

# Submission to the Bureau of Communications Research NBN Funding Options Consultation Paper

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**About the Author:**

John de Ridder is a former chief economist of Telstra. His 18 year career at Telstra included a number of roles including broadband and data pricing and USO costing. Since leaving Telstra 12 years ago, he has consulted to various domestic and international organisations. His OECD report on broadband was referred to extensively in the Berkman (Harvard) Centre Report to the FCC on US broadband policy. He was also a key player in TransACT's proposal for NBN Mark 1.

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## **Overview**

This submission addresses the first consultation paper issued by the Bureau of Communications Research (BCR) into funding options for non-commercial services on the National Broadband Network (NBN).

The main concerns with the BCR consultation paper are that it:

1. Shows little awareness of the literature and relevance of cost concepts here
2. Is too narrowly focussed on the levy when there are other complementary options
3. Has completely ignored the privatisation of the obligation to serve non-commercial users
4. Has under-estimated the importance of mobile broadband as an NBN substitute
5. Rejects the notion of broadening the base of the levy to include mobile broadband

The structure of the submission follows the questions posed in the consultation paper.

## Question 1 Is measuring NBN satellite and fixed wireless service costs on a commercially focused basis appropriate?

The way costs are measured depends on how the results are to be used. A classic example is the difference in opinion between the BTCE and Telecom (whose team I led for the joint study) in the costing of Telecom's Community Service Obligation (CSO). The BTCE<sup>1</sup> acknowledged that "Two possible purposes were apparent from the Ministerial Statements of 25 May 1988:

- A. "to determine the magnitude of the level of national resources being devoted to meeting its CSOs; and
- B. "to take account of the cost of CSOs adequately in setting Telecom's financial target in the corporate plan (and in measuring the achieved rate of return ex post)"

This led the BTCE to costing CSOs on both an avoidable cost and fully distributed cost basis to address A and B respectively. The resulting CSO estimates were far apart: \$230m and \$800m (discounting at 13.6%).

Two other possible public policy purposes that have been identified<sup>2</sup> and which could be relevant to the present exercise are whether the amount of CSOs is so large:

- C. that introducing competition would undermine internal cross-subsidies (an undeclared purpose in the 1988 joint study); and
- D. that the enterprise should be kept in the public sector.

For the current purpose, we have to go to the Government's response to the Vertigan Reports<sup>3</sup>

*"The Bureau of Communications Research (the policy research arm of the Department of Communications) will undertake an assessment of the costs of NBN Co's fixed wireless and satellite services, which serve many non-commercial parts of Australia, and provide options to Government for replacing the current opaque NBN Co cross-subsidy embedded in its wholesale access prices with more transparent funding arrangements.....The cross-subsidies which are currently embedded in NBN Co's wholesale prices will be replaced by transparent funding provided via contributions sourced from owners of high-speed broadband access networks that target residential and small business customers – i.e. the NBN and networks in commercially viable areas that are comparable to the NBN. There will be no additional costs to consumers relative to current NBN pricing – an opaque part of the cost of the NBN will be made explicit".*

Clearly, neither purpose A or B is the issue here. Rather, it is about C and making universal affordable broadband service possible in the presence of infrastructure competition; rather than relying on an unnatural NBN Co monopoly supporting internal cross-subsidy.

Vertigan conflates purposes C and D because it thinks the best way to set subsidies is to let operators bid for the subsidy they need to deliver services:

*"The panel believes that an important benefit of its disaggregation proposals is that*

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<sup>1</sup> Report 64, The Cost of Telecom's Community Service Obligations, BTCE 1989, p15.

<sup>2</sup> Universal Service and Competition – What Counts?, J de Ridder, Telecommunications Journal of Australia, Vol. 45, No. 3, 1995

<sup>3</sup> Department of Communications, *Telecommunications Regulatory and Structural Reform and Structural Reform*, (December 2014) p6.

*the process of divesting the satellite and fixed wireless networks would offer an opportunity for market-testing the amount of any future subsidy these networks might need ..... The panel therefore recommends that absent disaggregation, no specific mechanism for funding any subsidies within NBN Co be put in place, subject to review in five years' time"<sup>4</sup>.*

While there are more urgent issues currently, the future privatisation of these assets is on the political agenda:

*"Arrangements will be put in place to provide options for future NBN Co disaggregation if that is considered appropriate. The Government will require NBN Co to establish separate accounts for its FTTx, HFC, fixed wireless, satellite and transit businesses."<sup>5</sup>*

Why does the Bureau of Communications Research (BCR) Consultation Paper totally ignore this possibility which could help resolve funding issues, as discussed below?

