Question No: 1

NBN Co Limited Hansard Ref: Page 45, 04/06/2018

Topic: Fixed wireless take-up on 100Mpbs

Mr Brian Mitchell, MP asked:

Mr BRIAN MITCHELL: Related to that: on 12 January 2018, NBN gave evidence to the Senate stating that 50 per cent of fixed wireless users, so 300,000 Australian households and small businesses, would have access to speeds of 100 megabits per second by 2020, and I assume that was in relation to the NBN 100. That was in January 2018. So in January 2018 you were still talking about 100 megabits per second, and the take-up on fixed wireless at that stage was around 38 per cent. In the Senate estimates session where you declared that the upgrade had been 'killed', take-up was 39 per cent, so only one per cent difference. What changed between January, when the upgrade was on, and May, when it was off?

Mr Morrow: Two things. One was, again, that consumption continues to evolve, but, equally so, this point in time is when we start our planning process for the year. Remember, there were a number of things that had changed the plan, whether it was the pricing reduction that we made in November or the HFC pause that we did in November, and the decision that we're going to invest further into the fixed wireless. When you look at those added cost components, the idea then suddenly says, 'Do we even have the money to keep this as a user-pays model and to do this higher capacity upgrade?' and we concluded that, for the very few that that 100-megabit-persecond service would serve, it was not in the interest of the greater public of the region, and therefore we pulled that product—

Mr BRIAN MITCHELL: You've said a couple of times 'the very few'. Do you have a number? **Mr Morrow:** I don't remember what the—it was a few per cent of the—

Mr Rue: Of that, yes.

Mr Morrow: I remember that fixed wireless was only intended to cover 600,000 homes, so it would have been a few per cent of that.

Mr BRIAN MITCHELL: Could the committee be given information on numbers or how many users we're talking about in terms of 'very few'. Just give us a bit more information. I ask for that on notice.

Mr Morrow: Yes, let's look at it on notice. Again, I don't know if that's in our corporate plan, but we'll have a look at that.

Answer:

Less than 1.4 per cent of active fixed wireless services were forecast to be on a 100/40 speed tier in 2022.

Joint Standing Committee on the National Broadband Network

Answers to Questions on Notice

Committee Hearing 4 June 2018

NBN Co Limited

Question No: 2

NBN Co Limited Hansard Ref: Page 48-49, 04/06/18

Topic: User profile

Mr Stephen Jones, MP asked:

Mr STEPHEN JONES: From some comments that you've made here and before the Senate and elsewhere, there seems to be a view that, for want of a better word, the Netflix effect—the streaming effect—together with the super users within some of those cells, is creating a congestion problem that is with us not for a short period of time and which is just the nature of the technology. Do you propose that a fair use policy be introduced into the wireless network, as exists within the satellite network?

Mr Morrow: We're not yet at the point of proposing anything. But, as I mentioned in the opening statement, we're looking at all options, including a fair use policy.

Mr STEPHEN JONES: We don't need to use a crystal ball to know that, with data consumption going up at 40 per cent per annum and people in the fixed wire footprint assuming they're going to get equivalence with the fixed line footprint, we're going to be there pretty soon.

Mr Morrow: One of the things that we're looking at is that there are all different forms of caching—how can you look at towers in a very different architectural way; how can you share more of your facilities with the other carriers? When you consider this notion of a fair use policy, we have a model within the satellite services that we use, and then there are several variants of that. But it is quite interesting, our average consumption across the NBN network is just under 200 gigabytes per month, and when you look at the fixed wireless it's substantially less than that, so these users aren't as heavy. However, in the fixed wireless, there's a large portion that are using terabytes of data. Now, one of the things that we're evaluating—

Mr STEPHEN JONES: During the contended period?

Mr Morrow: During the contended period. We're evaluating a form of fair use policy to say that we would groom these extreme users during the time that they're—

Mr STEPHEN JONES: 'Excellent customers' I think is what some people might call them.

Mr Morrow: Well, if they're paying, yes. But if-

Mr STEPHEN JONES: There is no suggestion that they're not paying, is there?

Mr Morrow: Are they paying what other people are for more moderate amounts? That's the RSP related issue. But I think it's an important question. Now, the grooming could be that, during the busy period of the day when these heavy users are impacting the majority, they actually get throttled back to where they're taking down what everybody else is taking down, and during the non-congested or non-busy periods they're free to go for as much data as they want to pull down.

Mr STEPHEN JONES: Do you have any information on what these super users look like?

Mr Morrow: We certainly know the per cent and the amount of data that they're consuming.

Mr STEPHEN JONES: Is it video content? Is it streaming content? Is it data downloads? Is it uploading?

Mr Morrow: We believe it's gamers predominantly.

Mr BRIAN MITCHELL: On fixed wireless.

Mr Morrow: On fixed wireless.

Mr STEPHEN JONES: Are you able to provide the committee with data on this proposition that you've put before us now?

Mr Morrow: We're too early in the proposition. Again, this is a lot of brainstorming. We've got a team of people who are constantly saying, 'How can we manage a scarce resource to provide the best service for the people in this region that are served by fixed wireless technology?' Much like we had to do with satellite, we now have an emerged issue that warrants the same kind of out-of-the-box thinking, and we are considering all of these options. We're not far enough advanced to have the detail for a particular decision, but what I will offer up is to take a question on notice as to what the impact of these heavy users actually means.

