

Chapter 1

Introduction

Establishment of the Committee

1.1 The Parliamentary Joint Committee on the National Broadband Network (the committee) was established on 14 September 2016, pursuant to the agreement of the House of Representatives and the Senate, to inquire into and report on the rollout of the National Broadband Network.

1.2 The committee's establishing resolutions require the committee to report annually to each House of the Parliament until the National Broadband Network is declared built and fully operational on:

- (a) rollout progress with particular regard to the NBN Co Limited Statement of Expectations issued by Shareholder Ministers on 24 August 2016;
- (b) utilisation of the national broadband network in connected localities in both metropolitan and regional areas, and the identification of opportunities to enhance economic and social benefits;
- (c) Australia's comparative global position with regard to residential broadband infrastructure; particularly relative to other large, developed economies;
- (d) national broadband network activation rates, user demand, usage patterns and trends, and any identified impediments to the take-up of national broadband network services;
- (e) any market, industry, or regulatory characteristics that may impede the efficient and cost-effective rollout of the national broadband network; and
- (f) any other matter pertaining to the national broadband network rollout that the committee considers relevant.

Conduct of the inquiry

1.3 Details of the inquiry were placed on the committee's website. The committee also wrote to individuals and organisations, inviting submissions by 31 March 2017. The committee continued to accept submissions until August 2017.

1.4 The committee received 191 submissions to its inquiry from a range of individuals and organisations. A list of the submissions received by the committee is provided at Appendix 1. Other documents authorised for publication, including answers to questions taken on notice, are listed at Appendix 2.

1.5 The committee held 15 public hearings and took evidence from every state and territory. In developing its public hearing program, the committee recognised the importance of taking evidence in regional areas as well as capital cities. A list of witnesses who appeared at the hearings is at Appendix 3.

1.6 The committee also undertook three site visits to inform its inquiry: nbn Discovery Centre in Sydney, Innovation NQ in Townsville and the Royal Flying Doctor Service base in Port Augusta. The committee thanks those three organisations for hosting the site visits.

Acknowledgements

1.7 The committee thanks the individuals and organisations who contributed to the inquiry. In particular, the committee notes the witnesses who travelled to give evidence at public hearings and the individuals who provided detailed submissions about their experiences related to the NBN rollout.

Note on terminology

1.8 The company named nbn co limited was established in 2009 to design, build and operate Australia's new high-speed broadband network. References to the company name throughout the report will be abbreviated to the lower case nbn. Quotations and other sources that use variations of the company name will remain in their original form.

1.9 The acronym NBN will be used throughout the report when referring to the National Broadband Network.

References to Hansard

1.10 Some of the references in this report are to *Proof Hansard* transcripts. Page numbers may vary between the proof and the official *Hansard* transcript.

Structure of the report

1.11 The report is divided into the following chapters:

- Chapter 1 provides some context and background information about the development and rollout of the NBN;
- Chapter 2 provides detail about the current status of the rollout, including future planning and upgrade pathways;
- Chapter 3 provides evidence about the consumer experience when connecting to and using an NBN service;
- Chapter 4 focuses on the experience of consumers using the Sky Muster satellite service;
- Chapter 5 brings together the evidence received about the customer experience and proposes some actions to enhance the customer experience;
- Chapter 6 provides detail about the faults and customer data currently available and how this could be better collected and analysed;
- Chapter 7 discusses the evidence received about the market, industry and regulatory characteristics of the rollout; and
- Chapter 8 provides evidence about the future opportunities of the NBN, including a discussion about the innovation already achieved on the network.

Context of the inquiry

1.12 nbn was established in 2009 to design, build and operate Australia's new high-speed broadband network. nbn is wholly owned by the Commonwealth of Australia as a Government Business Enterprise (GBE) and is accountable to two Shareholder Ministers: the Minister for Communications and the Minister for Finance.

1.13 The nbn regulatory framework came into force in April 2011 and was set up by two Acts: *National Broadband Network Companies Act 2011* and *Telecommunications Legislation Amendment (National Broadband Network Measures—Access Arrangements) Act 2011*.

1.14 In addition to the two establishing Acts, nbn operates in accordance with a range of other legislation including: *Corporations Act 2001*, *Public Governance, Performance and Accountability Act 2013*, *Competition and Consumer Act 2010* and the *Telecommunications Act 1997*.

1.15 The delivery of the NBN to the Australian community in accordance with the legislative framework requires interaction with a range of stakeholders in the telecommunications industry. In its submission to the inquiry, the Telecommunications Industry Ombudsman (TIO) provided the following table explaining the different roles and responsibilities of government, regulators, consumer representatives and industry associations.

