

# Chapter 5

## Broadband Quality and Availability

5.1 In September 2013 the government asked the Department of Communications to prepare a report on broadband availability and quality. A national summary report on broadband infrastructure and performance was released by the Minister for Communications, the Hon Malcolm Turnbull MP, on 23 December 2013.<sup>1</sup> It was intended to be the first release of material providing a snapshot of broadband availability and quality. The department indicated that it would refine the detail of its analysis and compile maps which would be published along with the methodology used.

5.2 The final Broadband Availability and Quality Report (the report), which included maps to provide consumers with the opportunity to search the results for their local area, was released on 20 February 2014 along with the department's 'MyBroadband' website.<sup>2</sup> At the committee's public hearing on 12 March 2014, NBN Co confirmed that data from the MyBroadband website would inform the proposed rollout plan for underserved areas.<sup>3</sup>

5.3 The department later confirmed that the total cost incurred for the broadband quality project as at 23 October 2014 was \$302,460 (GST inclusive). Most of this cost went on website development (\$97,453), website hosting (\$130,607) and the Google Maps license (\$46,200).<sup>4</sup>

5.4 This chapter summarises the key findings of the report; discusses a number of concerns raised in evidence about the accuracy and reliability of information included in the report and on the department's MyBroadband website; and contains the committee's view.

### **Purpose and methodology of the report**

5.5 In opposition, Malcolm Turnbull was often critical of the rollout schedule of the NBN (which was determined by a number of engineering factors, including the location of necessary infrastructure, and the agreement with the regional independents to prioritise regional areas). In its 2013 election policy, the Coalition said:

Within 90 days the Department of Broadband Communications and the Digital Economy, with the assistance of NBN Co and private carriers, will provide Parliament with a ranking of broadband quality and availability in

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1 Department of Communications, Broadband Availability and Quality: *Summary Report*, 23 December 2013

2 Department of Communications, Broadband Availability and Quality Report, December 2013

3 *Committee Hansard*, 12 March 2014, p. 32.

4 Department of Communications, Answer to Question on Notice No. 5, Public Hearing 3 October 2014

all areas of Australia. This ranking will be published for comment and review and will guide prioritisation of the rollout.<sup>5</sup>

5.6 The report is based on a spatial analysis of the coverage of broadband customer access networks, along with an estimate of their likely performance using known constraints. The analysis considered three categories of broadband delivery separately: fixed broadband (including FTTP, FTTN, ADSL, HFC and fixed wireless), mobile broadband (3G and 4G) and satellite broadband. The main purpose of the analysis was to describe broadband access across Australia and identify areas with poor broadband services. The analysis which informed the report represented a snapshot of broadband access as at December 2013. It consisted of extensive datasets which were provided by a range of telecommunications carriers. The report stated:

The Strategic Review included estimated costs to allow for areas with poorer current broadband service to be prioritised. It assumed prioritisation will take into account reasonable operational efficiency considerations, such as needing to rollout in contiguous work fronts and dealing with an area as a whole.<sup>6</sup>

5.7 In response to a question at an additional estimates hearing of the Environment and Communications Legislation Committee in February 2014, Mr Clarke, Secretary of the Department of Communications, told the committee that the purpose of the report:

...is to provide an assessment of broadband availability and quality at a level of granularity—spatial resolution, if you like—that is suitable to inform the company's prioritisation in the rollout. The website...supports that by providing a more accessible version for the public to also view what our assessment concluded in the areas in which they live.<sup>7</sup>

5.8 Mr Clarke further told the committee that the department was exploring a number of options to update the report and website as new broadband infrastructure was built:

The options that we are looking at closely now are, first, to add a capacity for people to measure their actual broadband experience—the speed test, if you will—and to send that information back through the website to the department so that we get data points on actual user experience...<sup>8</sup>

5.9 The analysis of broadband in the report was based on a spatial model incorporating the coverage of the fixed technologies that deliver broadband services,

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5 *The Coalition's plan for fast broadband and an affordable NBN*, April 2013, at <http://lpaweb-static.s3.amazonaws.com/Policies/NBN.pdf>, p. 9.

6 Department of Communications, *Broadband Availability and Quality Report*, December 2013, p. 6.

7 *Committee Hansard*, additional estimates, Environment and Communications Legislation Committee, 25 February 2014, p. 33.

8 *Committee Hansard*, additional estimates, Environment and Communications Legislation Committee, 25 February 2014, p. 33.

