



Australian Competition and Consumer
Commission
GPO Box 3131
Canberra ACT 2601

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Reference Industry roundtable on regulatory arrangements under
NBN Co's Special Access Undertaking

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Internet Australia appreciates the opportunity to provide a written submission to the discussion paper released prior to the roundtable meeting regarding NBN Co regulatory arrangements. Thankyou also for publishing the summary of discussions on the day.

The NBN – as intended in its formation – has become the dominant and largely monopolistic infrastructure that most Australians rely on for Internet communication. Internet communication has become as essential as the other main utilities of water and electricity, and possibly more so. The NBN and Internet has also effectively taken over the telephone system, so when these other utilities fail, it is to NBN-dependent communications methods that affected people turn to, whether by web-based Internet portals, social media updates via Twitter and Facebook and similar services, or ringing the organisation via telephone call (over an NBN access service) that most people need to turn to report the problem, find the status of the problem, and initiate a repair.

The COVID-19 pandemic has put the essential nature of ubiquitous always-on Internet connectivity in very sharp focus, for all demographics but particularly the less well-off in society. With so many people home-schooling children, working from home using video-conferencing, businesses turning to online catalogues and e-commerce sites to provide ordering systems for home delivery of goods and services, home-delivery and “click’n’collect” systems for essential goods such as food and groceries, without high-speed broadband the ability of Australians to cope with the emergency would have been greatly constrained.

With the online-first nature of provision of information about the pandemic and local status updates by government, continuously updating online lists of exposure sites and travel restrictions, online booking systems for vaccinations, and application systems for relief payments all being online, and the essential need for all of society to quickly search access for the latest information about virus-related issues which are made available first online, it is self-evident that without the high-speed broadband Internet system underpinned by the NBN, the ability of governments to manage the crisis and provide information and services to citizens would also have been greatly constrained.



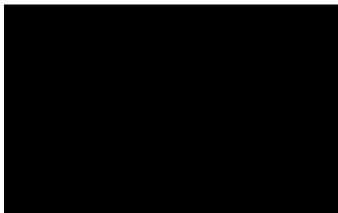
For these reasons a broadband service must be ubiquitously available, of sufficient capacity and quality to access government-provided services and assistance channels at a minimum, and affordable - a low enough retail price point (possibly at zero price to the end user) that disadvantaged and very low income families and individuals can subscribe without feeling like it is a luxury. Around 20 per cent of the population is still not connected, and a sizeable proportion of that 20 per cent simply cannot afford the current service offerings – yet still require a broadband Internet link for their children’s education and accessing essential services from home while being required or encouraged to stay indoors and not travel to a service storefront.

Appropriate regulation of the wholesale input costs to retail service providers is required to ensure services are universally available at a much lower price-point than the current NBN-supported entry-level price that appears to have settled around \$60/month in the retail market.

About Internet Australia

Internet Australia is the not-for-profit organisation representing all users of the Internet. Our mission – “Helping Shape Our Internet Future” – is to promote Internet developments for the benefit of the whole community, including business, educational, government and private Internet users. Our leaders and members are experts who hold significant roles in Internet-related organisations and enable us to provide education and high-level policy and technical information to Internet user groups, governments and regulatory authorities. We are the Australian chapter of the global Internet Society, where we contribute to the development of international Internet policy, governance, regulation and technical development for the global benefit.

Sincerely



Dr Paul Brooks
Chair – Internet Australia



Submission by Internet Australia

Consultation Paper – Framing Paper for publication – SAU industry roundtable – June 2021

Importance of continuing regulation on NBN pricing

While the wholesale-retail split allows for competition at the retail level, there is in fact little differentiation of services when all retailers can only re-sell the same small number of wholesale plans, which are only different from each other in one dimension – downstream and upstream capacity. This forces all service providers to sell much the same product and compete mainly on price. The situation with NBN is little different from the broadband situation in Australia back in the mid-2000s, where the majority of service providers resold Telstra Wholesale services at the three universal speeds offered by Telstra Wholesale of 256/64, 512/128 and 1500/256 (kbps down/up respectively).