So, now that we understand purpose C is the point of the present exercise, what is the appropriate costing method? This was a job that was going to be given to the Productivity Commission, so we should hear its view on this matter in this context.

The Consultation Paper suggests three options: stand-alone-costs (SAC), marginal (avoidable) costs and "commercially focused" costs; where the last is usually called fully-distributed-cost (FDC).

There is no discussion of the extensive cross-subsidy literature in the consultation paper. But my understanding is that cross-subsidy is said to exist if a group of consumers would be better off seeking alternative provision. This is relevant to the SAC. We know that TPG (and others) can target some customers profitably. But, surely, the BCR cannot second guess possible such opt-out of the NBN opportunities. Its focus must be on FW&S networks – the recipients of the subsidy. SAC is not relevant to that.

Looking through the other end of the telescope, a group of customers definitely receives a cross-subsidy if its revenues do not cover its long-term avoidable costs. This appears to be Vertigan's position too:

*"In theory"<sup>6</sup>, such a charge can be set at a level that discourages inefficient entry (that is, entry that involves higher costs than NBN Co's) while nonetheless accommodating efficient entry (that is, entry which involves lower costs or higher quality service than NBN Co's). The extent of such a tax depends on NBN Co's avoidable costs and its forgone revenues, with the revenue side being influenced by the precise nature of any pricing constraint on NBN Co."<sup>7</sup>*

Whatever it does, the BCR should separately identify avoidable costs and allocated costs of FW&S.

## **Question 2 Is it appropriate to consider commerciality on a network 'cluster' basis?**

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<sup>4</sup> Vertigan, Vol 1, NBN Market and Regulatory Report, p21-22

<sup>5</sup> Department of Communications, Op. Cit., p9.

<sup>6</sup> Vertigan, Op. Cit., *"In practice, it is not possible to determine the quantum of such a tax at this stage of network deployment. A premature decision would create a real risk of the tax being set incorrectly, distorting both NBN Co's network decisions and those of actual and potential entrants.... Notwithstanding these concerns, it would be far better to have some form of levy scheme than to continue restrictions on the development of competition so as to protect any NBN Co cross-subsidy"*, p105-106

<sup>7</sup> Vertigan, Ibid., p105

The CSO study by the BTCE did not stop at costs “on an exchange area basis” but looked at customers in concentric rings around country exchanges – all very complicated and unnecessary for the current study.

The focus is the internal cross-subsidy from NBN fixed networks to the fixed wireless and satellite (FW&S) networks. The BCR contemplates going down to wireless service areas (WSAs) so that these can be made contestable. But it is on a tight timetable, it is not sure that NBN Co has the necessary data and it is not clear that it would be useful either for opening-up some groups of fixed wireless (FW) customers or for selling the FW platform (with spectrum issues in disaggregation of FW too?).

In my opinion, the BCR should handle the FW business in the same way it intends to handle the satellite (S) business; at an aggregate level.

### **Question 3 Is FY2040 at an appropriate time period for assessing NBN non-commercial services?**

Maybe if base forecasts can be obtained from NBN Co. The BCR should not get involved in doing NBN Co.’s job for it. The last NBN Plan to2040 was published in late 2012 and the hiatus over the changes in policy and the Definitive Agreements gave it reason to pause. But, it should now be in a position to provide forecasts to 2040; which the BCR could then draw on.

Note also that NBN Co. is now required (see Q1) to provide separate accounts (including P&L and balance sheets) for FW, S, HFC, FTTx and transit businesses. That still leaves the BCR to unpack accounting concepts like opex into avoidable costs and other costs. It also needs to identify the cost drivers; e.g. services and traffic. As well, it will be looking at rules used for allocating joint and common costs (if it chooses to adopt “commercially focused costing”).

As noted above, the study needs to look at how privatisation of the FW and S networks, which might occur sooner, would affect the situation. Vertigan suggested that even if fixed costs were written-off, this might “*not be sufficient to cover the operating and asset replacement costs involved in serving non-commercial areas*”<sup>8</sup>. That is something that the BCR should be able to verify.

Note that even if non-commercial services are divested by tender, it should not be assumed that the FW&S networks will be used. The BCR itself refers at page 12 to alternative technology delivery platforms.

