

Our Ref: 56849  
Contact Officer: Jaime Martin  
Contact Phone: (03) 9290 1477



Australian  
Competition &  
Consumer  
Commission

GPO Box 3131  
Canberra ACT 2601

23 Marcus Clarke Street  
Canberra ACT 2601

tel: (02) 6243 1111  
fax: (02) 6243 1199

[www.accc.gov.au](http://www.accc.gov.au)

Ms Caroline Lovell  
Chief Regulatory Officer  
NBN Co

2 April 2015

**Sent via email: [CarolineLovell@nbnco.com.au](mailto:CarolineLovell@nbnco.com.au)**

Dear Ms Lovell

**NBN Co Limited application for re-authorisation (A91479-A91481) for revised arrangements concerning Optus' HFC network – information request**

Thank you for NBN Co's written response (dated 10 March 2015) to the initial questions raised by the Australian Competition and Consumer Commission (ACCC) at our meeting on 3 March 2015 and for the [REDACTED].

As foreshadowed, the ACCC has prepared a more detailed information request which is provided at Attachment A. In order to assist the ACCC's consideration of the application, the ACCC requests that NBN Co provide the information and documents set out in Attachment A by no later than **24 April 2015**.

In providing a response, please clearly identify any information NBN Co wishes to have excluded from the public register and provide brief reasons for any exclusion sought.

Please let us know if you consider any parts of this request to be too onerous and we can discuss whether there are ways of minimising the burden on NBN Co that still provide the ACCC with the information it needs to properly assess the application.

You are welcome to provide the information in tranches. In this regard, it would assist the ACCC if you were able to respond to the following questions as a priority: Questions 5, 11, 12, 13, 16 and 21(a) – ideally by **10 April 2015**.

This letter (with identified confidential information removed) will be placed on the ACCC's public register on **9 April 2015**. If you consider that any question in this letter discloses information confidential to NBN Co please advise us before that date.

If you wish to discuss any aspect of this matter, please contact David Hatfield on (02) 6243 1266 ([david.hatfield@acccc.gov.au](mailto:david.hatfield@acccc.gov.au)) or Jaime Martin on (03) 9290 1477 ([jaimie.martin@acccc.gov.au](mailto:jaimie.martin@acccc.gov.au)).

Yours sincerely

A handwritten signature in blue ink, appearing to be 'Richard Chadwick'.

Dr Richard Chadwick  
General Manager  
Adjudication

# Attachment A

[REDACTED]

## Information request

### Incremental benefits of the Optus HFC network

1. In the absence of NBN Co's acquisition of the Optus HFC network, how does NBN Co intend to infill any gaps in Telstra's HFC network to achieve full coverage in Optus HFC areas?
2. In the absence of NBN Co's proposed acquisition of the Optus HFC network, please explain what infrastructure NBN Co is likely to build to serve customers in 'Optus only' areas, and the additional cost that is likely to be involved in doing so.
3. In the absence of NBN's Co's acquisition of the Optus HFC network, and aside from coverage issues (see above), will any additional upgrades to the Telstra HFC network be required in order to serve customers using the Telstra HFC network? If so please provide details (including estimated costs).

### Information relating to the likely future without the conduct

4. In section 3.3 of its submission in support of its application, NBN Co contends that the most likely counterfactual is that the Original Subscriber Agreement remains on foot with the parties adapting it to the new policy environment.
  - a. Please explain what you mean by 'adapting it to the new policy environment'.
  - b. Please step the ACCC through how the relevant events will be triggered (as defined in the 2012 Subscriber Agreement) in the current MTM NBN environment, which then ultimately allows migration to occur and results in Optus decommissioning its HFC network.

### NBN Co's planned HFC product construct

5. NBN Co provided details of its intended HFC product construct in its submission

[REDACTED]

  - a. Please outline NBN Co's intended HFC product construct during the transition period noting any differences to the product construct to apply after the transition period respectively.

- b. Please advise NBN Co's estimation as to when the first HFC service area module's (HSAM) transition period will expire and when it anticipates the last HSAM's transition period will expire.
6. NBN Co has advised that its approach to developing its product constructs for each of its fixed line networks is to implement a common product construct to apply across its fixed line networks where feasible.
- a. Are there any products/features intended for supply over the NBN Co FTTP network that are not intended to be available under the HFC product construct?
  - b. For instance, NBN Co has previously announced a gigabit FTTP product (see L Battersby, *'One gigabit available on NBN this month'*, The Age, Dec 6). Is it intended for an equivalent product to be available on the HFC network?
  - c. Are there any products/features that are intended for supply over the HFC network but not intended for supply over the FTTN/B networks?

**NBN Co's planned approach to HFC network capacity and performance benchmarks**

7. Network operators could conceivably make available a similar product construct on their respective networks, but each network may differ in its ability to deliver those products in practice, for example, as a result of investments made in network capacity to meet demand.

The ACCC notes that the highest downstream data rates under NBN Co's intended HFC product construct (as previously advised) appear to broadly align with the highest downstream data rate supported by the Telstra and Optus HFC networks.

Consequently, the ACCC is interested in further understanding NBN Co's approach to investing in HFC network capacity, etc, so that in practice the NBN HFC network can meet demand for HFC products, and comparing this to what industry practice has been to date.