With little ability to differentiate, retail providers must compete primarily on price. However the dominant underlying costs that determines how low that retail price can be without the retail provider operating at a loss are set primarily by the wholesale prices that NBN charges. NBN, as has been widely reported, are more focussed on increasing the ARPU of its services to a target of around \$52/month¹ or around \$10/month higher than current charges, pushing and encouraging service providers to sign up consumers to higher speed plans at higher price-points^{2, 3} and discouraging service providers from selling the smaller capacity cheaper plans through offering short-term discounts on the higher-speed plans to become price-competitive for a while⁴, until usage changes increase the revenue.

As NBN Co does not face significant competition that might cause it to naturally seek initiatives to sustainably reduce wholesale prices (and ARPU) to remain competitive with other services in the market, it is essential that NBN Co be subject to price and non-price regulation to ensure it acts in

¹ <https://www.technologydecisions.com.au/content/networking/article/nbn-unlikely-to-hit-arpu-target-for-2021-666016312>

² <https://www.zdnet.com/article/nbn-residential-arpu-remains-stuck-at-au45/>

³ NBN Co, RMID1027 Pricing Review 2021 – Consultation Paper 1, Feb 2021, online at <https://www.nbnco.com.au/content/dam/nbn/documents/media-centre/media-statements/2021/nbnco-pricing-review-2021-consultation-paper-1.pdf>

⁴ <https://launtel.net.au/2018/07/22/the-great-game/>: “Really only the nbn50 is a good deal on the bundles, all the other speed tiers end up being more expensive. The nbn12 and nbn25 bundles are the same price as the nbn50 bundle (thus making them more expensive) and the nbn100 and above bundles are significantly more expensive than their unbundled counterpart. However because typically 75% of an RSPs users are on the nbn50 speed tier, the incentive to move to the bundles is still strong.”



the best interest of citizens and Australia as a whole, not in its own self-interest, where these are inconsistent.

1 Framing Paper Questions – Price Control Framework

1.1 Three High-Level Principles

1. We have outlined three high level principles to use in assessing whether particular NBN access product and pricing arrangements would promote the long term interests of end-users. What additions, deletions or refinements would you recommend?
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As described above, currently there is very little differentiation amongst service providers, as all retail service providers are constrained to provide the limited set of up/down speed services that NBN provides at a wholesale level. While we strongly agree that **access arrangements should support a wide range of retail service offerings attractive to different categories of end-users**, that is not occurring to date. When a certain speed combination (say 50/20 Mbps down/up) is sold at a certain wholesale cost, there is no incentive for an RSP to differentiate by artificially constraining the service (say to create a 20/20 symmetric retail product out of a 50/20 wholesale product).

the Framing paper on page 5 identifies “optional product features have allowed access seekers to select the level of operational quality and traffic class priority that they can offer to individual customers.”. While this is true in theory as the options are available in the product catalogue, in practice any improvement on the base quality level is priced so exorbitantly high that the premium cannot be justified in a residential setting – in practice, such improvements are rarely chosen and then usually only in a business usage application.

An example of a product construct which would support far richer product differentiation, while retaining the principle of wholesale pricing for NBN Co increasing as total service utility increases, would be if the RSP could choose to allocate different proportions of aggregate capacity to the upstream and downstream directions. If instead of a fixed 50/20 Mbps downstream/upstream ratio this ‘plan’ could allow different RSPs to ‘dial up and down the ratio’ and offer the same 70 Mbps aggregate (priced the same from NBN Co) in the form of 60/10, symmetric 35/35 or even a version focussed on higher upstream capacity than downstream (say 20 Mbps down, and 50 Mbps up) more suited to many small businesses, and every variation in between, for the same wholesale cost point from NBN.

Specifically addressing the ACCCs suggestion at Principle 1, item (iv):⁵

“For example, the adoption of suitability priced AVC ‘speed bolt-ons’ could allow access seekers and their customers to more closely match access product speed and price to the attainable speed of the line. This in turn would provide a stronger incentive to fix poor fibre to the node connections where efficient to do so.