Note also that the BCR assumes that mobile broadband will not be required to contribute to any levy because it does not offer a comparable service:

*“Future inclusion of mobile network operators could be considered on the basis of mobile networks operating in competition with fixed line networks primarily resulting in fixed to mobile substitution rather than fixed-mobile complementarity. The BCR notes that the extent of fixed to mobile substitution is not clear. It is likely that the full extent of competition and substitution between fixed line and mobile networks may not be known for many years. In this context, and noting the*

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<sup>8</sup> Vertigan, Ibid., p21

*Government's Policy Paper guidance on industry funding eligibility, the BCR will focus on arrangements relevant to high-speed fixed line networks*<sup>9</sup>.

The litmus test of fixed-mobile substitution is what end users do. The migration (or not) to the NBN should provide critical evidence. In my view, the threat to the NBN from mobile substitution continues to be under rated.

**Question 4 Are the proposed principles relevant and applicable when considering NBN non-commercial service funding arrangements?**

Yes.

**Question 5 Should the BCR consider additional principles? If so what are they?**

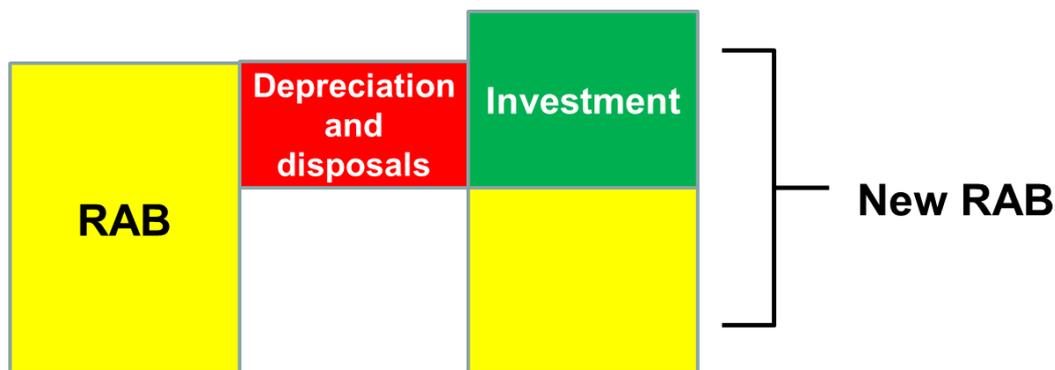
Keep it simple.

**Question 6 To what extent could financial reporting support transparency of the allocation of equity, debt and revenues towards non-commercial services?**

This is really saying that the FW&S businesses should both have their own P&L and Balance Sheets. They should and they will. The BCR may be able to some influence over NBN Co. in how information is presented in the accounts (e.g. sufficient cost disaggregation to identify marginal costs).

The allocation of equity and debt across the separate businesses is a secondary issue. The primary issue is costs; especially capex.

The BCR should use the building block method to ascertain costs. The regulated asset base (RAB) for the FW and S businesses is the value of capex rolled forward annually:



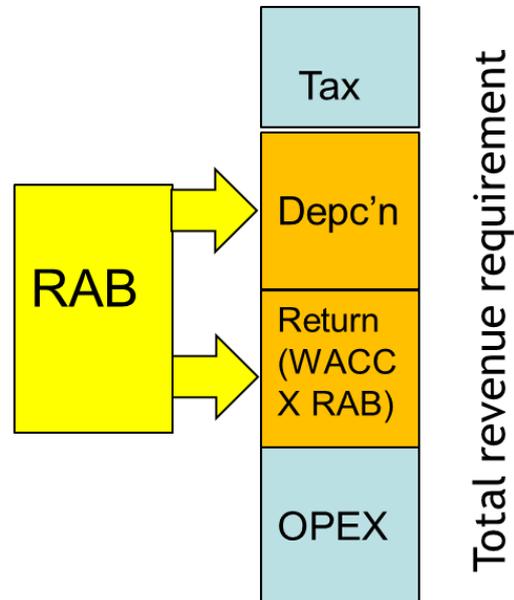
The RAB is what drives the main components of allowable revenues: depreciation and the return on capital. The BCR can have a fun time deciding how the cost of capital (WACC) should vary across the different NBN Co. businesses (Q15,16). It should engage with the ACCC and the Productivity Commission in determining what WACC to use for FW and S.

Clearly, it is expected that neither the FW nor S business will achieve the revenues required for a sustainable business (otherwise the study is unnecessary). But, as part of on an integrated entity (i.e.

