2

Rollout of the National Broadband Network

Background

2.1 The Government's primary objectives for the National Broadband Network (NBN) are that it will:

- 'deliver significant improvement in broadband service quality to all Australians,
- address the lack of high-speed broadband in Australia, particularly outside of metropolitan areas
- reshape the telecommunications sector.'[1]

2.2 The key features of the NBN are that it:

- connect 93 per cent of homes, schools and workplaces (premises) with optical fibre—fibre to the premises (FTTP)—providing broadband services to people living in urban and regional towns with speeds of 100 megabits per second (Mbps)
- use next generation wireless and satellite technologies to deliver 12 Mbps or more to the remaining 7 per cent of premises in remote and regional parts of Australia
- provide fibre optic transmission links between cities, major regional centres and rural towns
- provide a national wholesale-only, open access broadband network.

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

2.3 The NBN's Corporate Plan states that it will be built and operated by NBN Co Limited (NBN Co) on a commercial basis and at arm's length from Government using public and private investment. The NBN is expected to be rolled out simultaneously in metropolitan, regional and rural areas.[2]

2.4 It is the Government's expectation that 93 per cent of premises will be accessed by FTTP; with four per cent accessed by fixed wireless technology; and the final three per cent will be accessed through next generation satellite technology.[3]

2.5 The NBN has been planned as a monopoly national fixed-line network from the Points of Interconnect (POIs) to premises. The NBN Co will be able to cross subsidise from its national revenue flows to offer a common entry level wholesale broadband price structure for all premises across all technologies.[4]

2.6 Fibre optic technology has been selected over alternative technologies because of the superior performance of a fibre network over a copper network, wireless and Hybrid Fibre Coaxial (HFC). The NBN will become competitive with ADSL technology at entry level (12Mbps), will be competitive against wireless technology at the same level, and will provide a superior and more reliable performance over distance. HFC is competitive with the NBN at entry level within the existing HFC network footprint and as the NBN Co Corporate Plan notes the HFC networks are currently upgraded in Melbourne up to 100 Mpbs and have the potential with node-splitting to be upgraded to 240 Mpbs.[5]

2.7 The FTTP technology has been chosen over Fibre to the Node (FTTN) technology as it is considered by the Government to be superior because of its greater long-term benefit, albeit at a greater short-term cost. In evidence before the committee, Mr Mike Quigley, Chief Executive Officer of NBN Co stated:

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

2 NBN Co, *Corporate Plan 2011–2013*, 17 December 2010, p. 12.

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

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

5 NBN Co, *Corporate Plan 2011–2013*, 17 December 2010, p. 42.

> with a high-speed service. You could go only so far and then you would start to run into the problems you have with ADSL and ADSL2, unless you just keep pushing that fibre further and further, which will make the copper loops shorter and shorter, so there is a cost-benefit trade-off there. But, remember, as you push the fibre further and deeper and make the copper loops shorter and deeper with a fibre to the node or fibre to the cabinet, you need to put in more and more and more cabinets. Each one of those cabinets needs to be powered and active, and then they will have the same issues that we have talked about, such as of water ingress. So there comes a point at which you say this still is not the end architecture. Almost everybody in the world says that the right end architecture is fibre to the premise.[6]

2.8 Moreover, from the perspective of Government policy, FTTP allows for the decommissioning of the copper network, laying the groundwork for the structural separation of Telstra and providing a level playing field for competition at the retail level. In evidence before the committee, Mr Peter Harris, Secretary of the Department of Broadband, Communications, and the Digital Economy (DBCDE) stated:

> The Government started out with fibre to the node and ran a tender process for that purpose. For whatever reason the Telstra proposition to that failed and the independent panel that assessed the bids said there was no value for money. And probably the most important aspect for me when I came in and looked at this is that the ACCC said that this investment in fibre to the node was unlikely to necessarily deliver the kind of benefit that the Government perceived of it and that a substantial part of it would effectively be wasted, in terms of a competition outcome. So the Government is there, again, with an attempt to do fibre to the node that was previously unsuccessful and it is required to either do nothing or move up to fibre to the premises. It chose to move up to fibre to the premises...[7]

2.9 The rollout of the NBN began with the development of three pre-release sites in Tasmania, at Midway Point, Smithton and Scottsdale. In Tasmania approximately 4000 premises have been passed and of these 2000 have

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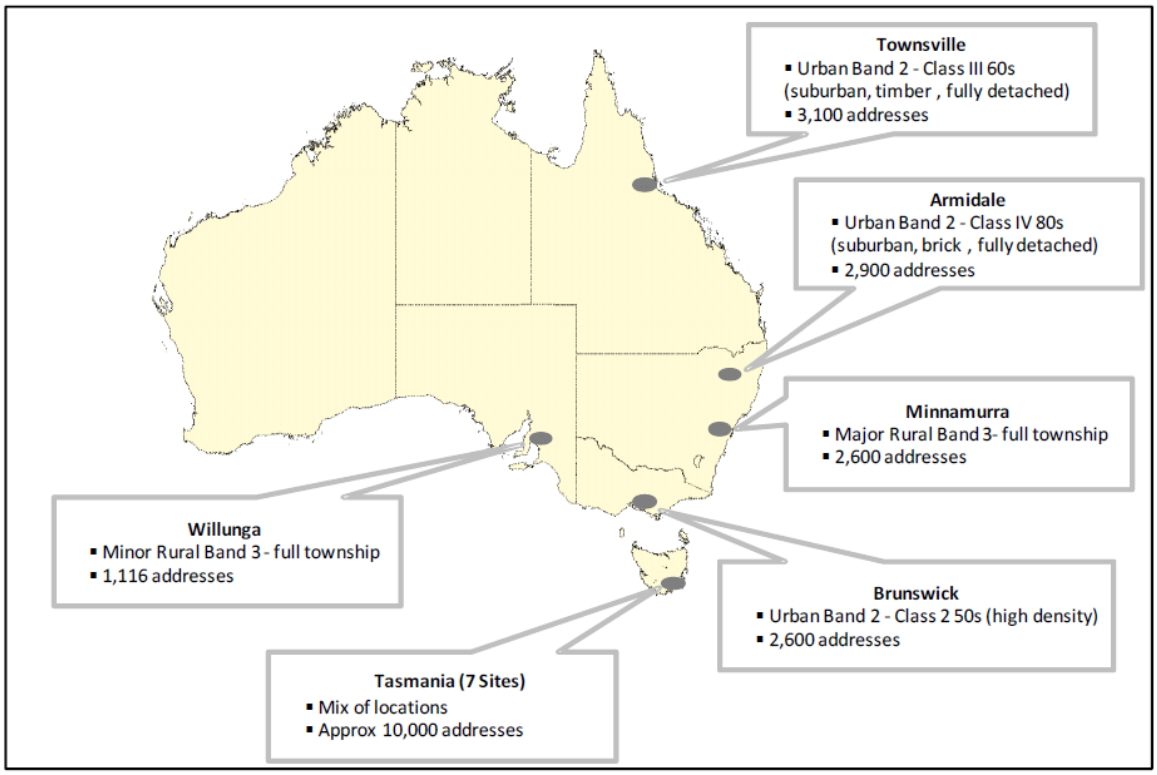
6 Mr Mike Quigley, Chief Executive Officer, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, pp 24–25.

7 Mr Peter Harris, Secretary, Department of Broadband, Communications and the Digital Economy (DBCDE), Transcript of Evidence, Sydney, 16 May 2011, p. 39.

consented to have a lead-in connected through their home with 723 services having been ordered or which 712 have been activated.[8]

2.10 Stage two of the NBN rollout in Tasmania, announced on 28 April 2011, will involve the rollout of the NBN First Release sites at seven further sites—Deloraine, Kingston Beach, George Town, Sorell, South Hobart, St Helens and Triabunna. In addition, there are five First Release sites on the mainland—Armidale, Willunga, Brunswick, Townsville and Kiama (see Figure 3.1).[9]

Figure 2.1 National Broadband Network First Release Sites



Source NBN Co Corporate Plan 2011–2013, p. 68.

