current public debt rates. (NBN Co 2010a, p. 12)

A rate of return that exceeds the long term bond rate is a necessary condition to ensure compliance with competitive neutrality principles. However, it is not, of itself, sufficient, in that the policy also requires a return which includes an appropriate margin for risk.

The DBCDE is silent on what may constitute an appropriate risk margin for NBN Co as a commercial business:

The Corporate Plan provides for taxpayers to get their investment back, with interest; the NBN is forecast to generate a rate of return higher than the government bond rate.

NBN Co's expected rate of return is 7.04 per cent, which compares favourably with the average 10 year bond rate (July 2009 to November 2010) of 5.39 per cent ...

The Minister for Broadband, Communications and the Digital Economy has stated that (Inside Business 2010):

... we have never taken the approach that we need to make the rate of return that the telco sector is used to. This is a project which returns all of the government's money and interest costs, and makes a modest return of six to seven per cent.

The NBN is seen by the Government as the platform for delivering a number of its telecommunications industry reforms. As put by DBCDE:

By investing in the NBN, the government is putting in place the essential underlying infrastructure which is the platform for Australia's improved participation in the digital economy. The government considers the structural reform it is pursuing provides a once-in-a-generation opportunity to create a level playing field and enable retail competition and investment to flourish for the benefit of consumers.

The presence of non-commercial benefits from NBN Co's business activities (examined later) does not over-ride the commercial discipline that underlies competitive neutrality policy, including the requirement to earn a rate of return that justifies the long term retention of assets in those activities.

The weighted average cost of capital

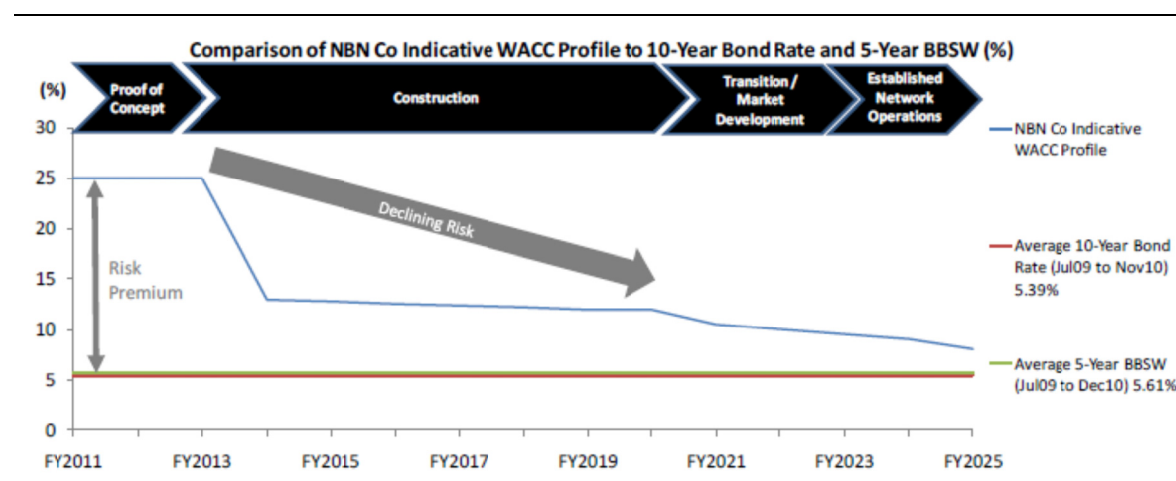
The *Competitive Neutrality Guidelines for Managers* (2004) provides guidance on how to determine a commercial rate of return when a benchmark rate has not been set by government. A number of approaches are discussed, including determining the WACC.

The WACC is the average of the minimum rates of return owners and creditors require to be paid, reflecting the risk profile of the business. As put by NBN Co, WACC estimates describe the '... return that has to be generated, in expectation, to attract capital investment from equity and debt investors' (NBN Co 2010a, p. 143). Once this has been determined, it becomes the benchmark rate against which a rate of return can be compared.

