

Chapter 2

Key developments since the committee's first interim report

2.1 The 12 months following the tabling of the committee's first interim report have seen, in addition to the various reviews discussed in this report, a range of issues arise in relation to the formalisation of the multi-technology mix (MTM) and the commencement of its rollout, trials and pilots of various technologies, the release of a new NBN Co corporate plan, a cost-per-premises review, and the finalisation of the revised agreements between the Commonwealth and Telstra, and NBN Co, Telstra and Optus. This chapter reviews those developments and their implications.

The multi-technology mix

2.2 As noted in chapter 1, on 8 April 2014 the government issued a revised Statement of Expectations (SoE) to NBN Co, which was made public on 2 May. Although the government's cost-benefit analysis was yet to be finalised, the SoE set out the government's direction that the NBN rollout transition from a primarily fibre to the premises (FTTP) model to the MTM.¹

2.3 On 13 November 2014, NBN Co released its 'Multi-Technology Deployment Principles'. The principles stated that for each service area NBN Co would consider the ability of existing infrastructure to deliver the required bandwidth and reliability to premises, the construction capacity available to deliver the service, consistent use of technology within areas to reduce the complexity of the network, and any impact of advances in technology. In addition, opportunities to prioritise underserved areas 'to the extent commercially and operationally feasible' and to achieve early/high revenue (such as in areas with a concentration of business customers) would be taken into consideration.²

2.4 NBN Co explained that this meant households and businesses:

- already served by Optus' or Telstra's hybrid fibre coaxial (HFC) cable networks would receive broadband via HFC;
- already built or in the 'advanced stages' of build with FTTP would most likely keep FTTP; and
- earmarked for fixed wireless and satellite would remain so.

1 The Hon Malcolm Turnbull MP, Minister for Communications and Senator the Hon Mathias Cormann, Minister for Finance, 'Government Expectations' letter to NBN Co, 8 April 2014, at <http://www.nbnco.com.au/content/dam/nbnco2/documents/SOE-Shareholder-Minister-letter.pdf>, p. 2.

2 NBN Co Limited, 'NBN Multi-Technology Deployment Principles', 13 November 2014, at http://www.nbnco.com.au/content/dam/nbnco2/documents/nbn_multi_technology_deployment_principles.pdf.

2.5 Premises in areas not falling into one of the above categories were 'likely to receive fibre to the node deployment (FTTN)' or, for multi-dwelling units such as apartment blocks, fibre to the building (FTTB).³

2.6 NBN Co's Chief Executive Officer, Mr Bill Morrow, said that NBN Co would review the principles on an ongoing basis 'to ensure the company was making the best use of the taxpayers' investment and identifying opportunities to incorporate technology advancement'.⁴

2.7 On 1 December 2014, NBN Co released the first MTM 18-month rollout plan, specifying approximately 480 planned rollout areas and the technologies to be deployed in them between December 2014 and June 2016.⁵ The Minister for Communications, the Hon Malcolm Turnbull MP, reaffirmed that servicing underserved areas remained a key government priority.⁶

2.8 In January 2014, technology website ZDNet released an internal NBN Co document, obtained under freedom of information legislation, setting out the 'five steps in the MTM planning process' which would be utilised by NBN Co to determine the technology used in each area. Estimating costs and potential revenues in each area, to maximise net present value and cash flow, were central to the process.⁷

2.9 NBN Co did not concur with concerns expressed by the committee that the principles adopted by the coalition government for the MTM rollout, including the introduction of fibre on demand (see below), threatened to compromise the NBN's foundation principles of equitable broadband access for all Australians, and the prioritisation of underserved areas. Mr Morrow argued, strangely, that affluence would not affect the choice of technology in an area, although its revenue potential would:

In terms of laying out an operational plan, you would naturally look first of all at our expectation, which is prioritising underserved areas and getting universal access, and therefore within the general universal access we are going to naturally target those higher revenue, higher density areas, [multi-

3 NBN Co Limited, 'NBN Multi-Technology Deployment Principles', 13 November 2014, at http://www.nbnco.com.au/content/dam/nbnco2/documents/nbn_multi_technology_deployment_principles.pdf.

4 NBN Co Limited, 'NBN Co outlines principles for Multi-Technology rollout', Media Release, 13 November 2014, at http://www.nbnco.com.au/corporate-information/media-centre/media-releases/nbn_co_outlines_principles_for_multi_technology_rollout.html.

5 NBN Co Limited, 'NBN Co rolls out new national construction plan', Media Release, 1 December 2014, at <http://www.nbnco.com.au/corporate-information/media-centre/media-releases/nbnco-rolls-out-new-national-construction-plan.htm>.

6 The Hon Malcolm Turnbull MP, Minister for Communications, 'NBN Rollout Will Reach One in Three Australians by June 2016', Media Release, 1 December 2014, at <http://www.malcolmturnbull.com.au/media/nbn-rollout-will-reach-one-in-three-australians-by-june-2016>.

7 Josh Taylor, 'How NBN Co will determine what connection you get', *ZDNet*, 14 January 2015, at <http://www.zdnet.com/article/how-nbn-co-will-determine-what-connection-you-get/>.

dwelling units] and things of that nature that help us with those financial constraints...

If I can give my example, if there is a strong business centre and NBN is going to be focused in that area and we know they are going to want as high a product as we can provide—they are less price sensitive—we are going there with fibre...

In a suburb we would just look at the technology options according to the model I gave you. Affluence has no effect in terms of changing technology by the criteria and guidelines that we are talking about.⁸

Fibre on demand

2.10 When releasing the MTM Principles in November 2014, Mr Morrow announced that work was under way on developing guidelines for a 'fibre on demand' product, allowing individuals, businesses or small communities in non-FTTP areas to purchase a fibre connection to their premises.⁹ NBN Co's Chief Customer Officer Mr John Simon advised the committee that:

There are three types of categories: a fibre to single dwelling; higher speeds to multi-dwellings; and an area switch, where you get a number of premises, businesses et cetera that put together to switch an area or add to that area. We are working through that process to come up with those offerings.¹⁰

2.11 NBN Co was unable to indicate likely prices, but advised that fibre on demand products would be on offer by the first half of 2015, and the pricing structure would be similar to that used by British Telecom in the United Kingdom.¹¹ NBN Co's January 2015 product roadmap indicated that consultations with industry were ongoing regarding the provision of fibre on demand infrastructure.¹²

2.12 On 12 March 2015, NBN Co quietly released its 'Technology Choice' policy on its website. NBN Co stated:

The Technology Choice Program has been set up for interested individuals, local governments and communities who wish to apply for a change to their National Broadband Network (NBN) infrastructure. It provides an opportunity for eligible applicants to select an alternate technology solution by paying the incremental cost of the change.¹³

8 Mr Bill Morrow, *Committee Hansard*, 26 September 2014, pp 48–49.

9 NBN Co Limited, 'NBN Co outlines principles for Multi-Technology rollout', Media Release, 13 November 2014, at http://www.nbnco.com.au/corporate-information/media-centre/media-releases/nbn_co_outlines_principles_for_multi_technology_rollout.html

10 Mr John Simon, *Committee Hansard*, 2 December 2014, p. 53.

11 *Committee Hansard*, 2 December 2014, pp 49–50.

12 <http://www.nbnco.com.au/content/dam/nbnco/documents/Integrated-Product-Roadmap.pdf>

13 <http://www2.nbnco.com.au/connect-home-or-business/technology-choice-program.html>

2.13 NBN Co noted that the cost of fibre on demand for the 'Individual Switch' option 'could range from a few thousand dollars to tens of thousands of dollars' and the cost for the 'Area Switch' option 'could range from tens of thousands of dollars to several millions of dollars depending on the size and complexity of the project'.¹⁴

Rollout progress

2.14 The 2013 Strategic Review stated that under the proposed MTM, the NBN will have reached approximately 5.3 million premises in total (including 4.5 million premises in the fixed line footprint, or approximately 43 per cent of that footprint), as well as completing the entire fixed wireless and satellite deployment, by the end of 2016. The Strategic Review projected completion of the MTM rollout by the end of 2020.¹⁵

2.15 The Strategic Review contained no forecasts for FY2015 or FY2016 for the MTM. NBN Co's implementation schedule to reach its targets was similarly redacted in Exhibit 4-11 of the Strategic Review, at figure 1 below.

Exhibit 4-11: Sequencing of key activities (not indicative of network completion date)



Figure 1: extract from NBN Co Strategic Review¹⁶

14 NBN Co Limited, *Technology Choice Policy*, 12 March 2015, at: <http://www2.nbnco.com.au/content/dam/nbnco2/documents/Technology%20Choice%20Policy.pdf>, p. 4.

15 NBN Co Limited, *Strategic Review*, December 2013, p. 97.

16 NBN Co Limited, *Strategic Review*, December 2013, p. 109.

2.16 NBN Co reported that at the end of the 2014 financial year, it had 552,618 serviceable premises across all technologies, with a total of 210,628 services in operation.¹⁷ Of these, 381,146 were brownfields FTTP premises passed, approximately 70,000 short of the Minister's stated target of 450,000.¹⁸

2.17 In November 2013, NBN Co undertook to issue build contracts for 150,000 premises by February 2014.¹⁹ However, an answer to a question on notice confirms that 'as of end April [2014], there have been 52 build instructions issued since 24 September 2013 with an estimated total premises count of 115,542.'²⁰

2.18 Speaking on the release of the MTM rollout plan on 1 December 2014, Minister Turnbull advised that as of November 2014, 'over 1.2 million homes and businesses can either access the NBN or are in areas where construction is currently underway', and of these, over 650,000 were able to connect to the NBN. The minister undertook that the new rollout plan would provide for 'one in three Australians' to have access to, or be under construction for, the NBN by June 2016.²¹

2.19 The committee notes with interest the minister's adoption of the rollout metric 'work underway'. In opposition, Mr Turnbull had a great deal to say about the use of this metric by former management (called 'construction commenced' instead of 'work underway' at this time). For example:

Now, what the NBN does, and this is I think a deliberate effort to mislead people, because it really does mislead people, is they use a metric that is used nowhere else in the industry that I've ever heard of, and this is premises in areas where construction has commenced or has been completed...Now there are two metrics that are really relevant. The most relevant one is obviously premises where you have an active service, where you actually are connected and you've got a customer that's paying you good money for that service. The second one is what they describe as premises passed, which is when the fibre is going past a premise - of course, could be cable, doesn't have to be fibre - but the network is going past a premise and if the occupant rings up and says

17 NBN Co Limited, *Annual Report 2013-14*, 30 June 2014, pp 12–13.

18 See page 37 of the Committee's First Interim Report, available here: http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/National_Broadband_Network/NBN/Interim_Report/~/_media/Committees/Senate/committee/broadband_ctte/interim_report/report.pdf

19 See: <http://www.theage.com.au/it-pro/government-it/150000-more-fibre-connections-approved-for-nbn-20131031-hv2bn.html>

20 Answer to Question on Notice No. 45, Public Hearing 17 December 2013.

21 The Hon Malcolm Turnbull MP, Minister for Communications, 'NBN Rollout Will Reach One in Three Australians by June 2016', Media Release, 1 December 2014, at <http://www.malcolmturnbull.com.au/media/nbn-rollout-will-reach-one-in-three-australians-by-june-2016>.

'I'd like a service', they can send a nice person around with a van within a day or two to connect it.²²

2.20 Stories of delay in the NBN rollout have continued to emerge. Discussing ongoing problems with the NBN rollout in Tasmania in May 2014, the ABC reported that customers in that state were waiting almost four times the 35-day national average timeframe for connection.²³ NBN Co acknowledged to the committee in July 2014 that 'we have openly said we are not where we want to be in terms of delivering faster installation at the right customer experience levels', emphasising that NBN Co was undertaking 'multiple programs' to try and improve rollout performance.²⁴

2.21 In July 2014 the committee queried NBN Co in relation to the promises made by the Government and the predictions in the Strategic Review regarding MTM rollout progress by 2016 and completion by 2019 or 2020. Mr Morrow reaffirmed that:

At this point we do not see any reason as to why we cannot stick with the strategic review projections. There is nothing saying that we cannot meet those.²⁵

...