Table 1.1: Roles and responsibilities in the telecommunications industry¹

GOVERNMENT	REGULATORS	CONSUMER REPRESENTATIVES	INDUSTRY ASSOCIATIONS	DISPUTE RESOLUTION
<p>Federal Minister for Communications</p> <p>Federal Minister for Regional Communications</p> <p>Department of Communications and the Arts</p> <ul style="list-style-type: none"> • collectively responsible for setting overarching telecommunications policy and coordinating implementation • administers the mobile blackspot funding program <p>State/Territory Governments</p> <ul style="list-style-type: none"> • some contribute to mobile black spot funding 	<p>ACMA</p> <ul style="list-style-type: none"> • administers the telecommunications licensing and conduct regime • enforces compliance with TIO scheme membership and Ombudsman decisions • approves industry codes <p>ACCC</p> <ul style="list-style-type: none"> • regulates the network and market competition • administers the Australian Consumer Law, including ensuring fair market practices 	<p>Australian Communications Consumer Action Network (ACCAN)</p> <ul style="list-style-type: none"> • peak body for consumer education, advocacy and research (telecommunications specific) <p>Financial Counselling Australia (FCA)</p> <ul style="list-style-type: none"> • consumer case work and advice • contributes to policy debates; hardship and debt focus <p>Other Consumer Law Centres</p> <ul style="list-style-type: none"> • consumer case work and legal advice <p>CHOICE and Consumers Federation of Australia</p>	<p>Communications Alliance</p> <ul style="list-style-type: none"> • develops industry codes, standards and guidelines • advocates for industry <p>Communications Compliance</p> <ul style="list-style-type: none"> • monitors compliance of industry codes <p>Other associations for internet and mobile</p>	<p>Telecommunications Industry Ombudsman</p> <ul style="list-style-type: none"> • facilitates the resolution of residential and small business consumer complaints • identifies and resolves broader issues • makes determinations on land access objections

1 Source: Telecommunications Industry Ombudsman, *Submission 115*, p. 2.

1.16 A broad overview of the activities undertaken by these stakeholders is provided later in this chapter.

Previous parliamentary inquiries

1.17 Since the establishment of nbn, there has been a number of parliamentary committees established to inquire into various aspects of the NBN: a Joint Standing Committee in the 43rd Parliament and Senate Select Committees in the 42nd and 44th Parliaments.

1.18 Whilst noting the previous parliamentary inquiries, the primary focus of this report is the evidence gathered throughout the current inquiry.

Activities throughout the inquiry process

1.19 The committee notes that it is conducting a 'live' inquiry about the rollout of the NBN. As this report is being tabled, NBN infrastructure is being constructed and NBN customers are choosing plans from their Retail Service Providers (RSPs).

1.20 As such, the committee is aware that new policies and changes to the rollout schedule have been occurring at the same time that the committee has been taking evidence about the rollout experience from individuals and organisations.

1.21 In addition to specific NBN rollout activities and announcements, the committee notes other reviews currently underway or recently completed related to matters that fall under the broad scope of the committee's terms of reference including:

- the independent review of the Telecommunications Industry Ombudsman (TIO) Scheme in accordance with the *Telecommunications (Consumer Protection and Service Standards) Act 1999*. The review report is due to the Ombudsman by 29 August 2017;
- the Productivity Commission (PC) review into the Universal Services Obligation, referred to the PC by the Government in April 2016. This inquiry analysed what changes may be required to support universal access to a minimum level of retail telecommunications services. When releasing the PC report on 19 June 2017, Senator the Hon. Mitch Fifield, Minister for Communications noted that the Government is considering the PC report and will undertake targeted consultations to inform the Government's response;²
- the Review of the *Migration Assurance Framework* being undertaken by the Department of Communications and the Arts;
- the legislation presented to the House of Representatives on 22 June 2017: Telecommunications (Regional Broadband Scheme) Charge Bill 2017 and Telecommunications Legislation Amendment (Competition and Consumer) Bill 2017. The Senate Environment and Communications Legislation

2 Senator the Hon. Mitch Fifield, Minister for Communications, 'Government releases Productivity Commission report into the Universal Service Obligation', *Media release*, 19 June 2017.

Committee conducted an inquiry on these bills and tabled its report on 6 September 2017;³ and

- the consideration by the Australian Competition and Consumer Commission (ACCC) of nbn's variation to its Special Access Undertaking (SAU) which was resubmitted to the ACCC on 27 June 2017. The ACCC published a consultation paper on 2 August 2017 and invited submissions by 25 August 2017.