NBN Co's corporate plan provides estimates of the company's WACC over the next 30 years. These estimates vary across the phases of the roll out, reflecting the different levels of expected risk for each of the phases. When risk is greatest, during the proof of concept phase, estimates of the WACC are close to 25 per cent. Once established, WACC estimates fall to between 8 and 9 per cent (figure 3.1). The

average WACC over the first 25 years, based on the expected amount of invested capital, was estimated to be between 10 and 11 per cent. (Comparisons made by NBN Co to other telecoms indicates that the cost of capital for non-incumbent European telecoms are in the order of 7 to 8 per cent and for regulated utilities/infrastructure of around 6.5 to 7.5 per cent (NBN Co 2010a, p. 144).)

Figure 3.1 **WACC estimates over NBN Co roll out**
2011-2025



Data source: NBN Co (2010a, p. 143).

The *Competitive Neutrality Guidelines for Managers* (Treasury and DFA 2004) advise that the WACC approach may only be workable for a business which could benchmark its cost of equity (and debt) against other businesses:

The WACC approach is likely to be appropriate for businesses that have a mix of equity types and undertake activities that are reasonably well established in the private sector (where benchmark data on the cost of equity is available). (p. 32)

For industry sectors where a comparable WACC is not easily determined, and managers are only able to approximate the business' market risk, the guidelines suggest risk broad-banding. This approach applies a benchmark base cost of capital (the Australian Government's nominal long term bond rate) and adds a risk premium (for more detail see CCNCO 1998). The suggested risk premiums for low, medium and high risk activities are 3, 5 and 7 per cent respectively. Using such an approach to determine a commercial rate of return would be consistent with the shareholder direction given to NBN Co in relation to the returns sought.

Using NBN Co's estimates of the average long term (10 year) Australian Government bond rates (5.4 per cent) for consistency, the indicative risk broad-banding commercial rates of return range from 8.4 per cent for low risk activities to 12.4 per cent for high risk (table 3.2).

Table 3.2 Risk broad-banding estimates

<i>Risk assessment</i>	<i>Base rate</i>	<i>Risk premium</i>	<i>Required pre-tax rate of return</i>
	%	%	%
Low	5.4	3.0	8.4
Medium	5.4	5.0	10.4
High	5.4	7.0	12.4

Sources: Treasury and DFA (2004); NBN Co (2010a).

NBN Co’s expected (after tax) internal rate of return of 7 per cent from building the national broadband network will deliver a return to NBN Co that is below all risk broad-banding estimates of commercial rates of return.¹ NBN Co’s own estimates of risk (used to determine their average WACC of between 10 and 11 per cent or higher over the next 25 years) also suggest it views itself as operating in at least a medium risk environment for the foreseeable future. On this basis, the targeted 7 per cent return after tax does not represent a commercial rate of return.

DBCDE’s response to the complaints confirms that the government has internalised the cost of risks that a commercial entity would need to bear:

The project is being financed by the government because it is best able to mobilise the capital required and manage the risks involved, rather than the private sector which would require an additional risk premium for risks controlled by government.

Under competitive neutrality policy, government businesses should adjust their cost base to offset advantages they receive by virtue of government ownership. This applies to the cost of debt, including any explicit or implicit government guarantees, but as discussed later, NBN Co has no debt exposure in the foreseeable future.

Non-commercial benefits

Where governments direct their businesses to undertake (or offer to private businesses) non-commercial activities, the business can retain its commercial focus and operation by being fully (and transparently) funded for the non-commercial activity through a ‘community service obligation’ (CSO) payment. Australian governments have generally based their definitions of CSOs on the formulation proposed by the Steering Committee on National Performance Monitoring of GTEs:

A Community Service Obligation arises when a government specifically requires a public enterprise to carry out activities relating to outputs or inputs which it would not

¹ Taking into account tax payments, the expected internal rate of return is likely to be close to the required pre-tax rate of return for a low risk business. However, as NBN Co does not consider itself low risk, and would not be considered such in the first 30 years of its operations, a return of close 8 per cent would not be considered a commercial rate.

elect to do on a commercial basis, and which the government does not require other businesses in the public or private sectors to generally undertake, or which it would only do commercially at higher prices. (SCNPMGTE 1994, p. xi)

DBCDE and NBN Co argue that NBN Co's 'commercial' rate of return should be viewed in the context that the company has been established to deliver both commercial and social benefits. As put by DBCDE:

The government has created NBN Co to build and operate a new fibre network (supplemented by next generation wireless and satellite technology) to address a number of failures in the telecommunications market ...