By the end of 2019 we will have covered all 12½ million homes across the country and we will connect roughly eight million of those by that time frame.²⁶

2.22 At the same hearing, however, noting issues which may impact on the rollout including FTTN trials and the Telstra negotiations, Mr Morrow said: 'I do not feel under pressure in order to stay with the schedule that was laid out within the strategic review'.²⁷

2.23 NBN Co's 2014-17 corporate plan, released in November 2014, stated that by the end of FY2015, 1,168,000 premises would be passed, with 1,033,000 of these serviceable and 481,000 activated.²⁸ The committee notes that the operational targets included in the 2014-17 corporate plan for FY2015 were excessively conservative. For example, NBN Co's greenfields targets have been 'lowballed' to such an extent that it met its 30 June 2015 greenfields activations forecast nearly six months early—by 22

22 Malcolm Turnbull, 'Turnbull disputes NBN connection figures', ABC Radio National *PM with Mark Colvin*, 21 November 2012, at: <http://www.abc.net.au/pm/content/2012/s3638019.htm>

23 'NBN's Tasmanian rollout problems continue', ABC News online, 13 May 2014, at <http://www.abc.net.au/news/2014-05-13/nbn27s-tasmanian-rollout-problems-continue/5450418>.

24 Mr John Simon, *Committee Hansard*, 11 July 2014, p. 36.

25 Mr Bill Morrow, *Committee Hansard*, 11 July 2014, p. 41.

26 Mr Bill Morrow, *Committee Hansard*, 11 July 2014, p. 47.

27 Mr Bill Morrow, *Committee Hansard*, 11 July 2014, p. 42.

28 NBN Co Limited, *Corporate Plan 2014-17*, 11 November 2014, p. 48.

January 2015—and at its current rate will meet its greenfields premises passed target in mid-March 2015.

2.24 NBN Co advised the committee in early 2015 that as at the end of 2014, the average weekly rollout rate required to reach the FY2015 targets set out in the 2014-17 corporate plan would be:

- 10294 premises passed ('ready for service') per week
 - 7567 fixed line, 2727 fixed wireless & satellite;
- 11,001 premises serviceable per week²⁹
 - 8273 fixed line, 2727 fixed wireless & satellite; and
- 6134 premises activated per week
 - 5071 fixed line, 1063 fixed wireless & satellite.³⁰

2.25 Releasing its half-yearly results for the 2014-15 financial year on 26 February 2015, NBN Co stated that its 12-week rolling average as at the end of December 2014 was 8,900 premises serviceable per week. NBN Co said that the rollout rate was continuing to increase, with the rate as of February 2015 'tracking at 10,200 serviceable premises per week'.³¹

FTTN trials

2.26 In February 2014, preparations were announced for FTTN trials on up to 20 nodes at Umina in NSW and Epping in Victoria, to run from May to October 2014. These trials would use 'spare pairs' on existing nodes and as such, would not involve construction of new nodes or the migration of active services.

2.27 On 21 March 2014 NBN Co signed a letter of intent with Telstra to undertake a larger, '1000 node trial' of FTTN.³² The trial was publicly announced by NBN Co on 26 June 2014.³³ According to an NBN Co fact sheet on the trial,³⁴ it would be conducted over 12 months and would pilot the planning, design and construction of

29 'Premises serviceable' indicates those premises or lots which have been passed and are ready for a service to be connected. It excludes those brownfields premises previously passed but rated 'Service Class 0' because service is not yet able to be connected to them without further work.

30 NBN Co, answer to question on notice (question 213) following Environment and Communications Legislation Committee, Supplementary Budget Estimates hearings, November 2014.

31 NBN Co Limited, 'NBN Co tracks towards full year targets as network transitions to new rollout model', Media Release, 26 February 2015, at <http://www.nbnco.com.au/corporate-information/media-centre/media-releases/nbn-co-tracks-towards-full-year-targets-as-network-transitions-to-new-rollout-model.html>.

32 Answer to question on notice (Question 184) from Senate Environment and Communications Legislation Committee, Supplementary Budget Estimates hearings, November 2014.

33 NBN Co Limited, 'NBN Co and Telstra expand construction of Fibre to the Node', Media Release, 26 June 2014, at <http://www.nbnco.com.au/corporate-information/media-centre/media-releases/nbn-co-and-telstraexpandconstructionoffibretothenode.html>

34 <http://www.nbnco.com.au/content/dam/nbnco2/documents/ftn-construction-fact-sheet.pdf>

1000 nodes in various locations in Queensland and NSW, using very high-bit-rate digital subscriber line (VDSL2) vectoring hardware, followed by consideration of piloting the connection of premises.

2.28 NBN Co advised that while the technology to be used for the trials had demonstrated capabilities of up to 100 megabits per second (Mbps) upload and 40Mbps download at a 400m distance from the premises:

[a]ctual performance will vary based on a range of factors including the distance from the node, the quality of the copper, equipment used in the premises and the service providers' own network.³⁵

2.29 Commencement of the Umina and Epping trials was delayed because agreement was not reached with Telstra for the use of its copper in the trials until late May, and power issues further delayed the progress of the Epping trial.³⁶ As of July 2014, NBN Co advised the committee that negotiations with Telstra meant that the trials remained in 'early days' with no end-users connected.³⁷ Power issues continued to delay the Epping trial, in which no nodes had been activated.³⁸

2.30 In relation to the 1000-node trial, Mr Greg Adcock, NBN Co's Chief Operating Officer, also qualified the 12-month timing:

I just want to be very clear: the estimate for the project plan is a 12-month trial. That is for us to plan, design, construct and deploy 1,000 nodes. But in all these things, the plan is the plan but there will be valid reasons where it may shorten—if you get a good run of weather—or there will be valid reasons where it might extend. We are still in negotiations with some of the utilities to reticulate power to the node. A plan is as good as the assumptions set at a point in time.³⁹

2.31 On 22 August 2014, in a press release entitled 'NBN speeds soar in Umina Beach', Minister Turnbull announced that 'the first customers connected to the NBN in its fibre-to-the-node pilot are achieving internet download speeds of around 100 megabits per second', and upload speeds of 30Mbps, at distances of more than 500 metres:

35 <http://www.nbnco.com.au/content/dam/nbnco2/documents/fttn-construction-fact-sheet.pdf>.

36 Mr Greg Adcock, *Committee Hansard*, 5 May 2014, p. 33; Senate Environment and Communications Legislation Committee, *Committee Hansard*, Budget Estimates hearings 29 May 2014, p. 153.

37 Mr Greg Adcock, *Committee Hansard*, 11 July 2014, p. 39.

38 *Committee Hansard*, 11 July 2014, p. 55.

39 Mr Greg Adcock, *Committee Hansard*, 11 July 2014, p. 46.

These results are an early indication that the NBN rollout will achieve the Government's commitment to upgrading Australia's broadband sooner, at less cost to taxpayers and therefore more affordably to consumers.⁴⁰

2.32 On the same day, NBN Co and the minister further announced that the FTTN construction program would be expanded to an additional 300 nodes in Woy Woy, NSW, and Warner, Queensland; essentially extending the 1000-node trial to 1300 nodes.

2.33 In November 2014, technology website ZDNet reported that information obtained under freedom of information laws indicated that both Telstra and the Department of Communications had advised the government to include a disclaimer on its announcement of the Umina pilot results, indicating that they may not be reflective of the speeds customers could access in the real world.⁴¹ No such disclaimer was included in the minister's press release.

2.34 In December 2014, NBN Co confirmed to the committee that the Umina and Epping trials would be extended to the end of September 2015.⁴² At the end of 2014, 53 customers had been connected in the Umina FTTN trial footprint, while no customers were yet connected in the Epping trial. Of the 53 customers connected in Umina, NBN Co reported a wide variance in download and upload speeds, averaging out to 85-91Mbps download and 34-37Mbps upload. NBN Co noted that achievable speeds 'may vary between premises depending on various factors including the quality and length of the copper', and that NBN Co had not to that date been given access to Telstra's data on the copper in the trial area.⁴³

2.35 NBN Co's January 2015 Integrated Product Roadmap indicated that a service and customer experience pilot of FTTN would commence in the third quarter of 2015.⁴⁴

FTTB

2.36 On 12 March 2014, NBN Co announced that it had agreed with four telecommunications carriers (Telstra, Optus, iiNet and M2) to participate in a FTTB

40 The Hon Malcolm Turnbull MP, Minister for Communications, 'NBN speeds soar in Umina Beach', Media Release, 22 August 2014, at http://www.minister.communications.gov.au/malcolm_turnbull/news/nbn_speeds_soar_in_umi_na_beach.

41 Josh Taylor, 'Turnbull, NBN Co ignored Telstra real-world FttN speed warnings', *ZDNet*, 25 November 2014, at <http://www.zdnet.com/article/turnbull-nbn-co-ignored-telstra-real-world-fttn-speed-warnings/>.

42 Mr John Simon, *Committee Hansard*, 2 December 2014, p. 54.

43 NBN Co Limited, answer to question on notice (Question 187) following Senate Environment and Communications Legislation Committee, Supplementary Budget Estimates hearings, November 2014.

44 NBN Co Limited, Integrated Product Roadmap, January 2015, at: <http://www.nbnco.com.au/content/dam/nbnco/documents/Integrated-Product-Roadmap.pdf>

pilot in the Melbourne suburbs of Carlton, Parkville and Brunswick.⁴⁵ Although the trial was announced as a three-month exercise, in May 2014 NBN Co advised the committee that it would 'be at least going to the end of the financial year, if not a little bit longer'.⁴⁶

2.37 In May 2014, NBN Co stated that the FTTB trial to that date had yielded average download speeds of 106Mbps, and 47Mbps upload.⁴⁷

2.38 By July 2014, while maintaining that it was 'still early days' on the FTTB trial and that it was likely to be three months more before outcomes were available, NBN Co advised that around 50 services were active.⁴⁸

2.39 As at November 2014, iiNet reported that the results of NBN Co's FTTB trials had still not been made public.⁴⁹ On 19 January 2015, however, NBN Co stated that it was 'delighted' with the results of the trials, and had identified 43 apartment blocks with approximately 6000 users in Melbourne, Sydney and Canberra to receive FTTB in the first half of 2015, with 2000 to be ready for service by the end of March.⁵⁰ An FTTB 'service and customer experience pilot' would launch within the same timeframe.⁵¹

HFC

2.40 Relatively little solid information was available to the committee about the proposed HFC rollout, given that until December 2014 it was awaiting the completion of the revised agreements with Telstra and Optus. The committee was advised that NBN Co had, during 2014, undertaken some technical testing in relation to HFC deployment in preparation for eventual rollout. However, as late as November 2014, with a corporate plan released indicating that HFC would comprise 27 per cent of the MTM rollout, NBN Co advised that it had not secured access to any part of the Telstra or Optus HFC networks for the purpose of preliminary trials.⁵²

45 NBN Co Limited, 'Telcos and consumers sign up for FTTB pilot', Media Release, 12 March 2014, at <http://www.nbnco.com.au/corporate-information/media-centre/media-releases/telcos-and-consumers-sign-up-for-fttb-pilot.html>.

46 Mr Gary McLaren, Chief Technology Officer, NBN Co Limited, *Committee Hansard*, 5 May 2014, p. 26.

47 Mr Greg Adcock, Environment and Communications Legislation Committee, *Committee Hansard*, Budget Estimates hearings, 29 May 2014, pp 154–155.

48 Mr Greg Adcock, *Committee Hansard*, 11 July 2014, p. 62.

49 <http://blog.iinet.net.au/nbn-case-study-denises-nbn-fibretothebuilding-trial/>

50 NBN Co Limited, 'NBN Co announces location of first 6,000 homes to receive Fibre to the Building', Media Release, 19 January 2015, at <http://www.nbnco.com.au/blog/nbn-co-announces-location-of-first-6000-homes-to-receive-fibre-to-the-building.html>.

51 NBN Co Limited, Integrated Product Roadmap, January 2015, at: <http://www.nbnco.com.au/content/dam/nbnco/documents/Integrated-Product-Roadmap.pdf>

52 Senate Environment and Communications Legislation Committee, *Committee Hansard*, Supplementary Budget Estimates, 20 November 2014, pp 21–22.

