

Regional and Remote Issues

Introduction

- 3.1 Chapter 3 examines issues associated with the National Broadband Network (NBN) rollout to regional and remote Australia through the fibre, fixed wireless and satellite networks – all three technologies will be used to rollout the NBN to regional and remote Australia.
- 3.2 NBN Co's performance information for the NBN rollout across the fibre, fixed wireless and satellite networks is discussed in Chapter 2. Broader issues relating to NBN policy and alternative network models are also discussed in Chapter 2.
- 3.3 In terms of the regional and remote aspect of the NBN rollout, the Australian Government's Statement of Expectations for the NBN Co in implementing the NBN notes that, in progressing the NBN rollout, 'the Government expects that the NBN Co will take into account the Government's commitment that fibre will be built in regional areas as a priority'.¹ The NBN Co 'will also bring forward the introduction of wireless and satellite services so that regional Australia can get better broadband access sooner'.²
- 3.4 The Australian Government's objective for the NBN Co is to:
- ...connect 93 per cent of Australian homes, schools and businesses with fibre-to-the-premises technology providing broadband speeds of up to 100 megabits per second, with a minimum fibre coverage obligation of 90 per cent of Australian premises. All remaining premises will be served by a combination of

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

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

nextgeneration fixed wireless and satellite technologies providing peak speeds of at least 12 megabits per second.³

3.5 In accordance with the Government's Statement of Expectations, the seven per cent of premises that do not fall within the 93 per cent fibre footprint will therefore be serviced by either a fixed wireless or satellite connection.⁴ As stated in the NBN Co Corporate Plan 2011-13, the technologies utilised should be:

...Fixed Wireless to 4% of premises (delivering at least 12Mbps) (defined in this Plan as the Fixed Wireless Network or Wireless Network), and Satellite to 3% of premises (defined in this Plan as the Satellite Network).⁵

3.6 These technologies are used to reach areas of low population density that make it 'both difficult and expensive to build infrastructure to these premises'.⁶ Consequently, this remaining seven per cent comprises regional and remote Australia.

3.7 In terms of regional and remote communication initiatives concerning the NBN rollout, the Shareholder Ministers' Fourth Performance Report to the Joint Committee on the National Broadband Network (JCNBN) notes that the NBN Co met with various councils and Regional Development Australia (RDA) bodies over the reporting period, providing information to 'increase practical understanding of the rollout, the NBN and its benefits'.⁷ In September 2012, the NBN Discovery Truck also worked with local retail service providers (RSPs) to host community events in South Morang, Willunga, Kingston and Townsville, with more than 570 residents and multiple RSPs attending these events.⁸

3.8 This chapter discusses regional and remote issues emerging over the Fifth Review reporting period concerning:

- the fibre network
- the fixed wireless network
- the satellite network
- network extensions

3 Australian Government, *Statement of Expectations*, 20 December 2010, p. 1. However, as discussed later, on 6 February 2013, NBN Co announced a new 25 Mbps speed tier for its fixed wireless and long term satellite services, Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 36.

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

5 NBN Co, *Corporate Plan 2011-13*, p. 12.

6 NBN Co, *Corporate Plan 2011-13*, p. 69.

7 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 24.

8 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 24.

- mobile networks

Fibre Network

Background

- 3.9 This section of the report looks at issues associated with the fibre rollout for regional Australia. (Issues relating to the fibre rollout more generally are discussed in Chapter 2.)
- 3.10 The NBN fibre footprint covers '93 per cent of all Australian premises and includes communities with more than 1000 premises, and communities with greater than 500 premises where transit backhaul passes near such communities'.⁹ Seventy per cent of regional Australia will receive fibre.¹⁰ The NBN Co Corporate Plan 2012-15 identifies that the fibre rollout will be completed by mid 2021.¹¹

Rollout Progress

- 3.11 In March 2012, the NBN Co released its first 'Three-year fibre rollout plan', which has an objective of construction commenced or completed for approximately 3.5 million fibre premises by 30 June 2015, across 1 500 communities in every state and territory in Australia.¹²
- 3.12 As at 31 December 2012, the NBN Co had commenced or completed construction in respect of 784 592 fibre brownfield premises and 60 686 fibre new developments lots.¹³ Tables 3.1 and 3.2 set out details concerning the deployment of fibre to regional (non-metro) Australia, as provided in the Shareholder Ministers' Performance Reports to the committee on the NBN rollout.
- 3.13 To 'determine the communities that will receive access to the NBN Co's Fibre network over the next 3 years', the NBN Co is following design principles that include 'balancing construction across states and territories and between metropolitan and regional locations'.¹⁴

9 Joint Committee on the National Broadband Network (JCNBN), *Review of the Rollout of the National Broadband Network: Second Report*, November 2011, pp 91-92.

10 Senator the Hon Stephen Conroy, Minister for Broadband and Communications and the Digital Economy, 'National Press Club Address', 13 December 2011.

11 NBN Co, *Corporate Plan 2012-15*, p. 12.

12 NBN Co, *Corporate Plan 2012-15*, p. 19.

13 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 5.

14 NBN Co, *Corporate Plan 2012-15*, p. 19.

Table 3.1 Fibre deployment—brownfields

Fibre to the premise (FTTP) brownfields			
<i>Premises passed</i>	<i>Six months to 31 Dec 2011¹⁵</i>	<i>Six months to 30 June 2012¹⁶</i>	<i>Six months to 31 Dec 2012¹⁷</i>
Metro—premises passed	3 938	2 182 (6 120)	1 792 (7 912)
Non metro—premises passed	14 305	8 435 (22 740)	15 426 (38 166)

Table 3.2 Fibre deployment—new developments

FTTP new developments			
<i>Premises passed</i>	<i>Six months to 31 Dec 2011¹⁸</i>	<i>Six months to 30 June 2012¹⁹</i>	<i>Six months to 31 Dec 2012²⁰</i>
Metro—lots passed	798	5 517 (6 315)	9 292 (15 607)
Non metro—lots passed	153	3 586 (3 739)	6 905 (10 644)

3.14 The importance of balancing construction between metropolitan and regional locations was reinforced over the committee's Fifth Review reporting period. As the Australian Communications Consumer Action Network commented:

It is very important that we have the same access to services in regional and metropolitan areas. That has been a catchcry that has come through time and time again with regional review after regional review. We will be watching very carefully to make sure that any potential differences or changes to the current policy do not end up with a two-tiered system...Our members would be very unhappy if we ended up with a situation where there was a difference in the way that metropolitan and regional consumers were being treated.²¹

15 Shareholder Ministers, 'Performance Report to 31 December 2011', p. 27.

16 Shareholder Ministers, 'Performance Report to 30 June 2012', p. 37.

17 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 39.

