

Attachment B – NBN Co’s Special Access Undertaking – Request for further information – explanatory notes on NBN Co’s response

The ACCC has requested actual and forecast price, demand, revenue and expenditure information under two pricing scenarios (price paths as in the 2012-15 Corporate Plan, and the maximum price paths allowed by the SAU) for the period from 2008-09 to 2039-40.

NBN Co has prepared its response to the ACCC’s information request using:

- for the Corporate Plan pricing scenario, the forecasting framework, approach and assumptions that underpin NBN Co’s 2012-15 Corporate Plan, as published on 6 August 2012; and
- for the maximum pricing scenario, the framework, approach and assumptions that are relevant and applicable in that context.

To assist the ACCC and interested parties (subject to the applicable confidentiality arrangements) in interpreting and utilising the information in Attachment A, NBN Co has prepared the following notes. These should be read in conjunction with the detailed commentary in the Corporate Plan.

Note that while a number of scenarios are discussed below, NBN Co makes no representation about the merits or likelihood of any of the scenarios actually eventuating. Indeed, given the 30 year forecast horizon, it would not be reasonable or appropriate for NBN Co to do so.

Interaction between price, demand, revenue and expenditure in different pricing scenarios

For each pricing scenario (the Corporate Plan pricing scenario, and the maximum pricing scenario), there is a matched set of pricing, demand, revenues and expenditure. Different pricing between the scenarios results in different levels of demand and revenue (that is, higher pricing leads to lower demand and the balance between these effects determines the level of revenue), and the levels of demand in turn have some effect on levels of opex and capex over time (although, by nature, most of NBN Co’s costs are fixed).

Accruals basis

The financial information for each scenario is prepared on an accruals basis using NBN Co’s Corporate Plan framework and approach. This is consistent (subject to the capex timing issue discussed below) with the basis on which the SAU recognises the relevant inputs to the Long Term Revenue Constraint.

Price, demand and revenue

General

Consistent with the ACCC’s information request, detailed price, demand and revenue information for each pricing scenario is presented for the NBN Access Service by product component and product feature, but only in respect of those product components and product features that are relevant to the Reference Offers and Non-Reference Offers detailed in Module 1 of the SAU. The presentation of this information reflects any bundling that is inherent in the specification of the Reference Offers and Non-Reference Offers.

In respect of all other sources of revenue over the period to 2039-40, the total revenue from such sources is split between:

- new NBN Access Service product components and product features (including Asymmetric AVCs above 1000 Mbps); and
- all remaining revenue (including Ancillary Services and Facilities Access).

In preparing the price, demand and revenue information, a number of simplifications have been made based on the framework, approach and assumptions that underpin NBN Co's Corporate Plan.

- Additional asymmetric AVC and second UNI-V – the Corporate Plan does not explicitly model demands for these services as they are assumed to be minimal (in relative terms) over the period to 2039-40.¹
- Symmetric access capacity – linear pricing of symmetric access capacity for each traffic class is assumed to continue across each capacity tier. Demand is modelled as the aggregate of Mbps sold each year for each traffic class, with the level of demand in each year reflecting an assessment of the combined future business end-user requirements for services such as multiple voice lines, transactional processing and video conferencing.
- CVC – the unit price of CVC is assumed to remain the same across all traffic classes (TC-1, TC-2, TC-3 and TC-4), and demand for CVC is modelled as an aggregate of Mbps sold each year across all traffic classes (this aggregate figure is presented as TC-4 demand).
- NNI – Demand for NNI is assumed to be limited to short range equipment and thus only two of the NNI variants are explicitly modelled in the Corporate Plan. Also, to account for the combination of upfront setup and ongoing monthly charges, an annualised effective price is presented in Attachment A that involves the amortisation of the setup charge over an assumed 5 year average upgrade cycle.
- Facilities Access and Ancillary Services – the Corporate Plan does not explicitly model revenue from these services. Such revenue is assumed to be relatively immaterial (noting that a number of Ancillary Services and Facilities Access Services are currently priced at \$0).

Corporate Plan pricing scenario – Prices

In the Corporate Plan pricing scenario, all initial prices are as per the 2012-15 Corporate Plan. Prices either decrease in nominal terms as demand grows or are held flat in nominal terms. This results, to a degree, in the continuation of the long-term deflationary trend in telecommunications unit prices.

Corporate Plan pricing scenario – Demand

Subscriber forecasts in the Corporate Plan pricing scenario reflect the NBN emerging as the primary fixed line platform. Modest growth in the proportion of premises not subscribing to

¹ These services are unrelated to the issue of Community Services Port Utilisation (Second Port), which is discussed in NBN Co's 2012-15 Corporate Plan (see p.68).

fixed line services is assumed, with wireless services substituting in elements of the residential market.