2.41 At the committee's 2 December 2014 hearing, 12 days prior to the signature of the Telstra agreements, NBN Co advised that it expected the HFC footprint to cover more than the 3.27 million premises posited in the Strategic Review, but declined to quantify its revised expectation, saying that a HFC rollout plan would be finalised in the first half of 2015.⁵³

2.42 NBN Co's Chief Technical Officer, Mr Dennis Steiger, outlined the significant remediation and preparation work that would be required on the Telstra and Optus HFC networks to ready them for NBN services:

After we obtain access to the HFC networks, the fibre lines, the CEOs and the exchanges we will begin a very methodical process which will really start around the clearing of the spectrum. So, not only do we need access to the physical facilities, we also need access to the spectrum on that HFC network because it is currently in use. My understanding is that there is a DOCSIS 1 modem in existence that we need to replace to clear up some of the spectrum. So we will go through a process...

the older technology is removed and it creates some space for the network that we will be overbuilding on the HFC on a separate spectrum. At that point we have to qualify the HFC network to make sure that it is properly operational, good signal-to-noise ratios, and the node sizes are appropriate for the amount of traffic demand that we expect over the next few years. We will be splitting any nodes and tightening the plants. Preparing the plant is a big part of our process.

We will also be defining the architecture that we are going to be deploying. As you are aware we are going to be acquiring two networks which cover some of the same areas, so we have to develop an architecture that supports us doing that operation, which we have given quite a bit of thought to, and we have some ideas around. We will then be deploying the CMTSs and tying the CMTSs with the HFC network and the NBN transit network. We also have to go through a rigorous process around product definition and onboarding our responsibilities, which will take some time, and providing the operational support throughout an OSS and operational capabilities in the network operation centres to support an HFC network, which is new to NBN.

After that we go through a series of trials starting with technology demonstration followed by construction trials. So that gives us a good insight into the infrastructure that is in place and the procedures and processes that NBN is going to need to roll out its network over the HFC that is in place. Finally, a customer trial with an RSP prior to a more significant launch.⁵⁴

2.43 While unable to offer precise figures, NBN Co also advised at that time that its estimates suggested that up to 50 per cent of premises in the HFC footprint,

53 *Committee Hansard*, 2 December 2014, pp 4–5.

54 Mr Dennis Steiger, *Committee Hansard*, 2 December 2014, pp 7–8.

perhaps 1.5 million premises, did not have HFC lead-in and would need to be connected.⁵⁵

2.44 No detailed costing was provided for the HFC rollout in the 2014-17 corporate plan, and on 4 December 2014 NBN Co's Chief Financial Officer, Mr Stephen Rue, indicated that it was still too early for NBN Co to provide any cost estimate for the deployment of HFC.⁵⁶

2.45 NBN Co's January 2015 Integrated Product Roadmap indicated that a service and customer experience pilot of HFC would commence in the final quarter of 2015.⁵⁷

2.46 On 23 February 2015 NBN Co announced that it had signed a contract with US company Arris for the technology required to upgrade the existing HFC networks for the NBN.⁵⁸ The financial value of the contract was not disclosed, but was reported by the media as approximately \$400 million.⁵⁹

Release of commercial products

2.47 By the end of 2014, commercial products had not yet been provided to retail service providers (RSPs) to sell FTTN, FTTB, HFC or long-term satellite services. Predicted product release dates for the various technologies indicated to the committee and others throughout 2014 slipped, and slipped again.

2.48 The commercial release of FTTB became a particularly pressing issue in 2014, following the commencement of commercial FTTB offerings by competitor TPG in selected multi-dwelling units (MDUs) in central Sydney, Melbourne and Brisbane. In May 2014, Mr Morrow advised the committee that NBN Co would accelerate its FTTP rollout in order to counter the TPG threat:

Fibre-to-the-basement was the plan for a lot of these already. They had a different date than TPG was targeting. Therefore, we accelerated in certain areas that we could to offer a competitive response. We have been told by customers, the building owners, the RSPs, that they like the fact that we are doing this. Those dates by the end of the financial year which we have announced are to actually turn up service within those basements...

The idea was that there is a potential problem to the model behind NBN if we have this large-scale material change of cherry-pickers. We felt it was in the interest of the taxpayers and in the interest of NBN Co to offer a competitive response. We have outlined which areas we will do that in and we have said that we will do it by the end of the financial year. The only

55 *Committee Hansard*, 2 December 2014, pp 9–11.

56 Mr Stephen Rue, *Committee Hansard*, 4 December 2014, pp 8–9.

57 NBN Co Limited, Integrated Product Roadmap, January 2015, at: <http://www.nbnco.com.au/content/dam/nbnco/documents/Integrated-Product-Roadmap.pdf>

58 NBN Co Limited, 'NBN Co's HFC Network: Start the engines!', Media Release, 23 February 2015, at <http://www.nbnco.com.au/blog/nbnco-hfc-network-start-the-engines.html>.

59 David Ramli, 'NBN deal promises higher speeds on cable TV networks', *Australian Financial Review*, 23 February 2015.

product that we have available today is fibre-to-the-premise and that will be the product which we are offering.⁶⁰

2.49 NBN Co indicated that its larger plan remained to counter the competitive threat in MDUs—from TPG and, potentially, from others—with speedy release of an FTTB product, which representatives indicated they hoped to have in place by October 2014.⁶¹ Mr Adcock confirmed at a Senate Estimates hearing later that month that FTTB products would be commercially launched by the end of 2014.⁶² In July, however, Mr Adcock revised his advice, stating that FTTB would be ready for commercial launch by February 2015.⁶³

2.50 NBN Co consistently emphasised to the committee that timetables were fluid, processes remained under development, and everything was subject to change. Discussing the FTTB delay, Mr Simon noted the complexity for NBN Co of developing and commercialising its offerings across different technologies under the MTM:

The attempt for October, I believe, is that that would be the beginning of the onboarding of [retail service providers]. So, if you think of what we have to do—our IT upgrades and network upgrades—we make that then available for RSPs to test. They go through their build and development. So the February date that we are talking about as being the full commercial release is the end-to-end capability with the RSPs. We commence onboarding in October.⁶⁴

2.51 In December 2014, NBN Co assured the committee that its FTTB product set would be released, allowing RSPs to commence connecting actual services, by the end of March 2015.⁶⁵ On 26 February 2015 NBN Co stated that the FTTB product release was 'imminent'.⁶⁶

2.52 Meanwhile, timing for the completion of trials and subsequent delivery of FTTN products to the market also continued to slide. In December 2014 NBN Co indicated that its FTTN product release would take place by the end of September 2015.⁶⁷ These timings were reflected in NBN's January 2015 Integrated Product

60 Mr Bill Morrow, *Committee Hansard*, 5 May 2014, p. 29.

61 *Committee Hansard*, 5 May 2014, p. 30.

62 Mr Greg Adcock, Environment and Communications Legislation Committee, *Committee Hansard*, Budget Estimates hearings, 29 May 2014, p. 155.

63 Mr Greg Adcock, *Committee Hansard*, 11 July 2014, p. 39.

64 Mr John Simon, *Committee Hansard*, 11 July 2014, p. 62.

65 *Committee Hansard*, 2 December 2014, pp 55-56.

66 NBN Co Limited, *Half Year Results Presentation*, 26 February 2015, at <http://www.nbnco.com.au/corporate-information/media-centre/media-releases/nbn-co-tracks-towards-full-year-targets-as-network-transitions-to-new-rollout-model.html>

67 *Committee Hansard*, 2 December 2014, pp 55-56.

Roadmap,⁶⁸ but in the presentation of its half-yearly results on 26 February 2015, NBN Co wrote that FTTN products would be released in the first quarter of 2016.⁶⁹

2.53 An initial product release for hybrid fibre coaxial (HFC) services is scheduled by NBN Co to occur in the first quarter of 2016.⁷⁰ Progress on satellite services is discussed in chapter 3.

7. NBN Co – Stated Targets

TARGET	STATUS
25/5 mbps to all Australians by 2016	MISSED
450,000 Premises Passed (BF) by 30 June 2014	MISSED
Build Contracts for 150,000 premises by February 2014	MISSED
Weekly Run Rate of 6,000 Premises by 30 June 2014	MISSED
Telstra negotiations complete by 30 June 2014	MISSED
Umina and Epping FTTN Trials underway by 1 May 2014	MISSED
FTTB product set released by October 2014	MISSED
FTTP to apartments in TPG areas by 30 June 2014	MISSED

Figure 2: Slide shown at public hearing 11 July 2014⁷¹

The Melton FTTP trial

2.54 On 6 September 2014, Fairfax media published a story citing a 'confidential' test rollout conducted for NBN Co in Melton, Victoria, which, it stated, showed that Labor's all-fibre national broadband network could have been delivered faster and for

68 NBN Co Limited, Integrated Product Roadmap, January 2015, at: <http://www.nbnco.com.au/content/dam/nbnco/documents/Integrated-Product-Roadmap.pdf>

69 NBN Co Limited, *Half Year Results Presentation*, 26 February 2015, at <http://www.nbnco.com.au/corporate-information/media-centre/media-releases/nbn-co-tracks-towards-full-year-targets-as-network-transitions-to-new-rollout-model.html>

70 NBN Co Limited, Integrated Product Roadmap, January 2015, at: <http://www.nbnco.com.au/content/dam/nbnco/documents/Integrated-Product-Roadmap.pdf>

71 Available at: http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/National_Broadband_Network/NBN/Additional_Documents.

less money than originally forecast',⁷² and for significantly less than indicated in the government's Strategic Review and cost-benefit analysis.

2.55 The leaked presentation detailed a pilot installation of FTTP to 2,484 premises, commenced in February 2014, utilising design changes formulated by NBN Co in an internal review conducted in 2013. Key innovations employed in the Melton trial included:

- use of the 'Render' deployment management system;
- new technical equipment such as smaller-diameter cable and small-form multiports;
- faster and more effective testing methods; and
- a new contracting model and work practices, including more streamlined 'build-drop' installation.⁷³

2.56 The evaluation, presented to NBN Co in August 2014, stated that 90 per cent of the Melton installation was completed within 104 working days, 61 per cent faster and 50 per cent cheaper than rollouts under previous models, with various aspects of construction being concluded 22 to 400 per cent faster than comparative rollouts.

2.57 At first, NBN Co rejected the story entirely, claiming on 7 December on Twitter that there had been 'no such pilot'.⁷⁴ The following day the company acknowledged that the trial had taken place but maintained that it did not produce the results claimed in the document and reported by the press. NBN Co stated in a press release on 8 September 2014 that:

The work underway in Melton delivered no such conclusions... the claims being made in the Fairfax report – and extrapolated out to the entire NBN project – are based on work in a single area that is atypical and which is employing construction methods that are not unique, they are already widely in use. It also required more oversight and more resources than usual to make it a success.⁷⁵

2.58 Notably, NBN Co also offered that:

our construction crews tell us there have been rollouts elsewhere in Victoria which cost less per premises and which have suffered fewer defects and had fewer design variations.⁷⁶

72 David Braue, 'NBN fibre rollout was going to be cheaper, sooner, pilot results show', *The Age*, 8 September 2014.

73 NBN Co Limited (letterhead), '3MLT-10 deployment trial post-implementation results and recommendations – industry pack', as published by the media and tabled by Senator Conroy at the committee's public hearing on 26 September 2014, at: http://www.aph.gov.au/Parliamentary_Business/Committees/Senate/National_Broadband_Network/NBN/Additional_Documents, document no. 17.

74 See *Committee Hansard*, 26 September 2014, pp 24-25.

75 NBN Co Limited, 'Two sides to every story', Media Release, 8 September 2014.

76 NBN Co Limited, 'Two sides to every story', Media Release, 8 September 2014.

2.59 NBN Co rejected any suggestion that the Melton results warranted a re-consideration of the costs and benefits of FTTP across the full NBN rollout, while reiterating that fibre 'remains an important part of the multi-technology mix'.⁷⁷

2.60 Addressing the committee on 26 September 2014, Mr Morrow said:

I would like to say something about what has been described as an NBN study or pilot in a suburb in northern Melbourne. Documents with an NBN letterhead claiming material FTTP improvements were leaked to a journalist. These were documents, I might say, that none of us here had actually seen before the media brought them to our attention. It was important for NBN to respond to this story and place context around these documents—which may have been seen by the public as representing NBN's considered view, which they do not.

