

Chapter 3

The importance of promoting fibre in new developments

Introduction

3.1 The focus of this chapter is on the first of the two key areas of debate raised during the committee's consultation process, namely the desirability and importance of promoting fibre in new developments.

3.2 The second key area of debate, namely the application and operation of the Bill's requirements that fibre-related infrastructure be installed in specified developments, is addressed in Chapter Four.

The importance of fibre in new developments

3.3 Overall, there was broad support from submitters for the underlying policy of the Bill of ensuring that new developments will be fitted with high-speed optical fibre lines or fibre-ready technology instead of with outdated copper technology.¹

Impetus: building a National Broadband Network

3.4 The Bill forms part of the government's historic plan to build a National Broadband Network (the NBN). Under that plan, a Government Business Enterprise, NBN Co, will build a network to deliver super-fast broadband to all Australian homes and workplaces. Ninety per cent of existing Australian premises will be connected with Fibre To The Premises (FTTP) services delivering speeds of up to 100 Megabits per second (Mbps), and the remaining 10 per cent of existing premises will receive speeds of at least 12 Mbps delivered using next generation satellite and wireless technologies.²

3.5 When announcing its plans to build the NBN, the government indicated that it would '[p]rogress legislative changes that will govern the national broadband network company and facilitate the rollout of fibre networks, including requiring greenfield

1 See for example: Universal Communications Group, *Submission 6*, p. 1; Optus, *Submission 7*, p. 1; Master Builders Australia Ltd, *Submission 10*, p. 1; Engineers Australia, *Submission 11*, p. 2.

2 The Hon. Kevin Rudd MP, Prime Minister, the Hon. Wayne Swan MP, Treasurer, the Hon. Lindsay Tanner MP, Minister for Finance, Senator the Hon. Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'New National Broadband Network', Joint press release, 7 April 2009, www.minister.dbcde.gov.au/media/media_releases/2009/022 (accessed 27 April 2010).

developments to use FTTP technology from 1 July 2010'.³ The policy intention became known as the government's 'fibre in greenfields' policy.

3.6 The Bill is intended to implement that fibre in greenfields policy. The explanatory memorandum (EM) to the Bill states that it does not make sense to roll-out a fibre network to 90 per cent of existing Australian premises as part of the NBN roll-out, but leave new developments to be serviced by old technology or subject to more expensive retro-fitting costs down the track.⁴ Thus the objective is to have 'FTTP installed in new developments to the greatest extent practicable and, where this is not immediately feasible, to have developments made "fibre-ready": that is, to have appropriate ducting and other facilities installed in order to avoid more costly retrofitting later'.⁵

3.7 Two matters were the subject of general consensus in evidence to the committee:

- First, that fibre is the fixed-line telecommunications infrastructure of the future, and that the fibre in greenfields policy is therefore an important means of ensuring that new developments are not serviced with outdated technology; and
- Second, that the historical arrangements for the installation of copper telecommunications infrastructure in new developments are no longer suitable, feasible or available alternatives to fibre.

Historical arrangements for providing telecommunications in new developments

3.8 Historically, new developments have generally been serviced by copper-based infrastructure. The copper network provides voice services and, more recently, also broadband services using Digital Subscriber Line (DSL) technology.

3.9 Generally, the copper deployment has been undertaken by Telstra, largely reflecting its status as the universal service provider.⁶ In evidence to the committee, Telstra explained how the arrangements have traditionally worked:

...when approached by developers to install [telecommunications] infrastructure in the past we have, in accordance with the planning

3 The Hon. Kevin Rudd MP, Prime Minister, the Hon. Wayne Swan MP, Treasurer, the Hon. Lindsay Tanner MP, Minister for Finance, Senator the Hon. Stephen Conroy, Minister for Broadband, Communications and the Digital Economy, 'New National Broadband Network', Joint press release, 7 April 2009, www.minister.dbcde.gov.au/media/media_releases/2009/022 (accessed 27 April 2010).

