Explanatory note – ACCC NBN SAU access cost projection model

Model objective

The objective of the model is to project the costs that retailers would expect to incur where NBN Co prices its access services in line with its proposed variation to its Special Access Undertaking (SAU).

Model scope

The model includes the main best efforts (Traffic class 4) NBN ethernet broadband services within its scope. It generates a chart showing the cost paths for the most popular speed tiers of 12, 25, 50 and 100 Megabits per second.

Model context

This note should be read in conjunction with the Excel model 'ACCC model of NBN SAU projected access costs' released by the ACCC as part of its consultation on NBN Co's SAU variation.

The model has been populated with the parameter values that underpin the projections described in Figure 3 of page 12 of the ACCC's consultation paper *Proposed variation to the NBN Co Special Access Undertaking,* May 2022.

However, stakeholders can amend these values to generate alternative projections to aid in informing their submissions to the SAU variation consultation.

The model also includes for comparative purposes, projected access charging outcomes under May 2022 Roadmap prices in FY2022 and FY2023, but this is not a major focus of the model or the explanations provided below.

Model design and operation

The modelled price projections are designed to indicate the wholesale access cost paths that would be expected to occur if NBN Co were to price its offers to the levels allowed under its proposed variation to its SAU.

Under this proposal, the costs of all NBN access services would increase in line with the relevant CPI+X price caps. For NBN Co's broadband offers of 50 Mbps or less, the access costs would also be subject to annual growth in CVC utilisation and CVC allowances. The difference between growth in CVC utilisation and CVC allowances determines, in conjunction with the starting CVC utilisation level of each 50 Mbps or less broadband offer, the amount of any CVC overage charge payable in addition to the bundled charge.

Accordingly, the projections rely on an estimate of annual CPI growth, and for NBN Co's offers of 50 Mbps or less, estimates of starting and annual growth of CVC utilisation and CVC allowances. The ACCC's sources of these and other inputs is outlined below.

The model also has functionality to change the opening year of the CVC utilisation variables entered and the associated commencing year of CVC utilisation growth and the commencing year of CPI+X price growth. The ACCC's assumptions for these variables are also outlined below.

In terms of the model outputs, the model generates the monthly wholesale access costs for each speed tier, making allowance for the cost switching to the 100 Mbps (Homefast) speed tier once a lower speed tier at least equals the cost of the 100 Mbps (Homefast) speed tier. This cost switching along with the maximum allowable cost path growth for 100 Mbps

(Homefast) or lower tiers, is reflected in the graph contained in the model and which is reflected in Figure 3 of the consultation paper.

Other than signalling when particular speed tiers will no longer be rational demand choices for RSPs, the model does not provide a signal of the likely demand for the particular products at the access costs indicated.

Model operational detail and data sources

The key input cells that can be changed and have an impact on modelled outputs are highlighted in the model in yellow.

Explanation of these, and the applicable ACCC input assumptions for its modelling that underpin the cost paths generated for Figure 3 of the consultation paper are outlined below. Some further explanation of the model outputs is also provided.

Variable	Cell reference(s)	Notes/sources
Inputs		
Opening utilisation	B17-B20	Average daily peak utilisation for plans with a download speed tier of 50 Mbps or less. The ACCC derived these from the estimated average wholesale charges for May 22 Roadmap in NBN Co's SAU variation discussion paper June 2021 (rightmost column, Table 2, p. 12). The explanation of how this was done is contained in the note for cell C16.
		When inputting alternate values, the start of the relevant period should be specified at cell B3. For example, if the values relate to those observed at the start of 2022, then 2022 should be selected in this cell. This is because the input at cell B3 specifies the beginning of the starting year of growth in utilisation.
Bundle prices	F17-F27	These are the SAU variation starting prices. These are sourced from clause 1C.4 of the proposed SAU variation. The model allows for these to increase in FY2024 and each subsequent year in line with the applicable price cap allowances.
CVC utilisation allowance	G18-G20	These are the SAU starting utilisation allowances for each speed tier for plans 50 Mbps or less. These are sourced from clause 1C.4 of the proposed SAU variation. The ACCC has assumed these can be increased in FY2024 and each year after in line with the applicable annual allowance increase (not applicable for 12 Mbps services).
CVC price	H18-H20	CVC price as specified in the SAU variation. This does not increase or reduce over the SAU term in nominal terms. This is sourced from clause 1C.4 of the proposed SAU variation.