- a. What demand profile by speed tier does NBN Co anticipate for its HFC product set (e.g., speed tier 1 x%, speed tier 2 y%, etc)? In support of this forecast, please provide
  - historical data showing the distribution of NBN Co FTTP AVCs (in aggregate) by speed tier and
  - a brief explanation for any difference between the HFC demand forecast and these historical trend data.
- b. What engineering rule or performance benchmarks, etc, would NBN Co intend to maintain in order for the HFC network to meet the forecast demand profile? (These rules or benchmarks might take a variety of forms; for illustrative purposes only, they might conceivably be in the form of: 'to meet x% of busy hour demand, y% of the time'; 'to maintain a minimum ratio of total capacity (mbps) per connected subscriber of x mbps'; or 'to maintain a maximum number of active subscribers per node of x subscribers'.)
- c. For each rule or benchmark that NBN Co identifies above, is NBN Co aware from its own inquiries how its approach compares to that of Telstra and Optus as current HFC network operators?

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

### HFC performance and upgrades

10. The ACCC wishes to understand the nature and extent of the investment that NBN Co intends to undertake in the HFC networks, which we understand will occur pursuant to the recently announced contract between NBN Co and Arris.

[REDACTED] Will the Arris contract result in any investments in the HFC network in addition to [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

b. Will Arris provide/install this equipment across both of the 'Telstra HFC plant' and 'Optus HFC plant'.

11. While we understand [REDACTED] that the precise work quantities/values are not yet finalised (pending completion of field trials, etc), it would assist the ACCC where possible for NBN Co to advise the indicative work quantities/values that have informed the announced overall contract value of \$400m. (See for instance: B Karlovsky, *Arris upstages Cisco to win long term \$400m NBN Co HFC contract*, ARN, 23 February 2015).

a. What is the contribution to total contract value for each network investment type? How many network elements (CMTS, optical nodes, etc) will be deployed as a consequence of the contract?

b. Where possible, the ACCC would appreciate a breakdown of the investment to be made under the Arris contract as it relates to the Telstra HFC plant and the Optus HFC plant respectively.

12. The ACCC understands [REDACTED] that NBN Co would intend to invest in the 'Optus HFC plant' to the extent that it represented [REDACTED]



[REDACTED] in areas where it shares a common footprint with the Telstra HFC plant and could thereby meet around [REDACTED] of demand in those areas; and was a viable stand-alone network in 'Optus only' areas.

- a. [REDACTED]
- b. What additional investment in the Optus HFC plant would NBN Co anticipate being required in a scenario where it would operate that network on a stand-alone basis across its existing footprint?

13. NBN Co announced the DOCSIS 3.1 investment subsequent to announcing the Arris contract. *The Australian* in an article titled 'NBN to crank up the speed on the HFC network' published on 13 March 2015 quotes NBN Co that "the cost of upgrading the network from DOCSIS 3.0 to 3.1 would not be material". [REDACTED]

- a. Is the value of the DOCSIS 3.1 investment reflected in the Arris contract value, or would this represent an incremental investment on top of the Arris contract?
- b. What particular network elements would need to be replaced or enhanced in order to supply DOCSIS 3.1 services? What does 'tuning of RF elements' involve?

14. The ACCC understands [REDACTED] that NBN Co will make preparatory works for the supply of DOCSIS 3.1 products in 2016 but will not supply these until 2017, [REDACTED]

What is the likelihood that DOCSIS 3.1 services can be implemented in 2017 as currently anticipated?

### Operations forecasts

15. Please provide forecasts of the number of NBN SIOs by Data Transfer Rate for each year until 2040. Please provide three set of forecasts reflecting the following assumptions:
  - a. The amended and Restated Optus HFC Subscriber Agreement is implemented;
  - b. The original Subscriber Agreement is implemented and the Amended and Restated Optus HFC Subscriber Agreement is not operational;
  - c. The original Subscriber Agreement with Optus and the Amended and Restated Optus HFC Subscriber Agreement are not operational.
16. Please provide forecasts of the number of NBN SIOs by Data Transfer Rate in HFC areas for each year until 2040 assuming the Amended and Restated Optus HFC Subscriber Agreement is implemented. Please provide a breakdown of these forecasts by residential and business users.
17. Please provide estimates of the annual revenue NBN will achieve and the annual operating expenditure and capital expenditure NBN will incur in providing services to subscribers assuming the Amended and Restated Optus HFC Subscriber Agreement is operational compared to NBN's annual revenue, operating expenditure and capital expenditure if the Original Subscriber Agreement with Optus and the Amended and Restated Optus HFC Subscriber Agreement are both not operational. Please provide these estimates for each

year until 2040. For the avoidance of doubt, the ACCC is interested in estimates of the differences in NBN's annual revenues and expenditures under the two scenarios detailed above.

18. For each year, please provide a detailed breakdown of these expenditures, including identifying the estimated migration payments to Optus. In providing these estimates please detail any assumptions you have made regarding the rate at which Optus HFC subscribers will migrate to the NBN, the speed tiers they will demand and any increase in their data usage over time.
19. Paragraph 104(b) of NBN Co's submission states that, since 2011, Telstra's HFC customer base has increased [REDACTED]. Please clarify the basis for this figure.

#### **Cost savings from the proposed transactions**

20. Paragraph 9 of NBN Co's submission states that NBN Co will achieve savings from the re-use of approximately [REDACTED] Optus lead-ins – please confirm whether NBN is calculating capex on the basis that it will be re-using all of Optus' existing lead-ins and whether this reflects NBN Co's intentions.

#### **Documents**

21. Please provide copies of the following documents:
  - a. A map of NBN Co's connectivity serving areas.
  - b. Any document considered by the NBN Co board or senior management, created in the past 2 years which considers
    - i. trends, including historical and projected, in customer demand for data services (both speed and capacity).
    - ii. operation of a MTM NBN in the absence of the acquisition of Optus' HFC network.