4 EM, p. 1.

5 EM, p. 7.

6 EM, p. 4.

arrangements that apply around a development, moved in to install pit and pipe infrastructure and previously we had installed copper.⁷

3.10 Telstra's previous approach was to install copper based infrastructure for free on the expectation that its high upfront capital costs would be recouped from usage charges over the long lifespan of the infrastructure (some 20 to 30 years).⁸

Fibre as the future

3.11 Submitters were generally in agreement that fibre is the way of the future. The following exchange between the committee and a representative of Telstra, Mr Paul Granville, captured the overwhelming sentiment of key stakeholders:

CHAIR—So you believe optical fibre is the way to go.

Mr Granville—Definitely. It is the only fixed-line technology that has a long-term future in providing what the community needs.⁹

3.12 The sentiment flowed from the recognition that copper is not capable of meeting the needs of the future. As the EM explains:

The capacity of copper-based networks to deliver high speed broadband services is significantly inferior to FTTP networks. This capacity is affected by such factors as the quality of the copper, distance from the exchange, the availability of spare ports and the presence of network electronics such as remote integrated multiplexer (RIM) and pair gain systems. The limitations of copper can lead to poor broadband services or no broadband services at all.¹⁰

3.13 Evidence provided to the committee by the Department of Broadband, Communications and the Digital Economy (the Department) also indicated that, in general, purchasers of building units expect that the premises will be equipped with fixed-line telecommunications infrastructure, and that the deployment of fibre can make premises more valuable to prospective purchasers:

A survey in Canberra in August 2006 asked respondents to indicate how they would react if a developer who had planned FTTH [Fibre To The Home] rang up prospective buyers to say he had decided not to proceed with FTTH, but was willing to offer a discount on the house and land package. Over 60 per cent indicated no offer would be satisfactory; instead

7 Mr James Shaw, Director, Government Relations, Telstra Corporation Ltd, *Committee Hansard*, Sydney, 19 April 2010, p. 2.

8 Telstra Corporation Ltd, *Submission 9*, p. 4.

9 Mr Paul Granville, Director, Network Standards and Facilities, Telstra Corporation Ltd, *Committee Hansard*, Sydney, 19 April 2010, p. 2.

10 EM, p. 4.

they would buy elsewhere. Of the remainder, 80 per cent indicated they would not proceed without compensation of at least \$5,000.¹¹

3.14 In recent years there has been a moderate shift to the installation of FTTP in new estates instead of copper. For example, Telstra, which has been offering to deploy fibre lines to new developments since 2004,¹² indicated that it has deployed FTTH to 75 project areas to date.¹³ Universal Communications Group (UCG), a small, relatively new carrier which specialises in niche markets in small communities for the provision of FTTH in brownfield gated communities, also gave evidence of their work developing an 800-home greenfield development on the Gold Coast as well as a smaller one in Sydney.¹⁴ Finally, LandCorp, the Western Australian Government's primary land developer, also described how:

Where it has made sense to do so, LandCorp has installed pit and pipe on the basis fibre communications infrastructure will in time be reticulated in the region and estate. Other developers have also done this as a precautionary measure, while others have contracted with Telstra who rollout fibre to the home.¹⁵

3.15 The EM describes instances like these as reflecting '[f]orward-looking developers and local councils' recognising that 'FTTP networks provide additional benefits to households, add value to properties and become a selling point as the availability of superfast broadband becomes the expectation for all businesses and consumers'.¹⁶

3.16 However, it was clear from the evidence that the installation of fibre, or fibre-ready infrastructure has not become the standard practice. The committee did not receive any evidence which cast doubt on a statement by the Department that:

[w]hile fibre infrastructure has been increasingly installed in new developments and the government's policy is seeking to build on this trend, the provision of fibre is not yet widespread. A key issue is that the benefits of installing fibre are long term and therefore developers do not necessarily have the incentive to accept the higher cost of fibre in the short term...¹⁷

11 Cited in R. Eckermann, *Aurora Fibre to the Home Case Study*, Department Infrastructure Victoria, 2009, and referred to in Department of Broadband, Communications and the Digital Economy, answer to question on notice 29 April 2010 (received 28 April 2010).