1.22 Whilst providing some context, this report will primarily refer to these reviews as they relate to evidence received throughout the inquiry.

Broad overview of the NBN rollout

1.23 nbn is a government owned entity which is providing the infrastructure to enable the Australian community to connect to the NBN. nbn is party to an Equity Funding Agreement with the Commonwealth, which formalises the intention of the Commonwealth to provide equity funding to nbn.

1.24 This Agreement imposes a cap on the maximum amount of equity funding that will be provided by the Government of \$29.5 billion. On 18 November 2016, the Government announced that nbn would be provided a loan of \$19.5 billion on commercial terms to fund the remainder of the rollout.

1.25 As a wholesale operator, nbn sells capacity on the network to RSPs who then enter into contracts with consumers (individuals and businesses) to provide broadband internet and phone services.

1.26 nbn is deploying a range of technologies to deliver the NBN to premises across Australia. The technology types are summarised in the table below.

3 Senate Environment and Communications Legislation Committee, *Telecommunications Legislation Amendment (Competition and Consumer) Bill 2017 [Provisions] and Telecommunications (Regional Broadband Scheme) Charge Bill 2017 [Provisions]*, 6 September 2017, available at: http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/TelcoBills2017/Report.

Table 1.2: NBN rollout—network technology⁴

Fixed line network—93 per cent of premises	Fibre to the Premises (FTTP)	FTTP deploys fibre optic cable to the household or business.
	Fibre to the Node (FTTN)	FTTN deploys fibre into neighbourhoods and then uses existing copper infrastructure to the premises.
	Fibre to the Basement/distribution point (FTTB/dp)	FTTB deploys fibre optic cable to the basement of a building, utilising existing wiring in the building for connections to apartments or offices.
	Fibre to the Curb/Kerb (FTTC)	FTTC deploys fibre to a footpath telecom pit and then uses existing copper infrastructure to the premises.
	Hybrid Fibre Coaxial (HFC)	A HFC connection uses existing 'pay TV' or cable network to deliver fast broadband. A HFC line will be run from the nearest available fibre node, to the premises.
Outside fixed line network	Fixed Wireless	Fixed wireless transmits data from towers to a rooftop antenna using radio signals.
	Satellite	Two Sky Muster satellites deliver broadband to premises outside the fixed line network.

1.27 The decision to deliver the NBN through a multi-technology mix was a policy shift that occurred with the election of the Coalition government in 2013. Prior to that, nbn was rolling out a fixed line network using fibre-to-the-premise technology.

1.28 The shift away from FTTP was informed first by the Strategic Review (December 2013), and then by the subsequent Vertigan review (October 2014), which argued there was some prospect that an FTTP network would be surplus to Australia's broadband needs and would, therefore, represent a waste of capital expenditure.

1.29 Under the *Migration Assurance Framework*, once an area is designated as Ready For Service (RFS), customers have 18 months to migrate to the NBN before the existing copper network is switched off. Fixed line broadband services will replace existing landlines. A separate landline service will continue to be available on the copper network for NBN consumers on fixed wireless and satellite services.

1.30 As the wholesaler, nbn has a number of responsibilities including to build and operate the network, ensure open access to the network through non-discriminatory treatment of retailers, regulate wholesale access prices, and provide public information about migration responsibilities.

1.31 RSPs are the first point of contact for individual and business customers. RSPs are responsible for setting retail prices and selling services to the public, as well as providing equipment such as modems.⁵

4 Source: adapted from *nbn 2017 Corporate Plan* (pp. 12-13) and nbn *The nbn Multi Technology Mix (MTM)*, <http://www.nbnco.com.au/learn-about-the-nbn/network-technology.html>.

1.32 The delivery of the NBN rollout requires a major transformational change in the telecommunications industry. In order to facilitate this transformation and enable a competitive market, a range of regulatory and oversight mechanisms have been established. An overview of these activities is provided in the next section.

Department of Communications and the Arts

1.33 The Department of Communications and the Arts (the Department) advises the Government about ensuring that all Australians have access to high quality, reliable and affordable internet services. The Department has a key oversight role to monitor the activities of the NBN rollout.⁶

1.34 As one of the shareholder departments (as well as the Department of Finance), the Department provides government with an independent assessment and advises government on nbn's Corporate Plan.⁷

Australian Competition and Consumer Commission

1.35 The Australian Competition and Consumer Commission (ACCC) has a number of regulation responsibilities in accordance with the *Competition and Consumer Act 2010*, including determining the terms and conditions of access to services provided over the NBN, and publishing and maintaining explanatory material about the non-discrimination obligations that apply to nbn.⁸

1.36 The nbn Special Access Undertaking (the SAU) is a key part of the regulatory framework that governs the prices that nbn, as a wholesale open access telecommunications network, can charge for the services it supplies to RSPs, as well as other terms.