2.11 The First Release Sites have been selected as part of NBN Co's live trial of its network design and construction methods. They will test, cost and design assumptions for the network under a broad range of conditions.[10]

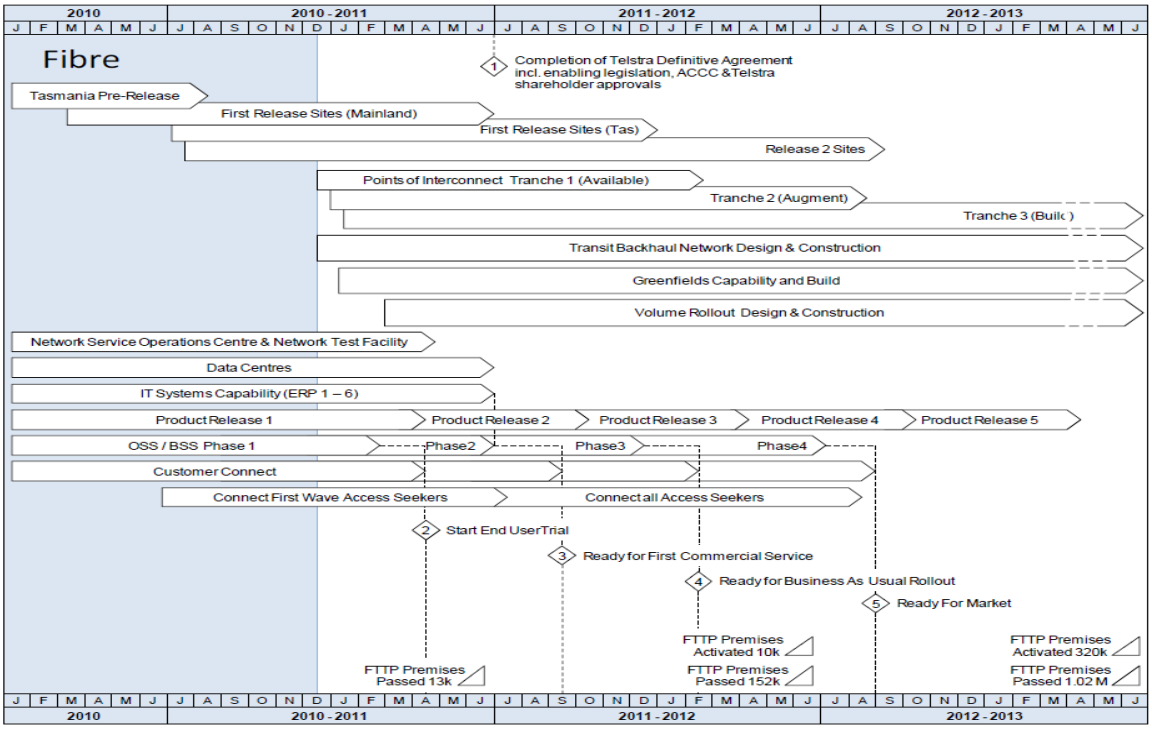
2.12 Figures 3.2 and 3.3 illustrate the proposed timetable for rollout during the life of the NBN Co Corporate Plan 2011-2013, of fibre, wireless and satellite services.

8 Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, p. 4.

9 Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, p. 4.

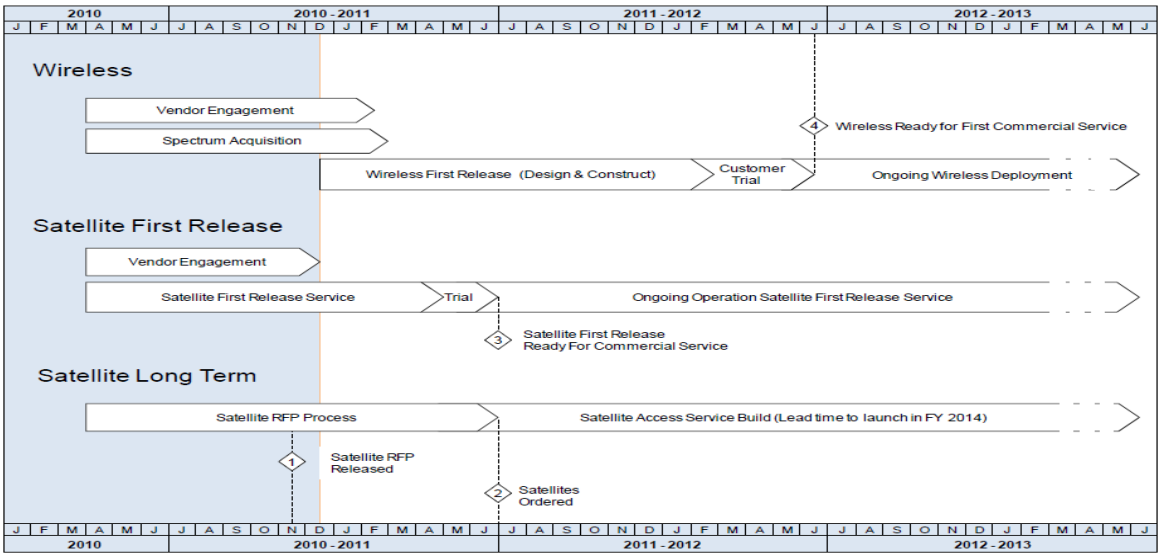
10 NBN Co, *Corporate Plan 2011–2013*, 17 December 2010, p. 68.

Figure 2.2 High Level FTTP timeline from 30 June 2010 to 30 June 2013



Source NBN Co Corporate Plan 2011–2013, p. 19.

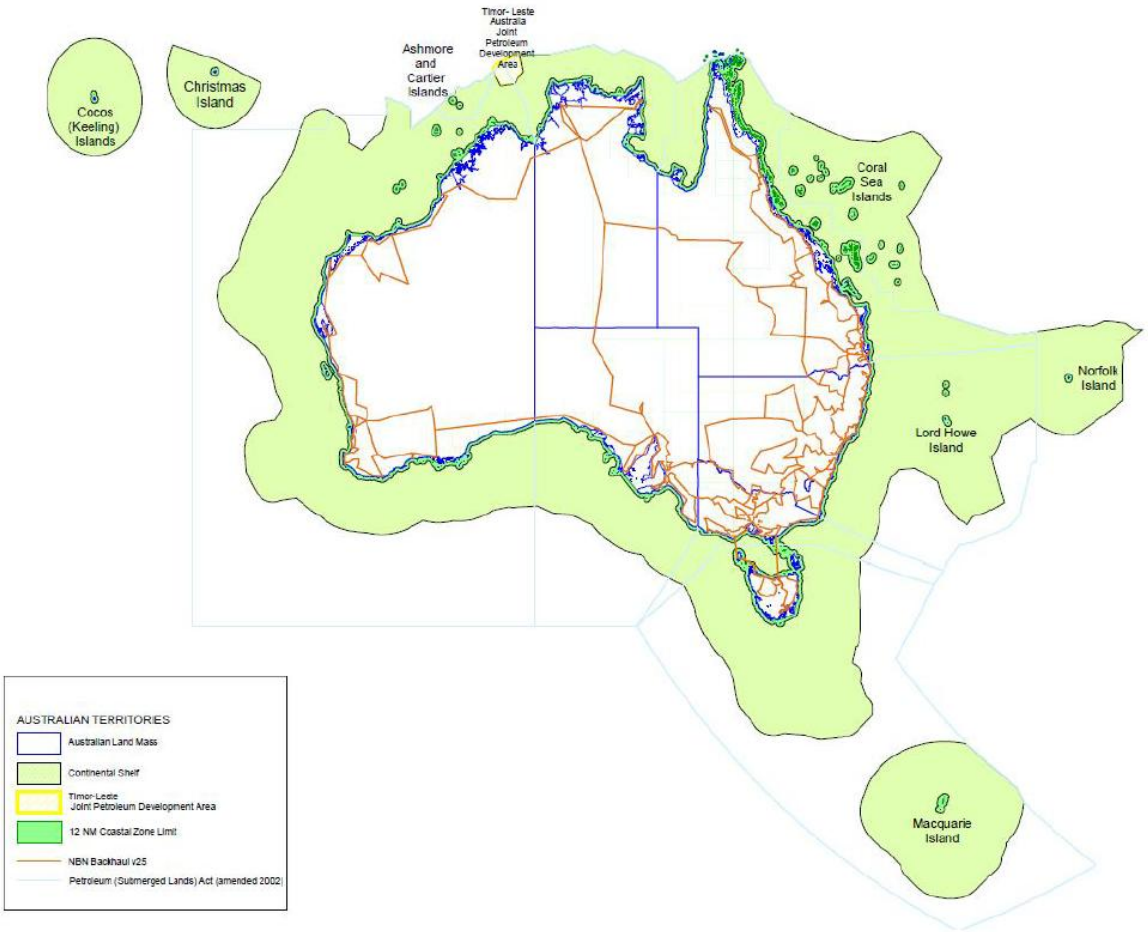
Figure 2.3 High Level Wireless and Satellite Timeline from 30 June 2010 to 30 June 2013



Source NBN Co Corporate Plan 2011–2013, p. 21.

2.13 Figure 3.4 shows the expected range of satellite coverage under the NBN and Figure 3.5 shows the expected wireless footprint and proposed satellite earth stations.