12 Mr Paul Granville, Director, Network Standards and Facilities, Telstra Corporation Ltd, *Committee Hansard*, Sydney, 19 April 2010, p. 2.

13 Telstra Corporation Limited, answer to question on notice, 19 April 2010 (received 28 April 2010).

14 Universal Communications Group, *Submission 6*, pp 1–3.

15 LandCorp, *Submission 4*, p. 3.

16 EM, p. 4.

17 Department of Broadband, Communications and the Digital Economy, answer to question on notice 19 April 2010 (received 28 April 2010), Attachment B, Item 18, p. 5.

3.17 The Department went on to state that the need for more wide-spread deployment and installation provided a mandate for legislative intervention:

Requiring the installation of fibre (or fibre-ready facilities by law) will ensure fibre is more widely deployed to the long term benefit of property owners and the wider community.¹⁸

3.18 The sentiment was broadly supported.¹⁹ However, there was some dissent expressed by the Urban Taskforce Australia, a non-profit organisation representing prominent Australian developers and equity financiers. Urban Taskforce Australia disputed whether legislative intervention is necessary, arguing instead that market dynamics are an adequate alternative if indeed there is a need for fibre-related infrastructure:

Developers are sophisticated enough to understand their market. If the market demands optic fibre technology, a developer does not need legislation for this technology to be provided. In fact, optic fibre has already been provided in many locations without legislation mandating its provision. Therefore, the government's "future proofing" efforts should be focused on network provision. In instances where there is an optic fibre network and consumer market to support its provision, developers are already working with service providers to service new developments with optic fibre technology.²⁰

The cost of fibre

3.19 The evidence suggested that, in part, the preference to deploy copper as opposed to fibre has resulted from the lower cost of copper.

3.20 Telstra confirmed to the committee that, unlike its practice of installing copper for free, since it began rolling out fibre in about 2004,²¹ it has generally required a contribution from developers when installing fibre:

At the moment where we deploy fibre it is a commercial agreement between us and the developer. There is generally a contribution from the developer towards the additional cost of deploying fibre, and any remaining costs are recovered through the ongoing usage of the network from the resident of the property.²²

18 Department of Broadband, Communications and the Digital Economy, answer to question on notice 19 April 2010 (received 28 April 2010), Attachment B, Item 18, p. 5.

19 See, for example: Universal Communications Group, *Submission 6*, p. 1; Optus, *Submission 7*, p. 1; Master Builders Australia Ltd, *Submission 10*, p. 1; Engineers Australia, *Submission 11*, p. 2.

20 Urban Taskforce Australia, *Submission 12*, p. 3.

21 Mr Paul Granville, Director, Network Standards and Facilities, Telstra Corporation Ltd, *Committee Hansard*, Sydney, 19 April 2010, p. 2.

22 Mr James Shaw, Director, Government Relations, Telstra Corporation Ltd, *Committee Hansard*, Sydney, 19 April 2010, p. 4.

3.21 Property developers and industry representative organisations also highlighted the importance of this cost-differential when deciding whether to deploy copper or fibre fixed-line infrastructure to new developments. The Housing Industry Association (HIA), Australia's largest residential building organisation whose members include builders, trade contractors, manufacturers and suppliers, said that some of their members:

...have instances in current projects where they have sought to install fibre-ready conduit in projects at their own expense, but have been advised by Telstra that a charge of \$1,000 per lot would be applied for the privilege, despite the cost for the appropriate conduit being minimal.²³

3.22 LandCorp also provided evidence of a number of indicative fibre reticulation cost estimates prepared for projects located across Western Australia:

In these estimates there would be a design and 'headworks' fee payable by the developer of approximately \$100,000 per estate (or large stage release) and then a per lot cost of between \$2000 and \$4000.