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in combination with factors that may constrain access to a service or affect the quality of a service. The report noted that the modelling approach was designed following a review of similar projects conducted in the United Kingdom, the United States, Canada, Germany and the European Union.<sup>9</sup>

### **Findings of the report**

5.10 The report made a number of findings in relation to broadband availability and quality. The executive summary stated that the findings:

...are based on a detailed spatial analysis of the coverage of broadband customer access networks, along with estimates of their likely performance given known constraints. This analysis uses the available information to measure broadband availability in terms of the infrastructure currently in place. It uses the possible speeds achievable over that infrastructure to measure quality. This methodology was determined after references to international experience.

Overall the analysis found that there are areas of inadequate access to infrastructure across the country—approximately 1.4 million premises (13 per cent) are in areas where fewer than 40 per cent of premises can access a fixed broadband service. The premises in this category are typically located in regional or remote areas of Australia, or in small pockets of poor service in metropolitan and outer metropolitan areas.<sup>10</sup>

5.11 The executive summary went on to specify the key findings of the premises level analysis. For broadband availability the findings included:

- approximately 9.9 million premises (91 per cent) have access to fixed line broadband services delivered via asymmetric digital subscriber line (ADSL) technology;
- approximately 3.1 million premises (28 per cent) have access to a high speed broadband platform (defined as including fibre to the premises, fibre to the node, hybrid fibre coaxial and fixed wireless networks);
- approximately 8.8 million premises (81 per cent) have access to 3G mobile broadband services and about 6.4 million premises (59 per cent) have access to 4G services; and
- all Australian premises are covered by satellite broadband, although there is a ceiling to the capacity of these services and therefore not all premises can access a service.<sup>11</sup>

5.12 For broadband quality the findings included:

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9 Department of Communications, Broadband Availability and Quality Report, December 2013, p. 36.

10 Department of Communications, Broadband Availability and Quality Report, December 2013, p. 3.

11 Department of Communications, Broadband Availability and Quality Report, December 2013, p. 3.

- approximately 3.1 million premises (28 per cent) have access to peak download speeds of between 25 megabits per second (Mbps) and 100Mbps;
- approximately 7.1 million premises (65 per cent) are in areas that have access to peak median download speeds of less than 24Mbps over the copper network;
- about 0.7 million premises (6 per cent) are unable to access a fixed broadband service; and
- of premises with access to ADSL broadband services over copper, about 3.7 million are located in areas with an estimated peak median download speed of less than 9Mbps, and 920,000 in areas with an estimated peak median download speed of less than 4.8Mbps.<sup>12</sup>

## **Issues arising from the report**

### ***The #MyBroadbandvReality survey***

5.13 As part of its ongoing inquiry, the committee received an important submission which provided a critical response to the MyBroadband website. The submission collated information contained in a large survey of people around Australia. Over 800 people participated in the survey in response to Twitter, Facebook and other social media avenues of promotion. The survey's main purpose was to gather information about whether the actual internet speeds people were receiving matched the estimates from the MyBroadband website. The survey also invited respondents to provide general comments about their internet service and quality.

5.14 Appearing before the committee on 19 May 2014, one of the submission's authors, Mr Grosvenor, explained how the survey came about:

A number of people were going to the MyBroadband website and getting an estimate from there which was saying that they should get such-and-such a speed or such-and-such a quality of internet service and then, when they did their own speed test, many of them found that what they actually got was significantly less than what [the MyBroadband] website was telling them.<sup>13</sup>

5.15 The submission raised a number of issues critical of the information contained on the MyBroadband website, including what it regarded to be significant omissions. It made nine recommendations for the committee to consider, some of which addressed a range of issues broader than the content of the MyBroadband website. These included that future discussion about broadband:

- include the impact of weather and region specific environmental factors;
- consider broadband as critical infrastructure like other essential services such as water and electricity;

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12 Department of Communications, Broadband Availability and Quality Report, December 2013, p. 4.

13 *Committee Hansard*, 19 May 2014, p. 1.

