# RMID1064 - nbn Special Access Undertaking Variation 2021 – Discussion Paper

**June 2021**

**nbn SAU Variation 2021 – Discussion Paper**

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# 1 Executive Summary

**nbn**'s Special Access Undertaking (SAU) plays a central role in the telecommunications industry's regulatory framework, providing certainty on key price and non-price issues for both **nbn** and Retail Service Providers (RSPs). With the **nbn**™ network now declared as being treated as built and fully operational, **nbn** is proposing updating the SAU. This paper sets out the rationale for this and seeks feedback on options under consideration.

Since the SAU was accepted in 2013, the **nbn** landscape has changed significantly. From less than 100,000 active services at the end of 2013, we now have over 8.1 million. We implemented the multi-technology mix (MTM) approach during 2014-17, and completed our initial network build in 2020. The central role played by **nbn** in enabling Australia's digital capability was highlighted last year as COVID-19 changed the way that people live, work, and learn.

Through all this, the SAU has operated largely unchanged.[1] The time is now right to seek to vary **nbn**'s SAU so that it continues to remain relevant and promote the long-term interests of end-users. In particular, changes are required to support the evolution of **nbn**'s pricing to deliver increased certainty and predictability to RSPs. **nbn** is commencing this variation process through public engagement with RSPs, the ACCC and other stakeholders prior to lodging a formal variation with the ACCC. **nbn** is seeking to achieve a number of outcomes in commencing this engagement with the industry at this time. This "pre-lodgement" process is intended to provide:

- RSPs with the opportunity to provide suggestions or raise issues on both the SAU and our long-term pricing approach, so that **nbn** can consider these as we formulate our variation prior to lodgement.
- Visibility to the ACCC of matters raised by RSPs, so that they are aware of potential topics that will be covered in the variation that **nbn** ultimately lodges.
- All parties with the opportunity to review and provide feedback on the detailed SAU drafting provisions prior to lodgement.
- **nbn** with an understanding of RSP and ACCC views in relation to the SAU and pricing, to give **nbn** the opportunity to consider and respond to them before we lodge.
- All parties with a better starting point for the lodged SAU variation, with the hope that the variation is able to be accepted in a timely manner, to allow its benefits (including new pricing) to flow earlier.

This Discussion Paper is the first step in that process. It provides a high-level description of our proposed amendments to ensure the SAU continues to deliver the objectives for which it was first established.

As detailed further in this paper, the SAU has been designed to achieve a number of objectives which recognise the role **nbn** has been asked to undertake by government. The objectives, which provide sustainable, long-term benefits for **nbn**, the industry and end-users, and remain relevant as the SAU evolves, are that the SAU should:

- *Support the delivery of Government policy objectives for **nbn**;*
- *Enable a sustainable and competitive retail environment;*
- *Support efficient investment in the network as well as efficient use of the network;*
- *Support continued investment to lift the digital capability of Australia;*
- *Provide **nbn** with the opportunity to recover efficiently incurred costs; and*
- *Provide **nbn** with the flexibility to respond to market dynamics.*

[1] Noting that the SAU was recently varied to extend the term of certain non-price terms. This variation was accepted by the ACCC in April 2021. See: https://www.accc.gov.au/system/files/Notice%20to%20NBN%20Co%20to%20accept%20SAU%20variation.pdf

The areas we intend to cover in our 2021 variation are: (1) Pricing; (2) Inclusion of the MTM technologies; and (3) Targeted modification of other SAU terms. The proposals presented here are intended to facilitate discussion on key aspects of the SAU. However, we recognise that there may be matters beyond our proposals that the industry wishes to raise in relation to the SAU or our pricing. We welcome these being provided either in response to this Discussion Paper or during other stages of this engagement process, and we will consider all matters raised.

## (1) Pricing

This Discussion Paper also serves as the next step in "Part B" of the pricing consultation process **nbn** commenced in February this year, and proposes new long-term pricing constructs for consideration by the industry.

We believe that the three pricing proposals canvased in this paper substantially address concerns raised by RSPs and the ACCC that because of **nbn**'s current bundle discounts, which effectively price AVC and CVC below the Maximum Regulated Price (MRP) in the SAU, **nbn**'s pricing is not effectively constrained by regulation, which has the potential to adversely impact the predictability of wholesale costs faced by RSPs.

In particular, two of the pricing options proposed in this paper would see the removal of CVC charges, resulting in an "AVC-only" pricing construct for some or all TC-4 fixed line and fixed wireless speed tiers.[2] In all options proposed, we would include these as prices regulated by the SAU, rather than via discounting. We believe this change substantially addresses many of the concerns that have been expressed by RSPs and the ACCC. However, we recognise that any pricing construct will have advantages and disadvantages, and we will continue to work with RSPs and the ACCC to identify whether there are any other approaches which could better address those concerns. We encourage RSPs and other stakeholders to put forward other long-term pricing constructs that can ensure the objectives underpinning the SAU (set out in section 2.2) are met.