18 Shareholder Ministers, 'Performance Report to 31 December 2011', p. 28.

19 Shareholder Ministers, 'Performance Report to 30 June 2012', p. 37.

20 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 40.

21 Ms Teresa Corbin, Chief Executive Officer, Australian Communications Consumer Action Network, Transcript of Evidence, Sydney, 19 April 2013, p. 5.

3.15 Concerning this matter, the NBN Co emphasised:

You cannot do everywhere at once, so it is just a decision of which areas you go to first. The government has given us clear instructions to try to get balance. As you know, we have put an emphasis on regional Australia early on. Now they have given us instructions to balance across states between regional and urban as well.²²

3.16 The Shareholder Ministers' Fourth Performance Report to the committee on the NBN rollout noted a number of key outcomes through to March 2013 concerning the fibre rollout to regional Australia, including that, in February 2013, 'NBN Co switched on the NBN in Bacchus Marsh, the first regional area in Victoria to join the fibre network. Nearly 1,800 more homes and businesses will have access to the network in the coming months'.²³

3.17 In October 2012, the NBN Co released updated coverage maps covering a further 148 600 premises in the fibre footprint in New South Wales, Queensland, South Australia, Victoria and Western Australia.²⁴ Additional detailed maps indicating where construction had commenced or been completed, covering approximately 98 800 premises in the fibre footprint in New South Wales, Queensland, South Australia, Victoria, Western Australia and the Australian Capital Territory, were released in January 2013.²⁵ These maps include regional locations where work to rollout the fibre network is commencing for the first time.²⁶

3.18 On 21 March 2013, the NBN Co reported that it had 'updated its short-term fibre rollout timeline expecting to pass 341,000 premises with fibre about three months later than the June 2013 target, with between 190,000 and 220,000 premises now forecast to be passed by fibre by end June'.²⁷ This delay in the fibre rollout may affect regional communities. However, the NBN Co emphasised that this was a 'short-term issue' that would 'not affect the long-term delivery of the NBN or the overall cost of the project'.²⁸

22 Mr Mike Quigley, Chief Executive Officer, NBN Co, Transcript of Evidence, Sydney, 19 April 2013, p. 40.

23 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 37.

24 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 6.

25 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 36.

26 NBN Co, 2013, NBN Construction Commences Covering Around 100,000 More Premises, media release, 25 January.

27 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 37.

28 NBN Co, 2013, NBN Co Updates Short-Term Fibre Rollout Timeline, media release, 21 March.

- 3.19 The NSW Business Chamber highlighted possible delays in the fibre rollout to regional communities and the need for the rollout to prioritise regional communities in pre-existing 'internet black spots' as issues of concern to its members:

The Chamber regularly engages with our members right across regional NSW who have reported that while they welcome the proposal to provide over 93% of Australia with... [fibre] NBN connections, the projected delivery of these services in regions such as the Central West, Northern Rivers, Murray-Riverina and New England have a commencement date of up to 2015 or beyond, which means that these areas remain significantly disadvantaged in terms of telecommunications services...

As has been acknowledged by the NBN Co. itself, the rollout of the network has been slower than anticipated. The revising down of rollout numbers has been keenly felt in regional areas with many businesses expressing their disappointment in the slower connection to the network...

Furthermore, there have been reports of several connection problems being faced by businesses in a variety of regions...in internet black spots. It is these areas that should be identified as requiring urgent roll outs.

The Chamber requests that the NBN Co. continues to deliver the NBN as soon as possible to the areas most in need.²⁹

- 3.20 The NSW Business Chamber also provided the committee with information on the fibre rollout progress in Kiama Downs, in regional New South Wales:

The Chamber contacted a local chamber representative from one of the first active NBN sites, Kiama Downs, NSW for feedback regarding the implementation and connection phases of the rollout and to determine whether any initial or on-going service faults have been experienced by NBN customers...

the Chamber understands that the roll out has been generally well received. BRW reported a 44% uptake of NBN in just over a year in Kiama Downs and Minnamurra. This represents the highest penetration in Australia...

The Chamber is also aware that many Kiama businesses initially engaged with the NBN through an NBN expo in March 2012. The local engagement and education of businesses on the opportunities and benefits of high-speed broadband through the NBN Discovery

truck has assisted many businesses in understanding the role the NBN can play in their businesses future success and should continue.³⁰

Fixed Wireless and Satellite Networks

3.21 On 6 February 2013, the NBN Co announced a new 25 Mbps speed tier for its fixed wireless and long term satellite services:

...NBN Co announced plans to bring even faster internet to the bush by offering a new speed tier doubling the wholesale broadband speeds for rural and remote Australia. More than half a million homes, farms and businesses eligible to receive the NBN's Fixed-Wireless and Long Term Satellite services will be able to order wholesale download speeds of up to 25 Mbps and upload speeds of up to 5 Mbps from their internet service provider.³¹

3.22 The committee has previously noted that the NBN Co has aggregated the data for the fixed wireless and satellite rollout, such that progress for the fixed wireless service and satellite service cannot be individually determined.³²

3.23 As discussed in Chapter 2, on 29 January 2013, the NBN Co released six-monthly figures on progress of the NBN rollout for the period covering June to December 2012.³³ These figures revised down the fixed wireless and satellite target for premises activated from 38 000 (as set out in the NBN Co Corporate Plan 2012-15³⁴) to 37 700.³⁵ The total premises activated target in this area has therefore been revised down by 300 premises.

Fixed Wireless Network

Background

3.24 This section of the report examines issues associated with the fixed wireless rollout for regional and remote Australia. (NBN Co's

30 NSW Business Chamber, *Submission 11*, p. 2.

31 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 36.

32 JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 42.

33 NBN Co, 2013, 34,500 Australian Homes and Businesses Now Using the NBN, media release, 29 January, p. 2.

34 NBN Co, *Corporate Plan 2012-15*, p. 36.

35 NBN Co, 2013, 34,500 Australian Homes and Businesses Now Using the NBN, media release, 29 January, p. 2.

performance information for the fixed wireless rollout is discussed in Chapter 2.)