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- ensure the broadband network could grow in speed and bandwidth alongside Australia's broader economy;
  - include the productivity and security risks inherent in the existing copper network;
  - ensure the publication of an accurate map of existing broadband infrastructure including realistic equitable options to inform the electorate;
  - include a realistic cost of ongoing legacy network maintenance or replacement;
  - include a productivity impact of network congestion, in light of growing population and future home devices;
  - include consideration of equity of internet access; and
  - include regular community feedback.<sup>14</sup>

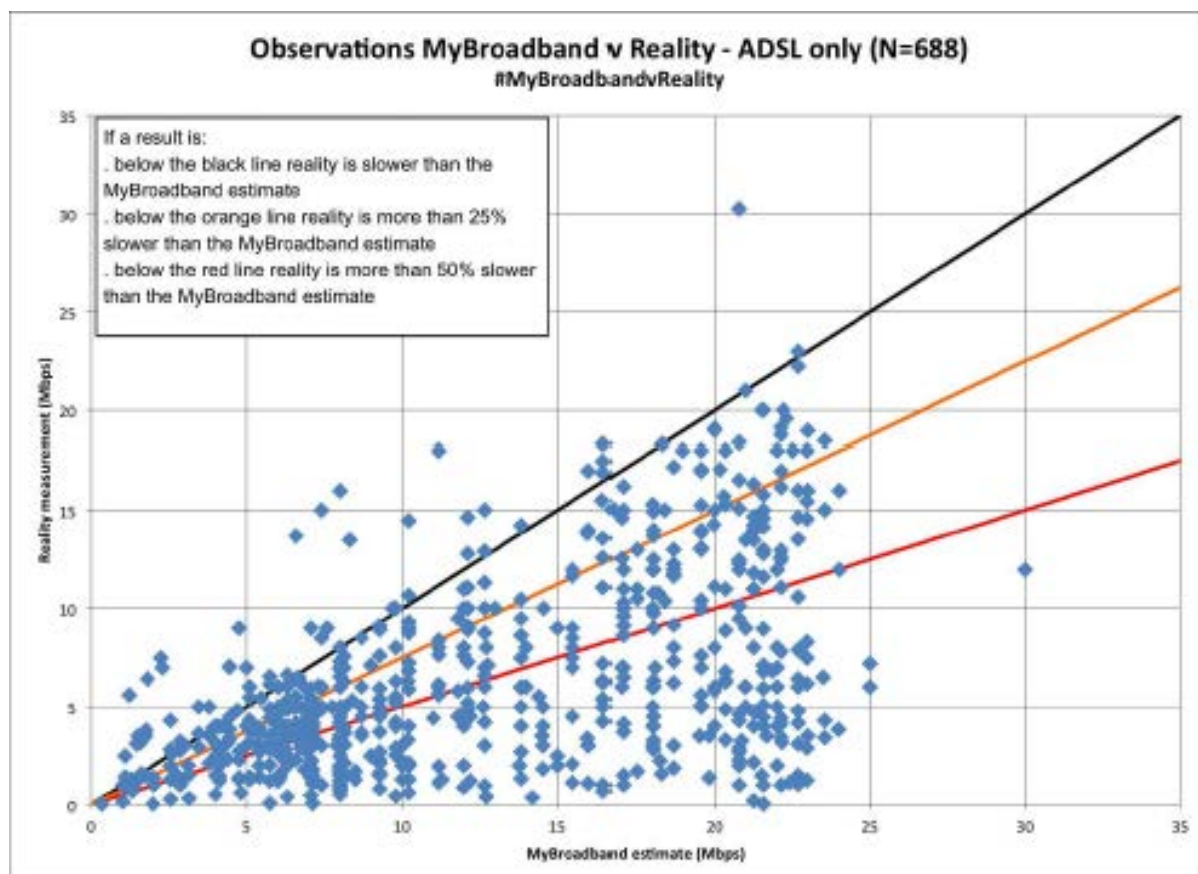
5.16 The submission's main conclusion was that information published on the MyBroadband website was inaccurate and misleading. The real-world broadband speeds experienced by people were significantly lower than the information on the website was telling them, taking into account ISP and geographical factors:

...for many Australians, the reality of their broadband does not match the information on the Government's MyBroadband website. Through a survey and graphing results, we have shown the frustration experienced by people around the country that they do not have access to reliable and affordable high-speed internet. We are also concerned that many of our survey respondents struggled to understand the technical issues related to matters.<sup>15</sup>

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14 #MyBroadbandvReality, *Submission 52*, p. 1.

15 #MyBroadbandvReality, *Submission 52*, p. 1.