<sup>9</sup> Footnote 24, BCR Consultation Paper, May 2015

NBN Co.), should they bear a contribution of any corporate tax paid by NBN Co.? On the avoidable cost basis, I do not think so.

And, as mentioned above, the BCR will want to see what has been included in opex and may ignore some or all allocated costs depending upon what cost method it adopts.



Note that the financing options do not affect the derivation of required revenues as shown above (except that the ratio of debt to equity does affect the WACC).

But, what if, say, some of the equity was changed into a grant covering all or part of the investments in the FW&S services? The investments are large:

*“The Government estimates that over the 30 years to 2040, the fixed wireless and satellite networks (covering the 7% outside the fixed line footprint) will cost about \$13.16 billion in capital expenditure and \$9.45 billion in operating expenses for a total cost of \$22.6 billion. Against that will be revenue of only \$5.36 billion resulting in a total loss of \$16.8 billion, more than half a billion dollars a year. That massive loss is cross subsidised by city broadband users and amounts to about \$6.70 per user per month for every city customer”<sup>10</sup>*

The numbers above seem at odds with those reported by Vertigan:

*“However, deployment of high-speed services using satellite and fixed wireless to the bulk of the remaining 7 per cent of premises not covered by a commercially determined rollout involves a net cost in excess of \$4 billion (comprising \$4.8 billion in costs and \$0.6 billion of benefits)”<sup>11</sup>.*

The BCR needs to get the definitive estimates of costs for providing FW&S services.

Whatever the agreed costs, it seems to me that converting some government equity into a grant towards the capital cost of FW&S services would reduce their respective RABs and also affect WACC

<sup>10</sup> Malcolm’s blog 12 Dec 2014

<http://www.malcolnturnbull.com.au/media/why-labor-got-it-wrong-on-broadband-in-the-bush>

<sup>11</sup> Vertigan, Op. Cit., p13

calculations. It would also, of course, reduce the level of required revenues and the size of subsidies needed to cover costs:

*(More affordable broadband) "could partly be achieved by writing down to their value-in-use any assets NBN Co acquires as they are brought into service. Were that done, the burden of any subsidies would be borne by taxpayers and accounted for in the Commonwealth's budget and associated financial statements. The panel believes this would be an appropriate approach to adopt, as it would signal transparently to taxpayers the capital loss entailed in providing service to uneconomic areas"<sup>12</sup>.*

Note that even if the government does not agree to a write-down/grant, the same effect will be realised if/when the FW&S platforms are privatised because the sale price would effectively write-down the value of the assets:

*"In the full knowledge of (specified) obligations, potential operators would bid to acquire the assets. This bidding process would therefore have the advantage of capitalising expected future losses on the price capped services, substantially reducing the total quantum of required subsidies going forward. Nonetheless, as both the satellite and fixed wireless operators would likely incur losses on operating costs, the bids would be required to include the quantum of subsidy demanded, allowing the Commonwealth to evaluate the minimum subsidy it would need to pay for those services to be made available"<sup>13</sup>.*

It may be possible that the privatised FW&S platforms could be commercial enterprises without subsidies if they are sold at the right price. That price would reflect what the new owners how the new owners operate the business: e.g. they may target CBD business with satellite service, which is not what NBN Co. would do. It will also reflect any expectations about continuing funding through the levy arrangement; but I believe that no such commitments should be made.

As mentioned above, the BCR should look at avoidable costs and revenues of FW&S services.

### **Question 7 What issues are associated with maximising economic efficiency in developing NBN non-commercial service funding arrangements?**

An issue for the BCR to consider is whether the levy should be a uniform rate or vary by area. In the chart below, customers are ranged left to right from cheapest to most expensive to serve; as shown by the red cost curve. There is a geographically uniform wholesale price, A. The difference between line A and the red curve is the contribution that each customer is making to covering the costs of customers to the right of C. The total amount is the area ABC.