- 3.25 On 1 June 2011, the NBN Co announced plans to complete the rollout of its fixed wireless network by 2015, with the first services to be available from the middle of 2012.³⁶ The fixed wireless network will cover around four per cent of premises outside of areas covered by the fibre and satellite networks.³⁷
- 3.26 As set out in the committee's Third Review report, a fixed wireless service differs from mobile wireless networks 'as a fixed service is designed to support a dedicated number of premises, each with a wireless receiver affixed externally to the property. This enables the delivery of a more predictable level of service performance to premises compared to a mobile wireless network which is focussed on mobility'.³⁸
- 3.27 The NBN Co signed a fixed wireless equipment supply and managed services contract with Ericsson in June 2011.³⁹ The first services over NBN Co's fixed wireless network commenced in April 2012.⁴⁰

Rollout Progress

- 3.28 In August 2011, the NBN Co announced that the communities of Geraldton (Western Australia), Toowoomba (Queensland), Tamworth (New South Wales), Ballarat (Victoria) and Darwin (Northern Territory) would be the first to receive the fixed wireless service.⁴¹
- 3.29 The Shareholder Ministers' Fourth Performance Report to the committee detailed further progress in this area over the reporting period, noting that:
- Between 3 and 12 July 2012, NBN Co announced the local government areas in the Central West and Mid-Western regions of New South Wales and the Rockhampton, Townsville and Mackay regions of Queensland where planning proposals would be lodged to deliver fixed wireless broadband...
 - On 8 and 9 November 2012, NBN Co announced local government areas where planning proposals would be lodged to deliver fixed wireless broadband including:

36 Shareholder Ministers, 'Performance Report to 30 June 2011', p. 6.

37 Shareholder Ministers, 'Performance Report to 30 June 2011', p. 6.

38 JCNBN, *Review of the Rollout of the National Broadband Network: Third Report*, June 2012, p. 86.

39 Shareholder Ministers, 'Performance Report to 30 June 2011', p. 6.

40 Shareholder Ministers, 'Performance Report to 30 June 2012', p. 14.

41 NBN Co, *Corporate Plan 2012-15*, p. 39.

- ⇒ Victoria – the Goulburn Valley and North East Victoria, Bendigo, Central Victoria and parts of Northern Victoria; Bass Coast, South, East and Central Gippsland.
 - ⇒ Western Australia – Great Southern, Wheatbelt region, Goldfields-Esperance area, Peel and South West Region.
 - ⇒ New South Wales – Mid North Coast and Manning Region...
- On 17 January 2013, NBN Co announced that its design and construction partners will work with local governments to identify appropriate locations for fixed wireless network infrastructure in and around the Mid Murraylands, South East, Far South East and Kangaroo Island areas of SA...
 - On 26 February 2013, NBN Co announced that its design and construction partners will work with local governments to identify appropriate locations for fixed wireless network infrastructure in and around the Gympie and Sunshine Coast area...
 - Also on 6 February 2013, NBN Co began outlining plans to provide some smaller communities and rural residents in parts of the Northern Rivers with facilities dedicated to delivering high-speed, fixed-wireless broadband services.⁴²
- 3.30 As at 31 December 2012, there were 1 011 active fixed wireless premises and the NBN Co had commenced construction of the fixed wireless network for 21 684 premises.⁴³
- 3.31 Ericsson and the NBN Co continued planning and site acquisition activities for volume rollout in areas where spectrum is available. Approximately 1 500 sites are undergoing planning and site acquisition.⁴⁴
- 3.32 As at 30 December 2012, 21 RSPs had executed the NBN Co fixed wireless trial agreement and 12 RSPs were offering a fixed wireless service.⁴⁵
- 3.33 Based on 'contracted rates negotiated with Delivery Partners and on actual costs received to date NBN Co's estimate of the capital costs for the Fixed Wireless network remains within the \$1.4 billion forecast in the 2012-15 Corporate Plan'.⁴⁶
- 3.34 One issue of interest over the committee's Fifth Review reporting period was the development approval process for NBN Co fixed wireless towers in local government areas.

42 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, pp 3-5, p. 36.

43 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 8.

44 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 8.

45 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 23.

46 NBN Co, *Submission 13*, p. 11.

- 3.35 The Victorian Government submission to the inquiry raised concerns with the ‘approach being taken by NBN Co to the fixed wireless rollout’ as demonstrated by ‘events surrounding the proposal to build an NBN Co wireless tower in the community of Napoleons in the Golden Plains Shire’.⁴⁷
- 3.36 It was explained that the NBN Co plan had included Napoleons in the fixed wireless rollout and that NBN Co (or its agents) had submitted a development application for it and seven other sites in the Golden Plains Shire, with the following outcomes:
- NBN Co was informed on 20 January 2012 that their preferred site would not be approved
 - alternative sites were suggested by Council during negotiations
 - one site was investigated by NBN Co but the landholders would not agree
 - the Napoleons application was rejected in June 2012 by the Council on amenity grounds
 - when the application was rejected by Council NBN Co announced Napoleons would receive a satellite service
 - this service would not be NBN Co’s Interim Satellite Solution, therefore services would not be available until late 2015
 - seven of the eight applications were approved without issue.⁴⁸
- 3.37 The Victorian Government noted that the Victorian planning system ‘contains options that could be utilised, individually or in combination, in relation to NBN Co telecommunications towers’, but that, in the Napoleons case, the NBN Co is ‘choosing to not exercise any of these options’, including to ‘investigate other sites suggested by Council’ and ‘appeal the Council decision to the Victorian Civil and Administrative Tribunal’.⁴⁹
- 3.38 The Victorian Government stated that this outcome would ‘result in long term consequences for that community as a satellite service is a less capable service than wireless. Satellite is considered to be a lesser service in comparison to fibre and fixed wireless services due to the impact of latency’.⁵⁰ The Victorian Government concluded:
- There have been no indications from the Commonwealth that the citizens of areas affected by this NBN Co policy will have opportunities to improve their services at a later date. It is highly unlikely that alternatives will be available to Napoleons from
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47 Victorian Government, *Submission 1*, pp 1-2.

48 Victorian Government, *Submission 1*, p. 2.

49 Victorian Government, *Submission 1*, p. 2.

50 Victorian Government, *Submission 1*, p. 2.

other providers as Commonwealth policy settings mean NBN Co has an effective monopoly in the provision of fixed broadband.

NBN Co's policy of not taking full advantage of the options available to it leaves NBN Co open to a perception of pressuring councils to approve development applications. Councils will increasingly be aware that the rejection of a NBN Co tower site development application will lead to NBN Co's default outcome, the provision of a lesser satellite service for their communities...

It is the understanding of the Victorian Government that this issue is not confined to Victoria. For a project of the size and national significance of the NBN, the Victorian Government considers it vital that the initiative is developed and implemented in a transparent manner. It is the responsibility of the Commonwealth Government to ensure accountability of NBN Co to the communities it is supposed to serve.⁵¹

3.39 The issue of community consultation concerning NBN Co's fixed wireless towers was also raised as an issue:

This submission is a brief summary of our recent experience and that of other residents of Deuchar, Queensland and the lack of any sort of consultation from NBN Co...