**Figure 6:** #MyBroadbandvReality, *Submission 52*, p. 3.

5.17 The submission included a graph which showed that most participants in the survey experienced speeds more than 25 per cent lower than the MyBroadband estimate (see figure 6). The survey results took into consideration two important qualifying factors:

- it is likely some lower speed observations are due to a person's selection of a cheaper internet provider plan, thus producing slower speeds; and
- a risk of survey selection bias whereby the results obtained are overly influenced by the audience selected.<sup>16</sup>

5.18 Mr Grosvenor explained at the hearing that:

...looking at [the graph] as a whole...the majority of respondents were tending to get only eight megabits per second as their highest possible speed. Then what you can sort of see visually is that there were very few people where their actual reality speed was greater than the estimate from the myBroadband website, and that is the few diamonds that are above that black diagonal line. Whereas the vast majority tend to be considerably below the black line and in a lot of cases below the red line even. That red

<sup>16</sup> #MyBroadbandvReality, *Submission 52*, p. 4.

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line represents where your actual speed is only 50 per cent of what the my Broadband estimate was.<sup>17</sup>

5.19 Mr Grosvenor informed the committee of a second follow-up survey involving 1000 people that addressed issues not covered by the first survey, such as asking what people actually used the internet for. Responses showed that most people were using the internet for banking and paying bills; news and weather; being socially connected with friends and family by Skype, social media and email; and watching games, videos and iView. Overall, the follow-up survey reinforced the main findings of the first survey:

Broadly speaking, it confirmed the same sorts of things that the first survey did: that actual speeds survey respondents were getting were significantly less than what the myBroadband website stated they should get.<sup>18</sup>

5.20 At the public hearing, Mr Grosvenor drew the committee's attention to the first, and most important, recommendation which was that the impact of weather and regional environmental factors should be considered during any significant discussion about broadband. Issues raised in evidence by the #MyBroadbandvReality submission relating to survey data on internet speeds and the effects of inclement weather on broadband availability and quality are addressed in more detail in the remaining sections of this chapter.

### ***Conflicting evidence on rollout priorities***

5.21 An issue the committee explored with NBN Co and the Department of Communications was contradictory policy announcements relating to where the broadband network would be rolled out first and on what basis a decision would be made to roll out the NBN to priority areas. In November 2013 the Minister for Communications made a very public commitment that underserved areas identified by the department would be prioritised to receive the rollout 'first'. During a speech to the CommsDay Conference in Sydney on 18 November 2013, the minister stated:

...up to two million households and businesses across Australia cannot get basic fixed-line broadband at present. Addressing these underserved areas first is a key objective of our NBN policy.

As a priority my Department, with the assistance of NBN Co and private carriers, will provide the Government and Parliament with a ranking of broadband quality and availability in all areas of Australia. This ranking will be published for comment and review and guide future prioritisation of the rollout.<sup>19</sup>

5.22 However, by December 2013 both NBN Co and the department had qualified the Minister's remarks by stating that areas of greatest need would receive the rollout

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17 *Committee Hansard*, 19 May 2014, p. 5.

18 *Committee Hansard*, 19 May 2014, p. 2.

19 The Hon Malcolm Turnbull MP, 'Rebooting the NBN Project', Speech to *CommsDay* Conference, 18 November 2013, at <http://www.malcolmturnbull.com.au/media/rebooting-the-nbn-project-speech-to-commsday-conference>, p. 7.

first where it was 'logistically and commercially viable to do so.' In practice, this meant that not all underserved areas would be prioritised in line with the Minister's April 2013 and November 2013 pledges because—as you would expect—the many underserved areas in Australia are underserved precisely because it is not 'logistically and commercially viable' for the private sector to serve them.

5.23 In evidence to the committee's public hearing on 17 December 2013, NBN Co's Head of Strategy, Mr Rousselot, told the committee that NBN Co was relying on the department to advise which areas were underserved and, based on the information, those areas '...would be prioritised in the rollout and therefore would be completed about 2.5 years earlier than the rest of the population'.<sup>20</sup>

5.24 However, NBN Co Executive Chairman and Chief Executive, Dr Switkowski, made it clear at the same hearing that an assessment of which areas would be rolled out 'first' and which areas were 'high priority' were not one and the same thing:

...we are going to bring [poorly served communities] forward in the rollout schedule. Does that mean they are the first areas that we will look at? No, it does not mean that.<sup>21</sup>