⁵ ACCC Framing Paper – SAU industry roundtable, page 6



We consider this suggestion is not suitable as it would only serve to reward poor network construction, by entrenching a situation where the customer is required to pay more (and NBN recover more revenue) in order to use capacity they should already be entitled to use, where the underlying cost to NBN Co is no different regardless of the attainable speed of the line. Regardless of what speed the FTTN line can actually operate at, and regardless of what speed was ordered by the end-user, the line and the port on the FTTN DSLAM cost NBN Co the same amount to purchase, operate and maintain. We consider the same incentive to fix poor FTTN connections would exist where the RSP (and passed through to the end-user) was changed only for the next lowest attainable speed-tier below what the customer wished to order, but the port was provisioned to use 'up to' the whole attainable capacity on the line. That is, if a customer orders a 50Mbps service and the line is only capable of 35 Mbps, then the RSP and the customer should be able to use the full 35 Mbps of which the line is capable, but the RSP and end-user should only be charged the amount appropriate to a 25 Mbps tier connection, until and unless the line is remediated.

Regarding Principle 2 Access seekers should have reasonable certainty over access costs over time for a given level of quality

Again we strongly agree – and submit that the only way this can be achieved is if there are no volumetric pricing elements from NBN. An access seeker cannot control how much or little data an end-user will wish to exchange, and so cannot have certainty over access costs if it is subject to cost components that vary based on data volume. And neither should they need to – the operating cost-base for the NBN, and for the access seeker if they were operating their own network which was constructed efficiently, has no volumetric cost components. The access portion represented by the network access equipment and the AVC charge, that in other architectures would be referred to as a per-subscriber 'port charge' or similar, costs NBN Co precisely the same amount for a 'port', irrespective of the speed of the service provided by the port or how much data flows through the port. The NBN backhaul component between access equipment and POI, represented by the CVC charge, similarly has no volumetric cost to NBN if built efficiently – NBN wholly owns the transmission equipment and the optical fibre on which it is carried, so its costs are infrastructure-ownership costs of construction and maintenance – costs that are completely independent and fixed irrespective of how much data flows through the network.

Regarding Principle 3: The access provider should have a reasonable opportunity, but not the guarantee, to earn an appropriate return on its efficient investment and recover its efficient operating costs:

While the access provider should have 'reasonable opportunity' to earn an appropriate return on efficient investment, and recover its efficient operating costs, that opportunity should not be guaranteed through measures such as protectively anticompetitively favourable legislation, and an independent body such as the ACCC should first determine that its actual operating costs and investment was, indeed, 'efficient'.

Internet Australia considers that the NBN in its role of access provider is operating in an environment where the services and infrastructure competes with infrastructure installed and operated by private and publicly-held carriers, using capital funds invested at risk of being



competed with and potentially not achieving a business plan if another organisation can out-serve and under-price similar services and gain market share. Prior to the development of NBN Co, the Commonwealth Government had gone to great lengths to privatise its government-owned infrastructure-based carrier (Telecom/Telstra), and put Telstra on a somewhat equal playing field, underpinned by a telecommunications regulatory regime that promoted competition and innovation for providers to attempt to win market share and live or die on the success (or otherwise) of its strategies.

NBN Co, except in size and scale, is little different from the many alternative access network providers in greenfield and brownfield estates it is or will compete with, and should not expect any more guarantee of achieving its financial targets as any other private company investing capital in such a way. It makes little difference to the government budget if the NBN achieves its 'return' in 10, 20 or 50 years, or indeed never achieves a commercial return and operates at a small loss or cashflow profit similar to other utilities or government-owned enterprises. Arguably the aggregate benefit to Australia from lower retail broadband prices stimulating business and social activity may over-compensate the nation for any shortfall or delay in the NBN Co achieving or not achieving its ARPU and financial targets.