1.37 The SAU is considered and approved by the ACCC. The current SAU was accepted by the ACCC in December 2013 following an assessment and consultation process.

1.38 The SAU works in conjunction with the Wholesale Broadband Agreement (WBA). The SAU will shape price and non-price terms until 2040, while the WBA is a commercial contract between nbn and its customers, and currently has a standard term of 2 years.

1.39 The ACCC issues industry guidance to assist RSPs to comply with their legal obligations under Australian Consumer Law. Building on the industry guidance for

5 nbn, *The network explained*, <http://www.nbnco.com.au/learn-about-the-nbn/how-the-network-comes-together.html> and nbn, *How your broadband gets to you*, <http://www.nbnco.com.au/learn-about-the-nbn/how-the-nbn-network-gets-to-you.html>.

6 Department of Communications and the Arts, *What we do*, <https://www.communications.gov.au/what-we-do>.

7 Mr Andrew Madsen, Assistant Secretary, Broadband Implementation Branch, Department of Communications and the Arts, *Proof Committee Hansard*, 1 August 2017, p. 24.

8 Australian Competition and Consumer Commission, *National Broadband Network (NBN)*, <https://www.accc.gov.au/regulated-infrastructure/communications/national-broadband-network-nbn>.

RSPs it issued in 2007 and 2011, in February 2017 the ACCC published the [*Broadband Speed Claims—consultation outcomes report*](#) summarising the outcomes of its 2016 consultation about advertising of retail fixed-line broadband speeds.

1.40 The Broadband Speed Claims report included principles to guide RSPs in informing consumers of the speeds that they typically deliver on their broadband plans:

1. Consumers should be provided with accurate information about typical busy period speeds that the average consumer on a broadband plan can expect to receive.
2. Wholesale network speeds or theoretical speeds taken from technical specifications should not be advertised without reference to typical busy period speeds.
3. Information about the performance of promoted applications should be accurate and sufficiently prominent.
4. Factors known to affect service performance should be disclosed to consumers.
5. Performance information should be presented in a manner that is easily comparable by consumers, for example by adopting standard descriptive terms that can be readily understood and recognised, and
6. RSPs should have systems in place to diagnose and resolve broadband speed issues.⁹

1.41 On 21 August 2017, the ACCC released detailed industry guidance on implementing its six principles concerning the marketing of broadband speeds. Further detail is provided in Chapter 5 of the report.

1.42 On 23 March 2017, the committee wrote to the Minister for Communications asking whether the Government was intending to support and resource the Broadband Performance Monitoring and Reporting Program (BPMR) proposed by the ACCC.

1.43 On 24 March 2017, the ACCC appeared before the committee at a public hearing in Canberra and gave evidence about the successful 2015 trial of a broadband speed monitoring program which had since been proposed as the BPMR to the government.

1.44 On 7 April 2017 the Minister for Communications, Senator the Hon. Mitch Fifield, announced that the ACCC would be implementing the BPMR program.

1.45 Evidence received about the regulatory responsibilities of the ACCC will be discussed in further detail in Chapters 5 and 7 of the report.

9 Australian Competition and Consumer Commission, *Broadband Speed Claims—Consultation outcomes report*, February 2017, p. 1.

Australian Communications and Media Authority

1.46 The Australian Communications and Media Authority (ACMA) is an independent statutory authority tasked with ensuring most elements of Australia's media and communications legislation, related regulations, and numerous derived standards and codes of practice operate effectively and efficiently, and in the public interest.¹⁰

1.47 With respect to its telecommunications role, the ACMA administers and enforces rules for all businesses in the telecommunications industry. These rules may be technical in nature and relate to operational activities (such as building infrastructure) or consumer focused with respect to the relationship between consumers and RSPs.