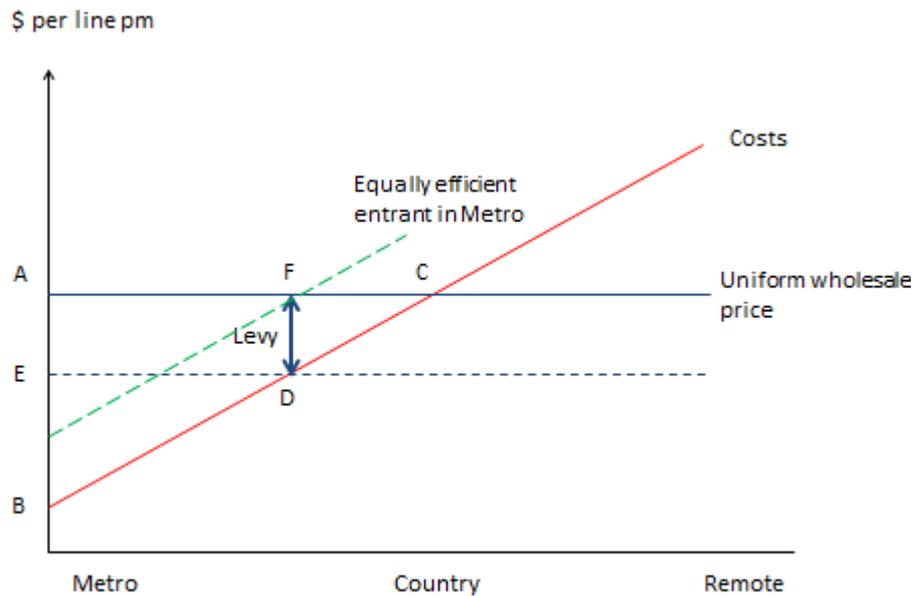
Without a levy, an equally efficient (same red cost curve) entrant in metro areas can profitably under-cut NBN Co.'s uniform price for all customers to the left of C; and so could entrants with higher costs for many of the same customers.

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<sup>12</sup> Vertigan, Ibid., p21

<sup>13</sup> Vertigan, Ibid., p106

If there is a uniform levy as shown (the difference between F and D) this raises the costs of the equally efficient entrant to the green dotted line shown. Now, it can target only target customers to the left of F profitably.

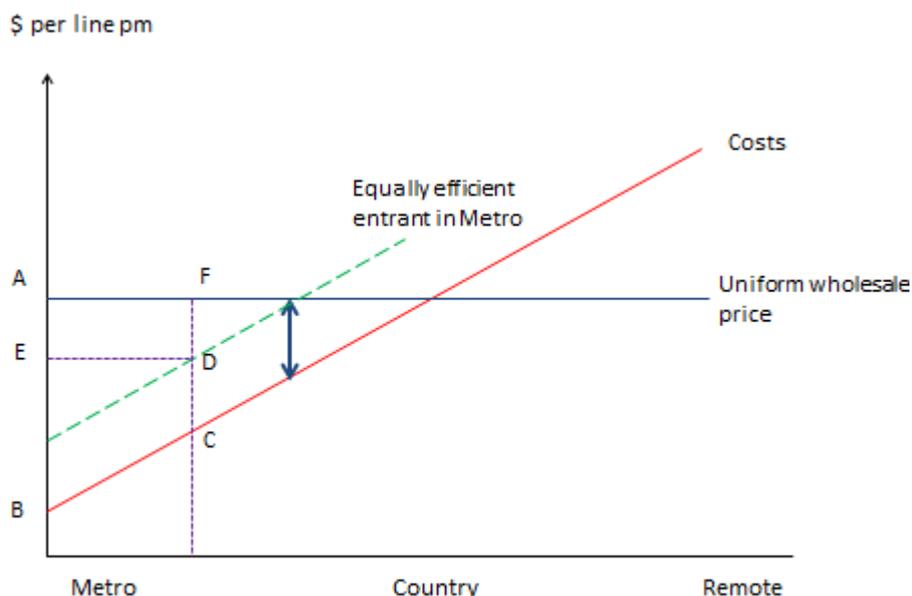


Neither NBN Co.'s costs nor wholesale prices change. All we have done is to nominate what part of the uniform wholesale price represents the levy. Note that with a uniform levy, the proceeds (ACDE) are smaller than the actual internal cross-subsidy (ABC).

**Question 8 In designing NBN non-commercial services, how can pro-competitive market conditions for the provision of both non-commercial and commercial services best be achieved?**

It may be profitable and essential for NBN Co. to *“reduce wholesale pricing in response to competition while still deploying and maintaining NBN non-commercial services”*. This is illustrated below.

NBN Co could lower price from A to E for customers up to F (the wholesale price is unchanged elsewhere). It loses AFDE but retains EDCB.



Clearly, NBN Co. would have to be fairly certain that EDCB is at risk before it gave up AFDE; it needs to keep all the revenue it can. That requires a degree of sophistication in the de-averaging of its uniform wholesale price; it would have to be done by vulnerable sites (i.e. not all metro). And, it would have to be done pre-emptively; once an entrant has gained a site it is too late and inefficient.