5.25 The department's broadband and availability quality report also made it clear that the scale and location of underserved premises mean that not all of these premises could be addressed first. NBN Co would need to consider a range of factors including cost, logistics and reasonable operational efficiency.<sup>22</sup>

5.26 Release of NBN Co's new Statement of Expectations (SoE) by shareholder ministers in May 2014 and the Corporate Plan 2014–17 by NBN Co in November 2014 provided further evidence of an incremental watering-down of the Minister's November 2013 commitment to roll out the NBN to underserved areas first. The new SoE included a range of policy and commercial issues to guide the NBN rollout as it transitioned from a primarily fibre to the premises (FTTP) model to the multi-technology mix (MTM) model recommended by the 2013 Strategic Review. One such issue included that:

NBN Co will prioritise areas identified as poorly served by the 'Broadband Availability and Quality Report' published by the Department of Communications in February 2014 (including any subsequent refinements arising from additional data) to the extent commercially and operationally feasible.<sup>23</sup>

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20 *Committee Hansard*, 17 December 2013, p. 48.

21 *Committee Hansard*, 11 December 2013, p. 49.

22 Department of Communications, *Broadband Availability and Quality Report*, December 2013, p. 6.

23 The Hon Malcolm Turnbull MP and Senator the Hon Mathias Cormann, *Government Expectations*, 8 April 2014. In response to written Question on Notice No. 77 from the Committee's 11 July 2014 public hearing, NBN Co confirmed that the term 'poorly served', which does not appear in the Department's Availability and Quality report but which does appear in the Statement of Expectations, is understood to mean 'under-served'.



5.27 The SoE also directed NBN Co to include in its 2014–17 corporate plan details of the approach NBN Co would take to implement an MTM NBN. One of the policy issues identified was the rollout scheduling and prioritisation of poorly served areas.

5.28 In response to a written question on notice from an Additional Estimates hearing in May 2014, NBN Co attempted to put some parameters around the meaning of 'commercially and operationally feasible' as it related to poorly served or underserved areas:

Each area is analysed based on the technology available, delivery capability, and construction costs required to service that area. It is expected that after an iterative process of analysis and validation, a proposed set of feasibility rules can be determined.<sup>24</sup>

5.29 The Corporate Plan 2014–17 included a section on 'Prioritisation of Underserved Areas' as part of its consideration of implementing the strategic direction of the MTM NBN. It referred to the department's finding that there were approximately 1.6 million premises in areas which could be categorised as not having access to adequate broadband services. Most of these areas were located in regional or remote areas or in small pockets of poor service in metropolitan and outer-metropolitan areas:

In accordance with the April 2014 Statement of Expectations, NBN Co's rollout of the MTM will prioritise underserved areas to the extent commercially and operationally feasible. It is estimated that, overall, the FTTP construction planned to commence in FY2015 will pass more than the proportionate amount of underserved Premises in these areas.<sup>25</sup>

5.30 In evidence provided at a public hearing on 11 December 2013, the Department of Communications provided the first clarification of the intention of the broadband survey and what the analysis would provide. The Secretary, Mr Clarke, told the committee that while the data would include information about what speeds were being achieved at particular locations within an area, it would not be able to represent the approximately 10 million premises and draw a ranking of what they could do:

...this is not a house-by-house engineering analysis. This will not answer the specific question on a specific address. The intent of it is to indicate areas—not individual households but areas that are not served or are underserved...in order to inform prioritisation of completion of the rollout of the NBN...<sup>26</sup>

5.31 At a hearing the following March, the department clarified that the information on the MyBroadband website in relation to speed was the estimated

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24 Additional estimates, Environment and Communications Legislation Committee, Question on Notice No. 284, May 2014

25 NBN Co, *Corporate Plan 2014–17*, 11 November 2014, p. 18.

26 *Committee Hansard*, 11 December 2013, p. 75.

median peak speed for all premises in a given area: 'It is not the individual premises speed'. When someone put in their address the results were for the local area only; individual circumstances may vary to a significant degree.<sup>27</sup> The department further explained that a geographic area was the construct or boundary of the Telstra distribution area. For the purpose of its analysis, the department was able to distinguish which ADSL services within an area emanated from the cabinet (multiplexer) and which emanated from the exchange:

For every premise in a [distribution area] that had access to ADSL, we made a calculation of what we thought their peak speed was and then—say there are 200 premises in the DA—we found the median, the midpoint of all the results in that exchange and that is what we are reflecting.<sup>28</sup>