In the Southern Free Times newspaper dated Thursday, January the 10th, 2013 (whilst many residents were away) a development notice appeared in relation to an application for a Material Change of use...

The notice gave scant detail and referred to the change of land use to 'Community Use – Telecommunication Facility...

Many residents were unaware of the application and the length of time to lodge objections was not long enough. Given the time of year some residents were unable to lodge their submissions within the time period...

In a narrow vote the application was approved by council...

We understand that there are many such towers now proposed for the Southern Downs Area and are now aware of other small communities who find themselves in our situation and are similarly being railroaded.⁵²

51 Victorian Government, *Submission 1*, p. 3.

52 Mr Brad Jones and Ms Kym Rose, *Submission 8*, pp 1-2.

Satellite Network

Background

- 3.40 This section of the report looks at issues associated with the satellite network rollout for regional and remote Australia. (NBN Co's performance information for the satellite rollout is discussed in Chapter 2.)
- 3.41 The satellite network will cover 'around three per cent' of premises outside of areas covered by fibre and fixed wireless networks.⁵³ In the period before it launches its own satellite service in 2015 – the Long Term Satellite Service – the NBN Co is operating an Interim Satellite Service to provide broadband services for regional and remote Australians who do not have access to 'metro comparable' broadband.⁵⁴

Rollout Progress

Interim Satellite Service

- 3.42 NBN Co's Interim Satellite Service (ISS) – also referred to as the First Release Satellite Service – was commercially launched on 1 July 2011, using spare capacity on existing satellites.⁵⁵ The ISS acts as a transition between the Australian Broadband Guarantee Scheme, which expired on 1 July 2011, and NBN Co's Long Term Satellite Service, scheduled for commercial service by mid-2015.⁵⁶
- 3.43 Under the ISS, the satellite equipment and installation will be provided by the NBN Co, at no cost to the end user for a standard installation, and peak download speeds of up to 6Mbps will be available via participating RSPs.⁵⁷ These services are available to consumers through NBN Co contracts with Optus and IPStar.⁵⁸
- 3.44 During the reporting period, Optus delivered a new Operational Support System/Business Support System platform to support the ISS and successfully migrated all RSPs, with the Shareholder Ministers' Performance Report to the committee noting that 'RSP feedback has generally been positive'.⁵⁹
- 3.45 Skymesh is seeking to offer the current ISS to a number of remote schools, with 'approximately 57 schools and related premises...set to be connected

53 Shareholder Ministers, 'Performance Report to 31 December 2011', p. 13.

54 NBN Co, *Statement of Corporate Intent: 2012-15*, pp 4-5.

55 Shareholder Ministers, 'Performance Report to 31 December 2011', p. 12.

56 NBN Co, *Corporate Plan 2012-15*, pp 20-21.

57 Shareholder Ministers, 'Performance Report to 30 June 2011', p. 6.

58 NBN Co, *Corporate Plan 2012-15*, p. 21.

59 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 9.

- in the first six to eight months of 2013, including some very remote Indigenous schools and communities'.⁶⁰
- 3.46 In terms of customer satisfaction with the ISS, the NBN Co explained that it had 'dimensioned 30 kilobits per second average busy-hour throughput' and, as a result, it was hearing from the people getting the service that 'they are very happy with it compared to what they were getting before'.⁶¹
- 3.47 The Shareholder Ministers' Performance Report further noted that, following the commercial launch of the ISS, services continued to be activated 'at a higher rate than forecast'.⁶²
- 3.48 The NBN Co released 'more detailed eligibility criteria' for potential rural and remote users of its ISS in May 2011, confirming that, 'where high demand exists first priority will be given to those people who have no access to alternate broadband services, subject to a service qualification process'.⁶³ From 1 July 2012, the eligibility criteria for the ISS was expanded to include eligible education, health and local government facilities.⁶⁴
- 3.49 Approximately 250 000 end users are eligible for the ISS, based on current eligibility criteria.⁶⁵ The NBN Co explained the increased coverage of the ISS from 165 000 premises in June 2012 to 250 000 premises in December 2012:
- When we look at the premises covered, it is based on the calculation that is done by DBCDE on the eligible premises – in other words, what is the footprint over which we have to provide a service? Those eligibility rules were expanded between those two dates that you just talked about, which means we ended up with a bigger coverage area... We have not passed any more; it is just that the coverage has gone up because there are more premises we are now obliged to serve.⁶⁶
- 3.50 There is currently a 48 000 customer cap on the ISS.⁶⁷ Total active ISS as at 31 December 2012 was 23 051, with 12 RSPs actively selling services, and

60 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 22.

61 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 39.

62 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 8.

63 Shareholder Ministers, 'Performance Report to 30 June 2011', p. 6.

64 NBN Co website <www.nbnco.com.au/nbn-for-home/how-it-works/satellite.html> (accessed 8 May 2013).

65 NBN Co, *Submission 2.5*, Answer to Question on Notice No. 7, Second Review of the JCNBN, p. 12.

66 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

67 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

the total number of pending orders for the ISS as at 31 December 2012 was 1 368.⁶⁸

- 3.51 Against this background, an issue of interest over the Fifth Review reporting period was when the 48 000 customer cap on the ISS might be reached, based on current take-up rates.
- 3.52 The committee heard that the number of premises currently connected to the ISS is around 28 000.⁶⁹ The cap would therefore be reached '[s]ome time next year' and this would be before the launch date of the LTSS in mid 2015.⁷⁰ This raised concerns about what arrangements were in place for new customers wanting to access the ISS once the cap is reached. The NBN Co responded:
- We simply will not be able to serve them. There is no more economically viable capacity that we can identify...
- We have explored it and looked at it carefully. It just does not make sense because the cost is really...astronomical. It is very high...
- Something like three or four – multiples – of what is costing for the 48,000.⁷¹
- 3.53 The NBN Co clarified that a number of customers would therefore miss out on the ISS:
- ...we are going to have a gap in which we cannot provide service to those people who are almost certainly going to want it. There is a long lead time on designing and launching satellites. The good news is that we have designed two specifically for Australia and they will come online in 2015.⁷²
- 3.54 There was also interest in whether a number of spot beams were approaching capacity in the ISS. The NBN Co commented it expected that 'some of those beams are going to exhaust some time next year'.⁷³

Long Term Satellite Service

- 3.55 The NBN Co's Long Term Satellite Service (LTSS) is scheduled for commercial service by mid-2015.⁷⁴ The two major components of the LTSS are a space segment and a ground segment.

68 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 8.