NBN Co, in its Statement of Corporate Intent 2011-2013 (NBN Co 2011e), states:

As a commercial company, NBN Co has been established with the aim of providing an acceptable return to our shareholders.

However, the NBN is a Government initiative that has more than just a commercial return as its objective – it has a broader set of social and economic objectives, which NBN Co must balance with commercial objectives. ...

It will have benefits for education, health, environment and transport management, entertainment delivery and business productivity. It is not part of NBN Co's role to determine the nature, magnitude or prioritisation of these additional benefits, but they are expected to be above and beyond the financial returns to be made by the Government's investment. (p. 11)

NBN Co is not funded through an explicit CSO for the delivery of non-commercial benefits that the Government requires it to provide. Further, the AGCNCO has not been provided with any quantification of the non-commercial benefits that are expected to be generated by the business activities of NBN Co.

In the absence of such quantification the AGCNCO is unable, at this point, to determine whether the difference between a commercial rate of return for NBN Co (reflecting its risk profile), as required by competitive neutrality policy, and NBN Co's expected rate of return of 7 per cent, is adequately explained by the non-funded community service obligations required of NBN Co by the Government. There is a potential *ex ante* breach of competitive neutrality policy.

FINDING 3.6

In the absence of a quantification of the non-commercial benefits to be delivered by NBN Co, the targeted rate of return of NBN Co represents a potential ex ante breach of competitive neutrality policy.

RECOMMENDATION 3.1

The Australian Government should arrange for an analysis of the nature and magnitude of the non-commercial benefits required to be delivered by NBN Co. On receipt of the analysis, the Australian Government should put in place accountable and transparent community service obligation funding.

RECOMMENDATION 3.2

To comply with competitive neutrality policy, NBN Co would need to adjust its pricing model by taking into account funding by the Australian Government for its community service obligations and would need to demonstrate that the adjusted pricing model is expected to achieve a commercial rate of return that reflects its risk profile.

Is a commercial rate of return achievable in a reasonable timeframe?

NBN Co's business case and corporate plan are based on a 30 year model, with positive cash flows (after capital and debt costs) accruing from 2022. The complainants allege that this timeframe is unreasonable when viewed from a commercial perspective and that it represents a breach of competitive neutrality policy.

As stated by OPENetworks:

The further question is what commercial returns should NBN Co be providing its shareholders now or even within a reasonable timeframe, given that no other competitor or commercial network builder/provider/operators, such as OPENetworks can delay producing profits for their shareholders if they are to carry on a sustainable business. It is not an answer for NBN Co to expend billions of taxpayer funds to eliminate other competitive network builder/provider/operators from the market over what may even be a period of say 3 to 5 years, and then try to justify that delay in profits by only then declaring a commercial dividend on profits because of anti-competitive processes. That is not what the government through the competition reforms that produced the Competitive Neutrality Policy had in mind for a government owned business of significance operating in the commercial marketplace.

Competitive neutrality policy and guidelines provide limited guidance as to what is considered to be a reasonable timeframe in which to earn a commercial rate of return. The *Competitive Neutrality Policy Statement* (Australian Government 1996) states that returns should be such to justify the retention of assets in the business in the long-term:

All Commonwealth organisations identified as engaging in significant business activities will be required to earn commercial returns at least sufficient to justify the

long-term retention of assets in the business, and to pay commercial dividends (ie, equivalent to the average for their industry) to the Budget from those returns. (p. 17)

A number of previous AGCNCO investigations have examined issues relating to the timeframes under which commercial returns should be achieved — CCNCO 2000 and 2001, for example. The Office has previously stated that:

... the commercial rate of return requirement is not a single year target, but rather is an average that should be achieved over a reasonable period. Failure to earn a commercial rate of return in any particular year, or even over several years during the establishment phase of a business, may not necessarily constitute a breach of competitive neutrality. (CCNCO 2001, p. 11)

Consistent with this advice, a delay in NBN Co earning profits and commercial rates of return over their start-up phase is not necessarily a breach of competitive neutrality policy. Indeed, for major infrastructure projects, it can be the norm.