5.32 The survey data from the #MyBroadbandvReality submission presented in figure 6 is a good illustration of how the MyBroadband website estimates represent almost the maximum rather than average speed, which is what the website (and the department) implies. Submission author, Mr Grosvenor, told the committee:

...the [MyBroadband] website talks about the 'median speed' that people should receive, which means it should be the middle speed. But we did not find it anywhere near the median.<sup>29</sup>

#### *Evidence from the New South Wales Central Coast*

5.33 Evidence received from witnesses on the New South Wales Central Coast at the committee's hearing in Terrigal on 11 March 2014 provided an interesting snapshot of the wider picture presented by the #MyBroadbandvReality survey and submission. The Central Coast was one of the first rollout sites for the NBN and by the end of 2013 there was an expectation the region was on track for a three-year delivery of FTTP across the coast.

5.34 The committee heard evidence in relation to two surf clubs which were showing high download speeds on the MyBroadband website when the clubs in question in fact had no broadband infrastructure. Mr Abrahams, spokesperson for the Central Coast Broadband Alliance, drew the committee's attention to:

...the somewhat clumsy attempt on the MyBroadband website to represent our region as one that has ample broadband infrastructure via ADSL, wireless or otherwise. In our opinion...it should be taken down throughout the region. It is not accurate. I bring two tests: both McMasters surf club and Killcare surf club reportedly have 17 megabits per second potential speed for their download capacity over ADSL2. I can report from committees of both these clubs that there is no broadband infrastructure in those two surf clubs, zero, nothing. We once had ADSL1 but, because of the congestion, we have nothing.<sup>30</sup>

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27 *Committee Hansard*, 12 March 2014, p. 60.

28 *Committee Hansard*, 12 March 2014, p. 63.

29 *Committee Hansard*, 19 May 2014, p. 5.

30 *Committee Hansard*, 11 March 2014, pp 25–26.

5.35 Mr Abrahams speculated that the data used by the department came from: '...Telstra's theoretical ADSL map, which we all know is on a parallel universe because it has never existed or actually gelled with reality in this particular part of the world'.<sup>31</sup>

5.36 A similar scenario was presented to the committee by Mr Patrick Spedding, managing director of research and development for Rocket Software in Sydney. Speaking in his private capacity, Mr Spedding told the committee of his experience getting his new house connected to ADSL through AAPT at eight megabits per second in 2009, which he described as 'bearable'. However:

Now we are at two megabits per second, max. The myfraudband website—sorry, myBroadband!—states that we can get 21.56 megabits per second, median speed. Now, I am a mathematician, so I understand the difference between a max and a median. And basically that is not possible.<sup>32</sup>

5.37 The committee heard from a number of other Central Coast witnesses who described how their personal experience did not match the information provided on the department's website in relation to internet speeds. The main concern was that the information being made available by the department through its website was overestimating average download speeds, sometimes by a significant margin. Inaccurate information was therefore being provided to NBN Co to determine the type of service that would be offered. People's confidence in the authenticity of the MyBroadband website data was being eroded because it was not authoritative at any given point in time.

5.38 Senator O'Neill expressed people's frustrations in the following way:

That is civic information. It is citizens seeking information about the society in which they live. I think they have a reasonable expectation, despite the complexity of this information management, that they are going to get something that is approximating the truth in terms of their experience.<sup>33</sup>

5.39 Responding to the concerns raised at the hearing in Terrigal, the department at one point rejected the argument that the information on the website was inaccurate, but later qualified this response by rejecting claims that the website itself was 'totally inaccurate'. The Secretary, Mr Clarke, acknowledged that producing a modelled outcome that was a median for hundreds of premises was 'inherently frustrating' for people who could not match the speeds received at their home address with the information available on the department's website.

*Estimated median peak broadband and upload speeds*

5.40 The department confirmed that the website's use of the phrase 'limited availability' in certain circumstances to describe the number of available ports in a

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31 *Committee Hansard*, 11 March 2014, p. 26.

32 *Committee Hansard*, 11 March 2014, p. 42.