While NBN Co. can selectively price below the uniform wholesale price, it cannot price above it in high cost areas because it is price-capped:

*“A price cap is exactly what it sounds like – a maximum price level. The difference is that while the maximum price the NBN Co can charge is capped, it would be, under our policy, free to charge lower prices where it needed to do so to remain competitive”<sup>14</sup>.*

On the one hand, that is necessary because high wholesale prices discourage retail providers from offering service; as we have seen outside metro areas with de-averaged ULL pricing.

On the other hand, Vertigan sees that capping wholesale prices in high-cost areas will discourage wholesale (infrastructure based) competition so:

*“Over time, however, charges and caps in higher cost areas would gradually move to levels that take those higher costs into consideration – much as was done by the ACCC in establishing pricing bands for ULL; without such price adjustments, customers in those areas will forever face ongoing monopoly supply as below cost pricing will make any market entry financially unattractive. This*

<sup>14</sup> Malcom’s blog, Op. Cit.

*differential pricing approach would reduce the level of cross-subsidy within NBN Co's prices and therefore diminish the potential impacts of competition on NBN Co's viability"<sup>15</sup>.*

### **Question 9 What issues are associated with developing sustainable NBN non-commercial service funding arrangements?**

The first step, which has been taken, is to recognise that cross-subsidies cannot be internally funded by an unnatural monopoly for NBN Co.

The second step, now being taken, is to re-purpose the current USO levy (TIL) to raise the levy discussed in the BCR Consultation Paper. As Vertigan reported, the voice and broadband components of the future TIL should be merged subject to current contracts involving Telstra. The BCR should be offering some comments on this.

The third step is to reduce the amount of losses that the industry has to recover. As discussed at Q6 above, there is significant capex in providing FW&S services. The BCR should look making broadband more affordable.

The fourth step, which will accomplish what was not achieved at step 3, is to privatise the FW and S platforms. As noted earlier, the BCR could estimate what operational losses would need to be subsidised – although this could be determined by competitive tender, as suggested by Vertigan. The point is that the sale price will write down the assets if it is clear that only opex will be subsidised.

### **Question 10 What equity issues need to be considered as a result of NBN non-commercial service funding arrangements?**

The introduction of a levy should *"not increase total NBN end user costs compared to current forecasts"* if it simply makes explicit what is embedded in NBN Co. wholesale prices (see chart at Q7). But what about the impost on end users of non-NBN providers who make a contribution to the levy?

The BCR will need to make a *"careful assessment"* of how the levy affects potential contributors. The levy is intended to deter cream-skimming: new investments will be made only if they are profitable after contributing to the levy. However, the levy will be a new impost for those with sunk investments such as iinet which has HFC networks that are not part of the NBN.

The BCR proposes (Questions 20-21) that operators offering fixed broadband access capable of delivering at least 25 Mbps to consumers and small business would be eligible to pay the levy. There are such services now (e.g. iinet) so there will be levy proceeds outside what is collected within NBN Co. (i.e. the internal cross-subsidy). The BCR needs to estimate how much could be collected and whether that should go to the FW&S service; which would reduce NBN Co. wholesale charges. Or, if it should be held elsewhere (Question 19).

### **Question 11 What are appropriate mechanisms to ensure equitable outcomes?**

Vertigan noted that affordability has two equity dimensions:

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<sup>15</sup> Vertigan, Op. Cit., p100

*“Affordability is intended to ensure all Australians can access high-speed broadband services, should they choose to do so, without undue financial sacrifice. Traditionally, this goal has combined vertical equity (that is, the objective of ensuring that irrespective of income level, all households can afford the service) and the geographical dimension of horizontal equity (the objective of ensuring households can access a given service on similar terms, regardless of where they are located). With both objectives being pursued by a single instrument (the uniform national price), substantial distortions are likely to result”<sup>16</sup>.*

The proposed levy plus price-capping of NBN Co.’s wholesale prices address horizontal equity; that is geographical equity in the sense of customers served by FW&S services enjoying the same prices as their metro cousins.

Vertigan suggests that price capping and explicit subsidies provided directly to end users would address vertical equity.

I have suggested another approach<sup>17</sup>. NBN Co. could have an entry level plan that would help retain voice-only end users; which would be self-administering, unlike voucher schemes that are normally proposed in this context.