I would like to make clear to the committee that, in order to meet the objectives given to us by the board of directors, we must find efficiencies across the company and across all technologies. Projects like the one described in the media are taking place throughout the company and we expect there to be efficiency gains from them, but nothing we have seen will alter the direction of the company when it comes to the MTM model.⁷⁸

2.61 At the same hearing Mr Adcock confirmed that the Melton trial was the first and only deployment area (known as a fibre serving area module, FSAM) in Australia to incorporate the full suite of technological and efficiency improvements identified for FTTP, including the 'Render' work scheduling program.⁷⁹ NBN Co was not prepared, however, to accept the positive results of the trial, describing the presentation of its results as:

a preliminary document that was prepared by the [NBN Co project] team prior to peer review. It has not reached the executive yet, because the assertions made in it had not been subject to peer review. That review is still ongoing.⁸⁰

2.62 Mr Adcock indicated, for example, that the claim that the Melton rollout was completed in 104 business days may not be correct, querying the stated commencement date of 28 February 2014.⁸¹ NBN Co later advised the committee that:

NBN Co issued two instructions for work to commence at Melton. The first was on 9 January 2014. This was on day rates as we had not at this stage agreed scope of work. The second was on 28 February 2014 on an agreed schedule of rates (SOR).⁸²

77 NBN Co Limited, 'Two sides to every story', Media Release, 8 September 2014.

78 Mr Bill Morrow, *Committee Hansard*, 26 September 2014, p. 2. The document,

79 Mr Greg Adcock, *Committee Hansard*, 26 September 2014, pp 9-10.

80 Mr Greg Adcock, *Committee Hansard*, 26 September 2014, p. 4.

81 *Committee Hansard*, 26 September 2014, p. 12.

82 NBN Co Limited, response to question on notice (question 13) following the 26 September 2014 public hearing.

2.63 More generally, NBN Co would not accept the factual accuracy of any of the Melton trial results as they had not been 'validated' by management.⁸³ While advising that some of the improved processes and equipment used in Melton such as smaller-diameter cable had already been incorporated into standard FTTP rollout practice elsewhere,⁸⁴ NBN Co indicated that other clear and internationally-verified efficiencies identified in 2013 had still not been accepted by NBN Co as uniform or mandatory procedure.⁸⁵

2.64 Mr Morrow went as far as to say that:

It may turn out that there are heaps of savings behind these various projects and trials that we have underway. I do hope, in fact, that there are. Once we can validate those and once we can bake them in... [o]f course we will bake these in. But this whole thing is premature and has a bad smell to it in different areas. Until we can flush this thing out we are left in this quandary of, 'Is it misguided? Is it accurate? Is it somebody who has left the company who is disgruntled and who wants to be able to push for a fibre to the premises because they don't like the MTM model? Are there political motivations behind all this?' We do not know until we can actually go through this process.⁸⁶

2.65 At a Senate Estimates hearing on 20 November 2014, NBN Co advised that the peer review process on the Melton trial had been completed, and had confirmed much of the information in the Melton results, although certain matters were revised by the peer review, including the stated commencement date of the rollout, which was amended to 9 February 2014.⁸⁷ NBN Co acknowledged before the Estimates hearing, and in its 2014-17 corporate plan released the same month, that it was making changes to its construction delivery model and the design of the FTTP rollout to reflect the improvements demonstrated in Melton and elsewhere.⁸⁸ These changes to the construction delivery model were overwhelmingly those identified in the corporate plan (and accompanying board papers) delivered to the board in September 2013, and attested to by NBN Co personnel as being implemented.⁸⁹

83 *Committee Hansard*, 26 September 2014, p. 12.

84 NBN Co later advised that by the time of the Melton trial small-diameter cable had been used in 64 FSAM designs, and small-form multiports in 85 FSAMs. Mr Greg Adcock, Senate Standing Committee on Environment and Communications, *Committee Hansard*, Supplementary Budget Estimates, 20 November 2014, p. 32.

85 *Committee Hansard*, 26 September 2014, pp 23-25, 26, 63.

86 Mr Bill Morrow, *Committee Hansard*, 26 September 2014, p. 25.

87 Senate Standing Committee on Environment and Communications, *Committee Hansard*, Supplementary Budget Estimates, 20 November 2014, p. 29.

88 Senate Environment and Communications Legislation Committee, *Committee Hansard*, Supplementary Budget Estimates, 20 November 2014, p. 29.

89 See Senate Select Committee on the National Broadband Network, *Interim Report*, March 2014, pp 29-34.

2.66 NBN Co provided a copy of the Melton presentation to the Senate Environment and Communications Committee, at the committee's request, in December 2014. The copy provided by NBN Co was dated October 2014 and appeared to represent the post-peer review, approved version of the Melton trial outcomes. It redacted the figures relating to average per premises costs, which NBN Co stated was necessary to avoid commercial harm to the company.⁹⁰

2.67 It is not clear why NBN Co denied the existence of the Melton 10 trial so vehemently. NBN Co CEO Mr Morrow is on the record as saying 'we must find efficiencies across the company and across all technologies'.⁹¹ The committee notes that the results of the Melton 10 trial demonstrate that the cost of rolling out FTTP is going down, not up, as alleged in the Strategic Review.

The NBN Co 2014-17 corporate plan

2.68 The committee's first interim report discussed in some detail the draft 2013-16 NBN Co corporate plan, which projected significant savings in the FTTP rollout, but which was never adopted by the NBN Co board, apparently due to the change of government and the ensuing replacement of the board.⁹² The committee expressed concern that the information available to NBN Co in the draft revised corporate plan (known as 'Version 13') was not used as the base case for the key financial comparisons of the Strategic Review, despite being the most up-to-date projections and indicating the latest rollout and cost figures for FTTP.

2.69 The Strategic Review indicated that NBN Co would produce a new corporate plan for 2014-17 in the first half of 2014.⁹³ NBN Co subsequently stated that it would release a 2014-15 'financial plan' within that timeframe, with a full 3-year corporate plan to follow later in 2014, drawing upon the cost-benefit analysis and other reports being prepared.⁹⁴

2.70 NBN Co submitted the draft 2014-17 corporate plan to the government on 19 May 2014.⁹⁵ The 2014-17 corporate plan NBN Co submitted to government included forecasts for financial year (FY)2015, FY2016 and FY2017, as is appropriate for

90 Letter from Mr Greg Adcock, Chief Operating Officer NBN Co Limited, to the Secretary of the Senate Standing Committee on Environment and Communications, 'Post-Implementation Review – Melton Deployment Trial', 12 December 2014, at: http://www.aph.gov.au/~media/Committees/ec_ctte/estimates/supp_1415/communications/NBNCo_Melton_PIR_October_2014.pdf

91 Mr Bill Morrow, *Committee Hansard*, 26 September 2014, p. 2.

92 Senate Select Committee on the National Broadband Network, *Interim Report*, March 2014, pp 25-29.

93 NBN Co Limited, *Strategic Review*, December 2013, p. 9.

94 Dr Ziggy Switkowski, Executive Chairman, NBN Co Half-Yearly Results Briefing, 21 February 2014, at <http://www.nbnco.com.au/content/dam/nbnco/images/media-images/Transcript-Half-Year-Results.pdf>, p. 3.

95 Department of Communications, answer to question on notice No. 557 from Senate Standing Committee on Environment and Communications Budget Estimates, May 2014.

corporate plans submitted by government business enterprises (GBEs). This was confirmed by the Department of Communications at the 12 March 2015 hearing:

Senator CONROY: What I'm trying to understand from your earlier answer is whether or not NBN Co provided the Government with numbers in...[20]16 to [20]17.

Mr Robinson: They did, Senator, yes.

Senator CONROY: So they provided the Government with a set of forecasts, but when they provide it to the public—this committee—they say they are too uncertain to make any forecasts.

Mr Robinson: That's right, Senator, but that's because—

Senator CONROY: I'm trying to understand whether they have complied with the GBE guidelines which state unambiguously that they have to present a three year plan.

Mr Robinson: And they did, Senator.⁹⁶

2.71 At the committee's 26 September 2014 hearing, CEO Bill Morrow confirmed that the document remained 'on the minister's desk'.⁹⁷

2.72 By October 2014, the corporate plan had still not been publicly released or tabled in parliament. On 29 October 2014, the Senate passed an 'order for the production of documents' requiring the Minister for Finance and the Minister for Communications to table a copy of the 2014-17 NBN Co corporate plan in the Senate by 24 November.⁹⁸ In response to this order the NBN Co *Corporate Plan 2014-2017*, dated 11 November 2014, was tabled in the Senate, and released publicly, on 17 November 2014.

2.73 In July 2014, discussing the lack of information available on NBN Co's detailed implementation and rollout targets, Mr Morrow assured the committee that '[w]e will have ample information within the corporate plan that we will submit to the board and to the department'.⁹⁹

2.74 The information in the corporate plan as finally released in November, however, can not be described as 'ample'. Lacking the forecasts for FY2016 and FY2017 submitted to Government under the GBE guidelines, and details of NBN Co's business case out to 2040, it is clear that the public version of NBN Co's 2014-17 corporate plan is a 'glossy'—a document with most of the pertinent information and relevant assumptions excised.

2.75 NBN Co cited the 'significant amount of change at NBN Co' since August 2012 (the date of the previous official corporate plan), saying implementation of these

96 *Committee Hansard*, 12 March 2015, p. 4.

97 Mr Bill Morrow, *Committee Hansard*, 26 September 2014, p. 46.

98 *Journals of the Senate* No.62, 29 October 2014, p. 1675.

99 *Committee Hansard*, 11 July 2014, p. 80.

required 'making assumptions about future outcomes that carry high levels of uncertainty at the time of publishing the 2014-17 corporate plan'. These included:

- the 'recommendations, subsequent policy decisions, and industry reaction' to the Vertigan Panel's Cost-Benefit Analysis and the 'Scales review' of the NBN policy process;
- finalisation of the revised Definitive Agreements between NBN Co and Telstra, and the revised Optus agreement, and related regulatory approvals, 'which will be relevant to the timing of the rollout';
- NBN Co's 'ability to quickly ramp up' the rollout of FTTP and fixed wireless, and to deploy FTTN and HFC, dependent *inter alia* on NBN Co's negotiations with delivery partners and suppliers, and workforce availability; and
- internal challenges to NBN Co in 'operations, staff/culture, IT systems, processes, planning tools and delivery models' impacting on its ability to complete the many tasks necessary to transition to, and rapidly deploy, the MTM model.

2.76 Given these uncertainties, NBN Co advised that the corporate plan 'should be viewed as a transition plan for NBN Co'.¹⁰⁰

2.77 The plan provided rollout estimates and financial projections for FY2014-15, including \$160 million in revenue and \$5.5 billion in expenditure.¹⁰¹ These projections, covering a forward period of less than eight months from the release of the corporate plan, were nonetheless heavily qualified:

While the FY2015 Estimates are based on NBN Co's best considered professional assessment, NBN Co's officers... do not give any guarantee or assurance to any third party that the results, performance or achievements expressed or implied by the FY2015 Estimates will actually occur, and such FY2015 Estimates should not be relied on or considered to be a representation of what will happen...¹⁰²

2.78 Beyond FY2015, no new forecasts were offered. The 2014-17 corporate plan provided no deployment metrics beyond June 2015, and only a few broad financial assumptions for 2020, drawn from the Strategic Review. No details were provided about executed contracts and values.

2.79 The corporate plan stated that:

NBN Co is not in a position to generate forecasts with a reasonable level of confidence for FY2016 and FY2017. Therefore any operational and financial data for FY2016 and FY2017 are long range assumed, possible outcomes, not a forecast (or FY2016-2017 assumptions).¹⁰³

100 NBN Co Limited, *Corporate Plan 2014-17*, 11 November 2014, pp 5-6.

101 NBN Co Limited, *Corporate Plan 2014-17*, 11 November 2014, p. 44.

102 NBN Co Limited, *Corporate Plan 2014-17*, 11 November 2014, p. 4.

103 NBN Co Limited, *Corporate Plan 2014-17*, 11 November 2014, p. 6.

2.80 Despite having prepared a detailed plan by late 2014 for the NBN rollout up to June 2016, NBN Co maintained that it was unable to detail any cost and revenue forecasts beyond June 2015, advising the committee again in December 2014 that 'we are still working through that'.¹⁰⁴

2.81 Mr Morrow told the committee that:

the release of our 2014 to 2017 corporate plan represented another important milestone. We were very open about its content, and I think that the various media commentators accepted that it was, by necessity, a transition plan and largely focused on an FY 2015 forecast. I know you may ask why. The reason is that we still do not have absolute certainty on all the inputs that you need to finalise a detailed financial and operational model that underpins such a forward-looking strategy. Our shareholders accept this and we prefer to be up-front with our other stakeholders as well.