For a 'small' 100 subdivision in regional Western Australia (in a town with a population exceeding the threshold) the additional delivery cost exceed \$0.5 million. For other towns in the North West of the State experiencing rapid growth where a larger scale of development is needed (e.g. 1000 lots), the additional costs will be substantial and run into millions. These are additional costs to a project, as it was the case previously that Telstra provided communications infrastructure to owners and occupiers and there was no contribution to be made by the developer.²⁴

Telstra changes policy: copper no longer available

3.23 During the course of the inquiry it became apparent that, even aside from the technological merit or otherwise of copper being deployed, as a result of decisions that have recently been made by Telstra, copper is no longer an available alternative to optical fibre for fixed-line telecommunications infrastructure deployments in new developments.

3.24 Telstra announced at the Urban Development Institute of Australia's annual conference on 9 March 2010 that it would no longer install copper infrastructure in all new developments, except to the extent that it already had a contract in place with the relevant developer to do so.²⁵

3.25 Telstra has stated that it will 'continue to meet [its] obligations' under the Universal Service Obligation (USO) (which requires Telstra to ensure that all people

23 Housing Industry Association, *Submission 3*, p. 3.

24 LandCorp, *Submission 4*, p. 6.

25 Department of Broadband, Communications and the Digital Economy, answer to question on notice, Question 5, 19 April 2010 (received 28 April 2010).

in Australia have reasonable access to standard telephone services and payphones)²⁶ by deploying what it considers 'the most appropriate technology in individual circumstances'.²⁷ At the committee's hearing, the following further explanation was provided by Telstra:

Where we have existing obligations to provide copper then we will meet those obligations... [W]hen you look at the planning cycle for new developments we are talking about several years, so I am not sure how our decision at this point in time is going to immediately flow through to the planning processes that apply to new developments. Where we have committed to put copper in we will meet those commitments, and in the meantime we are not automatically deploying copper, we will work with developers to put in a solution that means the customers can get a service.²⁸

3.26 It emerged from further questioning that where arrangements are not made to deploy fibre to the premises, that solution 'could be wireless'.²⁹

Committee view

3.27 The committee welcomes the government's policy objectives and considers that the Bill is an integral part of ensuring that new developments are not left behind as the NBN is rolled out across the country.

3.28 The committee believes that fibre is the fixed-line telecommunications technology of the future. The committee further believes that fibre is therefore the most appropriate telecommunications infrastructure to be deployed in new developments that are, or will be, within the NBN's 'fibre footprint'. The committee agrees with the government's policy that where fixed-line telecommunications infrastructure is installed in new developments, it should be optical fibre or fibre-ready facilities and not outdated copper infrastructure.

3.29 The committee also understands that, as a result of Telstra's decision not to deploy copper to any new development, the question of whether fibre or copper should be deployed in new developments is a moot one: fibre will, in the future, be the only alternative regardless. The committee considers that these developments provide even more impetus for the Bill.

26 The supply of standard telephone services includes consumers having access to an efficient and reliable telephone service, good voice reception and responsive fault repair. See the *Telecommunications (Consumer Protection and Service Standards) Act 1999*.

27 Mr James Shaw, Director, Government Relations, Telstra Corporation Ltd, *Committee Hansard*, Sydney, 19 April 2010, p. 10.

28 Mr James Shaw, Director, Government Relations, Telstra Corporation Ltd, *Committee Hansard*, Sydney, 19 April 2010, p. 11.

29 Mr James Shaw, Director, Government Relations, Telstra Corporation Ltd, *Committee Hansard*, Sydney, 19 April 2010, p. 11.

3.30 Finally, the committee believes that to date, in the absence of legislative intervention, there has not been sufficient take-up of fibre for new developments. Although the committee notes that there has been an increasing trend towards fibre, the committee believes there is a clear need for legislative mandating of fibre and fibre-ready facilities to ensure higher take-up rates, and more consistent standards for the deployment and installation of these technologies. The committee can see the clear justification in fibre being deployed at the outset so as to avoid, wherever possible, the costs that would be associated with retrofitting fibre to new developments after they have been built.³⁰

30 The comparative costs are outlined in the EM at p. 5.