69 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

70 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

71 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

72 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

73 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

74 NBN Co, *Corporate Plan 2012-15*, p. 21.

- 3.56 In February 2012, Space Systems/Loral were awarded the contract to build the two next-generation Ka-band satellites for the space segment.⁷⁵ The contract is valued at approximately \$620 million and followed a two-year procurement process.⁷⁶ The planned launch date for the two satellites remains unchanged from previous forecasts, at mid 2015. The Stakeholder Ministers' Fourth Performance Report to the committee noted that the contract with Space Systems/Loral had 'progressed well during the period'.⁷⁷
- 3.57 On 4 March 2013, the NBN Co announced that Arianespace, the European satellite launch company, had been awarded a contract worth up to \$300 million to launch the two NBN satellites.⁷⁸
- 3.58 Previous committee reports have commented on the issue of orbital slot allocation. In its Third Review report, the committee noted that the NBN Co had 'lodged coordination applications' with the International Telecommunications Union (ITU) for four orbital slots for its two commissioned satellites, but that these slots were 'yet to be secured from the ITU'.⁷⁹ In its Fourth Review report, the committee stated that it would 'seek future evidence upon the...progress in obtaining orbital slots for the LTSS satellites'.⁸⁰
- 3.59 Accordingly, there was continued interest over the Fifth Review reporting period about progress in obtaining orbital slots for the two satellites. The NBN Co clarified that:

Just to be clear: we are not negotiating with the ITU or anyone; we are coordinating with other satellite operators. It is a very standard process that the ITU facilitates basically by having a register that advises everyone of all the activity going on around satellite frequency coordination. We have just recently filed resolution 49 data, which has been put into the ACMA, who have put it into the ITU. That basically puts into the satellite community that we now have a genuine satellite being built, contracted and progressing as planned and have a launch.⁸¹

75 NBN Co, *Corporate Plan 2012-15*, p. 21.

76 NBN Co, *Corporate Plan 2012-15*, p. 21.

77 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 9.

78 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 37.

79 JCNBN, *Review of the Rollout of the National Broadband Network: Third Report*, June 2012, p. 91.

80 JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 51.

81 Mr Gary McLaren, Chief Technology Officer, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 39.

- 3.60 The Stakeholder Ministers' Performance Report further noted that the ITU orbital slot coordination process 'continued to progress'.⁸²
- 3.61 There was also interest in the lead times for when equipment would start being rolled out to facilitate switching over from the ISS to the LTSS in mid 2015. The NBN Co responded that:
- We plan to do that around the time of the actual satellites going operational. We are not looking to do that any earlier. Our current corporate plan is to do that as the satellites become operational around mid-2015...
- We will still have the interim satellite in place, and there will be a migration over a period of time. It looks like it will take probably 12 to 18 months to do that migration. It is not something we can organise a workforce to do within a week or two and switch things over. It needs a customer visit. It needs to be supported through a program right across regional and rural Australia.⁸³
- 3.62 In terms of the ground segment, the LTSS requires satellite ground stations to be built across Australia to receive and transmit data signals. Negotiations for 10 ground stations continued during the reporting period, with seven contracts having been exchanged and negotiations for the remaining three sites continuing in 2013.⁸⁴
- 3.63 Ground stations are planned to be located in New South Wales (Wolumla, Bourke and Broken Hill); South Australia (Ceduna); Tasmania (Geeveston); Queensland (Roma); and Western Australia (Kalgoorlie, Geraldton, Carnarvon and Wagerup).⁸⁵
- 3.64 In October 2012, the NBN Co announced that it had selected Cockram Corporation Pty Ltd and Perkins (WA) Pty Ltd to build the 10 ground stations, with contracts awarded being worth up to \$180 million and construction due to be completed in 2015.⁸⁶ An estimated 20-30 construction workers will be required to build each facility, with a further 60 people expected to be employed nationwide to manage the service.⁸⁷
- 3.65 In July 2012, the US satellite network specialist ViaSat was contracted to supply the equipment for the 10 ground stations, as well as the equipment

82 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 9.

83 Mr McLaren, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 39.

84 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 9.

85 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 11.

86 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 11.

87 NBN Co, 2012, NBN Co Selects Satellite Ground Station Construction Contractors, media release, 25 October.

to be installed in end user premises, with the contract worth approximately \$280 million.⁸⁸

- 3.66 The NBN Co confirmed that cost estimates for the satellite service remained within the Corporate Plan forecasts: '[b]ased on contracted rates negotiated with Delivery Partners and on actual costs received to date NBN Co's estimate of the capital costs for the Satellite network remains within the \$1.8 billion forecast in the 2012-15 Corporate Plan'.⁸⁹

Additional Issues

Network Extensions

- 3.67 As set out in the NBN Co Corporate Plan 2012-15, the network extensions framework allows individuals, businesses or governments to pay the 'incremental cost of extension of the fibre or fixed wireless network to areas where it would not otherwise be built'.⁹⁰
- 3.68 There are three types of network extensions:
- Adjacent Fibre Network Extensions – covering premises located on the edge of a fibre serving area module. These premises can be individual (e.g. a house) or a group of premises (e.g. a group of houses or a group of businesses in an industrial area);
 - Large Fibre Network Extensions – covering small communities or towns that are not planned to be serviced by fibre or individual premises or multiple premises that cannot be considered for an Adjacent Fibre Network Extension; and
 - Fixed Wireless Network Extensions – covering small communities or towns that are planned to be serviced by satellite services.⁹¹
- 3.69 The committee has tracked the evolution of NBN Co's network extension policy for the fibre and fixed wireless networks over its previous reports. In its Second Review report, the committee recommended that:
- ...as a matter of urgency, the NBN Co formalise and publicise its policy for the provision of costing extensions to its planned

88 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 11.

89 NBN Co, *Submission 13*, p. 11.

90 NBN Co, *Corporate Plan 2012-15*, p. 32.

91 Australian Government, October 2012, *Response to the Joint Committee on the National Broadband Network Third Report of 25 June 2012*, pp 16-17.

National Broadband Network fibre footprint, especially for regional and remote Australia.⁹²

3.70 In its Third Review report, the committee recommended that the NBN Co:

- ...publicise the [Network Extension] policy and its process for communities in the fixed wireless and satellite service areas; and
- At the point of announcing new areas within these footprints, ensure that the policy is attached to media releases and known to the relevant local government associations.⁹³

3.71 Consistent with these recommendations, a network extension policy has now been introduced. As the Shareholder Ministers' Fourth Report to the committee on the NBN rollout noted:

The Network Extension policy was launched on the NBN Co website on 12 July 2012. The policy states that NBN Co must recover only the incremental cost of building any Network Extensions.