We are currently in the process of working through the operating and financial plan that will be completed once we have all of the inputs finalised. I can assure you that the result of this work will form the basis of a more relevant three-year corporate plan extending out to June 2018. It is this plan that will be the crucial guide as we move into the key period of the rollout.¹⁰⁵

2.82 Giving evidence to the committee on 4 December 2014, Chief Financial Officer Mr Stephen Rue insisted that the company had completed no revised forecasting of costs and revenues beyond June 2015, in the 12 months since the publication of the Strategic Review:

Mr Rue: What we have is the 2015 budget, which is what you see in the corporate plan. What we also have is the strategic review. We are, as I said in my opening statement to the Senate estimates committee, currently working on a longer range plan which will expand on the strategic review and will also be possible to do once the final deals are done with a certain large telecommunications company. What I think Mr Morrow was referring to is that, when one looks at a rollout plan, one considers many things, including potential revenues in certain areas and certain costs.

Senator CONROY: Yes, they are usually referred to as forecasts.

Mr Rue: Forecast of costs and revenues, correct, but that is different from doing a long-term plan.

Senator CONROY: So you have no idea what the forecasts are for your revenue over the next four years?

Mr Rue: We are currently working on a long-range operating and financial plan, which will form part of the 2015 to 2018 corporate plan.

104 Mr Bill Morrow, *Committee Hansard*, 2 December 2014, p. 24.

105 Mr Bill Morrow, *Committee Hansard*, 2 December 2014, p. 2.

Senator CONROY: So I repeat: you are the chief financial officer of a company that is looking to spend \$40 billion and you have no idea of your forecasted revenue or forecasted costs past 2015?

Mr Rue: To say we have no idea is not correct. We have the strategic review that was done in November-December last year. On top of that we need to do obviously a detailed long-term plan, which is what we are working on.¹⁰⁶

...

Senator CONROY: Let us be very clear. You are now saying the most up-to-date revenue and costs for your company were prepared in December 2013. That is your evidence to this committee.

Mr Rue: At this moment in time, that is the best set of numbers we have.¹⁰⁷

External oversight of the corporate plan

2.83 Under the previous government and former management of NBN Co, NBN Co corporate plans were subject to independent external review. The 2011-13 Corporate Plan was reviewed by Greenhill Caliburn, the 2012-15 corporate plan by KPMG, and the 2013-16 corporate plan by both KPMG and Ernst & Young. This process has been cancelled under the current government.

2.84 The Department of Communications advised that NBN Co's 2014-17 corporate plan was reviewed by shareholder minister departments (Communications and Finance) under the 'ownership' of NBN Co's shareholder ministers, with 'expert input' from two consultants engaged by the department.¹⁰⁸ Secretary Mr Drew Clarke advised the committee that:

The difference between models is that previously the department, on behalf of stakeholder ministers, engaged a consulting firm to undertake a review. In the model we have applied this year, departmental officers, supported by those two advisers, undertook the analysis themselves, including extensive consultation and engagement with the company.¹⁰⁹

2.85 Mr Clarke noted that the consultants engaged were Mr Chris Martin from 333 management and Mr Robert James from iMediate Consulting. Mr Clarke also acknowledged that one of the two external experts engaged by the department—Mr Chris Martin—had also worked on the Strategic Review, and was engaged on that basis. Mr Clarke rejected the suggestion that there was any conflict of interest in these arrangements for review of the corporate plan.¹¹⁰

106 *Committee Hansard*, 4 December 2014, p. 2.

107 *Committee Hansard*, 4 December 2014, p. 3.

108 Senate Standing Committee on Environment and Communications, *Committee Hansard*, Supplementary Budget Estimates, 25 November 2014, p. 23.

109 Mr Drew Clarke, *Committee Hansard*, 3 October 2014, pp 28–29.

110 *Committee Hansard*, 3 October 2014, pp 31, 34–35.

The revised Definitive Agreements

2.86 Uncertainty regarding the finalisation of revised agreements between NBN Co and Telstra for the acquisition of its copper and HFC networks was an ongoing preoccupation in 2014.

2.87 In April 2013, Minister Turnbull signalled that the Revised Agreements would be done 'speedily'.¹¹¹ He subsequently indicated that they would 'certainly' be complete by mid-2014.¹¹² The government's predictions of completion by mid-year failed to be realised. It is now clear that this target was missed by a considerable margin.

2.88 On 14 December 2014 the government finally announced the revised Definitive Agreements between the government, NBN Co and Telstra Corporation. Ministers Turnbull and Cormann stated that:

Under the agreements NBN Co will progressively take ownership of many parts of Telstra's copper and HFC cable networks and use this infrastructure in the NBN, at no additional cost to taxpayers.¹¹³

2.89 NBN Co, in its media release announcing the agreements, was less definitive on the cost to taxpayers, saying: 'the progressive transfer of the copper and HFC assets to NBN Co involves no overall additional cost to the taxpayer.'¹¹⁴

2.90 Implementation of the revised agreements remains subject to several conditions precedent, including approval by the Australian Competition and Consumer Commission (ACCC) of a revised Migration Plan. Telstra's Tony Warren indicated on 14 December 2014 that 'we hope to have the conditions precedent satisfied in the first half of next year [2015]'.¹¹⁵

2.91 Meanwhile, negotiations with Telstra would continue for the provision of 'planning, design, construction and maintenance services' which would be subject to separate payment, on commercial terms, and regulatory oversight.¹¹⁶ Telstra CEO Mr

111 'Tony Abbott and Malcolm Turnbull – Coalition NBN Policy Launch', 9 April 2013, video at <https://www.youtube.com/watch?v=bKbANwmJyWc>

112 Ben Grubb, 'Malcolm Turnbull expects new Telstra NBN deal in a "few months"', *The Age*, 21 February 2014, at: <http://www.theage.com.au/it-pro/government-it/malcolm-turnbull-expects-new-telstra-nbn-deal-in-a-few-months-20140220-hvdaw.html>

113 The Hon Malcolm Turnbull MP and Senator The Hon Mathias Cormann Minister for Finance, 'NBN Co and Telstra sign revised Definitive Agreements', Media Release, 14 December 2014.

114 NBN Co Limited, 'Landmark deal paves way for faster NBN rollout', Media Release, 14 December 2014, at: <http://www.nbnco.com.au/corporate-information/media-centre/media-releases/landmark-deal-paves-way-for-faster-nbn-rollout.html>

115 Telstra, Analyst Briefing, 14 December 2014, p. 5, at: <http://www.asx.com.au/asxpdf/20141216/pdf/42vhl1z1qb711z.pdf>

116 The Hon Malcolm Turnbull MP, Minister for Communications & Senator the Hon Mathias Cormann, Minister for Finance, 'NBN Co and Telstra sign revised Definitive Agreements' Joint Media Release, 14 December 2014, at http://www.minister.communications.gov.au/malcolm_turnbull/news/nbn_co_and_telstra_sign_revised_definitive_agreements.

David Thodey indicated that if Telstra took on this contract it would be at Telstra's gross margin of '20, to the mid 25, margin level'.¹¹⁷

2.92 Telstra disclosed the detail of the agreements to the Australian stock exchange on 14 December 2014. This included a media release, a comprehensive background document setting out the changes to the original agreements, a presentation, and a recording and transcript of an analyst briefing to investors. By contrast, NBN Co, on behalf of the taxpayer, issued a single press release and no detail.¹¹⁸

HFC

2.93 At the public hearing on 12 March 2015, NBN Co indicated that—unlike the copper network—they cannot choose which parts of Telstra's HFC network they take for the NBN. Under the Revised Agreements, once the first HFC line is taken by NBN Co, NBN Co is committed to take Telstra's entire HFC network:

Senator CONROY: Do you have to take all of [the HFC]? Is there a minimum you have got to take off Telstra? I will start with Telstra. How does it work? You mentioned it in your opening statement but it was a little unclear to me from that, so I want to draw from you what the arrangement for the HFC is.

Mr Rousselot: The HFC network is a network as a whole, so we have the option to use that network where we want to. There are areas where we will use that HFC network to roll out the NBN high-speed network. There are areas where we won't. However, the network that we take over is a network in its entirety. So once we start including the HFC network in our rollout...once we start rolling out HFC, yes, we are taking the entirety of the network.¹¹⁹

2.94 NBN Co appeared unclear on the trigger point—the point of no return after which NBN Co is committed to taking Telstra's entire HFC network:

Senator CONROY: what is the trigger point where you take full control of both networks—or is it just the Telstra one at this stage?

Mr Rousselot: The Telstra one. First of all, we do not take control of the entire Telstra HFC network the moment we start. The ownership transfer is progressive and therefore happens—

Senator CONROY: But you do not know where your responsibility is? You can't cherry pick, though, can you?

Mr Rousselot: No. However, once we have started in one region—and so to answer your question—the trigger point is when we would end up being committed to doing the HFC network and to take it over would be

117 Telstra, Analyst Briefing, 14 December 2014, p. 13, at: <http://www.asx.com.au/asxpdf/20141216/pdf/42vhl1z1qb711z.pdf>

118 NBN Co Limited, 'Landmark deal paves way for faster NBN rollout', Media Release, 14 December 2014, at: <http://www.nbnco.com.au/corporate-information/media-centre/media-releases/landmark-deal-paves-way-for-faster-nbn-rollout.html>

119 *Committee Hansard*, 12 March 2015, p. 45.

when we confirm to Telstra that we are indeed rolling out, using HFC in a particular region.

Senator CONROY: So you do not actually have to start the physical construction? You just say: 'Right, we're doing the design. We're definitely using it in this area.' That is the point. So it is not like when someone knocks on your door and says, 'I've come to install your lead-in?'

Mr Rousselot: I will have to check the exact trigger. It might be that it is actually on the first ready-for-service declaration of an HFC area. I do not know whether it is on the first ready-for-service or whether it is on the confirmation of the design of that area. I will have to check that point in time for you, if you want.¹²⁰

2.95 It was also revealed at this hearing that under the new HFC 'Continuity Deed', NBN Co has an open-ended obligation to maintain the HFC network for as long as Telstra wishes to use it for pay TV services:

Senator CONROY: NBN have to maintain the HFC—keep it operational—for as long as Telstra want to provide, or Foxtel-Telstra want to provide, pay TV services?

Mr Rousselot: Yes we do....We will be using and maintaining it and upgrading it for the purpose of providing the broadband, therefore the small increment of providing the maintenance for the ability to continue to provide the pay TV services through that part of the spectrum that it licenced to Foxtel will be a small portion and Telstra—

Senator CONROY: Are you billing Foxtel for it?

Mr Rousselot: Yes, well not Foxtel but Telstra will be contributing to that cost of maintenances as part of the continuity arrangement with them.

Senator CONROY: So, there will be no subsidy from NBN in any way shape or form, an effective subsidy by maintaining Foxtel's ability to keep using the HFC?

Mr Rousselot: We will continue to charge Foxtel, sorry Telstra indirectly, probably Foxtel, but we will continue ourselves to charge Telstra for their contribution of the maintenance and operation of the HFC network as long as they keep using part of the spectrum to provide pay TV on it.¹²¹

2.96 Costs for maintaining legacy networks (like the HFC) are expected to increase over time. However, Mr Rousselot indicated that the amount Telstra pays NBN Co to access to HFC for PayTV is only indexed to CPI:

Senator CONROY: The rent is fixed?

120 *Committee Hansard*, 12 March 2015, p. 46.

121 *Committee Hansard*, 12 March 2015, pp 46–7.

Mr Rousselot: We have an agreed formula for how much we will be charging Telstra for their licence to use part of the HFC network.

Senator CONROY: You cannot vary that at all? It was signed up beforehand?

Mr Rousselot: That formula is agreed and will therefore continue....

...

Senator CONROY: Now, the rental fee we are charging Telstra to maintain the cable...Obviously costs increase over time. Is that an increasing cost?