Figure 2.4 Satellite Coverage under the National Broadband Network



Source *NBN Co Corporate Plan 2011–2013, p. 72.*

2.14 The NBN Co has also reached agreement on nine of the nineteen proposed Second Release Sites, including extensions to the First Release Sites at Kiama, Townsville and Armidale, and new sites at Springfield Lakes, Toowoomba, inner northern Brisbane, Riverstone in Western Sydney, Coffs Harbour and Gungahlin, Australian Capital Territory (ACT).[11]

11 Mr Mike Quigley, NBN Co, Transcript of Evidence, Canberra, 5 July 2011, p. 1.

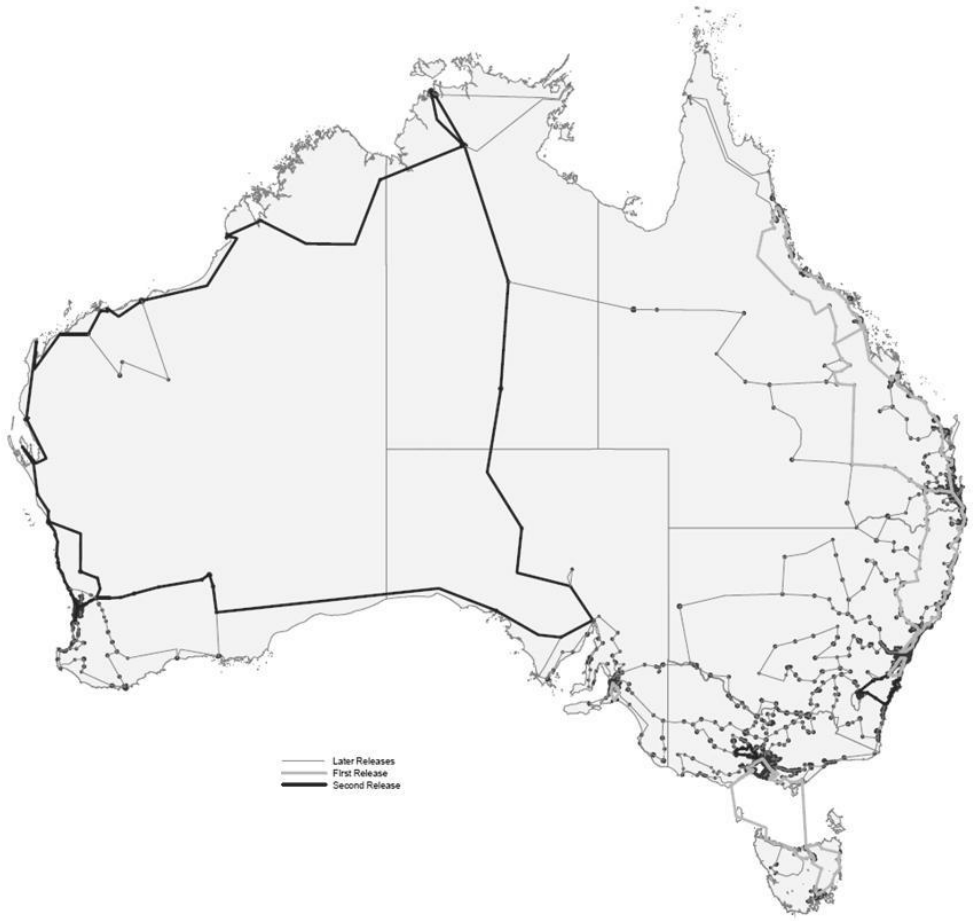
Figure 2.5 National Broadband Network Wireless Footprint and Satellite Earth Stations (subject to changes based on the semi-distributed PoI model)

Source NBN Co Corporate Plan 2011–2013, p. 71.

2.15 Underpinning the development of the NBN is the Regional Backbone Blackspots Program (RBBP), designed to improve the supply of backbone transmission links to regional centres where there is a lack of competitive backbone infrastructure. The six priority locations chosen are Geraldton, Darwin, Emerald, Longreach, Broken Hill, Victor Harbour and South West Gippsland. The RBBP will create service ready POIs for 100 regional locations with provision for further access points approximately every ten kilometres along each backbone route.[12] While in Broken Hill, the committee inspected the backhaul facilities built by Nextgen Networks as part of the RBBP. Nextgen Networks was testing the system at 100 Gigabytes, which is 1000 times faster than the official specification. Figure 5.6 illustrates the proposed transit backhaul rings under the NBN.

12 DBCDE, *NBN:Regional Backbone Blackspots Program – fast facts*, viewed 11 August 2011, <www.dbcde.gov.au/blackspots_program>

Figure 2.6 Transit Backhaul Rings (subject to changes based on the semi-distributed PoI model)



Source NBN Co Corporate Plan 2011–2013, p. 65.

2.16 Within the context of its 30-year business model, NBN Co estimated the construction of the NBN would take 9.5 years to complete.[13] The timelines contained in the NBN Co Corporate Plan and for the longer term in the NBN Co business model, are subject to a range of contingencies and assumptions.[14] In addition to the risks of construction budget and schedule, these include the impact of the ACCC decision on POIs (i.e. raising the number of POIs from 14 to 121) and the Binding Definitive Agreement with Telstra. The NBN Co explained:

> Those are the targets we will be making the committee aware of and you will find them in the Corporate Plan. There were some targets for numbers of premises passed and premises activated, but I would like to draw the committee's attention to the fact that they were indicative targets in the Corporate Plan with a number

13 NBN Co, *Corporate Plan 2011–2013*, December 2010, p. 22.

14 NBN Co, *Corporate Plan 2011–2013*, December 2010, pp 45–52.

> of dependencies. The first and most important dependency is the availability of exchange facilities for the location of semidistributed POIs. As you all know, our intention is to use Telstra facilities for a large number of those points of interconnect. Clearly, until the Telstra negotiations are completed and the Telstra deal is finally done, we cannot move ahead with making those points of interconnect available. That is an issue with which we have to deal.[15]

2.17 The ACCC explained its decision on increasing the number of POIs in the following terms:

> Broadly, the approach we took in the advice to government on points of interconnection was driven by the long-term interests of users and took into account both the retail and wholesale aspects of where the points of interconnection with the National Broadband Network would be. This was an environment where there is existing transmission competition in a number of areas, and effective competition, such that the regulations occurred in another set of areas. So our approach was to look at how we move the points of interconnection to be appropriate to a natural monopoly—that is, not to see scope creep so that the last few kilometres became the last few hundred kilometres.[16]

2.18 The purpose of the Telstra deal is to provide:

- progressive disconnection of copper services and decommissioning of Telstra's fixed line copper as the NBN Co FTTP network is rolled out;[17]
- a contractual commitment by Telstra not to use its HFC network for voice or broadband services;
- use of existing Telstra exchange infrastructure and space;[18]
- use of a significant portion of Telstra's existing duct and conduits;[19] and
- access to dark fibre and managed services for backhaul.[20]

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15 Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, pp 3–4.

16 Mr Rob Nicholls, General Manager, Convergence and Mobility Branch, Australian Competition and Consumer Commission (ACCC), Transcript of Evidence, Sydney, 16 May 2011, p. 47.

17 NBN Co, *Corporate Plan 2011–2013*, 17 December 2010, p. 51.

18 NBN Co, *Corporate Plan 2011–2013*, 17 December 2010, p. 51.

19 NBN Co, *Corporate Plan 2011–2013*, 17 December 2010, p. 51.

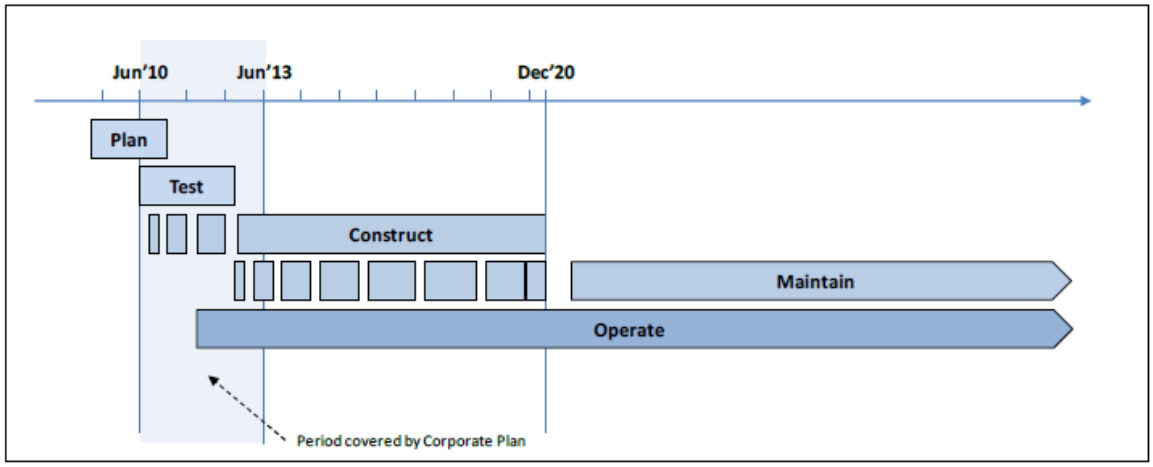
20 NBN Co, *Corporate Plan 2011–2013*, 17 December 2010, p. 51.

2.19 According to NBN Co, the Binding Definitive Agreement with Telstra represents a substantial improvement to the Corporate Plan and mitigates a number of potential risks to the NBN rollout.[21]

2.20 As previously stated, the Telstra deal has been agreed but is subject to conditions subsequent, including approval by the ACCC and endorsement by Telstra shareholders. The NBN Co has also signed a Definitive Binding Agreement with Optus, which will see the migration of Optus customers to the NBN and the decommissioning of those sections of the Optus HFC network not used by Optus to support other aspects of its business.[22]

2.21 Figure 3.7 illustrates the long term NBN timeline as contained in the 30 year business model for the NBN.

Figure 2.7 National Broadband Network Long-Term Timeline commencing in June 2010



Source *NBN Co Corporate Plan 2011–2013, p. 22.*

2.22 A recent report by Deloitte Access Economics titled *The Connected Continent: How the Internet is transforming the Australian economy* found that the internet is expected to contribute seven per cent annually to the Australian economy over the 'next five years or increasing from $50 billion to $70 billion by 2016.'[23]

2.23 The report also states that growth in the size of the Australian internet economy would occur through 'increased access to the internet' or 'increased uptake of services and intensity of use of the internet.'[24]

21 NBN Co, *Corporate Plan 2011–2013*,17 December 2010, p. 51.

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

23 Deloitte Access Economics, The Connected Continent: How the internet is transforming the Australian economy, August 2011, p. 41-42.