The mix of AVC services is based on the assumption that there will be continued stable growth in the average speed of broadband services. This mix includes circuits only supporting voice services, as well as satellite and fixed wireless AVCs.

Projected end-user data usage drives the demand for CVC. Projected per subscriber growth is combined with NBN Co assumptions for access seeker capacity planning expectations to determine average volumes per POI.

Other Revenues includes a conservative upside from a number of services that may be developed by NBN Co in the future. For modelling purposes this includes potential revenues from Asymmetric AVCs over 1000 Mbps, Enterprise point-to-point services, and low bandwidth services (such as smart metering communications). Evolution of these or alternative products are uncertain, but this revenue line reflects to a degree the potential capacity to deliver services beyond those on the current NBN Co product roadmap.

Maximum pricing scenario – Prices

In the maximum pricing scenario, prices are modelled as follows.

- Reference offers (where explicitly modelled in the Corporate Plan framework and approach, as discussed above) are fixed at current prices in nominal terms until 30 June 2017, and are increased at the Individual Price Increase Limit thereafter.
- Standard Business Offer – the bundle of an Asymmetric AVC of 25/10 Mbps and 500kbps of Symmetric Access Capacity (TC-1) is not modelled directly in the Corporate Plan framework and approach. To proxy its effect in the maximum pricing scenario, the Asymmetric AVC component is modelled as if it were a Reference Offer in its own right (with its nominal price fixed until 30 June 2017) and the Symmetric Access Capacity component is modelled as a Non-Reference offer (with its nominal price increasing at the Individual Price Increase Limit from 2013-14).
- Non-Reference Offers – for Offers with maximum prices set out in Module 1, these prices are applied in nominal terms in respect of each Non-Reference Offer in the year in which the Offer is expected to be introduced. In each following year, the price is increased by the Individual Price Increase Limit. For all other Non-Reference Offers (such as Asymmetric AVCs over 1000 Mbps), the price once introduced is increased each year by the Individual Price Increase Limit.
- Individual Price Increase Limit – maximum price increases are calculated using a constant assumed CPI of 2.5% (as per the 2012-15 Corporate Plan) and the formula as specified in the SAU, $[(1+CPI)*(1-1.5\%)-1]$.

The maximum pricing approach applied to each Reference Offer and Non-Reference Offer is noted, where relevant, in Attachment A.

Maximum pricing scenario – Demand

As compared to the Corporate Plan pricing scenario, the maximum pricing scenario involves significantly weaker demand for activations (due to higher wireless-only substitution), AVC speeds (due to reduced affordability) and CVC (due to reduced overall and average end-user data usage).

Expenditure

Opex

The ACCC has requested that opex be presented as an aggregate figure for each year. For the avoidance of doubt, the Corporate Plan treats the infrastructure payments to Telstra and other infrastructure owners in respect of duct, dark fibre, rack space and tower and pole access, as opex, which is consistent with the treatment under the SAU.

Capex, asset lives and disposals

- Capex categories –capex is presented in 12 categories and each category is associated, for SAU regulatory and tax depreciation purposes, with both an asset lifetime and a taxation asset lifetime. The categories used are related to the framework and approach that underpins NBN Co's Corporate Plan, including how capex is typically summarised in that context. The capex categories are as follows:

Capex category	Scope of capital costs included:
1. Fibre Activations	Installation of the end-user equipment (i.e. Network Terminal Device and Battery Backup) (including equipment, ancillary materials, and capitalised labour)
2. Fibre Lead-Ins	Installation of fibre lead-ins from the end-user equipment to the street (including equipment, ancillary materials, and capitalised labour).
3. Passive - Fibre Deployment	The Fibre cable sheath and other passive infrastructure (e.g. Fibre Distribution Hub Cabinet, Closures) in the Local Network / Distribution Network (including equipment, ancillary materials, and capitalised labour).
4. Civil Works - Fibre Deployment	Cable hauling into existing ducts, the cost of acquiring these ducts, aerial works and trench works in the Local Network / Distribution Network to pass existing premises (including equipment, ancillary materials, and capitalised labour).
5. Active - Transit Network	Installation of active equipment at the FAN / Aggregation Nodes & PoI sites (e.g. OLTs, DWDM, Aggregation - racks, cards and shelves) (including equipment, ancillary materials, and capitalised labour).
6. Passive - Transit Network	The Dark Fibre Transit links (cable sheath) and other passive infrastructure required in FAN / Aggregation Nodes & PoI sites.
7. Civil Works - Transit Network	Cable hauling into transit links as well as the trench works in the Transit network.
8. Fixed Wireless Connections	Installation of the Fixed Wireless end-user equipment (including equipment, ancillary materials, and capitalised labour).
9. Fixed Wireless Infrastructure	Deployment of the Fixed Wireless network (including equipment, ancillary materials, and capitalised labour).
10. Satellite Connections	Installation of the Satellite end-user equipment (including equipment, ancillary materials, and capitalised labour).
11. Satellite Infrastructure	Deployment of the Satellite network (including equipment, ancillary materials, and capitalised labour).
12. Other	Common capex / IT capex / non-allocated capex spread across all access networks.