The policy outlines the process and criteria for individuals, businesses or government organisations to submit a request for NBN Co to deliver an extension of the existing fibre footprint or fixed wireless footprint beyond that which is planned.⁹⁴

3.72 The Shareholder Ministers' Performance Report further notes that training on the network extension process and policy for NBN Co contact centre staff is scheduled for early 2013.⁹⁵

3.73 On occasion, the issue of extending the fibre footprint can indicate community concern about perceived differences in quality between the services available on the fibre network from those available on the fixed wireless and satellite networks. The committee received evidence on this matter over the Fifth Review reporting period:

I live in Fernmount, a small hamlet of 200 houses 4km East of Bellingen. Unfortunately we are unable to obtain fibre to the premises if and when Bellingen receives the NBN roll out.

I believe you are going to receive a great deal of [complaint] as a result of the NBNCO policy for low-density regional communities. Currently we are facing a Hobson's choice as we are being offered

92 JCNBN, *Review of the Rollout of the National Broadband Network: Second Report*, November 2011, p. 124.

93 JCNBN, *Review of the Rollout of the National Broadband Network: Third Report*, June 2012, p. 104.

94 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, pp 18-19.

95 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 19.

fixed wireless broadband which will only ever be a 2nd rate service if the rest of the network is installed post-September 2013.⁹⁶

Deuchar, Queensland is a rural community made up of predominately lifestyle properties located between Allora and Warwick on the Southern Downs...

Under the current NBN rollout proposal the Optic Fibre cable will run through our area on the way to service Warwick...

The NBNco Fixed Wireless solution delivers an inferior product to Rural Australia...⁹⁷

- 3.74 Such comments point to the importance of continued community consultation and awareness raising by the NBN Co concerning the three technologies being used to rollout the NBN to regional and remote Australia, as well as about how local government and regional communities might utilise the network extension program.
- 3.75 As at 31 December 2012, the NBN Co had received 85 network extension applications.⁹⁸ One extension is currently being constructed, with eight under commercial discussion.⁹⁹

Mobile Networks

- 3.76 Mobile services and mobile backhaul in regional Australia, in the context of the NBN rollout, were raised as issues over the committee's Fifth Review reporting period.
- 3.77 The 2011-12 Regional Telecommunications Independent Review Committee (the Sinclair Review) report had previously pointed to a need to improve mobile coverage in regional and remote Australia and one of its recommendations was that 'NBN Co engage with mobile carriers about using NBN fixed-wireless towers to also improve mobile coverage (recommendation 4.5)'.¹⁰⁰
- 3.78 In its response to the Sinclair Review, the Australian Government agreed with this recommendation, noting that the 'construction of the NBN fixed wireless network provides an opportunity for carriers to expand their mobile phone coverage in certain locations across regional Australia by co-locating equipment in new towers built to support the network'.¹⁰¹

96 Mr Marc Percival, *Submission 2*, p. 1.

97 Mr Brad Jones and Ms Kym Rose, *Submission 8*, pp 1-2.

98 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 19.

99 NBN Co, *Submission 13.1*, Answer to Question on Notice No. 103, p. 25.

100 Department of Broadband, Communications and the Digital Economy (DBCDE), *Submission 10*, p. 1.

101 DBCDE, *Submission 10*, p. 1.

3.79 NBN Co's response to this matter was discussed in the committee's Fourth Review report, which noted that:

...NBN Co has undertaken to develop a Facilities Access Policy for towers, duct and depot space, which would allow access seekers to obtain terms, prices and ordering and provisioning processes for accessing NBN Co facilities. This would allow for the co-location of mobile network equipment on NBN wireless sites...The NBN Co has already reached reciprocal agreements with Telstra and Optus for access to each others' facilities, including NBN Co built and owned wireless towers.¹⁰²

3.80 However, the Victorian Government submission to the committee's Fifth Review argued that:

The Commonwealth Government response to the recommendations regarding mobile coverage indicates a lack of understanding of the practical requirements of the mobile telecommunications carriers.

A tower built to satisfy the fixed wireless requirements of NBN Co will not necessarily be suitable for the carriers to co-locate.

Therefore carriers need to be involved in the planning stages. For example:

- space required on each tower – a tower built to NBN Co needs only may not be high enough or structurally appropriate to allow any co-location
- power requirements will change if carriers co-locate
- ground equipment housing capacity and security capabilities need to be considered...¹⁰³

3.81 The Sinclair Review report also included a 'proposal for a co-investment program, jointly funded by the Commonwealth and interested states or territory governments, to expand the mobile coverage footprint in regional Australia (recommendation 3.2)'.¹⁰⁴

3.82 In its response to the Sinclair Review, the Australian Government noted that it would 'review the impact of the NBN fixed wireless network on improving mobile coverage in regional areas before making any commitments to fund a new program to extend mobile coverage'.¹⁰⁵

102 JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 50.

103 Victorian Government, *Submission 1*, p. 4.

104 DBCDE, *Submission 10*, p. 1.

105 DBCDE, *Submission 10*, p. 2.

- 3.83 However, the Victorian Government submission to the committee's Fifth Review observed that:

The expectation that the NBN Co fixed wireless network will, in itself, improve mobile coverage is flawed. NBN Co is not tasked with addressing mobile coverage in the Commonwealth's Statement of Expectations and this task is not included in its 2012-15 Corporate Plan.

NBN Co should be involved as a partner in efforts to improve mobile coverage where opportunities exist to co-locate facilities. However, it is not practical to expect NBN Co to plan and deploy its fixed wireless network to deliver better mobile coverage and to achieve its coverage targets in a timely fashion. Either NBN Co will prioritise the fixed wireless network, in which case its impact on regional mobile coverage will be minimal, or it will face conflicting objectives.¹⁰⁶

- 3.84 In response to this matter, the DBCDE highlighted that:

The government agrees that NBN Co and mobile carriers should work together to take advantage of the NBN fixed wireless towers to improve mobile coverage in regional Australia, where possible, and we note that NBN Co, Telstra and Optus have recently entered into agreements to share tower infrastructure. This is obviously a positive development towards improved mobile coverage in regional and rural Australia...