End users on an entre-level plan and all other users with low levels of use would be disadvantaged by a flat levy per line (i.e. there would be an effective cross-subsidy from low use to high use users). There is no discussion in the consultation paper about the price structure for the levy. But it could be based on traffic or a combination of fixed and traffic charges, like other NBN pricing. Vertigan almost saw this:

*“one option would be to allow NBN Co to impose an ‘access deficit contribution’: that is, to mark up its charges in such a way as to recover any losses it necessarily incurs in providing service in high cost (or low revenue) areas. However, because such charges are typically traffic-based or related in some way to interconnection, it is not clear what form they could take in NBN Co’s case”<sup>18</sup>.*

But, it is clear. Each eligible contributor would be levied for the number of broadband access lines it provided plus the traffic it carried.

### **Question 12 Is a discounted cash flow methodology based on NBN Corporate Plan projections an appropriate approach to modelling NBN non-commercial service losses? If not, why not?**

Cash-flows forecasts are critical although implementation of a levy would probably look only one year ahead and make any correction for over/under recovery of audited losses in the subsequent year.

The profile of costs and revenues is different so it may be useful to set a levy based on a long-term projection. An NPV of the net losses divided by the number of years could then set a stable levy.

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<sup>16</sup> Vertigan , Ibid., p98

<sup>17</sup> Entry Level Pricing for Fixed Broadband, J de Ridder and R James, August 2013 at <http://deridder.com.au/files/Entry%20Level%20Pricing%20for%20Fixed%20Broadband-August.pdf>

<sup>18</sup> Vertigan, Op. Cit., p105

Incidentally, building block models do not involve annualising capital costs<sup>19</sup>. See Q6 above. However, using NBN Co. financial projections to assess cash flows for the FW&S services seems a good way to proceed.

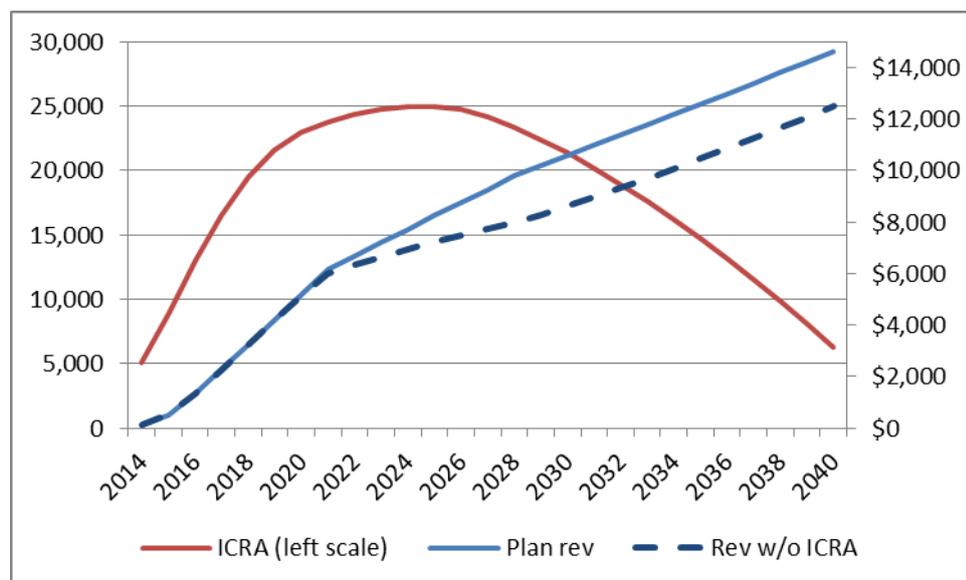
**Question 13 What, if any, issues arise in using NBN Co Corporate Plan financial estimates for the purpose of assessing NBN non-commercial service losses?**

As noted earlier, it is important to unpack opex to see more details of the cost structure.

Vertigan sees no problem with NBN Co.’s initial cost recovery account (ICRA)<sup>20</sup> although where deferred revenue has been allowed in a few previous cases it was expected to be temporary. In the case of the NBN, there is still over \$5 billion to be collected at 2040. In the chart below<sup>21</sup>, there is over \$30 billion difference between the dotted and solid blue lines.

The effect of deferring revenues is to increase measured net avoidable costs.

Should some of the ICRA be allocated to FW&S and would the regulated right to recover these unclaimed revenues be transferable on the privatisation of the associated services?



(Source: Author, file NBN-ARPU-rev-5)

**Question 14 Is a fully allocated cost approach appropriate for the treatment of NBN non-commercial services? What are the strengths and limitations of this approach?**

<sup>19</sup> The BBM regime is more than just a different way of valuing assets. Under the TSLRIC+ regime, the capital stock was valued at ORC and then annualised. But the BBM does not estimate the capital stock (once the initial value has been set) and then annualise it. It calculates the return of capital (depreciation) and return to capital (at the WACC) directly from the opening value of the capital stock year by year.