In question, however, is the reasonableness of the length of the start-up phase. NBN Co's business case suggests that positive cash flows (after capital and debt costs) will be realised after 12 years (NBN Co 2010a, p. 133).

The DBCDE argue that within the first 15 years, where commercial returns will be negative or low, NBN Co will be the mechanism by which the Government delivers its telecommunications industry reforms and that the delay in achieving commercial returns is justified by the achievement of the Government's policy objectives:

NBN Co will be funded with government equity until NBN Co has sufficient cash flows to support private sector debt without explicit government support. The provision of equity is intended to enable NBN Co to implement the government's policy.

Should there be payments by the Government to NBN Co for the delivery of non-commercial benefits, the period prior to the achievement of commercial returns would be reduced.

FINDING 3.7

In the absence of a quantification of NBN Co's community service obligations, the expected timeframe for achieving a commercial rate of return represents a potential ex ante breach of competitive neutrality policy.

Does the rate of return meet the cost of NBN Co's shareholder loans?

The complainants put forward that the Government's commitment of funds to NBN Co represent a shareholder loan. On this basis, the funds should be viewed as debt

when assessing compliance with competitive neutrality policy. As suggested by Service Elements:

There is no certainty of a sale of shares or the business of NBN Co after the NBN is deemed by Government to be complete. As such the assurance of any ROR is illusory and a sham designed to avoid scrutiny by Australian voters by describing the funding by Government as a loan. If it is a loan then it should be on commercial terms and that is not the case.

NBN Co has received significant public funds through an equity investment by the Government. Government equity injections are expected to total over \$27 billion over the next 30 years (NBN Co 2010b). Payments in the form of equity are substantiated by NBN Co's financial report (NBN Co 2010e).

Competitive neutrality policy only requires debt neutrality provisions to be applied when monies are borrowed from the Australian Government or raised in the market. As stated in the Guidelines for Managers (Treasury and DFA 2004):

Managers must adjust their cost base, and therefore prices, where they borrow money at a rate that reflects the credit risk of the Australian Government as a whole rather than a rate reflecting the credit risk of that type of business activity. (p. 21)

In such circumstances, government businesses are required to make adjustments to their cost base so that debt is costed at commercial rates, reflecting the risk of the business on a stand-alone basis.

FINDING 3.8

The Australian Government's equity funding of NBN Co is not subject to the debt neutrality provisions of competitive neutrality policy.

Advantages received through Ministerial determinations

Issues of regulatory neutrality arise when government businesses are exempted from complying with regulations that are faced by their actual or potential competitors. Examples include exemptions from planning and environmental regulation and licensing requirements. Competitive neutrality policy requires that where issues of regulatory neutrality arise, government businesses are required to either operate under that regulation or alternatively account for the cost of any advantage by making payments to the official public account.

Managers must adjust their cost base, and therefore prices, by an amount equivalent to any advantage they accrue by not being subject to similar regulatory arrangements and obligations as their competitors. (Treasury and DFA 2004, p. 27)

OPENetworks puts forward that there is:

... a serious regulatory benefit that may be bestowed on NBN Co if the Ministerial Instrument that is to set conditions for the FTTP network design and deployment determines that NBN Co standards and specifications shall apply, rather than those of say, Comms Alliance or in a Code approved by the ACMA for FTTP greenfield developments or as currently adopted by the various greenfield builder/provider/operators of FTTP networks (not just NBN co).

While a Ministerial determination that adopts NBN Co's current practice may provide a benefit if, in order to comply, other operators must change the products they supply, it does not exempt NBN Co from regulations that apply to other competitors. Thus, such determinations would not be a breach of the regulatory neutrality provisions within competitive neutrality policy.