24 Deloitte Access Economics, The Connected Continent: How the internet is transforming the Australian economy, August 2011, p. 41-42.

2.24 In particular, the Deloitte report found:

- Internet activity has doubled in Australia over the previous four years which is predicted to continue into the future[25]
- There has been a trend towards demand for faster internet connection for households and small businesses while demand for slower internet connections has steadily decreased[26]
- Up to 60 per cent of small businesses have an online presence through a website and sell goods and services through this website. This is expected to continue into the future with the range of goods and services available expected to increase.[27]

Government's Statement of Expectations

2.25 The Government's SoE was released on 20 December 2010 and provides direction and clarity to NBN Co about how the NBN is to be delivered.[28]

2.26 In addition to including the Government's response to the NBN Implementation Study[29], the SoE provides direction to NBN Co on the:

- Government's NBN vision and objectives
- achieving the Government's coverage objectives
- premises NBN Co is required to offer a connection to meet its coverage objective
- fibre in new developments
- structuring the NBN in the long term interest of end users and the telecommunications industry
- ensuring the availability of voice services over the NBN
- designing the right network and service offerings

25 Deloitte Access Economics, The Connected Continent: How the internet is transforming the Australian economy, August 2011, p. 31.

26 Deloitte Access Economics, The Connected Continent: How the internet is transforming the Australian economy, August 2011, p. 33.

27 Deloitte Access Economics, The Connected Continent: How the internet is transforming the Australian economy, August 2011, p. 37.

28 Australian Government, *Statement of Expectations*, 20 December 2010, pp 1 and 13.

29 Background to the NBN Implementation Study is included in Chapter 1.

- pricing and services
- planning, reporting and performance management
- funding and privatisation
- general matters[30]

2.27 The NBN Co Corporate Plan includes those areas highlighted in the SoE, but does not include more recent changes to Government policy such as changes to the fibre in Greenfields policy, and the increase in POI from 14 to 121, in addition to the signing of the Optus deal. The NBN Co stated it would amend its Corporate Plan to reflect any changes in policy at the request of the Government. The NBN Co stated:

> ...we submitted a Corporate Plan on 17 December 2010 which anticipated a Telstra deal but did not anticipate an Optus deal; we did not have the Optus deal built into the plan. It also did not include the requirements we now have on us for Greenfields. There are additional consequences of the points of interconnect decision, moving from our assumption of 14 points of interconnect to 121. The consequences were not fully included in the Corporate Plan, because that decision came just before we submitted the plan; we did not have an opportunity to incorporate all of the issues. So we will, over a period of time, be including all of those factors and any other implications that come from policy decisions by Government in the next version of the Corporate Plan, which will be submitted to the Government at their request. It is an integrated document... . It has a lot of moving parts in it. It really needs to be produced and read as a whole.[31]

Funding the National Broadband Network

2.28 The Government intended for the NBN to be jointly funded through public and private sector investment. In April 2009, the Government stated that the NBN would be built over an 8-year period with a private-public equity mix of investment of up to $43 billion.

2.29 On 20 December 2010, the Government estimated the total capital expenditure of the NBN at $35.9 billion with the Government expected to

30 Australian Government, *Statement of Expectations*, 20 December 2010, pp 1 and 13.

31 Mr Mike Quigley, Chief Executive Officer (CEO), NBN Co, Transcript of Evidence, Canberra, 5 July 2011, p. 3.

contribute $27.5 billion in rollout equity.[32] The peak funding requirement of the project is estimated to be $40.9 billion.[33]

2.30 The Government stated that it would fund its investment in the NBN through the 'Building Australia Fund' and the issuance of 'Aussie Infrastructure Bonds' to the general public.[34]

2.31 The Government's SoE states that the Government will provide funding to NBN Co in the rollout of the NBN 'until private sector debt raised by NBN Co will complement Government equity to fund rollout activities.' The Government also stated:

> Following completion of rollout, the Government will consider the optimum capital structure for the Company following which private sector debt should be applied to repaying the Government investment, consistent with that structure.[35]

2.32 In relation to the equity agreement between the Government and NBN Co, the Government stated that its investment provides market certainty and certainty for NBN Co to 'enter into the long term commercial contracts needed to deliver the Government's NBN policy objectives.'[36]

2.33 The Government expects to divest its interest in NBN Co within five years of the completion and operation of the NBN.[37] Privatisation of NBN Co is expected to occur after:

- The Minister for Broadband, Communications and the Digital Economy makes declares the NBN is built and fully operational.
- The Productivity Commission (PC) has concluded an inquiry into the NBN.

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32 Hon Julia Gillard MP, Prime Minister, Hon Wayne Swan MP, Deputy Prime Minister and Treasurer, Senator the Hon Penny Wong, Minister for Finance and Deregulation and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'Government Releases NBN Co Corporate Plan', *Joint Media Release*, 20 December 2010.

33 NBN Co, Corporate Plan 2011-2013, 21 December 2010, p. 133.

34 Hon Kevin Rudd MP, Prime Minister and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'New National Broadband Network', *Joint Media Release*, 7 April 2009; NBN Co Limited, *Corporate Plan 2011-2013*, 17 December 2010, p. 12.

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

36 Australian Government, *Statement of Expectations*, 20 December 2010, p. 12.

37 Hon Kevin Rudd MP, Prime Minister and Senator the Hon Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'New National Broadband Network', *Joint Media Release*, 7 April 2009.

- The PC's report has been referred and reported on by a Parliamentary Joint Committee on the ownership of NBN Co.
- The Minister for Finance and Deregulation makes a declaration (that is not disallowed by the Parliament) that conditions are suitable to sell NBN Co.[38]

2.34 The NBN Co commented that the amount of public funding put to it through the May 2011 Budget of ($18.2 billion)[39] was sufficient for it to meet its obligations in reference to the Agreement with Telstra. The NBN Co stated:

> I believe that the arrangements that were put in place between the company and the government for funding the company will be satisfactory. It will clearly be the responsibility of the NBN Co Board to ensure that is the case.[40]

2.35 The Government is expected to provide the following amounts to NBN Co as part of its investment during construction of the NBN:

- $4.4 billion in 2012-2013
- $6.6 billion in 2013-14
- $4.1 billion in 2015-16.[41]

2.36 The DBCDE outlined the arrangements for NBN Co to repay the Government's investment in it and stated:

> ...the Government has agreed a corporate plan with NBN Co which has them receiving equity payments while the company is set up and commences its rollout. And as the rollout proceeds and customers are signed up, the revenue grows over time. As the revenue grows and the company has the capacity to fund, in its own right, private borrowings—borrowings from the private debt markets—it will begin to repay the equity to the Government.[42]

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38 Australian Government, *Statement of Expectations*, 20 December 2010, p. 12.

39 Mr Abul Rizvi, Acting Secretary, DBCDE, Senate Environment and Communications Legislation Committee, Estimates, Transcript of Evidence, 26 May 2011, Canberra, p. 31.

40 Mr Mike Quigley, CEO, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, p. 27.

41 Ms Pip Spence, First Assistant Secretary, NBN Implementation Division, DBCDE, Senate Environment and Communications Legislation Committee, Estimates, Transcript of Evidence, 26 May 2011, Canberra, p. 52.

42 Mr Daryl Quinlivan, Deputy Secretary, Infrastructure Group, DBCDE, Senate Environment and Communications Legislation Committee, Estimates, Transcript of Evidence, 26 May 2011, Canberra, p. 52.

Competition Issues

2.37 The Government's vision and objective for economic reform of the telecommunications sector through creation and implementation of the NBN is outlined in its SoE for NBN Co which states:

> To achieve a truly competitive telecommunications industry and in support of the NBN, the Government is implementing reform of the industry. The establishment of NBN Co with a wholesale-only, open-access mandate is a key element of this reform. The Government will improve the telecommunications regulatory framework through the introduction and amendment of key legislation. This will facilitate a competitive and well functioning telecommunications sector and assist NBN Co to fulfil its mandate.[43]

2.38 There were a number of issues raised in relation to how the implementation of the NBN would affect competition at various levels.

2.39 The key issues raised include the impact on competition of: the structural separation of Telstra, the monopoly structure of the NBN, uniform wholesale pricing of access to the NBN, how the use of FTTP and FTTN technologies may affect cost and price of the NBN and the ACCC's decision to increase the number of POIs from 14 to 121.