Pricing review related to Satellite services

In addition to the three principles listed in the ACCC paper, we consider that special attention needs to be focused on the pricing and product construct related to the NBN Satellite connection option.

The nature of NBN site classification to a single NBN technology dictates that a premises allocated to the NBN technology is unable to access any other service, even if within adequate line-of-sight of a Fixed Wireless tower. Pricing for NBN satellite services, uniquely, involves data volume caps, peak and off-peak differences in costs and characteristics, and is structured such that the monthly cost, after 'speed boosts' and extra data packs are applied, greatly exceeds the catalogue subscription price. These additional data volume inclusions, caps and add-ons have not kept pace with the actual increased data volumes required to be exchanged by a family working and schooling from home.

Any future consideration of NBN pricing must involve a review of the NBN satellite data capping and pricing model, and simplification to a model more akin to the other technologies where the contracted base cost to the consumer each month is usually what was expected, rather than being a rarity.



1.2 Reasonable Certainty over revenues and costs

2. What ideas do you have so that NBN Co and access seekers can have reasonable certainty over their wholesale average revenues per user and access costs respectively?
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Internet Australia submits the NBN CVC charge should be eliminated, or if not eliminated then reduce in the manner described below, at the same rate as traffic volume rises – between 30% to 40% reduction year-on-year.

The first step in doing so might be an ACCC forming a view of an efficient construction cost and operational cost model to identify what the actual cost of the backhaul portion represented by the CVC charge is. The NBN construction is now finished, so there should be no more expansion of the fibre backbone transmission between access equipment and POI locations. The costs of operating this network are fixed regardless of how much traffic is flowing through. Further, a large proportion of the traffic carried to the POI is from access equipment less than 40 kilometres from the nearest POI, particularly in urban areas, where the cost to NBN of a dark-fibre carrying that traffic, including all transmission equipment is less than a cent per Mbps for which NBN Co is charging between \$8 to \$16 per Mbps. Even taking into account far flung areas in rural settings such as the north-west areas of Western Australia being back-hauled down to Geraldton where the cost of transmission per Mbps is significantly higher, the blended average cost to NBN across Australia on a per-Mbps basis cannot be remotely close to the \$8 - \$16 per Mbps volume charged to RSPs.

From the point the network was declared finished, NBN should only be permitted to recover the same total revenue for CVC component, and CVC revenue should be frozen apart from a CPI-related annual increase. If NBN wishes to continue to charge a per-volumetric price for CVC, then each year the per-Mbps charge should reduce by the same proportion as the traffic levels have risen (30% to 40% year-on-year), to keep the NBN revenue from CVC overall flat over time from year to year.

This construct would mirror the cost structures that telecommunications carrier would naturally incur if they could build their own network rather than use NBN Co's network – a flat fixed cost-base for ownership operations and maintenance of the underlying infrastructure, regardless of how much traffic passed through it.

1.3 Breadth of retail products should CVC charges be removed

3. What suggestions do you have to preserve the breadth of retail products that are in market in the event that volumetric CVC charges were to be withdrawn or scaled back? Please consider how support for unique maximum speed products, diverse busy hour speeds, voice only and low data quota products could best be provided in such a wholesale pricing model.
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It is a false dichotomy to suggest that the removal of volumetric CVC charges would result in a reduction in breadth of services. It is also presumptive that a removal of CVC charging would



necessarily result in an increase in access charges, prior to an independent cost model review. On the contrary, it is likely there would be an increase in the variation in practical service characteristics offered, as the certainty in costs incurred for the RSP is likely to provide more confidence to take chances on product variations without the risk of the variation causing a blow-out in costs.

A removal of volumetric CVC charges would also enable RSPs to provision headroom in their CVC transmission links, removing the incentive to manage capacity so closely that the networks are always operating on the borderline of congestion. This would result in an improvement of reliability, predictability and service quality especially at peak times.