Mr STEPHEN JONES: Sure. Very generous. We put the questions.

Answer:

A heavy fixed wireless user increases the likelihood that their cell will exceed capacity, impacting the speed of services for other end users relying on that cell at that particular time.

Question No: 3

NBN Co Limited Hansard Ref: Page 49, 04/06/2018

Topic: Terabyte users

Mr Stephen Jones, MP asked:

CHAIR: Why are they not being constrained by their existing plans when you hit the peaks? **Mr Morrow:** There are many out there that have either a data limit or high levels of limit to where they're comfortable using them. Remember that a lot of the time people who are taking their entertainment over broadband are doing it after hours, so that falls right within this massive window of when people need to do homework or want to do a bit of video streaming for entertainment. Again, with terabytes of data we're talking a considerable amount.

Mr STEPHEN JONES: You put the terabyte example out there. How many are there within a cell and how many are there throughout the network? Is this just one example, or are you saying—**Mr Morrow:** No, no. It's a big enough number to cause a—

CHAIR: How many average consumers?

Mr Morrow: We'd have to take that on notice. I'm not sure of the specific number. It's big enough that, if we did groom them during the busy time of the day, it would be a substantial lift for people. Again, I don't think there's a silver bullet in all of this. This is going to require us to think through a number of different areas. Remember, it's about how we can reduce cost in the rest of the network. This is not about making a big profit. It's a very modest profit. But, rather than making more profit, if we can save in other areas then we can invest more into these areas to give them a better service, even with the higher consumption concurrency and take-up rate that we're seeing. This grooming is just one of many things that have to be considered.

Answer:

More than 1,500 cells had at least one service that downloaded more than 1TB of data in May.

NBN Co Limited

Question No: 4

NBN Co Limited Hansard Ref: Page 50–51, 54

Topic: Area Switch

Stephen Jones, MP asked:

Mr STEPHEN JONES: I will talk about the Area Switch program. I'm keen on any additional information you could provide us about how many councils or other bodies have made applications under the Area Switch program. How many have proceeded? Has the NBN Co has done any analysis of which ones have proceeded and why, and which ones have not proceeded and why?

Mr Morrow: Mr Rue, do you have the latest data amount?

Mr Rue: I'll see if I can find it.

Mr Morrow: The numbers are small. Mr Rue is looking to see if we have it. If we don't, we'll take it on notice. It's a question that is pulled on notice from time to time—

Mr STEPHEN JONES: While Mr Rue is checking for that information,

Mr STEPHEN JONES: While Mr Rue's going through his notes,

Mr STEPHEN JONES: How are we going on the area switch, Mr Rue?

Mr Rue: I've sent a message to the team.

Mr STEPHEN JONES: So that we don't chew up other committee members' time, we could come back to that.

Mr Rue: As soon as it comes I'll answer it.

Mr STEPHEN JONES: Thank you, I'd appreciate that

Mr STEPHEN JONES: How are we going on the Area Switch?

Mr Rue: I've been communicating. The latest information we have is a year old. They're chasing the data for you. They promised me before 3.15, so we'll see how good they are.

Mr STEPHEN JONES: Good man.

Answer:

Please refer to Question on Notice 76 from the Senate Estimates hearing in May 2018 for data on the Area Switch program. There are many reasons that applicants may choose not to proceed with an application, including where only a quote is required for tabling at a Local Council or Body Corporate budget meeting, or the quoted costs are higher than expected, which may be due to a lack of understanding that nbn's Area Switch is a cost recovery program. Some applicants also withdraw their request, preferring to wait for the rollout to reach them and experience the multi technology mix, before deciding whether to proceed.

Question No: 5

NBN Co Limited Hansard Ref: Page 58, 04/06/18

Topic: Lowest rate of FTTP

Senator Chris Ketter asked:

Senator KETTER: Are you able to tell me which state is projected to receive the lowest rate of fibre to the premises once the network is fully rolled out?

Mr Morrow: We don't have that handy here. We can maybe take that on notice if we are doing a state-by-state breakdown in the reports, so yes we can.

Answer:

Please refer to Question on Notice 79 from the Senate Budget Estimates hearing in May 2018.

Question No: 6

NBN Co Limited Hansard Ref: Written, 18/06/2018

Topic: Area Switch program

Mr Stephen Jones, MP asked:

- 1. How many applications has NBN received for Area Switch in the last financial year [2017-18]? How many in the previous financial year [2016-17]?
- 2. Please provide a list of organisations that have applied for Area Switch and the locations of the proposed areas.
- 3. For each of the Area Switch applications, please provide a list of the existing technology and the technology sought for each.
- 4. What was the highest cost per premises for Area Switch quoted by NBN and what was the location of the proposal? What factors affected the cost of this quote?
- 5. What was the lowest cost per premises for Area Switch quoted by NBN and what was the location of the proposal? What factors affected the cost of this quote?

Answer:

Please refer to Question on Notice 76 from the Senate Budget Estimates hearing in May 2018.