

Senate Standing Committee on Environment and Communications

Answers to Senate Estimates Questions on Notice

Supplementary Budget Estimates Hearings November 2014

Communications Portfolio

NBN Co Limited

Question No: 104

Program No. NBN Co

Hansard Ref: Page 23 (20 November 2015)

Topic: Fibre access points

Senator Ludlam asked:

Senator LUDLAM Not yet. Imagine that you get your way with the HFC rollout and you somehow get access to those networks, you incorporate it into NBN Co's back office systems and you light it all up. What is the upgrade path to full fibre to the premises in the future? We have dwelt a fair bit in past hearings on how you go from fibre to the node. You rip the nodes up. You connect the households to the exchange. It is ugly but there is an upgrade path there, and other countries have done it. What is the upgrade path for an HFC network to a full fibre-to-the-premises network?

Mr Adcock: Again, without delving into the detail at this point in time I do not understand that you can actually upgrade the network to full fibre to the premise.

Senator LUDLAM: That is my understanding, too. But just to be clear about what that would actually look like in practice, it involves dismantling and decommissioning the HFC cable and running fibre all the way to the premise. You would have to basically overbuild it. There would be no element of those networks that you would be able to hold onto.

Mr Adcock: I believe there are fibre access points out there, but I cannot confirm that. If you like, we can take it on notice and come back and confirm whether there is or is not an upgrade path.

Answer:

This question is best answered in two parts - Evolution to Gigabit speeds and Evolution to Fibre.

Evolution to Gigabit speeds

In order to deliver Gigabit speeds to businesses and households, an upgrade to fibre is not necessary. Hybrid Fibre Coaxial (HFC) networks are capable of achieving the same result with the introduction of DOCSIS 3.1 delivering Gigabit speeds. The initial global deployments of DOCSIS 3.1 modems will occur in 2016 with the first DOCSIS 3.1 commercial services expected in 2017. Leveraging this capability, the NBN Co HFC network can evolve to Gigabit speeds with a few additional considerations:

- Optical Node sizes would need to be reduced and DOCSIS Spectrum would need to be expanded.
- Network upgrades to backend equipment, including CMTS would be required.
- End users would require a new Cable Modem.

Evolution to Fibre

As the bandwidth demand of business and households continues to grow, there are many options available for augmenting the NBN Co HFC network to meet this demand that are more cost effective than deploying fibre all the way to the premises. These options include deployment of fibre deeper into the network and in doing so reduce the number of premises per optical node. Ultimately, fibre can be connected into the premise using this strategy.