Internet Australia does not support the concept of 'diverse busy hour speeds', which essentially condones congestion and poor performance during busy hours. As we provided in our submission to the Department of Infrastructure, Transport, Regional Development and Communications (Department) regarding the Telecommunications (Statutory Infrastructure Providers – Standards, Rules and Benchmarks) Determination 2021 (SIP enquiry), regarding NBN Co as a SIP:

"...In particular, within the network region for which a SIP is responsible (from premises to POI), there should not be any congestion at any time, and hence no allowance for slow-down at peak times. Any slow-down in end-user experience of throughput during peak times should be attributable to either a retail service provider's network (including backhaul from the SIP's POI) or general Internet peak-hour congestion outside the retail service provider's network."

"SIPs are not subject to the same forms of network contention that give rise to peak-hour performance slow-downs for retail providers and the Internet at large. Accordingly, we consider there should not be any permissible allowance for peak and non-peak speeds to be different for SIPs."

"At a wholesale level, we consider a SIP should deliver the full speed contracted on behalf of the retail end-user, 100% of the time, on a 24x7x365 basis. There should be no 'peak speed standard' that allows for slow downs even during peak times."

On the other hand, Voice-Only services should be relatively simply provided using a NBN Wholesale product of 12/1 (or better, 10/10 symmetric if a more flexible access product system is developed), where the retail provider arranges the Voice-over-IP services to be carried over the low-capacity (ideally symmetric) link. Similarly low-quota services can still be provided by the retail providers, who may still offer limited data quotes based on their input cost model for national and international Internet transit connectivity, after the traffic has exited the NBN into the RSP's network. There should be no impediment to NBN offering a low-priced low capacity (say 25/5 Mbps down/up) service for use by RSPs to offer affordable entry-level connectivity closer to the all-in \$30/month retail price desired by underprivileged community and their advocates

1.4 Regulatory Controls against Discounts

4. Should we consider regulatory controls to safeguard against discounts again becoming the principal means by which NBN access products and pricing are implemented? What form could these take?
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We do not take a view on this aspect. Any method by which RSP costs can be reduced, and hence reductions in retail pricing can occur, in a manner that doesn't unfairly favour a small number of RSPs and reducing competition should be considered against other options.

1.5 Cheaper broadband for low-income earners

5. Do you support a cheaper broadband product for low income earners? What form should it take and how should it be funded?
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Internet Australia strongly encourages a cheaper broadband product for low-income earners. As outlined earlier, we consider it essential that low-income end-users, individuals and families be able to access an affordable broadband Internet service as an essential utility service, at a retail price-point under \$30/month.

We recommend consulting community groups that are already active in researching the forms it might take, including supporting calls for action on communications affordability⁶ and working with groups in a similar way to Telstra's Low Income Measures Assessment Committee (LIMAC)⁷ formed as part of Telstra's license conditions.

We consider that such a service would ideally be a symmetric service, to ensure neither direction of data transmission fell below a threshold that prevented effective use of the service for downloading and uploading forms and accessing common government and not-for-profit assistance.

2 Questions Relating to Revenue Controls

2.1 Objectives for SAU revenue control mechanism

1. Do you have any views on the ACCC's objectives for the SAU revenue control mechanism? Are there any other objectives that should be considered?

We share the ACCC's concern that possibly "a revised SAU would enable NBN Co to prioritise revenue targets at the expense of other policy objectives, such as providing affordable high speed broadband to all Australians and maximising benefits of the NBN."

We agree that NBN should be able to recover efficiently incurred costs – however we would like to see 'efficient costs' to be independently evaluated using modern equipment and network architectures, with methodologies to account for NBN's significant economies of scale and vendor

⁶ ACCAN 2020, <https://unitingcare.org.au/download/community-sector-organisations-call-on-government-to-act-on-communications-affordability-issues/>

⁷ <https://www.telstra.com.au/aboutus/community-environment/community-programs/access-for-everyone>



discounts that NBN can access. Also as outlined above, we do not consider NBN should be protected from effective competition that may effect the recovery of efficient costs

We also agree that NBN co should face incentives to making efficient investments. These incentives should prioritise long-term planning and provisioning to make efficient use of capital, in the absence of a competitive threat that would rationally encourage NBN CO to be efficient in its operations.