2.40 The NBN Co explained the creation of the NBN and the separation of Telstra will mean that RSPs will no longer have to compete at the retail level with the same group that supplies the telecommunications infrastructure. The NBN Co stated:

> If the NBN is the vehicle, it means that no longer will the other retail service providers in the country have to rely on the copper network. In other words, they will not be competing with the same group that is supplying them with their underlying infrastructure; they will use the NBN. We are just a wholesaler; we do not compete with any of the retail service providers. In the end, if there is no longer a copper network and people are riding on the NBN, you have achieved structural separation.[44]

2.41 In addition, the DBCDE stated that the required migration of Telstra's existing customers to the NBN (which is part of the structural separation

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

44 Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, p. 18.

agreement or Binding Definitive Agreement made between NBN Co and Telstra) will improve competition policy outcomes. The DBCDE stated:

> ...because of the Telecommunications Legislation Amendment (Competition and Consumer Safeguards) Act that was passed at the end of last year, Telstra has the choice of functional separation or structural separation, and that is the preferred model from Telstra's perspective, as I understand it. I do not want to claim to be speaking on behalf of them, but we have been negotiating it for ... a long time, the preferred model for delivering that competition policy outcome is structural separation and migration of the customers.[45]

2.42 The DBCDE explained the decision to use FTTP instead of Fibre-to-the-Node (FTTN) technology to implement the NBN and further stated that while the use of FTTP technology was more expensive than FTTN technology (for implementation of the NBN), it was one option available to the Government to enable the structural separation of Telstra. This in turn would allow for reform of the Telecommunications Sector, leading to improvements in competition. The DBCDE stated:

> In a commercial sense, why do people favour fibre to the node? Because it is commercially cheap. Yet, as the ACCC advised the Government...—if you are going to invest in a fibre-to-the-node network...: if you were to want a competitive wholesale network, most of that investment would be wasted, because it will commercially advantage one party. So I am answering your question. You asked me why everyone favours it. The answer is that they are mainly investing on their own behalf; they are investing in their own networks and they would like to do it cheaply, because you make more money that way. That is why you do it. So it is common around the world. What are we doing? We are doing a big Government investment in a national network. I have been happy to publicly call it unique. There are 70 governments around the world, as I understand it from the United Nations Broadband Commission, that are investing some billions of dollars in fibre networks of different kinds, but we are right out there. The Economist Intelligence Unit said this, and everybody says it. We are right out there. We are building a national network. But that is the Government's plan.

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

> We are doing it for structural separation reasons—that is what we are doing. We are pursuing competition objectives.[46]

2.43 Given its role in the review of the structural separation of the Telstra undertaking, the ACCC stated that it 'would be premature [for it] to make any judgements' about the sufficiency of retail competition as a consequence of the introduction of the NBN, but conceded that the vertical and horizontal integration of Telstra has 'been one of primary concern' in regard to competition in the telecommunications sector.[47]

2.44 The ACCC added that while there had been progressive competition improvement in the telecommunications sector, it had been 'patchy'. The ACCC explained:

> ...we have consistently said in our competition assessments that whilst there has been progress it has been patchy progress... by patchy I mean that... there have been some successes in the regime via access to the copper [Customer Access Network] CAN and as a consequence of DSL services and their provision by competitors in particular where that competition has been able to flourish. We would also say that the mobile area, which is not one we regulate in a particularly intrusive way, has been an example of infrastructure-based competition succeeding. So we would say there have been some successes in competition...[48]

2.45 The ACCC also stated that in the last two years it had reconsidered its pricing approach in recognition that the Customer Access Network (CAN)[49] is 'a piece of natural monopoly infrastructure'. The ACCC stated:

> ...a few things like that along the way have caused the commission to reconsider the extent to which the customer access network—the CAN—is a piece of natural monopoly infrastructure. I think that, if you looked at commission publications over the last two years, in particular we have changed our pricing approach over the last two years to move away from a pricing methodology that really talked about promoting an efficient build-buy decision—a decision on whether you build or buy or, in other words, whether you engage in full infrastructure-based competition or not—to a

46 Mr Peter Harris, DCBDE, Transcript of Evidence, Sydney, 16 May 2011, pp 40-41.

47 Mr Michael Cosgrave, Group General Manager, Communications Group, ACCC, Transcript of Evidence, Sydney, 16 May 2011, p. 51.

48 Mr Michael Cosgrave, ACCC, Transcript of Evidence, Sydney, 16 May 2011, p. 51.

49 The Customer Access Network is the link between the telephone exchange and the customer, ACCC, September 2007, Regulation Impact Statement, *Telstra customer access network record keeping and reporting rule*, p. 4.

> recognition that the CAN is much more a natural monopoly, which is why we have started to price it much as we would price an electricity utility or any other natural monopoly.[50]

2.46 The impact of the NBN on smaller RSPs in reference to the decision to increase the number of POIs from 14 to 121 was canvassed by Mr Michael Bethune, CEO of Australia On Line Pty Ltd. Australia On Line put the view that the increase in the number of POIs would adversely affect the ability of small operators to compete with the increase in capital and running costs, pricing them out of the market.[51]

2.47 Australia On Line stated that it agreed with the view put by Internode (another commercial RSP) that the decision to increase the number of POIs would result in less competition, fewer choices and higher prices. Australia On Line stated that Internode:

> ...expects the ACCC's POI increase to leave just 5 large ISPs standing, I agree. We will be forced out of non-metro subscriber services and later be driven from the industry. The result for non-metro residents, $32 billion later, is fewer offerings, less competition, higher prices and fewer choices – back to the future.[52]

2.48 The DBCDE stated the NBN will 'provide a level playing field for all RSPs to compete on non-discriminatory terms and aims to ensure that an RSP is not able to leverage an advantage from NBN Co due to its size.'[53]

2.49 In regard to RSPs concerns about pricing and charges associated with access to the NBN, NBN Co stated that it had held discussions with Internode. The NBN Co stated:

> ...we have had ongoing discussions with [Internode] about their concerns. There is a balance here between having a CVC[54] charge to a point at which you can say, 'How small do you go where it is absolutely equal?' Clearly at some point a retail service provider has to make some investment in infrastructure.[55]

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50 Mr Michael Cosgrave, ACCC, Transcript of Evidence, Sydney, 16 May 2011, p. 49.

51 Mr Michael Bethune, Chief Executive Officer, Australia On Line Pty Ltd, Transcript of Evidence, Melbourne, 28 July 2011, pp 14–15.

52 Australia On Line, *Submission 1*, p. 1.

53 DBCDE, *Submission 3*, Question No:9.

54 The CVC is the Customer Virtual Circuit which 'determines the capacity required to service each connectivity Serving Area. The CVC is an aggregation of the Access Virtual Circuit from the End User premises back to the Point of Interconnect. NBN Co, *Corporate Plan 2011-2013*, p. 152.

55 Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, p. 20.

2.50 In response to this concern, the DBCDE stated that NBN Co's Corporate Plan indicates that its product pricing will decline over time and that NBN Co's pricing model provides flexibility and value to a broad range of RSP business models. The DBCDE stated:

> The NBN Co Corporate Plan 2011-13 states that the CVC pricing adds approximately less than one dollar per average end user for a 12/1 megabit per second service with current average data usage. Over time, the Corporate Plan indicates that product pricing, including for higher bandwidth plans, will decline.
>
> According to NBN Co, the pricing model provides flexibility and value to a broad range of RSP business models. Using a mix of speeds, traffic classes and contention, RSPs will be able to create offerings tailored to their particular customer set with the ability to scale up or down as required. The model also supports the ability for RSPs to offer services nationally or to a specific region. If RSPs wish to service a smaller geographical area, they are able to do so by connecting at a smaller number of points of interconnect. NBN Co anticipates that this will allow smaller RSPs to more effectively compete using the NBN which is consistent with government expectations.[56]

2.51 Further, NBN Co stated that in terms of the threshold for the access charge for RSPs the aim was to reach balance in making a seven per cent revenue return and setting the right access price. The NBN Co stated:

> We are working through that at the moment, but I have a set of cases—which say: 'This is how it breaks out. These are what the charges are for a given size.' Obviously, as you go to 121 points of interconnect you need to take that into account. It is also clear that we tested this rigorously with quite a number of retail service providers. Would they like our prices to be lower? Of course they would. But we have to balance between aiming for a seven percent return and getting the right prices.[57]

2.52 In relation to the disadvantage of offering volume discounts to ensure competition in the market, NBN Co commented:

> Smaller operators tend to focus on specific areas; they do not try to cover the whole nation. If they try to cover the whole nation then they have to make investments, including in CVC capacity, across

56 DBCDE, *Submission 3*, Question No: 9.

57 Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, p. 20.

> all 121 points, but if they are small and focus on regional areas the investment is much more modest.[58]

2.53 The NBN Co was of the view that the decision to increase the number of POIs from 14 to 121 'is certainly a less favourable outcome for smaller operators than our original 14 points of interconnect', but emphasised that this was 'an ACCC decision'.[59]

2.54 Broadly, the NBN Co also stated that the pricing structure of the NBN product had been released for public comment 'for quite some time' and would be included in its Special Access Undertaking (SAU) to the ACCC. The NBN Co commented:

> We have had our product construct out into the public domain for quite some time for consultation. We will have it embedded in our special access undertaking which has been prepared for submission to the ACCC. So it will get quite a hearing.