<sup>20</sup> Vertigan, Op. Cit. p127. And my concerns about aspects of NBN pricing are also dismissed there on the basis it was not Vertigan’s role to revisit or question ACCC or NBN Co. decisions.

<sup>21</sup> See NBN – Comments on ARPU and the ICRA, J de Ridder, April 2013 at <http://deridder.com.au/files/NBN%20finances%20-%20technical%20-%20ARPU-ICRA.pdf>

As discussed at Q1, the costing approach should reflect the purpose. The thought experiment is to estimate the net avoidable costs of providing FW&S services. Assuming a continuing obligation to provide these non-commercial services, a building block approach is required (see Q6 above).

The BCR says, I think, that it will use activity based costing to determine the allocation of common costs. That is a non-trivial exercise. It is extremely unlikely that OSS/BSS and other elements of common costs could be justified by such an exercise. These costs would have been incurred and would remain with or without the non-commercial service obligations.

**Question 15 What are the relevant issues in determining a discount rate for NBN non-commercial services?**

As a government enterprise, the social discount rate may be appropriate for NBN Co. But, if we take the position of someone considering the acquisition of the FW and/or S platforms and associated obligations to serve, a higher discount rate would be necessary.

As noted above (Q12), the reason for doing an NPV is to set a stable levy. In the case of both NBN Co. and the private operator, the proceeds of the forecast levy would be treated as income and with the higher discount rate, the private operator would require a higher levy. This will be the case even with the tender suggested by Vertigan.

**Question 16 What relevant discount rate should be considered for NBN non-commercial services?**

See above.

**Question 17 What issues arise when considering the application of a terminal value for calculating NBN non-commercial services?**

As noted earlier (Q12), the reason for looking at the NPV is to set a stable levy in the face of costs and revenues with different time profiles. For that, you do not need to consider the terminal value, a 2040 horizon of cash flows is enough to consider.

The BCR says that it may need to consider a longer horizon, in which case a terminal value may be needed. But, if privatisation of assets occurs within the 2040 time-frame, we do not need it.

If a longer-term than 2040 is required, do a longer forecast.

Incidentally, I found that NBN Co. implicitly used an EBITDA multiple of 8 rather than 6 in its last long-term plan<sup>22</sup>.

**Question 18 What are the key sensitivities or scenarios which should be considered?**

As noted earlier, the key scenarios which need to be included are:

- privatisation of FW&S before 2040
- inclusion of mobile broadband operators on the NBN and as eligible providers

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<sup>22</sup> NBN – Comments on the IRR, J de Ridder, March 2013 at <http://deridder.com.au/files/NBN%20finances%20-%20technical%20-%20IRR.pdf>

- ICRA (Q13)

**Question 19** Should NBN Co contributions towards NBN non-commercial services, and funding to deploy and maintain these services, be made via a Commonwealth account?

Agree that:

*“non-NBN network operators to contribute via a Commonwealth account while NBN Co continues to fund non-commercial services directly (i.e. without making contributions or receiving funds via the Commonwealth account)”<sup>23</sup>*

**Question 20** What issues should be considered when examining industry funding eligibility?

Pass.

**Question 21** Is it reasonable to apply a service standard to determine eligibility? If so, is a high-speed broadband speed criteria based on a minimum download speed of 25 Mbps reasonable?

Pass.

**Question 22** In the context of NBN non-commercial services, what issues should be considered regarding eligible revenue or other eligibility thresholds?

Pass.

**Question 23** To what extent is it appropriate to consider proportionality when developing funding arrangements?

Pass.

**Question 24** It is practical to consider contestability in the provision of NBN non-commercial services?

Pass.

**Question 25** Would bill transparency arrangements be beneficial?

Pass.

**Question 26** Is it feasible for NBN non-commercial services to be reflected on end user invoicing?

Pass.

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<sup>23</sup> BCR, Op. Cit., p25

**Question 27** Is there opportunity to amend the existing USO/TIL collection arrangements to include NBN non-commercial services collection arrangements – noting that industry funding eligibility may be different?

Pass.

**Question 28** To what extent will elements of the SAU need to change to accommodate the introduction of NBN non-commercial service funding arrangements?

Pass.

John de Ridder

30th May, 2015