

ECONOMUSE

Are CVCs “evil, stupid and counterproductive”?

The arrival of video streaming services has quickened the debate.

NBN pricing is back under the microscope with attacks from industry heavy weights like iinet’s Chief Technology Officer, Mark Dioguardi, and serial telco entrepreneur Bevan Slattery who recently called CVCs “evil, stupid and counterproductive”.

The alarm bells are ringing because it looks like video streaming is about to take off and all forms of backhaul (including CVCs) have to be augmented to cope with that. In its first week’s trial, iinet reported that Netflix grew its share of traffic from 3% to 25% of traffic on iinet; without substituting for other video streaming.

CVCs are currently priced at \$17.50/Mbps. Mark Dioguardi says that is too high and sees some hope in the “dimension based pricing” proposed by NBN in an options paper last year. How it works: “Customer A purchases on average 950kbps of CVC capacity for each end-user, hence the unit CVC price Customer A would be charged is \$12.50 per Mbps per month. Customer B dimensions the CVC capacity to 650kbps for each end-user. This would result in a unit CVC price of \$17.50 per Mbps per month. Although the unit price is lower for Type A customers, more capacity per customer is being bought.....it is a substantial departure from the current CVC pricing approach and may involve potentially pricing, billing system and business planning complexities” (p7, NBN July 2014 Pricing Constructs Consultation Paper). This is illustrated in the top left of the chart.



\$1/Mbps to get under \$10/user/pm

Mark thinks this is still not good enough for the new video streaming environment. In 2014, according to iinet, service providers provisioned 400 Kbps in the busiest hour for the CVC. That translates into \$8/user/pm. In the new environment, at least 2 Mbps/user CVC capacity is

required if customers average one HD movie streaming at 4 Mbps every other night. With CVCs priced currently at \$17.50/Mbps, Mark says this “consumption tax” would cost about \$35/user/month. This is way above the \$10 pm price point for a subscription video streaming service.

But, there are a couple of errors and also a huge problem for TPG here.

First, Mark has not taken into account that with dimension based pricing and the provisioning he needs the unit price per Mbps of CVC falls below \$17.50/Mbps. NBN's curve in the chart does not extend to 2 Mbps/user; but you get the point.

Second, the base level of the CVC is promised to fall (i.e. the NBN curve shifts down) with increases in traffic. According to Exhibit 8.9 of NBN's 2012-15 Corporate Plan, the base price of the CVC will

A	CVC price per Mbps		\$17.5	\$17.5	\$1.2
B	Kbps usage per end user		400	2,000	8,000
C	Customers		2000	2000	2000
B*C=D	Req'd CVC Mbps		781	3,906	15,625
E	Purchased CVC capacity		800	1,000	2,000
A*E=F	CVC fees pm		\$14,000	\$68,359	\$18,750
F/C=G	Per customer pm		\$7.00	\$34.18	\$9.38

be around \$8/Mbps by the time average data usage is about 600 GB/user/pm. But, on NBN's 19% pa expected growth in data, that won't happen until around 2027 and even then it is still too high

and too late. Mark needs the price of CVCs to come down to \$1/Mbps soon to get provisioning of 8Mbps/user at less than \$10/user/pm.

Third, a lot of video streaming is not paid for. That is, iinet and others get nothing for over-the-top video. That is very bad news if, like TPG, you are offering unlimited data. You cannot block OTT services (net neutrality) but you can change your business model (scrap unlimited data).

It is unrealistic to expect NBN to reduce the price of CVCs to \$1/Mbps and crazy for NBN to scrap any element of volume based pricing. Although CVCs are not "evil, stupid and counter-productive" there is a better way of recovering costs.

As mentioned in [this column last August](#), which examined the NBN CVC options paper, it is possible to replicate NBN's corporate plan revenues with a different option which replaces CVCs with a simple cents/GB tariff. Combined with removing speed constraints on AVCs, the growth in data will be higher than in the plan (see [Option 6: Assessing the revenue impact of the traffic model](#)) and the new tariff would fall from 8 cents/GB today to 1.2 cents/GB by 2028 or \$2/user/pm if they average one HD movie streaming at 4 Mbps every other night.

Of course, we can get there even faster if the growth in data is faster still. The beauty of the proposed tariff is that the more data grows, the faster the unit price can fall while maintaining NBN revenue.

There is ample capacity in NBN's access network. Why artificially constrain it by making wholesale customers choose provisioning capacity (degrading the experience)? The simple tariff also reduces barriers to entry by removing the need to buy lumps of CVC capacity.

John de Ridder