2.55 The ACCC stated that its decision to increase the number of POIs from 14 to 121 was designed to enhance competition and would not disadvantage small RSPs. The ACCC explained:

> Although Australia Online and a number of smaller [Internet Service Providers] ISPs, or retail service providers, have expressed concerns about the number of points of interconnection, we are of the view that there is a reasonable prospect, if not current existing competition, for transmission from points of presence, which is typically what an ISP or RSP has in capital cities, out to the 121 points of interconnection that we provided advice to Government on. So Australia Online and other providers in the future would expect to be able to acquire services that deliver from their point of presence to the POIs either from current transmission providers or potentially new services that offer layer 3 connectivity.[60]

2.56 At the committee's 5 July 2011 hearing, NBN Co stated the SAU is a Wholesale Broadband Agreement (WBA) and was about to enter into a third round of public consultation and review scheduled for 19 and 20 July. The NBN Co and the ACCC have held discussions over the SAU and input from the WBA[61] consultation process is expected to be included in

58 Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, p. 21.

59 Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, p. 21.

60 Mr Rob Nicholls, ACCC, Transcript of Evidence, Sydney, 16 May 2011, p. 47.

61 The WBA acts as a contract between NBN Co and RSPs and outlines the wholesale supply terms for NBN Co's fibre, wireless and satellite products. M Bingemann, A Hepworth, 'Broadband network could avoid scrutiny', *The Australian*, 26 July 2011.

the SAU. A date for lodgement of the SAU is still to be agreed between NBN Co and the ACCC. The NBN Co stated:

> The associated documents with the special access undertaking are [part of the] ... wholesale broadband agreement. I believe that we have scheduled for 19 and 20 July to have the third public consultation and review of that WBA. In parallel, we have been holding discussions—as you would expect—with the ACCC on the special access undertaking. That is progressing. We will probably take inputs from the third public consultation on the WBA and incorporate those and submit it to the ACCC in due course. I do not have a target date. That will probably be done in consultation with the ACCC.[62]

2.57 The DBCDE advised that NBN Co's terms and conditions which include pricing (which are to be outlined in the SAU) would be subject to close scrutiny by the ACCC. Further the DBCDE stated:

> The ACCC will be able to overwrite terms and conditions, including pricing, set out in a Standard Form of Access Agreement, with an Access Determination. The ACCC will need to consider NBN Co's terms and conditions, including pricing, against the statutory framework, including NBN Co non-discrimination obligations and the long term interests of end-users test.[63]

2.58 The ACCC expected that the timeframe for it to complete its review of the SAU would be between six and twelve months as the issues surrounding the SAU 'are likely to be both complex and ... potentially controversial.'[64]

Regional and Remote Access

Background

2.59 In recognition of the need for access to affordable high speed broadband across Australia including regional, rural and remote communities, the Government stated in its vision and objectives for the NBN that it:

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62 Mr Mike Quigley, NBN Co, Transcript of Evidence, Canberra, 5 July 2011, p. 16.

63 DBCDE, *Submission 3*, Question No: 9.

64 Mr Michael Cosgrave and Mr Mark Pearson, ACCC, Transcript of Evidence, Sydney, 16 May 2011, pp 50-51.

> ...recognises that access to affordable high speed broadband is essential to the way Australians communicate and do business. It will drive productivity, improve education and health service delivery and better connect our cities, regional, rural and remote communities.[65]

2.60 On 7 September 2010, the Government entered into the 'Commitment to Regional Australia' agreement.[66] Government commitments relating to rollout of the NBN in regional areas made under this agreement include:

- prioritising the rollout of the NBN in regional areas and
- fast-tracking the introduction of wireless and satellite services to enable better broadband access for regional areas sooner.[67]

2.61 Further, the Government's SoE for NBN Co on delivering the NBN requests NBN Co to:

- take into account the Government's commitment that fibre will be built in regional areas as a priority
- explore mechanisms by which community inputs and advice on regional priorities - in order to overcome the digital divide and improve the efficiency of the rollout - can be considered by NBN Co, including through existing coordination structures like the Regional Development Australia Committees[68]
- 'explore options to bring forward a suitable satellite solution to ensure the availability of improved satellite broadband services for regional Australia, eventually replacing the existing ... Australian Broadband Guarantee program.'[69]

2.62 The DBCDE stated that for the NBN to deliver uniform national wholesale pricing, 'NBN Co will need to cross-subsidise from its operations in lower cost, higher revenue areas to higher cost, lower revenue areas, particularly those in regional, rural and remote areas.'[70]

2.63 The NBN Co acknowledged that it has an obligation to follow-through on the Government's policies including the focus on regional Australia and

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

66 As stated in Chapter 1, this Agreement was reached between the Government and Mr Tony Windsor MP, Member for New England and Mr Robert Oakeshott MP, Member for Lynne, Australian Government, *Statement of Expectations*, 20 December 2010, p. 2.

67 Australian Government, *Statement of Expectations*, 20 December 2010, pp 2-3.

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

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

70 DBCDE, *Submission 3*, Questions No:12

commented that it will try to balance all competing interests. The NBN Co stated:

> ...we have an obligation to execute on the Government's policies, including a focus on regional Australia. We will try to balance all of those competing interests, including what infrastructure is available at what time and, assuming we go ahead with a contractor, which are the areas that make the most sense. We will put all of those competing interests in somewhere along the line, take that back to the shareholder and say, 'This looks like the three-year plan,' and seek their endorsement of that.[71]

2.64 The committee received evidence from two regional remote areas, Broken Hill and the surrounding region of New South Wales (NSW) and Julia Creek, Queensland. These towns exemplify the types of issues that are faced by regional and remote areas in seeking to access and use the internet and other information communication technologies which rely on the internet.

Broken Hill, New South Wales and Surrounding Region

2.65 Evidence taken by the committee at its recent hearings in Broken Hill, highlighted the importance of improved broadband access for regional and remote communities. For these communities, improvement in broadband access is not just about the future, but about current needs. The potential benefits of improved broadband access and service for people outside the major cities in improving access to basic services is significant and has the potential to substantially reduce the tyranny of distance for people living in regional and remote communities.

2.66 Three major issues were highlighted in reference to the rollout of the NBN in regional and remote areas. These were:

- the speed of the rollout to regional and remote communities
- the adequacy of the proposed access to the NBN in regional and remote areas
- improvements to service delivery and economic development in regional and remote areas arising from implementation and access to the NBN.

2.67 The need for immediate NBN access for the Broken Hill and surrounding region was highlighted in much of the evidence presented to the

71 Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, p. 20.

committee and is the case of most rural and regional communities across Australia. Submissions and witnesses highlighted the potential benefits (of access to the NBN) for health, education, commerce and individuals in having greater connectivity across the world, and urged the immediate rollout of the NBN in Broken Hill and the far west of NSW generally.

2.68 The need for the NBN rollout was not, however, simply a matter of creating new services and opportunities. The NBN was also seen as an important element in simply maintaining existing levels of service in the face of rapid technological change. Dr Stephen Flecknoe-Brown, Chairman of the Far West Local Health District Board, argued that 'our need for connection to the National Broadband Network is both great and urgent'.[72]

2.69 The Far West Local Health District Board's Telehealth Manager, Ms Sharyn Cowie, highlighted the fact that advancing technology would mean that not only were regional areas falling behind in relative terms, but also in absolute terms—technological change would mean that services that were once available, and at the cutting edge of technology, were no longer available in any form.[73]

2.70 The Royal Flying Doctor Service (RFDS) highlighted a similar problem in its evidence, describing loss of download speeds and loss of productivity over time. Mr Gary Oldham, IT Manager with RFDS, stated:

> At the rate of decline of the broadband system that we are currently using, if nothing is done now there is going to be a point in time when it is going to be unusable for us and our clinicians. Where does that leave our clinical services in these technological days? The Broken Hill area needs the upgrade now, not later; otherwise, it will have a very serious impact on the health of people living in our area.[74]

2.71 In terms of the type of technology that is currently in use in areas where access to internet is an issue, the RFDS described use of an aerial mounted on an old radio mast (for its communication needs) at a remote clinic in the remote town of Packsaddle. The RFDS explained:

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72 Dr Stephen Flecknoe-Brown, Chairman, Far West Local Health District Board, Transcript of Evidence, Broken Hill, 27 July 2011, p. 39.

73 Ms Sharyn Cowie, Manager, Telehealth, and Acting Manager, Electronic Medical Record Support Team, Far West Local Health District Board, Transcript of Evidence, Broken Hill, 27 July 2011, p. 40.

74 Mr Gary Oldman, IT Manager, Royal Flying Doctor Service (RFDS), Transcript of Evidence, Broken Hill, 27 July 2011, p. 34.