33 *Committee Hansard*, 12 March 2014, p. 61.

multiplexer was misleading because there were occasions where the information provided should have read 'no availability'. In response to the department acknowledging that approximately 1.1 million premises across the country were in areas where there was 'limited port availability', the committee's chair, Senator Lundy, asked:

Wouldn't it be more honest and open to describe the situation, rather than being 'limited availability', that there is 'finite availability' in those areas? And wouldn't it be more honest and open to describe the myBroadband website as 'Your community's estimated average median broadband' website—for the sake of openness and honesty, because at the moment people look up myBroadband and they do not get their broadband; they get the community's estimated median peak broadband and then some obfuscation...The term 'limited availability' is a misleading euphemism for a finite capacity in their geographic area.<sup>34</sup>

5.41 Further questioning of the department during Additional Estimates hearings in February 2014 and at the committee's public hearing in Sydney on 12 March 2014 addressed the issue of upload speeds:

**Senator CONROY:** Did you do a median upload speed?

**Ms Grainger:** No, we did not.

**Senator CONROY:** Why not?

**Ms Grainger:** Senator, we did not have data available to us in that respect.

**Senator CONROY:** What? Nobody knows what their upload speeds are?

**Ms Grainger:** No, we did not have the data available to us in that respect. We do set out in the report the download speeds and upload speeds in relation to each technology platform, but we specifically focused on download speeds with ADSL...

**Senator CONROY:** We are talking about broadband quality and you identify five-meg upload as defining broadband quality and you have made no effort to test even the 20,000 Telstra lines for their upload.

**Ms Grainger:** We had download speed real empirical data available to us but we did not have the upload speed data available to us.<sup>35</sup>

5.42 At a later hearing, the department reiterated that it did not have data available in relation to upload speeds, but that it was the department's intention to include a speed test facility on the website:

**Chair [Senator LUNDY]:** Can you get that data?

**Ms Grainger:** In relation to the crowd source data, when we put the speed test on the site we are going to be capturing that. That is something we are

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34 *Committee Hansard*, 12 March 2014, p. 64.

35 *Committee Hansard*, additional estimates, Environment and Communications Legislation Committee, 25 February 2014, pp. 38–39.

very much looking forward to getting. That will give us a real test of user experience.

**Chair:** This is critical because obviously upload speeds create genuine interactivity and make the internet work for people, as opposed to them being in large part a bunch of passive consumers. Will the new capability that you are building in to allow that input by the crowd have a specific category for upload speeds as well as download speeds?

**Ms Grainger:** Yes, that is our intent.<sup>36</sup>

5.43 When asked why data on upload speeds was not available at the time the MyBroadband website was launched, the department later confirmed that it had:

...requested a range of detailed data from carriers, including measurements of copper line signal loss, and/or line sync speeds attributable to specific cable lengths in each Distribution Area where ADSL services were available.

The Department is capturing measurements of upload speed by implementing a data speed test facility on the MyBroadband website.<sup>37</sup>

5.44 Mr Clarke informed the committee that several enhancements had been implemented, with more to follow, that would enable crowd-sourced data to be openly overlaid on the department's database:

One was to take new developments in actual build infrastructure into the model. The second was to publish the underlying data. The third will be adding our own speed tests...onto the site.<sup>38</sup>

*'It's raining outside; my network's not working'*

5.45 One issue that has been raised with the committee and with parliamentary committees established in previous parliaments to examine broadband-related issues, is the effect of inclement weather on the reliability of Telstra's copper network. As previously noted, the #MyBroadbandvReality submission included at the top of its list of nine recommendations consideration of the impact of weather and region specific environmental factors on broadband availability and reliability:

Rain in particular was a recurring theme in many comments. For people with ADSL, 'rain' was mentioned 63 times. Extreme heat also caused people's connections to either drop out or cease totally, requiring a call to Telstra. Considering the amount of extreme weather this country experiences (in particular drought and flooding), this should be paramount to any decision-making in regard to what infrastructure would work best for which location, as well as ensuring what is currently in use has not already been irreparably damaged.<sup>39</sup>

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36 *Committee Hansard*, 12 March 2014, p. 65.

37 Answer to Question on Notice No. 13, 12 March 2014.

38 *Committee Hansard*, 12 March 2014, p. 65.

39 #MyBroadbandvReality, *Submission 52*, p. 5.

