Launtel public response to NBN's response to the draft ACCC decision concerning NNI pricing

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We have been invited to submit a response to NBN's submission regarding NNI pricing. We believe that this issue affects many (probably all) smaller RSPs but we have not exhaustively canvassed opinions from others.

First of all we would like to acknowledge that NBN's proposal is most definitely a step forward, but we feel it is still a step too small and still represents a significant barrier to entry for the smaller RSP. We believe that the smaller RSP tends to be more innovative than the bigger RSPs and thus explore sections of the market that are not currently well served. For example at Launtel we like to explore the high quality, high service, high price part of the market. Artificially limiting smaller RSPs (e.g. by creating barriers to entry) is thus not in the long term interests of end users (LTIE).

NBN in section 3.1 of their response assert that the price of NNIs have not substantially changed since they commissioned the POIs over 10 years ago. We concur, but they then go on to assert that this represents an effective price reduction. This is true only if you consider it as a volumetric price (price per Mb). However this is not the way the technology and telco market has moved in that time. We are talking about information flow (data), not a commodity like water, electricity or wheat. We have become very much used to information performance, computing power and capacity increasing at an accelerating rate while keeping the price approximately constant. This growth is delivered to us simply and easily by advances in the underlying technology. This is described informally by Edholm's law (the telco equivalent of Moore's Law) which has observed a doubling of capacity every 18 months, which seems to have held true since the 1970s. Based on this we would expect everything (except the price) to have increased by a factor of 100 in the 10 years since NBN set the NNI prices.

In that same 10 year time span we have seen the top speed of NBN retail connections go

from 100Mb to 1000Mb (Ultrafast) while keeping the wholesale price pretty much the same - a volumetric growth by a factor of 10. We have seen the commercial price of 10Gb SFP lasers (the devices that are physically used in an NNI) come down to a point where they are roughly the same price (or less) than 1Gb SFP lasers in use 10 years ago. We believe it is up to NBN to justify why they are charging prices above this. The networking industry has long since moved on from 1Gb ports, and 10Gb is the current standard (and effectively the minimum) port on most devices. To follow NBN's current logic - it would have been equivalent to offering 100Mb NNIs to small RSPs 10 years ago (which obviously they didn't bother with, because by then 100Mb NNI's were all but obsolete just as 1Gb NNI are now).

As a monopoly provider NBN has managed to, and is seeking to continue to, side-step Edholm's Law, because they can use their market power to maintain their revenue by insisting that the 10Gb is not for the smaller RSPs and "encouraging" them to use 1Gb NNI or a multiple of them. Whereas the rest of the network market, subject to normal competition rules, has accepted that 1Gb ports are now obsolete and has replaced them with 10Gb ports. As has been noted before the 1Gb NNI (including multiple of them) is all but useless when attempting to run either Ultrafast or 1Gb EE services. The reason is technical but comes down to deficiencies in the technology (LAG) to share load across multiple NNI - it can't be done evenly, so it is easy to exceed the capacity of a single NNI - causing packet loss and a poor user experience.

To put it another way, if NBN were to start its operation today, it is extremely unlikely that they would bother with 1Gb NNI, they would make the 10Gb NNI as the entry level point and price it accordingly.

NBN has stated that these reflect the true costs of supplying and maintaining the NNI. However this doesn't hold up to scrutiny. NBN has chosen (and we don't fundamentally disagree) to include the costs of the racks, the buildings, the power, labour as well as the cost of the NNI laser itself. However they are unwilling to explain the implied cost differential between the 1Gb and 10Gb NNI. In terms of the setup costs, the only difference between the two is the cost of the laser and perhaps the port it is plugged into (how many times does this get paid for?). For example it is the same labour price, building costs etc between 1Gb and 10Gb NNI. With the market costs of 10Gb lasers having come down significantly over this same 10 years - is it reasonable that NBN has no incentive to negotiate more effectively with their suppliers over that time?

In terms of running costs we can't see how there is any significant difference in costs (power, building rent, rack rent, maintenance etc). So either NBN are massively subsidising the 1Gb NNI or they are over charging for the 10Gb NNI (or possibly both). However, in much the same way as "bracket creep" slowly increases the amount of income tax people have to pay, Edholm's law over time pushes all RSPs into higher speed NNI's at the higher price (given NBN's monopoly power).

I think it is important to try and work out what the NNI charge actually is and why it is charged. We agree the charge should not be zero, because as NBN have pointed out there are actual costs to connecting a physical NNI and there needs to be an incentive for RSP not to request these NNI frivolously. Though it is worth pointing out that cross connects within an NBN POI are not charged either a setup or monthly fee and this has not led to an explosion

in frivolous connections - though it can be argued that there is little disincentive to disconnect cross connections.