> At Packsaddle itself we set up a clinic in the local little huts that are provided by the roadhouse and we use their facilities. They have an aerial that they have mounted on an old radio mast. They have stuck in an extension cord and a little car aerial for Next G. They have done it themselves by making their pole higher and higher to try to tap the nearest tower. That is how we do our business.[75]

2.72 There were also concerns expressed about the adequacy of the proposed NBN rollout to regional and remote communities. Ninti One Ltd stated that the proposed FTTP model may not be an effective solution for people living in remote Indigenous communities. Instead, Ninti One suggested that 'internet access should be provided for shared community access to WiFi networks for community account holders and billing options'.[76] The outcome would be a Wi-Fi Base Station running off a satellite signal that connects the satellite through Wi-Fi to the broader community. Ninti One highlighted the availability of web mesh technology (which it is trialling) to achieve an efficient and cost-effective outcome.[77]

2.73 Ninti One Ltd explained that the take-up of this test-technology was low as there was a cost factor involved in making the technology readily available and the area to which it was needed has much abject poverty. Ninti One suggested that high-speed, low-cost internet access was needed to allow remote and poorer communities for greater access to online services and markets. Ninti One Ltd stated:

> Some years ago we did an initial report into access and found it to be very poor. We then looked at what sort of technology would change that. We developed a piece of technology that would distribute the internet at the community level. We had real difficulty in getting any take-up from any telecommunications entity because we work in the area of market failure and there are not the customers to bring in enough cash for them to be remotely interested in investing in it. This technology in 2008 cost $1000 and was made with readily available component parts. Due to the lack of income streams it just was not taken up. In summary, in the areas we work in we work with abject poverty. To change a lot of that abject poverty we would contest that we need high-speed,

75 Dr Michael Hill, Senior Medical Officer, RFDS, Transcript of Evidence, Broken Hill, 27 July 2011, pp 36-37.

76 Ms Jan Ferguson, Manager, Ninti One Ltd, Transcript of Evidence, Broken Hill, 27 July 2011, p. 1.

77 Ms Jan Ferguson, Ninti One Ltd, Transcript of Evidence, Broken Hill, 27 July 2011, pp 2–3.

> low-cost internet access to change people's access to markets and services.[78]

2.74 Mr Michael Wilson, Director of M&S Consultants Pty Ltd, questioned the utility of the NBN proposals for the School of the Air (SOTA). Mr Michael Wilson was concerned due to the loss of multicasting that the interim satellite solution within the NBN rollout would lead to a decrease in the capacity of the SOTA to deliver services. Mr Michael Wilson also questioned the suitability of the long-term satellite solution to meet the needs of the SOTA and others in remote communities.[79]

2.75 In its evidence, RFDS questioned the adequacy of the proposed satellite service for delivering high definition video conferencing, especially for the purpose of video conferencing. The RFDS was confident that such services could not be made available under the NBN rollout, as described, without substantial advances in technology.[80]

2.76 There was also some concern expressed over whether potential user-costs would undermine access to NBN services in regional and remote communities. In this vein, Ninti One Ltd stated:

> If you are at the poor end of the system then the figures I have heard mean you would not actually be able to engage. We have done some work which I can refer you to around relative levels of poverty—$20 makes a huge difference to someone's relative level of poverty on $296 a week. On the figures we have seen, we do not believe that people can effectively engage when their average household income is only $296 a week.[81]

2.77 In its evidence, the RFDS also highlighted the problem of costs in accessing services.[82]

2.78 Mr Frank Zaknich, General Manager of the Broken Hill City Council highlighted the importance of the rollout of the NBN in terms of the benefit and improvement to economic development it would provide to the region. Mr Frank Zaknich stated:

> The ... council views the rollout of the national broadband network as the key enabling infrastructure for the City of Broken Hill and

78 Ms Jan Ferguson, Managing Director, Ninti One Ltd, Transcript of Evidence, Broken Hill, 27 July 2011, p. 2.

79 Mr Michael Wilson, Director, M&S Consultants Pty Ltd, Transcript of Evidence, Broken Hill, 27 July 2011, pp 9–14.

80 Mr Gary Oldman, RFDS, Transcript of Evidence, Broken Hill, 27 July 2011, p. 37.

81 Ms Jan Ferguson, Ninti One Ltd, Transcript of Evidence, Broken Hill, 27 July 2011, p. 3.

82 Mr Gary Oldman, RFDS, Transcript of Evidence, Broken Hill, 27 July 2011, p. 36

> region and a critical part of retaining and attracting residents, business and industry to the far west of New South Wales. That is the key driver for us.[83]

2.79 Further, the Broken Hill City Council stated that it is a strong advocate for the installation of the RBBP infrastructure which is currently under construction in and around Broken Hill.

2.80 In addition to advocating for the RBBP and in support of the rollout of the NBN and underlying national policy, the Broken Hill City Council has:

- 'established in partnership with the Regional Development Australia Far West, a Digital Economy Working Group to develop and progress a key enabling Digital Economy Strategy for Broken Hill and the Far West NSW Region'
- ensured 'key components of the proposed Broken Hill Digital Economy Strategy will align with the National Strategy – including online participation by households, online engagement by businesses and not for profit organisations, smarter management of the local environment and infrastructure, improved health and aged care, expanded online education, increased teleworking, improved online government service delivery and engagement – as strategic outcomes.'[84]

2.81 On the grounds of improving Government service delivery including health and education and assisting economic development for Broken Hill and the surrounding region, the Broken Hill City Council requested that Broken Hill be made a priority location for NBN rollout.[85]

2.82 The RDA Far West NSW stated that there are 'tremendous disadvantages faced by residents in the region' especially in terms of managing sector diversification and generational change in the regional economy.[86]

2.83 RDA Far West NSW stated the broadband services currently in Broken Hill 'do not meet customer expectations in terms of price or product quality. Speed test (carried out on Broken Hill Broadband ADSL connections)[87] results show deficiencies in speed and consistency of

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83 Mr Frank Zaknich, General Manager, Broken Hill City Council, Transcript of Evidence, Broken Hill, 27 July 2011, p. 29.

84 Broken Hill City Council, *Submission 5*, p. 4.

85 Broken Hill City Council, *Submission 5*, pp 4-5.

86 Regional Development Australia (RDA) Far West New South Wales (NSW), *Submission 8*, p. 1.

87 RDA Far West NSW, *Submission 8*, Appendix 2.

quality. The clear message from our region is "We must have the NBN, we need it now, and can you please advise when we can receive delivery".[88]

2.84 Mrs Linda Nadge, Executive Officer, RDA Far West NSW commented on why the NBN rollout is needed immediately for the Broken Hill area and stated:

> ...we are really pushing to get the NBN rolled out here as quickly as possible. The future of our people in the region depends upon speedy delivery. If we wait until the end of the rollout period, for example, to receive the broadband network, a lot of our strategies would become quite worthless and probably not worth pursuing in 10 years time because we will have been left so far behind. Some of the submissions that the Central Darling Council has received really endorse that, such as the ones from Perilya and the hotelier in Tibooburra, who also sent a submission in. We also got one from a resident of Tibooburra, Andrew Chapman, who is well known in the education circles up there. The village committee from Tibooburra are also pushing for this. It is very important to the region.
>
> There was a comment this morning by Mr Looney from Menindee, who mentioned that speed was not so much his concern; it was more about the quality of service. I have to say that I have a problem with the speed as well. I think the speed is a big issue because I cannot function in my office 200 metres from the exchange at the speed I would like to operate at. To get around that, I have two screens on my desk so that I can work on one while on the other I am waiting for things to happen on the internet. That is how bad it can be out here.[89]

2.85 The main concerns about NBN rollout expressed by RDA Far West NSW are: delays of the NBN rollout in the Broken Hill region and timing of the NBN rollout, understanding the technical side of the NBN, the definition of premise and the reach of the fibre, wireless and satellite footprints, ensuring access prices to the NBN are competitive and education about the NBN.[90]

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88 RDA Far West NSW, *Submission 8*, p. 1.

89 Mrs Linda Nadge, Executive Officer, RDA Far West NSW, Transcript of Evidence, Broken Hill, 27 July 2011, p. 16.

90 RDA Far West NSW, *Submission 8*, pp 11-14.

Julia Creek, Queensland

2.86 On 22 March 2011, Mr Paul Woodhouse, the Mayor of the McKinlay Shire Council located in Julia Creek, Queensland wrote to the committee to highlight the issue of connection to the NBN of regional towns that were outside of NBN Co's fibre footprint.

2.87 Mr Woodhouse commented that Julia Creek is defined as a district rural activity centre with educational and health services and acts as a hub for a 40 000 square kilometre area that supports around 1 000 residents. And 'while the cable has already been laid, and actually passes through the town itself, I was disappointed to find the community would not be connected.'[91]

2.88 Mr Paul Woodhouse noted that Julia Creek would benefit from inclusion in the NBN fibre footprint as it would enable better health services and allow for improved communication for the pastoral industry across great distance.

2.89 In addition, Mr Paul Woodhouse provided a list of other small towns located in Queensland and the Northern Territory that were in a similar situation, that would benefit from a fibre and or satellite connection to the NBN.

2.90 The NBN Co responded to the concerns raised through the Julia Creek example and stated that it is expensive to interrupt the fibre traffic at every interval. However, the NBN Co stated that it was developing a process (and trialling it in Tasmania) to allow for areas to be included in the fibre footprint. Connection to the fibre network would in such cases be available on request with an incremental cost (if the request is accepted by NBN Co) to the party making the request.[92]

2.91 The NBN Co clarified its approach to allow for applications for connection to the fibre network (where available) and stated:

> If a council or householders or business premises put a request to us, we will make sure it is well known that there is a process: that people can apply to NBN Co to see if we can extend the fibre footprint. So, generally, we will cover every town throughout Australia with 1000 or more premises with fibre, and if they are on our transit links we will cover them if there are 500 premises or more. If a town has, for example, 300 premises but the council

91 Mr Paul Woodhouse, Mayor, McKinlay Shire Council, Julia Creek, Queensland, Correspondence dated 22 March 2011, p. 1.

92 Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, p. 6.