1.48 The ACMA described their activities in relation to the NBN:

To date, the ACMA has supported the NBN rollout by planning and allocating spectrum and licenses for satellite and fixed wireless services, through making or registering various code based rules that apply to participants in the industry, by providing information on the NBN via our website, by focusing our Telecommunications Consumer Protections Code compliance work on issues that we see have a real NBN relevance and also by conducting research.¹¹

1.49 Furthermore, on 1 August 2017, the ACMA advised its intention to commission research to examine the current consumer experience before, during and after migration to the NBN.¹²

1.50 This research will update and build on research published in 2016 titled *Migrating to the NBN—The experience of Australian consumers*, but will be the first survey of customer experience of the multi-technology mix. The 2016 research focused exclusively on FTTP connections, and found that three-quarters of residents connected to the NBN within three months of a service being becoming available and eight in 10 businesses connected within six months. The 2016 report also found that consumers would have a more positive service experience if further information was made available about: (a) how to get connected, (b) when the NBN is available in an area, and (c) the effect of connecting on landline and other services.¹³

1.51 Additionally, the ACMA will also collect information from businesses across the NBN supply chain. Twenty one industry participants including retailers, wholesale providers and nbn will receive notices seeking a range of data on issues such as fault

10 Australian Communications and Media Authority, *Introduction to the ACMA*, <http://www.acma.gov.au/theACMA/About/Corporate/Authority/introduction-to-the-acma>.

11 Ms Jennifer McNeill, General Manager, Content Consumer and Citizen Division, Australian Communications and Media Authority, *Proof Committee Hansard*, 1 August 2017, p. 9.

12 Ms Jennifer McNeill, General Manager, Content Consumer and Citizen Division, Australian Communications and Media Authority, *Proof Committee Hansard*, 1 August 2017, p. 9.

13 Australian Communications and Media Authority, *Migrating to the NBN, The experience of Australian consumers*, December 2016, p. 1.

handling, connection timeframes, appointment keeping, telephone number porting, and more.¹⁴

Communications Alliance

1.52 The Communications Alliance is the telecommunications industry association and has both an advocacy and co-regulatory role. The Communications Alliance engages with industry and nbn on a range of matters and coordinates nine working parties and committees to develop industry codes, guidelines and standards, 'with an overall objective to assist in facilitation the effective rollout of the NBN'.¹⁵

1.53 In consultation with the Department, the ACCC, ACMA and the TIO, the Communications Alliance has developed an online broadband education package to assist the community to make more informed choices when choosing broadband services.¹⁶

Australian Communications Consumer Action Network

1.54 The Australian Communications Consumer Action Network (ACCAN) is the peak communications consumer organisation representing individuals, small businesses and not-for-profit groups as consumers of communications products and services. ACCAN receives funding from the Commonwealth Government under section 593 of the *Telecommunications Act 1997*. This funding is recovered from charges to telecommunications carriers.¹⁷

1.55 In addition to ACCAN, the committee notes there are a number of organisations representing and advocating for consumers with respect to the NBN. Evidence about the consumer experience will be discussed in Chapter 3.

Telecommunications Industry Ombudsman

1.56 The TIO is an independent dispute resolution service for the telecommunications industry. The TIO does not regulate or monitor the performance of the NBN rollout.

1.57 In its submission, the TIO explained its activities in relation to complaints about services delivered over the NBN:

In the context of services delivered over the NBN, the TIO records and resolves complaints between consumers and their retail service providers, based on the consumer's contract for the provision of services. The TIO also

14 Senator the Hon. Mitch Fifield, Minister for Communications, Turnbull Government bolsters NBN customer experience program, *Media release*, 1 August 2017.

15 Communications Alliance, *Submission 11*, p. 1.

16 Mr John Stanton, Chief Executive Officer, Communications Alliance, *Proof Committee Hansard*, 23 June 2017, p. 33.

17 Australian Communications Consumer Action Network, *About ACCAN*, <http://accan.org.au/about>.

resolves complaints against NBN Co Ltd (nbn) for certain issues such as entry onto land and property damage.¹⁸

1.58 As well as resolving individual complaints, an additional function of the TIO is to undertake investigations of systemic issues it identifies with a particular provider or providers.¹⁹

1.59 The investigation and resolution of complaints received by the TIO with respect to NBN services will be explored in more detail in later chapters of the report.

Statement of Expectations

1.60 In addition to the legislation outlined above, nbn must also have regard to the Statement of Expectations issued by Shareholder Ministers. The Statement of Expectations provides guidance to nbn 'to help ensure its strategic direction aligns with the government's objectives for the delivery of the network'.²⁰ The Statement of Expectations is updated as required to reflect any ongoing decisions made by the Government. The current Statement of Expectations was issued on 24 August 2016 with previous statements issued on 8 April 2014, 24 September 2013 and 20 December 2010.

18 Telecommunications Industry Ombudsman, *Submission 115*, p. 6.

19 Telecommunications Industry Ombudsman, 'Systemic Issues', <https://www.tio.com.au/about-us/policies-and-procedures/systemic-problem-investigation>.

20 *Statement of Expectations*, 24 August 2016, p. 1, accessible at: <https://www.communications.gov.au/file/19556/download?token=Q7Pg2NPu>.