We are concerned that NBN are using NNI fees as an underhand volumetric charge, however done in such a way that, due the large steps and scaling involved, an outsized amount is spread to the smaller RSPs. This is particularly concerning given the overall movement away from CVC volumetric charging during this SAU process. Coming back to Edholm's Law is this NBN's way of slowly increasing the fees on retail providers? What has been NBN total revenue on NNI fees per POI. We expect this has been increasing at a rate higher than CPI.

NNI fees are a relatively small proportion of NBN's overall revenue (figures we have seen quoted are around 1% of the total), yet they form a massive barrier to entry for the small RSPs. NBN have further stated that the smaller RSPs are only a small proportion of this (though we believe it is higher than the 7% market proportion that small RSPs occupy) - surely this gives NBN more room to move on this?

NBN criticises our suggestion of increasing charges on the AVC in order to reduce the NNI fees. We are disappointed that this has been dismissed by NBN in toto complaining that the figures are inaccurate or would be too big a change for other RSPs to absorb. This wasn't meant to be a fully worked out example, but a starting point for discussion. Much of the overall SAU process involves the changing of AVC pricing, now would be a good time for NBN to move some (but probably not all) of its NNI costs across to the "general revenue" received from AVC charges. NBN already includes the vast majority of its costs within the AVC charging model - why is it so determined to get this relatively small amount of revenue as a separate item from NNI fees, given the outsized costs (and effect on competition) to small RSPs?

vNNI is continually touted as the best option for smaller RSPs and is the excuse given by NBN to not reduce the NNI rates, however there are several issues with vNNIs:

1) When using a vNNI, in practice you have to also use that provider's backhaul - there is no possibility of using an alternate provider for (say) redundancy.
2) The underlying NNI costs are still paid by the vNNI provider and are quite reasonably passed on down to the small RSP. While the utilisation on the underlying NNI may be higher there is an extra layer of margin and ends up being a cost of typically 12c extra per Mb.
3) A vNNI cannot be sold on top of another vNNI - it is common for smaller RSPs to "gang together" to share the costs of backhaul. This can only be done if one of the RSPs takes on the physical NNI.

We are not saying that vNNI are not valuable (and we welcome the drop in monthly price), we are just saying they have limitations. We are unclear why vNNI have any setup or monthly fees at all. Given they are a completely virtual (i.e. software) construct there are no inherent costs in setting up or running - note that a similar software construct, CVC, has no setup or running costs. We are concerned this is NBN charging for something that costs them nothing (though maybe they need to improve their automation - just as they automatically provision most AVC & CVC) because they have the market power to do so.

We welcome the ability to get a 100% rebate on “returned” NNI ports such that there will be the same long term costs for an RSP going via the 1Gb route (including multiple 1Gb NNI) versus going direct to 10Gb. This certainly fixes one of the anomalous barriers to entry for smaller RSPs. It is important to remember though that the total price for the upgraded NNI is still paid in full - it is just that the intermediate ones are rebated. NBN’s wording in 4.2 makes it sound like these upgrades are sometimes free, they are not, it is just that they are no longer paid twice.

However it is unclear that if the “upgrade route” involves vNNI (e.g. 1Gb NNI to 1.5 Gb vNNI to 10Gb NNI) whether the 1Gb NNI rebate will still apply.

We also welcome the drop in the setup price ($3000) for the 10Gb NNI, but still note it is very high when, based on discussion above regarding scaling and Edholm’s Law, compared to the price of the increasingly obsolete 1Gb NNI ($1000). To get a dual chassis is still $6000 per POI. When scaled up this is a significant drain on a small RSPs cash flow / startup capital. In our experience the setup costs of a backhaul link from most providers are around $1000 - how can NBN justify three times that amount for essentially one end of that link?

One suggestion here is for NBN to officially offer payment terms for the NNI setup fees as they did for one relatively large provider some years ago.

We welcome the drop in the running costs of the 10Gb NNI if a single or dual chassis NNI is deployed but note the rather convoluted limitation here - it appears NBN is keen to protect its current NNI revenue stream here. However as a small RSP we acknowledge this will make a big difference to the running costs.

So overall we very much welcome the ACCC’s interest in the NNI charge issue for smaller RSPs and NBN willingness to “come to the party”. However we request that in the spirit of the SAU’s substantial restructure of the NBN charging model, that NBN takes the opportunity to completely reconsider its NNI charging model and in particular what the side effects are of what it is currently trying to achieve.

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