It should be noted that each capex category covers both the capital costs of initial deployment, ongoing greenfields growth and any subsequent replacement over the period to 2039-40. Related to this, the “Other” capex category as defined above is narrower than that used in Exhibit 9-7 of the 2012-15 Corporate Plan. In the published Plan, the “Other Capex” category includes all replacement capex, and the “Fibre and Transit” and “Fixed Wireless and Satellite” categories only include capex related to initial deployment and ongoing greenfields growth. As a result of these differences in categorisation, the capex in Attachment A for the Corporate Plan pricing scenario can only be directly reconciled to the published Plan at a total capex level.

Although the capex categories used in Attachment A are different in some respects to the categories that NBN Co is likely to use in reporting actual capex to the ACCC under an accepted SAU (being more aggregated in some respects), this is of no practical significance for the purposes for which the ACCC has requested the information. There are two reasons for this. First, any change to how capex is categorised will not of itself change the total value of capex in a given year or over the period to 2039-40. Second, given the categories used in Attachment A, any further disaggregation would be unlikely to have a significant effect on the modelling of depreciation under the Long Term Revenue Constraint Methodology in either pricing scenario². It is important to recognise that depreciation effects are essentially matters of timing rather than value.

- Asset lives – for each capex category in Attachment A, NBN Co has provided indicative asset and taxation asset lifetimes to enable modelling of regulatory and tax depreciation for SAU purposes. These are by nature indicative because the capex categories described above are different from those that NBN Co will use in reporting actual capex to the ACCC under an accepted SAU.
- As-incurred basis for capex – under NBN Co’s Corporate Plan, capex is recognised on an as-incurred basis and there is no separate accounting for the value of construction in progress. This is different to the approach in the SAU in which capex is recognised on a Placed in Service basis and a separate allowance is made to account for the financing cost of construction in progress. However, when used appropriately, both approaches deliver the same outcomes in NPV terms; that is, there is a minor timing as opposed to a value effect when as-incurred capex information is used to calculate the RAB, the ABBRR and the ICRA. For the purposes for which the ACCC has requested the information and in the broader context of capex forecasting over a 30 year period, this timing effect is of no material significance. To be clear, when NBN Co reports actual information on the RAB, the ABBRR and the ICRA under the requirements of the SAU (once accepted), that information will be provided in a manner consistent with the definitions and commitments made in the SAU.

² In order to have a significant effect, the new capex categories created by further disaggregation would each need to have a substantial amount of capex relative to the overall capex in a given year and over the period to 2039-40. In addition, each such category would have to have a substantially different asset lifetime and the weighted average of those asset lifetimes would have to be substantially different from the original (more aggregated) capex category from which those new capex categories were created. In this context, NBN Co notes that network land and network buildings are not separated out in the capex categories related to the fibre, wireless, satellite or transit networks (but they will be when NBN Co reports actual capex under an accepted SAU). This reflects the relatively small value of capex associated with network land and network buildings in the context of the overall deployment of the NBN (noting that NBN Co will mostly be leasing sites for POIs, aggregation nodes and wireless base stations) and will have an insignificant effect on any modelling of the Long Term Revenue Constraint Methodology.

- No asset disposals – given the nature of NBN Co’s business, and the intention that it will continue to operate over the period to 2039-40 and beyond, the Corporate Plan does not forecast any asset disposals. Hence, there are no values recorded in the information for proceeds from asset disposals. It is possible that NBN Co may in the future sell for scrap some assets that are replaced in the ordinary course of business, which would then be reported consistent with commitments made in the SAU. However, the proceeds from such transactions are expected to be so minor that they have not been forecast.

Interest expense

In Module 1 of the SAU, the calculation of the tax allowance in the ABBRR uses NBN Co’s actual interest expense. Although interest expense was not part of the ACCC’s information request, NBN Co has included it in Attachment A in respect of each pricing scenario, but only for the years up until 30 June 2023 (when Module 1 is due to end).