Mr Rousselot: It is a formula that includes a CPI indexation, yes.¹²²

2.97 The committee notes that the political rhetoric around the HFC post-election was that it provided NBN Co with 'flexibility' and 'optionality'. For example, at the signing of the Revised Agreements, Minister Turnbull said:

What this deal does is give NBN Co the flexibility, the optionality that it would have were it the incumbent telco. So it has the options of going FTTP, using the copper in FTTN, FTTB, FTTdp; all of those hybrid fibre-copper technologies are now available, where they weren't before. And of course you've got the ability to use the HFC, which is capable – particularly when you upgrade to DOCSIS 3.1 – of 400Mbps, really an absolutely super-fast fibre-like network.¹²³

2.98 This statement is not accurate in the case of Telstra's HFC network. NBN Co has no real flexibility in this footprint—once it takes the first HFC line, it has a liability to take all the Telstra HFC and keep it operational for PayTV. There are also restrictions on its sale, 'particularly to large RSPs'.¹²⁴ There is no scenario where NBN Co would take ownership of an entire asset, pay to maintain the entire asset, and then only select parts of the asset to use for broadband. In other words, in the vast majority of Telstra's HFC footprint, NBN Co has no 'optionality or flexibility' at all.

Copper

2.99 Telstra indicated to the ASX upon the deals being signed that there would be no guarantees on copper acquired by NBN Co—it would be handed over on an 'as is, where is' basis.¹²⁵ This was confirmed by Mr Rousselot at the 12 March 2015 public hearing:

Senator CONROY: Now, have NBN managed to secure any fitness guarantees or any minimum standards on the copper?

122 *Committee Hansard*, 12 March 2015, p. 46.

123 Petroc Wilton, 'NBN Co and gov't sign off new Telstra, Optus deals', *CommsDay*, 15 December 2014.

124 Telstra, Overview of changes to Telstra's NBN Definitive Agreements, 14 December 2014.

125 Telstra, Analyst briefing presentation, 14 December 2014, at: <http://www.asx.com.au/asxpdf/20141215/pdf/42vgkf12mxbyvb.pdf>

Mr Rousselot: No, we are acquiring the copper where we decided we want it, but when we do acquire it, it is on a as is where is basis.

Senator CONROY: As is?

Mr Rousselot: Where is basis.

Senator CONROY: Okay, it is whatever is in the ground.

Mr Rousselot: Yes.

Senator CONROY: And Telstra do not have to remediate it?

Mr Rousselot: No, no copper remediation.¹²⁶

2.100 At the 24 February 2015 estimates hearing, it was revealed that NBN Co did not obtain data from Telstra on the operational costs associated with the copper network:

Senator CONROY: So Telstra did not tell you what their maintenance cost was before you bought the copper off them. I am not asking you to reveal it. I am just saying that you bought the network and Telstra did not bother to tell you what their maintenance cost was.

Mr Morrow: We made some assumptions based on what we think the cost would be.

Senator CONROY: So Telstra did not tell you what the cost would be?

Mr Morrow: I am not aware of that with the deal team, so at this point I would say no.¹²⁷

2.101 However, during the 12 March 2015 public hearing, Mr Rousselot noted that Telstra had supplied 'aggregate' data on the operations and maintenance costs of the copper network:

Senator CONROY: You are taking on board the operations and maintenance liability from the moment ownership is transferred—that is correct?

Mr Rousselot: Yes. Of the copper network—

Senator CONROY: Yes, the copper network. So, what detailed costing did they give you before you bought this dog?

Mr Rousselot: They are provided us aggregate numbers in terms of maintenance, operating and maintenance cost at a split by different categories, which enabled us to ascertain what the portion of the network that we would take over was and the minutes that were associated with it.¹²⁸

126 *Committee Hansard*, 12 March 2015, p. 52.

127 Environment and Communications Legislation Committee, *Estimates Hansard*, 24 February 2015, pp 130–131.

128 *Committee Hansard*, 12 March 2015, p. 55.

2.102 Mr Rousselot confirmed on 14 December 2014 that NBN Co would take responsibility for the costs of remediating the pits and ducts, although he claimed that this would be a 'dramatically' reduced liability under MTM, because there would be no need to re-use the HFC and copper pipes for fibre. This issue was discussed at Telstra's 14 December 2014 analyst briefing to investors. (Then) Telstra CFO Mr Andy Penn noted that:

We've negotiated reduced duct remediation obligations under this change as well. And NBN Co will now be responsible for remediation of ducts and pits in the fibre-to-the-node and HFC regions. And, further, we have also capped our remediation obligations within the FTTP regions.

In other words, we have transferred the majority of the responsibility for remediation to NBN Co. And in return for that we have also provided a credit relevant to the proportion of remediation responsibility we've passed over from the original budget that we set for remediation back in the original deal in 2010, when we did that math back then.¹²⁹

2.103 In terms of the quantum of remediation costs and the credit remitted to NBN Co, Mr Penn said:

On the second point around the cash cost of the remediation, we made a budget for what we thought the remediation would be back in 2010. I don't think we disclosed separately what that was or is, so I'm not in a position to share that with you today, but essentially the agreement that we've got—or the deal that we're doing is that we're, as Tony said, basically passing over the majority of the remediation obligations and responsibility to NBN Co, so we eliminate all of the risk—the cost that we incur. It is greater than what we originally budgeted and we—for that, we basically provide them a pro-rata of the original budget that we had as a credit. So they sort of simply take that as a credit, because then they have all of the ongoing liability and obligation to do the remediation, but we haven't disclosed those numbers, but I think it's an important protection for us; it gives us risk mitigation and financial security on that point.¹³⁰

2.104 It is clear from this testimony that Telstra has fixed its remediation exposure at its 2010 estimate, even though the costs to date have been higher. The risk of remediation cost increases in the future—particularly when upgrades are required—have been transferred directly to the taxpayer.

2.105 Under the revised agreements, NBN Co has taken on full responsibility for remediation in HFC and FTTN areas, and in FTTP areas where NBN Co decides to roll out FTTP beyond Telstra's remediation cap. It is unclear whether these arrangements have resulted in the transfer of a potential asbestos liability to the Commonwealth. This issue was raised with the Department of Communications at the

129 Mr Andy Penn, Telstra Analyst Briefing, 14 December 2014, p. 3, at: <http://www.asx.com.au/asxpdf/20141216/pdf/42vhl1zlbq711z.pdf>

130 Mr Andy Penn, Telstra Analyst Briefing, 14 December 2014, p.12, at: <http://www.asx.com.au/asxpdf/20141216/pdf/42vhl1zlbq711z.pdf>

12 March 2015 public hearing, but the Department did not divulge the nature of the advice it provided Government on the issue, instead deferring to NBN Co:

Senator CONROY: I am trying to understand whether you are aware of the size of the liability that has been transferred to the Commonwealth, particularly given the issues to do with asbestos, which are well documented and which both you and I worked on.

Mr Robinson: I am aware of all the issues involved and, as I said, we provided advice to the government. NBN Co will be here later today for a considerable period, and I know that they are prepared to answer questions on this issue.¹³¹

2.106 NBN Co was no more forthcoming on this issue when asked:

Senator CONROY: My concern is, and you possibly heard me having this discussion with Mr Robinson earlier, asbestos is not just in the pits to the home, it is also in other parts of Telstra's network like in exchanges, like in and around pillars. Are you aware of that?

Mr Rousselot: Yes I am.

Senator CONROY: Did you have a discussion with Telstra about that?

Mr Rousselot: Not in the details of it but, yes, I am aware of it.

...

Senator CONROY: If you have to open up a pit and it has asbestos in it, what? You are calling in Telstra?

Mr Rousselot: No, that will be our responsibility.¹³²

2.107 Under the Revised Agreements, when NBN Co takes ownership of the copper and HFC assets, Telstra will transfer the data pertinent to the operations and maintenance of those assets. Telstra noted on 14 December 2014:

Telstra has agreed to provide network data to NBN Co which NBN Co requires to enable it to undertake the MTM rollout. The parties have also agreed to either modify or create new IT interactions for the exchange of data between them, to support the undertaking by NBN Co of the MTM rollout.¹³³

2.108 At the 12 March hearing, NBN Co confirmed that it was not taking ownership of Telstra's legacy IT systems, indicating instead that NBN Co will be building new IT systems to accommodate Telstra's network data:

131 *Committee Hansard*, 12 March 2015, p. 8.

132 *Committee Hansard*, 12 March 2015, p. 56.

133 Telstra Corporation Limited, 'Overview of the changes to Telstra's NBN Definitive Agreements', 14 December 2014, p. 12, at: <http://www.telstra.com.au/abouttelstra/download/document/asx-announcement.pdf?ssSourceSiteId=aboutus>

Senator CONROY: So, you are building an entire—I am trying to understand whether you are augmenting the existing OSS PSS, you know the IT network or you are building one next to it, for running the HFC and the copper.

Mr Rousselot: I think at the aggregate level I would describe it as a mix of both and it is again a part of the details of that—of part of that plan that was put together.

Senator CONROY: Okay. So, you are not actually, as we agreed, taking on Telstra's IT network.

Mr Rousselot: That is correct.

Senator CONROY: They will just give you the data and you have enter it into your new system once you have built it.

Mr Rousselot: That is correct.¹³⁴

2.109 In its 2014-17 corporate plan, NBN Co acknowledged the challenge for the organisation of adapting its operational and business support systems (OSS/BSS) to deal with multiple technologies:

In preparing for the MTM approach, it will be necessary to upgrade or replace some of NBN Co's foundation IT capabilities and systems. For OSS/BSS, the new operating model will necessitate a more effective governance and planning process to align construction, IT and business change and modifying existing OSS/BSS systems and associated operational processes to support FTTx, Copper, HFC, Fixed Wireless and Satellite services. For example, this might include provision of data from Telstra and Optus for HFC Cable Networks to address master data, adding modules to configure and enable layer 2 integration, modifying systems to handle change, fault and order management integration with Telstra and/or Optus and finally in-sourcing HFC inventory, activations, design, network management and assurance services onto NBN Co OSS/BSS (over time).¹³⁵

2.110 When questioned about the IT costs expected from the MTM rollout, NBN Co personnel indicated that the IT costs would be significant:

Mr Rue: Obviously a significant piece of what we have to do is new IT systems, you are quite correct, and the data transfers are a key part of that.

Senator CONROY: It is the most massive part—it is labour intensive.

Mr Rousselot: It will be.

Mr Rue: It will be, yes.¹³⁶

134 *Committee Hansard*, 12 March 2015, p. 60.

135 NBN Co Limited, *Corporate Plan 2014-17*, 11 November 2014, p. 24.

136 *Committee Hansard*, 12 March 2015, p. 61.

2.111 However, NBN Co was not forthcoming on the quantum of these costs, or the companies which would be engaged:

Senator CONROY:...The operational costs of running four networks is greater—or three networks—is greater than running one network. Right?

Mr Rousselot: At an aggregate level those are correct assumptions.

Senator CONROY: Your IT systems costing more?

Mr Rousselot: Yes they are.

Senator CONROY: What is it costing?

Mr Rousselot: This will be a part of the—

Senator CONROY: Another hidden cost.

Mr Rousselot: —corporate plan we are putting together.

Senator CONROY: Another, I refuse to answer the question, cost?

Mr Rousselot: No. I am not refusing the question. I am saying that there is a corporate plan that is under preparation and when it is ready we will be more than happy to share—

Senator CONROY: There was a corporate plan delivered in December ...you must have had some estimate back then of what your IT network was going to cost.

Mr Rousselot: The corporate plan that was delivered for the period FY 14 to FY 17 included detailed information for the year FY 14, so 14 and 15, and included only limited information for 16 and 17 given that—¹³⁷

2.112 Under the Revised Agreements, Telstra will also be reimbursed its costs from shifting from the FTTP to the MTM policy model.¹³⁸ Mr Rousselot stated that Telstra may receive further compensation from NBN Co for the provision of data on network topology, maintenance history and other issues: 'We'll be reimbursing them the fair costs, and there is a margin in there'.¹³⁹

2.113 Telstra indicated on 14 December 2014 that the revised agreements incorporated the 'removal of the Take or Pay (TOP)/Provide or Pay (POP) regime for ducts and [lead in conduits]'.¹⁴⁰ Under the original agreements, NBN Co negotiated fitness guarantees for the lead-ins NBN Co was purchasing. It is clear that these fitness guarantees have been conceded in the revised agreements.

137 *Committee Hansard*, 12 March 2015, pp 59–60.

138 Telstra Corporation Limited, 'Overview of the changes to Telstra's NBN Definitive Agreements', 14 December 2014, p. 15, at: <http://www.telstra.com.au/abouttelstra/download/document/asx-announcement.pdf?ssSourceSiteId=aboutus>.