In addition, NBN Co has negotiated with carriers to secure further mutually beneficial arrangements which involve NBN Co accessing or constructing towers on sites that have been set aside for future development. This would apply when a carrier has a site for which it has all or some of the necessary approvals, but are not planning to build a tower in the near future. If such a site is considered appropriate for the fixed wireless network, NBN Co will initiate the construction process. This has the potential of seeing the networks expand at a quicker rate than they otherwise would.¹⁰⁷

- 3.85 NBN Co further explained that to assist in the governance of specific co-location requests and applications, the NBN Co has 'established a number of framework agreements with third parties, including mobile network operators, which outline the process and procedures to co-locate on NBN Co's network infrastructure sites. These agreements address

106 Victorian Government, *Submission 1*, p. 4.

107 DBCDE, *Submission 10*, pp 1-2.

operational, commercial and technical requirements for all incoming site share requests'.¹⁰⁸

3.86 In terms of the Government's response to the Sinclair Review that it would 'review the impact of the NBN fixed wireless network on improving mobile coverage in regional areas before making any commitments to fund a new program to extend mobile coverage', the DBCDE further noted that '[d]evelopments in this area are being monitored by the government. A date for this review will be determined once the NBN fixed wireless network has further progressed'.¹⁰⁹

3.87 Vodaphone Hutchison Australia (VHA) reinforced the 'central role' that the NBN Co could have in improving mobile services:

We feel now that there is increasing agreement that the NBN can play a central role in improving mobile services...

We welcome the committee's last report, in the sense that they have identified that delivering mobile services with the NBN is an important and exciting opportunity. The committee is right to identify that there are significant opportunities for the NBN and the committee was right to identify that more needs to be done to enhance those opportunities. We are pleased now to be getting some traction in this regard. We are having good discussions with NBN about this...¹¹⁰

3.88 As VHA further commented:

...the NBN presents outstanding opportunities to improve both coverage and choice for regional consumers and they should be pursued as a matter of priority. This will ensure the full benefits of the NBN can be realised. Convergence of fixed and mobile/wireless technologies means that the old paradigm of separate fixed and mobile services is no longer relevant and a more holistic approach to... [telecommunications] infrastructure should be the new public policy focus...

Given the importance of mobile and wireless technologies to the economy it is imperative that there be a greater recognition of infrastructure convergence and the benefits that NBN could deliver by enhancing the delivery of mobile solutions.

The NBN and mobile technologies should be seen as complementary technologies rather than as competing alternates...

108 NBN Co, *Submission 13.1*, Answer to Question on Notice No. 100, p. 24.

109 DBCDE, *Submission 10*, p. 2.

110 Mr Matthew Lobb, General Manager, Industry Strategy and Public Policy, Vodafone Hutchinson Australia, Transcript of Evidence, Sydney, 16 April 2012, p. 55.

VHA therefore submits that the NBN should embrace the convergence of technology and develop products with this in mind.¹¹¹

- 3.89 VHA also emphasised the broader role that the NBN could have in improving mobile services, clarifying that this encompassed both the NBN Co fixed wireless and fibre networks:

It is important to recognise that what we are talking about when we are talking about mobile services is not just NBN fixed wireless service – in fact that is actually the least useful opportunity for the NBN network.

What is going to be of most use to mobile services is NBN's fibre network to provide access for mobile services. As we have talked about previously, wireless services use a base station to connect your mobile phones but then they need transmission services to take the traffic out of the cell. That is where we see the most important opportunities for the NBN and mobile services.¹¹²

- 3.90 VHA pointed to the high costs involved in mobile backhaul, noting that the NBN could be used to provide lower cost backhaul options: '[t]he fundamental challenge, particularly for competitor mobile services such as Vodafone and Optus, is the build economics in regional Australia... We think the policymakers need to take a more holistic approach to solving this problem, and part of that is using the NBN to overcome the very high costs of regional backhaul'.¹¹³
- 3.91 On this point, Allen and Overy/Venture Consulting commented that there is 'yet an unexplored option to review the integration of the NBN fixed wireless network and the private sector regional mobile networks that often use common towers and backhaul', noting that mobile carriers 'may be interested in investing in this component and also in aligned operating arrangements'.¹¹⁴
- 3.92 VHA suggested that the provision of mobile backhaul might represent an additional revenue stream for the NBN Co: '[i]n addition to enabling mobile expansion, this would also significantly improve the business case for NBN by adding an additional revenue stream through the use of its fibre network for mobile backhaul'.¹¹⁵

111 Vodafone Hutchinson Australia, *Submission 9*, pp 2-3.

112 Mr Lobb, Vodafone Hutchinson Australia, Transcript of Evidence, Sydney, 16 April 2012, p. 55.

113 Mr Lobb, Vodafone Hutchinson Australia, Transcript of Evidence, Sydney, 16 April 2012, pp 55-56.

114 Allen and Overy/Venture Consulting, *Submission 4*, p. 7.

115 Vodafone Hutchinson Australia, *Submission 9*, p. 2.

- 3.93 However, Pipe Networks Pty Ltd (PIPE) offered an alternative view on this matter. In its submission to the committee, PIPE explained that it owns and operates the 'third-largest metropolitan fibre-optic network in Australia', using this network to 'provide dark fibre and ethernet services for backhaul and resale' to many other carriers, carriage service providers and ISPs supplying fixed-line services, as well as backhaul for a number of wireless carriers and Vodafone Hutchinson Australia's mobile telecommunications network.¹¹⁶
- 3.94 PIPE emphasised that its backhaul services had enabled these companies to 'engage in infrastructure-based competition with Telstra', resulting in 'significantly increased competition in retail markets for Internet, fixed-line and more recently mobile telephony services'.¹¹⁷
- 3.95 As PIPE further explained, the market for fibre backhaul services in Australia is serviced by a number of providers, both large existing providers and smaller, growing businesses. The current fibre footprint is 'naturally denser in larger metropolitan areas, but is ever expanding', with this continued expansion being in the 'long-term interests of end users as more and more people are capable of being serviced or the edge of the nearest networks moves ever closer'.¹¹⁸ PIPE therefore concluded that it had concerns about the NBN Co's possible entry into this market:
- Investment into larger network extensions may only come about upon securing an anchor tenant, such as a mobile provider. For example PIPE's agreement with Vodafone Hutchinson Australia in late 2010 extended PIPE's network by approximately 900 kilometers of new fibre over two years, which at the time of agreement represented a 60 percent increase to PIPE's existing network footprint...
- Intervention into this market by a taxpayer funded entity such as NBN Co will reduce network extension by existing and emerging private fibre providers to the detriment of the industry, the market and end-users.¹¹⁹
- 3.96 The NBN Co Corporate Plan 2012-15 notes that the NBN Co has 'received requests from the industry to develop products that are suitable for use as mobile backhaul' and that 'NBN Co is considering these requests and

116 Pipe Networks Pty Ltd, *Submission 7*, pp 1-2.

117 Pipe Networks Pty Ltd, *Submission 7*, pp 1-2.

118 Pipe Networks Pty Ltd, *Submission 7*, pp 1-2.

119 Pipe Networks Pty Ltd, *Submission 7*, p. 2.

evaluating whether to develop products suitable for use as mobile backhaul' but 'no decision has yet been made'.¹²⁰

Concluding Comments

Fibre Network

- 3.97 The committee notes that the NBN fibre rollout in regional Australia is progressing. It is critical that the NBN Co continues to balance construction between metropolitan and regional locations and meet its projected rollout timelines.
- 3.98 Given the significance of the NBN fibre rollout to regional Australia and that the NBN Co is following design principles, as set out in its Corporate Plan 2012-15, that include balancing construction between metropolitan and regional locations,¹²¹ it would be useful for the NBN Co to provide further information on the fibre rollout in regional communities. This might include rollout performance information for regional Australia and further information on prioritisation of regional locations and the NBN Co's definitions of 'metro' and 'non-metro' (and other such definitions used in reporting documentation).