We consider there is little risk where NBN, if operating efficiently, cannot generate sufficient cashflows to support its ongoing operations, plus a surplus to fund new investments and/or pay down the ICRA. The NBN network infrastructure is all relatively new, was covered under warranty provisions where the costs of rectification of issues is recovered from the vendor, and with low maintenance costs. The staffing costs of NBN similarly should have reduced significantly as the construction phase came to an end, with no requirement for large numbers of construction supervisors, project managers, procurement staff, and similar. NBN as a monopoly provider has little need for sales staff, and relatively simple billing requirements and as such should need relatively low costs of back-office staffing. NBN also enjoys significant efficiencies of scale, being able negotiate bulk purchase discounts due to high volume well beyond any other telecommunications network infrastructure owner. If operated efficiently, the operating expenses of the NBN should be significantly lower than annual revenue, yielding a cash profit that can be accounted against the ICRA and used for efficient network augmentation.

Recognising the social benefits and essential nature of the infrastructure, the Government and ACCC should not tilt the playing field towards profitability such that services become unaffordable. In the unseemly haste of attempted to increase ARPU in order to rapidly reduce the ICRA. The government could also consider effectively an internal transfer of value to recognise the reduced costs incurred by government-provided services such as Centrelink, benefits application processes, healthcare and other fields where online delivery of services – where the access method is funded by the end-user - has reduced the costs of government providing those services, for example by greatly reducing the number of in-person interactions and telephone call-centre staff required to be provided by the government departments that would otherwise have incurred the full costs of servicing the population.

2.2 Incorporation of ICRA

2. What do you think would be an appropriate approach for incorporating ICRA in a BBM for the SAU?

We have no comment to make on this item

2.3 Incentives to upgrade in a timely and efficient manner

3. What would be an appropriate approach to ensure NBN Co has appropriate incentives to upgrade its network in a timely and efficient manner?

The term “upgrade its network” has different meanings in the two different regimes of the NBN network.



In relation to the backhaul component between access equipment and the POI, NBN Co should be encouraged to acquire transmission equipment and systems and 'lighting up the fibres' with equipment suitable for supporting the volume of data predicted at least 5 years in the future, and ideally 10 years. An incremental 'just in time' planning and deployment process would result in massive inefficiencies through missing the opportunity to leverage the organisations economies of scale. We would like to see a 5-year and 10-year planning horizon that accommodated the generally accepted measure of Internet data increasing roughly 30% year-on-year, to ensure purchasing decisions made now ensure a large amount of spare capacity and headroom can inform the purchase process.

In relation to access network equipment (FTTN DLAMS, FTTP node cabinets, HFC head-end CMTS), NBN must have incentives to upgrade, or even scrap and install the next generation of technology to provide more extensive improved services (e.g. 10 Gbps and 40 Gbps GPON technologies).

The best way of encouraging NBN to upgrade its network in a timely and efficient manner would be for NBN to be subject to effective wide-scale infrastructure-based competition. NBN would rationally improve its infrastructure to at least maintain service parity with a competing provider. One approach to encourage the development of non-NBN competing infrastructure networks may be to repeal the anti-competitive provisions inserted into the *Telecommunications Act 1997* that restrict non-NBN entities from effectively competing with NBN,

2.4 Current SAU into the future

4. Could elements of the arrangements that are currently intended to apply from 2023 under the current SAU provide a good blueprint for considering arrangements for new investment and expenditure proposals in a revised SAU?

We have no comment to make on this item

2.5 Reporting and Transparency

5. What reporting or transparency requirements should be established to support arrangements under a revised SAU?

NBN could be required to report actual expenditures to ACCC in the form of a RKR, split out between access network and NBN backhaul infrastructure CAPEX and OPEX (from access equipment to nearest POI), and to identify the scale ratios such as \$/Gbps cost to show to the ACCC that the network is becoming more efficient over time as traffic volumes grow.

Ends