139 Josh Taylor, 'NBN Co to take over Telstra, Optus networks in new deals', *ZDNet*, 14 December 2014, at <http://www.zdnet.com/article/nbn-co-and-telstra-sign-amended-11-billion-deal/>

140 Telstra, Overview of Changes to Telstra's NBN Definitive Agreements.

2.114 At the December 2013 public hearing, it was revealed that two NBN Co executives—Mr Adcock and Mr Rousselot—held Telstra shares.¹⁴¹ Dr Switkowski indicated that an NBN Co board member also held Telstra shares but had 'undertaken to divest himself of those shares'. At the 12 March 2015 public hearing, Mr Rousselot—who headed up the negotiations with Telstra on behalf of the taxpayer—told the committee that he still holds Telstra shares:

I own a number of Telstra shares that have been disclosed on the first day I joined the company...all I can say is throughout the conduct of the negotiation I have on numerous occasion reminded the board and my colleagues of the limited shareholding of Telstra shares.¹⁴²

The cost per premises review

2.115 On 24 February 2015, NBN Co released another review—this one on the cost per premises of FTTP brownfields, FTTP greenfields and fixed wireless. NBN Co CEO Mr Bill Morrow said of this review:

This is an essential piece of work with the experience we have to date to determine the true and full cost of building the network in FTTP brownfields, FTTP greenfields and the fixed wireless areas. The analysis is that our CPP for brownfields life to date is \$4,316; for greenfields it is \$2,780 and for fixed wireless it is \$3,637. These are fully allocated costs, and represent the cost of building a connection from the transit network to the customer or RSP equipment. Accordingly, the costs include items of CAPEX which has long-term duct lease cost in brownfields, temporary transit fibre network in greenfields and long-term ground and tower leases in the fixed wireless footprint. We think it essential that these costs and their definitions are fully explained to assist us in our own future planning, as well as to be transparent with the Australian public on the full cost per premises.¹⁴³

2.116 In April 2013, NBN Co tabled a full breakdown of the cost per premises at a public hearing of the Joint Parliamentary Committee into the National Broadband Network. This document set out clearly how capital costs were allocated under previous management. See figure 3.

2.117 It also made clear that lease costs to Telstra for ducts and other infrastructure were accounted for as operational expenditure. See figure 4.

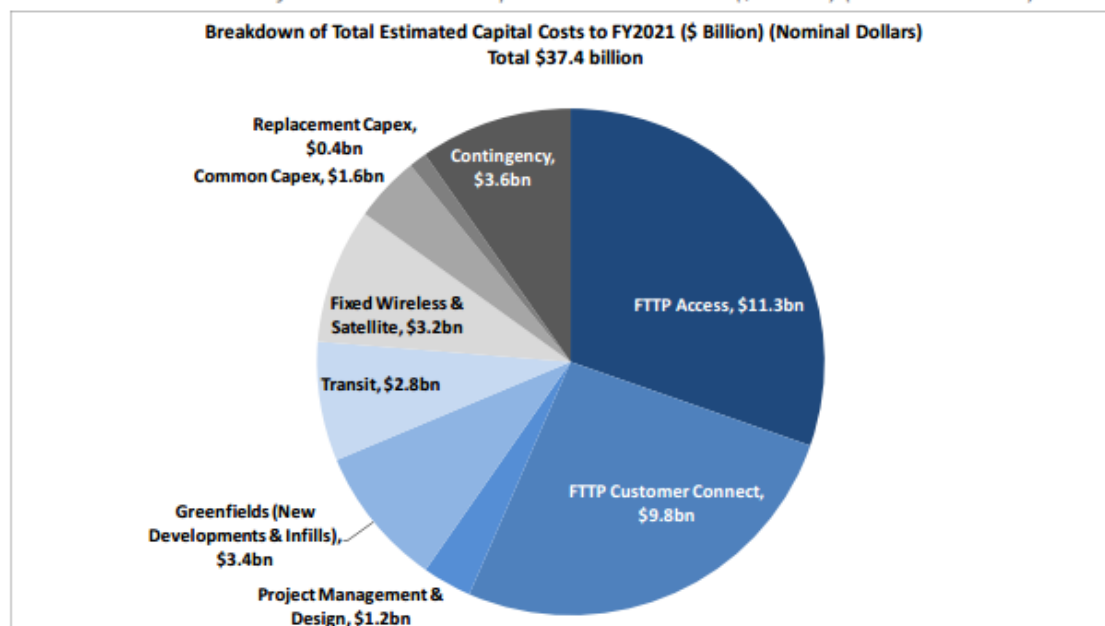
141 *Committee Hansard*, 17 December 2013, p. 64.

142 *Committee Hansard*, 12 March 2015, p. 63.

143 Environment and Communications Legislation Committee, *Proof Estimates Hansard*, 24 February 2015, p. 104.

1 Capital Expenditure

Exhibit 1-1: Breakdown of Total Estimated Capital Costs to FY2021 (\$ Billion) (Nominal Dollars)

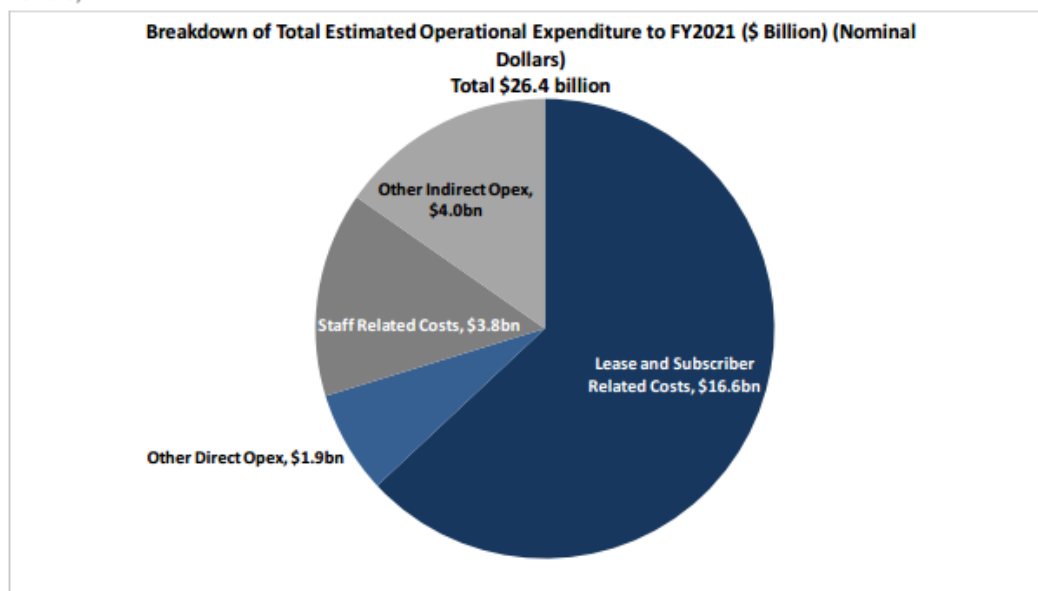


Source: NBN Co, 2012-15 Corporate Plan

Figure 3: Breakdown of Capital Expenditure (April 2013)¹⁴⁴

2 Operating Expenditure

Exhibit 2-1: Breakdown of Total Estimated Operating Expenditure to FY2021 (\$ Billion) (Nominal Dollars)



Source: NBN Co, 2012-15 Corporate Plan

Figure 4: Breakdown of Operating Expenditure (April 2013)¹⁴⁵

144 NBN Co Limited, *Report to Parliamentary Joint Committee on the National Broadband Network*, 19 April 2013, p. 4, at: <http://www.nbnco.com.au/content/dam/nbnco/media-releases/2013/report-to-parliamentary-joint-committee.pdf>

2.118 To arrive at its new cost per premises numbers, NBN Co made some accounting changes to include elements that had not to date been included in the cost per premises. These changes included reclassifying as capital expenditure Telstra duct lease costs and internal labour, which were previously accounted for (for internal management purposes) as operating expenditure. On the duct leases, Chief Financial Officer Mr Rue told a Senate Estimates hearing in February 2015 that:

Turning to duct leases, our arrangements with Telstra mean that we have a 35-year right to use a arrangements for ducts used in LNDN. You can see that I have subtotaled the first two items, and this is below the subtotal. For management or internally reported purposes, we treat these as operating expenses. It is easier for our team to track payments in this way. I can only assume for that reason that they were previously not considered part of capital cost. They were, of course, included as an operating cost.¹⁴⁶

2.119 Mr Rue also explained that \$131 of the cost increase was due to the capitalisation of internal labour:

I am talking about people who are directly involved in building either the infrastructure or maybe an IT build, which is separate from this discussion. The costs of that should be recognised as a capital item. When we had a look at the amount to which we were capitalising labour, it was felt that it was understated. I said in my remarks that the variance from previous practice added \$131 per premise over the FTTP brownfield landscape. So the \$131 increase is not year-on-year. This is just from what was previously done.¹⁴⁷

2.120 Mr Rue confirmed this during the public hearing of 12 March 2015:

To be clear, what I tried to do last time was to explain. Again, to use your terminology, the reason I told the 131 was I wanted you to know where there was a different accounting treatment.¹⁴⁸

2.121 Mr Rue also confirmed that \$39 of internal labour had been reclassified in customer connect costs:

Mr Rue: The \$39 is labour capitalised—additional people we have internally working on this, because the activations process has obviously accelerated.

Senator CONROY: Sorry, \$39 is—

Mr Rue: Internal labour.

145 NBN Co Limited, *Report to Parliamentary Joint Committee on the National Broadband Network*, 19 April 2013, p. 12, at: <http://www.nbnco.com.au/content/dam/nbnco/media-releases/2013/report-to-parliamentary-joint-committee.pdf>

146 Environment and Communications Legislation Committee, *Estimates Hansard*, 24 February 2015, p. 106.

147 Environment and Communications Legislation Committee, *Estimates Hansard*, 24 February 2015, p. 115.

148 *Committee Hansard*, 12 March 2015, p. 41.

Senator CONROY: So that is also a new number that has been added in, that probably was not in the other numbers before.

Mr Rue: Correct.¹⁴⁹

2.122 At the public hearing on 12 March 2015, NBN Co noted that it is not the practice internationally to capitalise duct costs as part of the cost per premises:

Senator CONROY: On page 13 of the strategic review it says ‘Internationally, the cost of rolling out a new FTTP network in countries most comparable to Australia ranges from \$1,100 - 1,300 per premises.’ Mr Rousselot, I assume you are very familiar with this document. Are you familiar with this page?

Mr Rousselot: Yes, I am.

Senator CONROY: Can you confirm for us whether this figure includes a capitalised duct lease component?

Mr Rousselot: I do not know the answer to that question. I will have to take that on notice. I would say that from an international comparison perspective it will be hard to find a situation similar to ours.

....

Senator CONROY: I am just asking if the 1,100 to 1,300 that Mr Rousselot put in his report would include a capitalised figure of the build of the ducts.

Mr Rue: I do not believe it would. That is why I think it is important that we define our cost-per-premise the way we do; to recognise the fact that we do have to do that. I am just trying to make sure that Mr Rousselot's report, your new configuration, is comparing apples with apples. That is what I am trying to establish about the figure that Mr Rousselot and company published, as its comparison points would have included those things. I think you are right. It would not have.¹⁵⁰

2.123 It was also made clear that the reclassification of certain costs—previously accounted for as operating expenditure for internal purposes, and now classified as capital expenditure—had no effect on any of the headline financial metrics of the project:

Senator CONROY: I presume we are also agreed that both treatments of the duct lease costs—either the way you have chosen to do it or the way that NBN Co previously chose to do it—makes absolutely no difference to the IRR. I think I asked you that last time.

Mr Rue: It makes no difference to the IRR. Nor does it make a difference to the cash.

Senator CONROY: So no different to the IRR, no difference to cash flow, no difference to peak debt or other key financials, as these items

149 Environment and Communications Legislation Committee, *Estimates Hansard*, 24 February 2015, p. 113.

150 *Committee Hansard*, 12 March 2015, pp 18–19.

were already accurately captured by previous management, but simply shown in a different place.

Mr Rue: Assuming it was accurately captured, yes.

Senator CONROY: No; I am not disputing the quantum. We will get to the quantum movements. I am just talking about the IRR, cash flow, peak debt and other key financials. There was no change.