Further, under the power to make Ministerial determinations contained in the *Telecommunications Legislation Amendment (Fibre Deployment) Act 2011*) no relevant determinations have been made.

FINDING 3.9

As no relevant Ministerial determinations have been made to date, there has been no breach of competitive neutrality policy. Further, if such determinations do not exempt NBN Co from regulations that apply to other competitors they would not be a breach of the regulatory neutrality provisions within competitive neutrality policy.

3.3 Summary of findings and recommendations

In relation to the issues raised in the complaints that fall within competitive neutrality policy, the AGCNCO found that:

- NBN Co's decision to be an alternative provider of fibre in greenfield developments (rather than only the provider of last resort) is not dependent on a competitive advantage by virtue of its government ownership, and is not a breach of competitive neutrality policy.
- NBN Co's use of its profile to promote itself to the development industry as a provider of fibre to the home in greenfield developments is an operational decision, and is not a breach of competitive neutrality policy.
- NBN Co's long term contracts with Telstra are enabled by the size of the corporation, and are not a breach of competitive neutrality policy.

-
- NBN Co's tender process for establishing a panel of appropriately qualified and experienced providers who can build and install fibre on its behalf is not a breach of competitive neutrality policy.
 - NBN Co's pricing model for individual goods or services in particular market segments, in itself, is not a breach of competitive neutrality policy.
 - In the absence of a quantification of the non-commercial benefits to be delivered by NBN Co, the targeted rate of return of NBN Co represents a potential *ex ante* breach of competitive neutrality policy.
 - In the absence of a quantification of NBN Co's community service obligations, the expected timeframe for achieving a commercial rate of return represents a potential *ex ante* breach of competitive neutrality policy.
 - The Australian Government's equity funding of NBN Co is not subject to the debt neutrality provisions of competitive neutrality policy.
 - As no relevant Ministerial determinations have been made to date, there has been no breach of competitive neutrality policy. Further, if such determinations do not exempt NBN Co from regulations that apply to other competitors they would not be a breach of the regulatory neutrality provisions within competitive neutrality policy.

The AGCNCO has found that NBN Co is in potential *ex ante* breach of competitive neutrality requirements. The AGCNCO recommends that to comply with the Australian Government's competitive neutrality policy:

- The Australian Government should arrange for an analysis of the nature and magnitude of the non-commercial benefits required to be delivered by NBN Co. On receipt of the analysis, the Australian Government should put in place accountable and transparent community service obligation funding.
- To comply with competitive neutrality policy, NBN Co would need to adjust its pricing model by taking into account funding by the Australian Government for its community service obligations and would need to demonstrate that the adjusted pricing model is expected to achieve a commercial rate of return that reflects its risk profile.

References

- AAP 2011, Optus strikes \$800m NBN deal, 23 June, www.news.com.au.
- AGCNCO (Australian Government Competitive Neutrality Complaints Office) 2004, *Australian Valuation Office*, Investigation Report No. 11, Canberra.
- Australian Government 1996, *Competitive Neutrality Policy Statement*, Canberra.
- Bremner D. 2011, NBN Co update, presentation to *2011 National General Assembly of Local Government*, 21 June.
- CCNCO (Commonwealth Competitive Neutrality Complaints Office) 1998, *Rate of Return Issues*, CCNCU Research Paper, Canberra.
- 2000, *National Rail Corporation Ltd*, Investigation Report no. 3, Canberra.
- 2001, *ARRB Transport Research Limited*, Investigation Report no. 6, Canberra.
- Conroy S. (Minister for Broadband, Communications and the Digital Economy) 2009, *New National Broadband Network*, joint media release of the Prime Minister, Treasurer, Minister for Finance, and the Minister for Broadband, 7 April, Canberra.
- 2010, *Provision of Fibre in new developments*, 9 December.
- 2011a, *Refined Arrangements for Fibre in New Developments*, 15 June.
- 2011b, *Government — Telstra — NBN Co Deal Delivers Historic Telecommunications Reform*, 23 June.
- Dalzell B. 2010, *Identified National Broadband Network (NBN) funding sources and allocations*, Background Note, Parliamentary Library, 16 August.
- DBCDE (Department of Broadband, Communications and the Digital Economy) 2008, *Request for proposals to roll-out and operate a national broadband network for Australia*, Request for proposals number DCON/08/18, 11 April, Canberra.
- 2009, *National broadband network: fibre to the premises in greenfield estates*, Consultation Paper, May, Canberra.
- 2010a, *NBN policy statements*, 20 June, Canberra.
- 2010b, *Policy statement – fibre in new developments*, 9 December, Canberra.
- 2011a, *Fibre in new developments, policy update*, 22 June, Canberra.