> would like us to provide a fibre solution to that town, then they can apply to us. We will tell them what the incremental cost will be and then they can make a decision as to whether they would like us to do that.[93]

2.92 The NBN Co undertook to return to the committee with an indication of the incremental cost of providing fibre to Julia Creek and in its response to the committee stated:

> NBN Co Network Planning and Design are undertaking a study of Julia Creek to identify the incremental cost per premises to provide fibre to the town compared to what it would have cost if the town was covered by the planning rule of 500+ premises on an existing transmission route.
>
> In order to complete the study data on the existing infrastructure (for example the Telstra Exchange to accommodate the Fibre Access Node) the costs for construction at this location have to be obtained. It is estimated that the case study will be completed by late July 2011.[94]

Access to Government Services

2.93 The Post Office Agents of Association Limited (POAAL) highlighted that there are 464 post offices that do not offer online services which can cause difficulties for remote areas (which often have manual post offices) as commonly the Post Office provides the only banking service available in an area.[95]

2.94 The Community Service Obligations (CSO) under which Australian Post operators are expected to deliver services does not include a uniform approach to service delivery for all post offices. The POAAL explained:

> While the CSOs address the matter of the number of post offices, and to a point, the distribution of post offices, it does not stipulate that all post offices offer all Australia Post services. All post offices offer basic postal services (assessment and lodgement of postal items, for example) but not all offer online banking, ID verification, parcel tracking, money transfers, real-time bill

93 Mr Mike Quigley, NBN Co, Transcript of Evidence, Sydney, 16 May 2011, p. 14.

94 NBN Co, *Submission 2*, Question No:3.

95 Post Office Agents Association Limited, *Submission 4*, p. 1.

> payment or access to certain Local, State and Federal Government services. Australia Post has been an agent for the Commonwealth Bank for decades, and in the last 15 years Australia Post has added to the range of banking services available from various banks at post offices. Now, in many communities, the local post office has become a primary access point for cash. While this is not one of Australia Post's CSOs, a community expectation has grown over the years that basic banking can be done at the local post office.[96]

2.95 In addition, as these manual post offices are small and serve rural and remote communities, without the customer base, they are unlikely to grow and meet the requirements to be able to receive electronic point of sale (EPOS) services.[97]

2.96 The POAAL states that the costs associated with EPOS include: 'data connection, computer hardware, training and ongoing help and support' with the cost to installation and maintaining the data connection the highest and most prohibitive cost.[98]

2.97 The Maari Ma Health Aboriginal Corporation commented that it received Commonwealth funding to assist with improving the health and wellbeing of Indigenous communities in NSW, but often in addition to the funding provided needs the infrastructure to ensure that the funding is targeted to need. The Maari Ma Health Aboriginal Corporation commented:

> You very much have a chicken and egg situation where the programs have been put in place to address poor Aboriginal health in remote Australia and therefore require resources. Yet remote Australia is often the poor cousin to metropolitan Australia regarding the infrastructure that is necessary to close that gap. Examples are two of those funding programs I have mentioned: the Community Support Service, which is all about providing information, referrals and internet access to Aboriginal people regarding mainstream services to try and assist Aboriginal people to better access mainstream services so that they overcome some of that disadvantage, and the remote service delivery program, which Paul Brown from Central Darling Shire mentioned, which is all about improving access to government services, both state and

96 Post Office Agents Association Limited, *Submission 4*, p. 2.

97 Post Office Agents Association Limited, *Submission 4*, p. 2.

98 Post Office Agents Association Limited, *Submission 4*, p. 2.

> Commonwealth, for Aboriginal people living in remote Australia.[99]

2.98 In addition, the Maari Ma Aboriginal Health Corporation commented that remote areas rely on online training and education so that people can serve the communities they live in. The Maari Ma Aboriginal Health Corporation stated:

> In terms of further addressing the issue of educational resources and training, we do a lot of online learning and distance education in our region. This means that people, particularly Aboriginal people, do not have to leave country or their community to actually access that training. It is incredibly important to us to be able to increase the number of Aboriginal people who are becoming clinicians for our region.[100]

Concluding Comments

2.99 In anticipation of the growing and predicted increased use of internet by Australian households and businesses to access services and conduct commerce, the committee sees the improvement of information communication technology as important to future economic productivity and growth. This is particularly the case for remote and regional areas where there is often limited service delivery and commercial opportunity.

Timeframe for rollout of the National Broadband Network

2.100 The committee acknowledges that NBN Co has advised the NBN will be able to use existing Telstra infrastructure which will assist the timeframe for the NBN rollout and make up for any time delay experienced as a result of the Australian Competition and Consumer Commission (ACCC) decision to increase the number of Points of Interconnect (POIs) and negotiating the Binding Definitive Agreements between NBN Co and Telstra and NBN Co and Optus.

2.101 The committee is unaware of NBN Co's progress attracting private equity and the timeframe for NBN Co to provide a return on the Government's investment in it. The committee will seek further information on how

99 Ms Cathy Dyer, Director, Corporate Services, Maari Ma Health Aboriginal Corporation, Transcript of Evidence, Broken Hill, 27 July 2011, p. 25.

100 Ms Cathy Dyer, Director, Corporate Services, Maari Ma Health Aboriginal Corporation, Transcript of Evidence, Broken Hill, 27 July 2011, p. 25.

private equity will be attracted, used and repaid to the Government on its NBN investment.

2.102 The committee will also examine whether, having regard to Divison 2 of the *National Broadband Network Companies Act 2011* (Cwlth), there are provisions for NBN Co to attract private equity, and whether there are options available to NBN Co to engage private equity through the construction phase of the NBN, to enable a return to taxpayers sooner.

Competition issues

2.103 The committee is also concerned about the impact of the NBN on competition. The committee believes that the Government needs to clearly state how the NBN will benefit the community by providing effective competition at the wholesale and retail levels.

2.104 In particular, greater clarification on how the POIs will impact on competition at the retail level in the short to long terms is needed to provide certainty for small internet service providers, and ensure competition outcomes are achieved.

Service delivery and timeline for NBN Rollout in regional and remote areas

2.105 It is clear to the committee the rollout of the NBN in regional and remote areas is vital to the future of those areas in terms of the delivery of services such as education and health and in the longer term, economic development and growth and vitality of local economies.

2.106 The evidence received by the committee indicates that there is considerable uncertainty about the timing of the rollout to regional and remote areas and concerns about the level of service provided to those areas.

2.107 In particular, the committee has received evidence that the transitional arrangements during the NBN rollout may lead to a decline in services during the rollout phase, and that certain capabilities may be reduced in the transition to the NBN. This was presented to the committee in terms of the services that may be affected by changes to satellite technology. The committee suggests that the NBN Co needs to investigate the impact of the transition of satellite technologies and if required formulate and implement contingency measures to counteract any negative impact. The committee will be raising these issues with the NBN Co and the DBCDE to investigate if there is a reduction of service for satellite to make transition as seamless as possible.

2.108 The committee recommends that Government agencies need to take steps now to enable them to be NBN-ready, prior to receiving and working with NBN for service delivery. This is especially evident in the examples presented to the committee in reference to postal delivery in remote areas where there is no electronic-point-of-sale available, making simple services such as online banking impossible. In addition, the benefits for health and education delivery will mean that people are able to stay in their communities and access Government services without cost or delay. This would enable Government agencies to make significant savings and better target services to individual need.

2.109 The committee will continue to pursue this issue into the future.

2.110 The committee believes that NBN Co should provide definite timelines for the rollout of services to regional and remote areas, clarify the impact of the transition on currently available levels of service, and provide contingencies against potential loss of capacity during and after NBN rollout. Further, NBN Co should communicate these to affected communities.

Recommendation 2

2.111 **The committee recommends that Government agencies take measures to ensure they are ready for the rollout of the National Broadband Network (NBN), prior to receiving and working with the NBN for service delivery.**

Recommendation 3

2.112 **The committee recommends that NBN Co Limited publish a detailed account of impacts on timing and cost of the National Broadband Network as a result of the time taken and resources used to complete the Binding Definitive Agreements between NBN Co and Telstra and NBN Co and Optus, and the decision to increase the number of Points of Interconnect from 14 to 121.**

Recommendation 4

2.113 **The committee recommends that the Minister for Broadband, Communications and the Digital Economy publish a detailed statement outlining the productivity, jobs and competitive benefits of:**

- **the overall rollout of the National Broadband Network for the cost-efficient provision of basic broadband infrastructure for all Australians;**
- **how competitive markets will operate at the wholesale and retail levels, with particular reference to the impact on small, existing internet service providers and other fibre deployment companies; and**
- **the impact on wholesale and retail competition of the increase of the Points of Interconnect from 14 to 121.**

Recommendation 5

2.114 **The committee recommends that NBN Co:**

- **publish timeframes for the rollout of National Broadband Network (NBN) services to regional and remote areas and communicate these to the areas to which they apply;**
- **investigate the impact of the transition to the NBN on currently available levels of service for satellite technology; and**
- **taking into consideration findings of this investigation, formulate contingency plans against potential reduction of capacity in regional and remote areas as a consequence of the NBN rollout, if required.**

Robert Oakeshott MP
Chair

25 August 2011