Mr Rue: There is no change.¹⁵¹

2.124 In sum, according to the cost per premises review, a significant chunk of the cost increase in FTTP brownfields is due to the reclassification of costs previously accounted for as operating expenditure, changes which have no effect on the headline financials of the project. This includes the capitalisation of Telstra duct leases, adding \$737 to the cost per premises, and the capitalisation of internal labour, adding another \$131 (LNDN) and \$39 (customer connect). With reclassifications excised from the cost per premises for brownfields, the cost is \$3,409 according to the review.

2.125 This cost is significantly lower than the cost per premises for brownfields FTTP assumed in the 'revised outlook' in the Strategic Review (which did not include these costs in the cost per premises for brownfields FTTP). The revised outlook assumed that the cost per premises for brownfields FTTP would be closer to \$4,100—and that the cost would remain about this high for the entire length of the FTTP build out to the reforecast end date of 2024, with provision for 'efficiencies' of 2.5 per cent in FY2017 and FY2018 only.¹⁵²

2.126 A number of the other cost increases included in the cost per premises review may be attributed to rate increases and claims settled under current NBN Co management. This was made clear during the 24 February 2015 hearing of the Senate Estimates committee. On the settlement of claims for the LNDN:

Mr Morrow: Mr Rue, with the dispute category of the \$4,300 we are talking about on FTTP brownfield, how much of that do you think is in there? It is not fair to call them legal disputes or settlements.

Senator CONROY: Call them ambit claims, just for simplicity.

Mr Rue: I think it is about \$120 of the \$4,316—related to that.

Senator CONROY: I see. We are going back to the end. The ambit claims that were settled are about \$120 worth of the \$4,300. So if I ignore the entertainment of the duct leases, it is \$120 as against—was this LNDN or customer connect or both?

Mr Rue: It is LNDN.¹⁵³

2.127 This was confirmed at the 12 March 2015 hearing of this committee:

151 *Committee Hansard*, 12 March 2015, p. 18.

152 NBN Co, Strategic Review, p. 63.

153 Environment and Communications Legislation Committee, *Estimates Hansard*, 24 February 2015, p. 110.

Senator CONROY: You said claims settlements per premise was \$120—that is on page 110 of estimates. So of your \$4,300, and as I said, I am disaggregating a bit, but the \$120 was for claims settlements per premise. Does that sound familiar?

Mr Rue: Yes, it does.¹⁵⁴

2.128 On the rate increases for customer connect:

Mr Rue: In terms of the customer connect...the remaining \$52 relates to additional rates, offset of course by any efficiencies.¹⁵⁵

2.129 On the change in the aerial to underground mix in customer connect:

Mr Rue: In 13 April the aerial mix was 46 per cent. Today, the average aerial across all build is only 13 per cent. So this mix changes the impact of the cost per premises by \$236.¹⁵⁶

2.130 Thirteen per cent aerial seems low—the average aerial component was assumed to be approximately 25 per cent (for the LNDN) in the 2012-15 corporate plan.¹⁵⁷ More information is needed to analyse this issue—an FSAM by FSAM breakdown that includes the distribution of single dwelling units (SDUs) and multi-dwelling units (MDUs). This issue was raised at the 12 March 2015 public hearing, with NBN Co undertaking to provide detailed information on the aerial mix on notice.

2.131 These cost increases—compared to the cost per premises assumed in the 2012-15 corporate plan—are set out in figure 5 below. At the Senate Estimates hearing on 24 February 2015, Mr Rue undertook to provide at the 12 March 2015 hearing of the select committee the quantum of the cost per premises increase (for FTTP brownfields) attributable to rate increases for the LNDN.¹⁵⁸ This information was not forthcoming at the 12 March hearing, so cannot be included in the table below as of the date of publication of this report. NBN Co also took on notice the cost per premises component of project management and design.

154 *Committee Hansard*, 12 March 2015, p. 38.

155 Environment and Communications Legislation Committee, *Estimates Hansard*, 24 February 2015, p. 112.

156 Environment and Communications Legislation Committee, *Estimates Hansard*, 24 February 2015, p. 105.

157 NBN Co, *Corporate Plan 2012-15*, p. 71.

158 Environment and Communications Legislation Committee, *Estimates Hansard*, 24 February 2015, p. 112.

Line item	\$Additional
(2012-15 Corporate Plan CPP = ~\$2,521)	
Telstra duct leases (capitalisation of costs previously accounted for as operating expenditure)	+ \$737
Internal labour (capitalisation of costs previously accounted for as operating expenditure—LNDN)	+ \$131
Internal labour (capitalisation of costs previously accounted for as operating expenditure—customer connect)	+ \$39
SUBTOTAL: CPP addition from capitalisation	+ \$907
Claim settlements (delivery partner claims settled by current management—LNDN)	+ \$120
Claim settlements (delivery partner claims settled by current management—customer connect)	+ \$?
Rate increases (higher rates negotiated by current management for customer connect)	+ \$52
Rate increases (higher rates negotiated by current management for the local and distribution network (LNDN))	+ \$?
SUBTOTAL: CPP addition from capitalisations and rate increases/claims negotiated by current management (not including LNDN rate increases or any claim settlements for customer connect)	+ \$1,079
Aerial mix (difference in the mix of aerial vs underground deployment between April 2013 and February 2015, from 46 to 13 per cent)	+ \$236
Project Management & Design (inclusion of project management and design costs in cost per premises)	+ ?
SUBTOTAL: CPP additions since April 2013 (not including LNDN rate increases, any reclassification of project management & design, and any claim settlements for customer connect)	+ \$1,315

Figure 5: Breakdown of CPP increase in brownfields FTTP

Committee view

2.132 The Coalition went to the 2013 election with promises of a 'cheaper, faster and more affordable' multi-technology NBN. In opposition, Malcolm Turnbull assured Australians that the Coalition's NBN would dramatically speed up the rollout and

reduce costs.¹⁵⁹ The Coalition promised that the NBN would deliver 25mbps to all Australians by 2016, and cost \$29.5 billion in peak funding.¹⁶⁰ The Strategic Review, released in December 2013, demonstrated that these forecasts were nothing short of heroic—the MTM would in fact cost ~\$41 billion and take until 2020 to complete.

2.133 The Melton 10 trial, which NBN Co seemed eager to conceal, provided more evidence of the architecture savings contained in NBN Co's 2013-16 corporate plan and the accompanying Board papers, submitted to the NBN Co Board in September 2013. New and improved equipment and processes are bringing down the costs of the FTTP rollout—that is, the costs of FTTP are coming down, not going up as suggested in the Strategic Review.¹⁶¹ The committee also notes that these architecture and cost savings were included by current NBN Co management in Scenario 2 (the so-called 'Radically-Redesigned FTTP scenario) of the Strategic Review, not the main FTTP scenario, which—according to the Government's own cost per premises review—inflated the cost of FTTP by a significant margin. The committee notes that the Strategic Review underpinned Shareholder Ministers' decision to direct NBN Co to implement the MTM in April 2014.

2.134 Most of the cost increases for FTTP (from the 2012-15 corporate plan) evident in the CPP review may be attributed to higher rates negotiated by current NBN Co management since September 2013, delivery partner claims settled since the same date, and different accounting practices (such as capitalising operational expenditure for Telstra duct leases and internal labour). Moreover, \$4.5 billion in FTTP architecture savings signed off by previous management—attested to by NBN Co personnel as implemented, and borne out by the Melton 10 trial—are not evident in these numbers.

2.135 The committee notes that NBN Co CEO Mr Morrow said of the cost per premises review that a key reason for its release was 'to be transparent with the Australian public on the full cost per premises'.¹⁶² However, as part of this review NBN Co released no cost per premises on the FTTN/B or HFC builds—despite the fact that these technologies are expected to make up the vast majority of the fixed line MTM rollout (approximately 75 per cent according to the Strategic Review and the 2014-17 corporate plan). This gives the cost per premises review the appearance of a political exercise.

2.136 The cost of the MTM remains unknown. NBN Co has offered little more than a restatement of the Strategic Review assumptions in 2014 and 2015, which now appear hopelessly dated. The targets in the Strategic Review are also redacted. The

159 *The Coalition's Plan for fast broadband and an affordable NBN: Background papers*, April 2013, at http://www.malcolmturnbull.com.au/assets/Coalition_NBN_policy_-_Background_Paper.pdf.

160 *The Coalition's Plan for fast broadband and an affordable NBN*, 9 April 2013.

161 Senate Select Committee on the National Broadband Network, *Interim Report*, March 2014, pp 44-51.

162 Environment and Communications Legislation Committee, *Estimates Hansard*, 24 February 2015, p. 104.

committee is deeply concerned about the government's inability to publish a corporate plan with more than seven months' meaningful forecasts—particularly when NBN Co has provided these forecasts to government. This calls into question the veracity of the assumptions for the MTM in the Strategic Review (as previously identified by this committee) and the stated commitments of NBN Co and the government to transparency.

2.137 The public version of the 2014-17 corporate plan contains no forecasts for FY2016 and FY2017, no details of NBN Co's financial model out to 2040 (as per previous corporate plans), and the FY2015 forecasts which are included have been 'lowballed' to such an extent that NBN Co is meeting some of them half way into the reporting period. It is clear that the public version of the 2014-17 corporate plan has had most of the pertinent information and assumptions excised, and the FY2015 forecasts have been manipulated politically.

2.138 In this regard, the committee notes that the independent external review process of NBN Co's corporate plan has been cancelled by this government. NBN Co's corporate plan is now being 'reviewed' by shareholder ministers' own departments and personnel who advised on the original assumptions in the Strategic Review.

2.139 NBN Co refuses to divulge the value of the contracts it has entered into on behalf of the taxpayer on the basis that it would harm its commercial prospects, despite the fact that the value of these contracts was released by previous management without harm. Yet NBN Co is content to release detailed information on the cost per premises of FTTP and fixed wireless in the CPP review—down to the last line item—despite the fact that NBN Co, under the current policy, will continue to roll out FTTP in greenfields and fixed wireless to 2020 and beyond.

2.140 The Revised Agreements, announced by NBN Co and Telstra in December 2014, contain numerous concessions, including *inter alia*:

- the risk of cost increases in remediation has been transferred directly to the Commonwealth. The new remediation arrangements may also result in the transfer of an asbestos risk to the Commonwealth;
- the fitness guarantees for lead in conduits have been conceded, which may lead to extra costs to NBN Co in the future when the MTM needs to be upgraded;
- during the negotiations NBN Co sought no information from Telstra about the cost of maintaining the legacy copper network, despite ample evidence and testimony that these costs are expected to be high; and
- NBN Co has taken on an indefinite liability to maintain Telstra's HFC network, and at the same time agreed to restrictions on its sale. It is unclear whether these arrangements will result in an effective taxpayer subsidy of pay TV services.

2.141 The committee notes that, contrary to the approach used in 2009 and 2010, NBN Co was provided no overt leverage in these negotiations. It appears that the taxpayer has lost value as a result. The committee further notes that key personnel at

NBN Co—including the NBN Co officer heading up the negotiations on behalf of the taxpayer—still own Telstra shares.

2.142 NBN Co will have to build its IT systems to accommodate the MTM from the ground up—Telstra is only transferring the data, not the legacy systems. NBN Co will also face significant complexity from having to manage five fixed line networks (FTTP, FTTN, two HFC networks and FTTB) rather than one (FTTP). This means that much of the capex NBN Co spent on its IT systems for the original network design—hundreds of millions of dollars—has effectively been wasted. Further, NBN Co has not divulged information about its expected IT costs under the MTM, or the vendors with which it has signed IT contracts, despite indicating to the committee that 'several vendor engagements with external IT providers are in place.'¹⁶³ It is the committee's view that this degree of secrecy is unacceptable for a government business enterprise accountable to the parliament and the people.

2.143 The committee remains concerned about this government's move toward a two-tiered system for NBN access. According to NBN Co's 'technology choice' policy, Australians living in FTTN areas who want to access a faster and more reliable service than the copper will have to pay 'from a few thousand dollars to tens of thousands of dollars'. New charges of \$900 have also been imposed on new developments, which the committee expects to be passed on to new home owners in full. These developments are unfair and at odds with the fundamental principle underlying the NBN: universal and equitable access to broadband for all Australians.

163 See in particular answer to question on notice (Question 6) from the committee's public hearings, 2 and 4 December 2014.