-
- 2011b, NBN legislative framework, Canberra http://www.dbcde.gov.au/broadband/national_broadband_network/nbn_legislative_framework, (accessed 29 September 2011).
- 2011c, Answers to Questions on Notice, submission 2.4 to the Joint Committee on the National Broadband Network, Question no. 6.5, Public Hearing 20 September.
- 2011d, National Broadband Network: Regional Backbone Blackspots Program, Canberra, http://www.dbcde.gov.au/broadband/national_broadband_network/national_broadband_network_Regional_Backbone_Blackspots_Program (accessed 10 November 2011).
- Inside Business 2010, *Broadband Profits less Import for Govt: Conroy*, 9 May 2010 <http://www.abc.net.au/insidebusiness/content/2010/s2894230.htm>.
- KPMG-McKinsey 2010, National Broadband Network Implementation Study, 6 May, Sydney.
- Lee, T. 2011, Telstra vote on NBN deal faces long delay, *The Australian*, 30 April.
- and Hepworth A 2011, Tender shifts National Broadband Network risks to taxpayers, *The Australian*, 1 June.
- NBN Co 2010a, *Corporate Plan 2011-2013*, 17 December 2010, NBN Co Limited, Sydney.
- 2010b, *NBN Co Business Case Summary*, 24 November, NBN Co Limited, Sydney.
- 2010c, Fact sheet: new developments, NBN Co Limited, Sydney.
- 2010d, Product and pricing overview for access seekers, December, NBN Co Limited, Sydney.
- 2010e, *Annual Report 2009-10*, NBN Co Limited, Sydney.
- 2011a, *NBN Co and Telstra Sign Binding Definitive Agreements*, Media release, 23 June, NBN Co Limited, Sydney.
- 2011b, *Introducing NBN Co's special access undertaking*, NBN Co Limited, Sydney.
- 2011c, New developments, Sydney, <http://www.nbnco.com.au/getting-connected/new-developments.html>, (accessed 29 September).
- 2011d, Answers to Questions on Notice, submission 2.2 to the Joint Committee on the National Broadband Network, Question no. 5, Public Hearing 5 July.
- 2011e, *Statement of Corporate Intent 2011-2013*, NBN Co Limited, Sydney.
- 2011f, *NBN Co Releases 12-Month National Rollout Plan*, Media release, 18 October, NBN Co Limited, Sydney.

-
- PC (Productivity Commission) 2004, *First Home Ownership*, Inquiry Report No. 28, Melbourne.
- Quigley M. 2011, Public hearing transcript for the Joint Committee on the National Broadband Network, 16 May.
- SCNPMGTE (Steering Committee on National Performance Monitoring of GTEs) 1994, *Community Service Obligations: Some Definitional, Costing and Funding Issues*, Canberra.
- Treasury 2011, *Budget: Portfolio Budget Statements 2011-12, Budget Related Paper no. 1.3*, 'Broadband, Communications and the Digital Economy Portfolio'.
- and DFA (Department of Finance and Administration) 2004, *Australian Government Competitive Neutrality Guidelines for Managers*, Canberra.
- Wong, P. (Minister for Finance and Deregulation) and Conroy, S. (Minister for Broadband, Communications and the Digital Economy) 2010, *Statement of Expectations*, shareholder letter to NBN Co, Canberra.
- Yeates, C. 2010, Conroy warns of delay on NBN, *The Age*, 16 September.