5.46 This end-user evidence—from everyday Australians using the internet from home or trying to run small business—is important because it corroborates previous evidence received by the committee about the effect of rain on Telstra's pits and the weather protection (or lack thereof) of the physical network. Yet the department's evidence to the committee confirmed that while some of the factors that affect broadband availability and quality were included in their report and on the MyBroadband website, inclement weather was not one of them. Assistant Secretary, Ms Grainger, told the committee at its 12 March public hearing:

Availability for ADSL technology can be impacted by a range of factors: pair gains, distance from the exchange and the type of technology that is actually available. We catalogue all of those in our report and we also set those out.<sup>40</sup>

5.47 The report's introduction made it clear that the spatial analysis of the coverage of broadband customer access did not include local or temporary variations in broadband infrastructure, services available or service quality, network dimensioning or other operational factors that were the responsibility of individual network owners. It added:

Other factors that impact on an end user's experience and perception of quality such as reliability, retail pricing, competition, value-added components to the service, weather events and mobility were also excluded from the analysis.<sup>41</sup>

5.48 When asked if the well-known reality of the effects of inclement weather on the copper network was factored into the MyBroadband website data, Ms Grainger confirmed:

We recognise that weather and weather events can have an impact on infrastructure, particularly broadband. But, realistically, we did not have any data available until we set out. While we recognise that weather events have an impact on both availability and quality, we had no data available to us to include that in our modelling.<sup>42</sup>

5.49 Mr Grosvenor was critical of the department's approach to providing practical advice to consumers about the effects of weather in its report and on its website. He argued that no real effort was made to make people aware that the network was unreliable in certain weather conditions such as rain and extreme heat. He noted that while mention of weather was hidden away on the MyBroadband website in a 'Frequently Asked Question' on the methodology '...[my] feeling is that the typical person is not going to follow that and read that far'.

5.50 Mr Grosvenor put to the committee that the department should have been more up-front with people, and that its website:

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40 *Committee Hansard*, 12 March 2014, p. 60.

41 Department of Communications, Broadband Availability and Quality Report, December 2013, p. 5.

42 *Committee Hansard*, 12 March 2014, p. 66.

...should state very clearly, first off, what type of internet connection [people] will get—whether it is ADSL, satellite or fibre to the premises. And then, for example, if it states that it is ADSL and gives a speed estimate, almost straight away it should say in a big note, 'Weather can have a big impact on the speed or the quality'.<sup>43</sup>

### Committee view

5.51 The committee notes that, in opposition, the Coalition made unqualified claims about prioritising underserved areas. In April 2013 the Coalition promised that 'suburbs, regions, towns and business districts with the poorest services and greatest need for upgrades will receive first priority'.<sup>44</sup> This promise was repeated by the minister in November 2013, when he said: 'two million households and businesses across Australia cannot get basic fixed-line broadband at present. Addressing these underserved areas first is a key objective of our NBN policy'.<sup>45</sup>

5.52 Since December 2013, this pledge has been incrementally watered down. Now areas of greatest need will only receive the rollout 'first' where it is 'logistically and commercially viable to do so'. In practice, this means that few underserved areas will be prioritised in line with the minister's April 2013 and November 2013 pledges because—as you would expect—the many underserved areas in Australia are underserved precisely because it is not 'commercially viable' for the private sector to serve them.

5.53 The committee considers that in many cases the MyBroadband data is unreliable and is not meeting community expectations. In many cases, the 'estimated average mean' speeds do not reflect the real speeds achieved by individuals. This was set out at length in the #MyBroadbandvReality submission and testimony provided to the committee.

5.54 The Broadband Availability and Quality Report also makes some interesting conclusions about broadband quality which reflect the political genesis of the review. For example, the report includes no detail of upload speeds in its assessment of broadband quality, and both HFC and FTTP are accorded the same 'quality' rank of 'A', despite the gulf in upload performance. Further, the report does not factor environmental conditions into its analysis, despite the susceptibility of copper-based broadband to weather conditions.

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43 *Committee Hansard*, 19 May 2014, p. 4.

44 *The Coalition's plan for fast broadband and an affordable NBN*, April 2013, at <http://lpaweb-static.s3.amazonaws.com/Policies/NBN.pdf>, p. 2.

45 The Hon Malcolm Turnbull MP, 'Rebooting the NBN Project', Speech to *CommsDay* Conference, 18 November 2013, at <http://www.malcolmtturnbull.com.au/media/rebooting-the-nbn-project-speech-to-commsday-conference>, p. 7.

5.55 The committee welcomes the timeliness of the #MyBroadbandvReality submission and the Australia-wide survey which underpinned it. The committee acknowledges that the survey was not scientific and that it relied on voluntary online contributions, but considers that the survey represents a community-sourced, real-world investigation of broadband availability and quality.