Utilisation growth	B3, I3-AA3	At cell B3, the applicable first year of utilisation growth is entered to correspond with the date of the opening utilisation levels entered into cells B17-B20. Options allowed are FY2022, FY2023 and FY2024. The ACCC has assumed FY2023 for its analysis. The value in this cell generates the values in cells I3-AA3 that are used along with the annual utilisation growth rate at cell E11 to generate the levels of CVC utilisation for each applicable product tier each year. These feed into the calculations of annual CVC overage costs as part of the wholesale costs for these products.
Years growth in CVC allowance	K4-AA4	Indicates the number of years of growth in CVC allowances. The ACCC has assumed the first year is FY2024. These values along with the CVC allowance increase variables at cells E12 and E13, determine the CVC allowances for each applicable product tier each year. These feed into the calculations of annual CVC overage costs as part of the wholesale costs for these products.
Years growth in SAU prices	K5-AA5	Indicates the number of years of growth in SAU prices. The ACCC has assumed the first year is FY2024. These values along with the annual price cap increase allowances for each applicable product tier determine the maximum SAU prices for each year. These feed into the Bundle/flat charges prices for each year that in turn feed into the annual wholesale costs for these products.
CPI	B7-B9	This is an estimate of CPI or inflation that feeds into the annual CPI+X values or maximum price increases for the applicable product categories at cells D7-D8 which are used in turn in cells K7-AA7 and K8-AA8, or are used directly in these latter cells. The ACCC has used the flat rate CPI estimate of 2.5% which is the mid-point of the Reserve Bank of Australia's target range. The ACCC has assumed that the price increases commence in FY2024. Alternative values can either be entered in cells B7-B9 or added for individual years along with any applicable X adjustment in the cells K7-AA7 and K8-AA8.
X factors	C7-C8	These are the X-factors that apply for the CPI+X values for the applicable product categories at cells D7-D8 which are used in turn in cells K7-AA7 and K8-AA8, or are used directly in these latter cells. These X factors are specified in the SAU variation at clauses 2B.2.3 and 3B.1. The ACCC has assumed that the price increases commence in FY2024. Alternative values

		can either be entered in cells C7-C8 or added for individual years along with any applicable CPI adjustment in the cells K7-AA7 and K8-AA8.
Annual growth rate in peak daily utilisation	E11	The annual growth rate in peak daily utilisation in this cell is used along with the values in cells I3-AA3 to generate the levels of CVC utilisation for each applicable product tier each year. These feed into the calculations of CVC overage costs as part of the wholesale costs for these products in each year. The ACCC has sourced the annual rate of 13% from page 177 of the published NBN Co supporting submission.
CVC allowance annual increase rate	E12	This value along with the CVC allowance increase interval at cell E13 is used to determine the CVC utilisation allowance for appliable products for each year of the SAU. These also feed into the calculations of CVC overage costs as part of the wholesale costs for these products in each year. The ACCC's assumed annual value of 6.5% reflects the SAU methodology specified at clause 2B.2.4 of the SAU that the rate of increase in the CVC allowance is to be determined as half the annual increase in historical peak CVC utilisation.
CVC allowance increase interval	E13	This value along with the CVC allowance annual increase rate at cell E12 is used to determine the CVC utilisation allowance for appliable products for each year of the SAU. In its calculations the ACCC assumed this value to be 1, to reflect an annual adjustment. However, the SAU variation makes provision for a 6-montly adjustment at clause 2B.2.4. Use of a more frequent adjustment has the effect of increasing the allowance and reducing the rate at which CVC overage costs increase. There is also provision in cell E13 of the model for the adjustment to be made on a quarterly basis.
Outputs		
Bundle/flat charges	K31-AA41	These are the estimates of the monthly bundle/flat charges for each product tier taking into account the applicable CPI+X maximum price increases for each year of the SAU.
Wholesale costs	K44-AA54	These are the estimates of the total monthly wholesale costs including applicable CVC overage charge costs. They are determined by adding any applicable overage costs as a result of any excess of peak CVC utilisation over peak CVC allowances.
Access cost estimates for graph	K58-AA58	These show the estimated monthly wholesale costs making provision for any

		switching of a 12Mbps to 50 Mbps speed tier to the 100 Mbps (Homefast) speed tier once the cost of the lower speed tier is equal to or greater than the 100 Mbps speed tier. These values are used to generate the graph shown below these cells.
Consolidated wholesale access costs all tiers	K86-AA96	These bring together the monthly wholesale costs for the 12 Mbps to 100 Mbps (Homefast) tiers after allowance for price switching as determined in the step above, with the monthly wholesale costs for the higher speed tiers to provide a consolidated list of potential wholesale maximum costs.