Fixed Wireless Network

- 3.99 The committee notes progress with the rollout of the fixed wireless network in regional and remote Australia, and that increasing numbers of NBN Co development proposals for fixed wireless network infrastructure are therefore being lodged in local government areas.
- 3.100 In terms of this development approval process, the committee is aware that the NBN Co and its design and construction partners are continuing to work with local government to identify appropriate locations for fixed wireless network infrastructure.¹²² Planning tribunals under various state and territory legal systems provide options for appeal.
- 3.101 The committee points to the need for the NBN Co to continue to consult with state governments, local councils and regional communities in a timely manner on the implementation of the fixed wireless network – in particular, concerning the planning and development approval processes for wireless towers. The NBN Co needs to continue to make clear its policy on this matter. There would also be benefit in the NBN Co increasing its public reporting on progress in this area (including numbers of

120 NBN Co, *Corporate Plan 2012-15*, p. 68.

121 NBN Co, *Corporate Plan 2012-15*, p. 19.

122 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, pp 3-5, p. 36.

development approvals lodged, approved, rejected and appealed) and on its communication and consultation activities concerning this matter.

- 3.102 The committee further points to the importance of continued community consultation and awareness raising by the NBN Co concerning the three technologies being used to rollout the NBN to regional and remote Australia, as well as about how local government and regional communities might utilise the network extension program.

Satellite Network

- 3.103 The committee notes progress with NBN Co's satellite network rollout for regional and remote Australia. However, it recognises the need to closely monitor take-up rates for the ISS before NBN Co's LTSS comes into operation in mid-2015, given that the 48 000 customer cap on the ISS is predicted to be reached some time in 2014, based on current take-up rates.¹²³
- 3.104 Given that the eligibility criteria for the ISS (subject to a service qualification process) include education, health and local government facilities in rural and remote communities, as well as Indigenous schools and communities, there is concern about what arrangements might be put in place by the NBN Co for new customers wanting to access the ISS once the cap is reached.
- 3.105 The committee points to the importance of the NBN Co closely monitoring the current rate of ISS activations and, prior to the customer cap on the ISS being reached, consulting with relevant stakeholders and the Australian community on options for establishing cost efficient arrangements to ensure that education, health and local government facilities in rural and remote communities and other individuals determined to be most in need of access to the ISS are still able to access the service. If additional satellite capacity becomes available at a competitive cost, the customer cap on the ISS may be able to be increased.
- 3.106 The committee also notes progress with NBN Co's LTSS. Given that the LTSS is scheduled for commercial service by mid-2015, the committee emphasises the importance of the NBN Co continuing to regularly publicly report on progress in terms of obtaining orbital slots for the two satellites, satellite construction and launch dates, planning approvals and construction of ground stations, and equipment supply to meet planned timeframes.

123 Mr Quigley, NBN Co, Transcript of Evidence, Sydney, 16 April 2012, p. 38.

Network Extensions

- 3.107 The committee is pleased to note that a network extension policy for the fibre and fixed wireless networks has now been introduced and widely communicated.¹²⁴ The committee will be interested in the future outcomes of this policy, particularly for communities in regional Australia.
- 3.108 The committee points to the importance of continued community consultation and awareness raising by the NBN Co concerning the three technologies being used to rollout the NBN to regional and remote Australia, as well as about how local government and regional communities might utilise the network extension program.

Mobile Networks

- 3.109 The committee notes the NBN Co's progress in working to facilitate access to mobile providers with a view to using the NBN to improve mobile telecommunications in regional and remote Australia.¹²⁵ The committee is aware that the NBN Co has developed a Facilities Access Policy for towers, duct and depot space, to allow access seekers to obtain terms, prices and ordering and provisioning processes for accessing NBN Co facilities.¹²⁶ The committee encourages the NBN Co to publicly report progress in terms of the implementation and outcomes of this policy. The NBN Co is also encouraged to continue to publicly report on the impact of its fixed wireless network in improving mobile coverage in regional and remote areas.
- 3.110 The committee reiterates the recommendation in its Fourth Review report that the Government should support the NBN Co to continue to 'explore the synergies between fixed and mobile telecommunications networks with a view to using the National Broadband Network to improve mobile telecommunications'.¹²⁷ The NBN Co is encouraged to include a statement on this area in its revised Corporate Plan.
- 3.111 The committee also notes the importance of continued industry consultation in terms of the NBN Co developing products suitable for use as mobile backhaul, including consideration of the potential impact of these services on the existing market in this area. To further clarify this

124 Shareholder Ministers, 'Performance Report to 31 December 2012', *Submission 3*, p. 18.

125 DBCDE, *Submission 10*, pp 1-2, and NBN Co, *Submission 13.1*, Answer to Question on Notice No. 100, p. 24.

126 JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 50.

127 JCNBN, *Review of the Rollout of the National Broadband Network: Fourth Report*, February 2013, p. 52.

matter, it would be useful for the NBN Co to include an updated statement on mobile backhaul in its revised Corporate Plan.

Recommendation 2

- 3.112 **The committee recommends the NBN Co Limited revised Corporate Plan and the six-monthly Shareholder Ministers' Performance Reports to the committee include further information on the National Broadband Network fibre rollout in regional Australia.**

Recommendation 3

- 3.113 **The committee recommends NBN Co Limited and the Department of Broadband, Communications and the Digital Economy closely monitor the current rate of Interim Satellite Service (ISS) activations and, prior to the customer cap on the ISS being reached:**
- **consult with relevant stakeholders and the Australian community on options for establishing cost efficient arrangements to ensure that education, health and local government facilities in rural and remote communities and other individuals determined to be most in need of access to the ISS are still able to access the service; and**
 - **consider increasing the customer cap on the ISS, if additional satellite capacity becomes available at a competitive cost.**