## (2) Inclusion of MTM technologies

**nbn** has previously sought to incorporate the MTM technologies into the SAU framework, to provide a consistent and integrated approach to the regulation of our services. It was not possible to achieve this in variations lodged in 2016 and 2017, but **nbn** considers that the inclusion of the MTM technologies within the scope of the product and pricing provisions of the SAU remains an important objective. Our proposed approach in the 2021 SAU variation is similar to that adopted in previous variations, with the addition of FTTC services to the FTTN, FTTB and HFC services included in the 2016 and 2017 variations. As described in section 4, we propose to update the description of these services and their terms in the SAU to reflect the recently commercially negotiated outcomes for the current Wholesale Broadband Agreement (WBA4), which also reflects the outcomes of the ACCC's 3-year inquiry into **nbn**'s Wholesale Service Standards and the ACCC's Pricing Inquiry.

## (3) Updating of other SAU terms

With the passage of time, several SAU terms have become outdated, and **nbn** sees this current SAU variation process as providing the opportunity to either refresh or remove such terms. For example, the removal of the Fibre Multicast product (which has recently been withdrawn) and the Interim Satellite Service which ceased operating in 2017 are logical updates to accommodate changes since the SAU was first accepted. A complete list of these proposed changes is set out in section 5.

[2] In this paper, the term "AVC-only" pricing is used to refer to a pricing construct in which RSPs would pay a single flat recurring charge each month for the AVC and CVC product components of each TC-4 service, with the associated variable (overage) charge set at $0/Mbps.

# 2 Overview and objectives of the SAU

## 2.1 Overview of nbn's SAU

**nbn**'s SAU is a key part of the regulatory framework that governs the terms on which **nbn** supplies services to RSPs over the period to 30 June 2040. It was accepted by the ACCC on 13 December 2013 and covers Layer 2 access services provided over **nbn**'s Fibre, Wireless and Satellite networks. The acceptance of the SAU followed a multi-year engagement between **nbn**, the ACCC, RSPs and other stakeholders to ensure it provided appropriate regulatory settings for the rollout of **nbn**'s network and access to the services provided over it.

Since its acceptance, **nbn** has operated under the terms of the SAU, which, amongst other things:

- Establishes Maximum Regulated Prices (MRPs) for all products covered by the SAU, and places controls on how those prices can change over time, which includes that each individual price for these products can increase by no more than CPI-1.5% in any year, on a "use it or lose it" basis.
- Sets out the processes that **nbn** must follow for product development, modification, and withdrawal.
- Defines the processes that **nbn** must follow in order to include capital expenditure in a Regulated Asset Base (RAB); to include operational expenditure in the determination of the Annual Building Block Revenue Requirement (ABBRR); and the mechanisms by which **nbn** calculates its initial losses and is provided the opportunity to subsequently recover them as revenues increase.

The SAU has a modular structure, which specifies certain terms in detail for the first ten years of its operation, with others to be established via the lodgement of "Replacement Modules" that apply from July 2023 onwards, with certain other terms continuing for the full term of the SAU as specified in Module 2 of the SAU.

The SAU also specifies fixed principles which endure for the full term of the SAU, including that the opening values of the RAB and the ICRA in each foregoing regulatory period are to be equal to the closing values of the RAB and the ICRA in the immediately prior regulatory period.

The core elements of **nbn**'s building block model (BBM) are described in detailed terms for the period of Module 1 of the SAU (to 30 June 2023), incorporating **nbn**'s actual costs for expenditures that meet the SAU's Prudent Cost and Prudent Design Conditions, and in higher-level terms for Module 2 of the SAU (which runs until 30 June 2040). The operation of the Long-Term Revenue Constraint Methodology (LTRCM) within the SAU means that expenditures on all **nbn** networks (including the MTM networks) are included in the LTRCM's arrangements. As a result, the Regulatory Asset Base (RAB) and Initial Cost Recovery Account (ICRA) values determined annually by the ACCC include the totality of **nbn**'s prudently incurred costs.

**nbn**'s prices are not currently set by reference to our prudently incurred costs under the BBM, and in fact to date have resulted in **nbn** under-recovering its prudently incurred costs. Instead of anticipating immediate cost recovery of **nbn**'s large up-front investment, the BBM in the SAU sets out the framework in which **nbn** is afforded the *opportunity* to recover those costs over time. This framework also sets out the mechanism by which **nbn** has the opportunity to recover initially unrecovered costs over time. Further detail on the long-term cost recovery mechanism under the SAU – and how this has operated to date - is set out in Appendix A.

While **nbn** acknowledges that some changes and updates to the SAU may be required to reflect experience gained over the past 8 years, with a particular focus on **nbn**'s discounting and pricing arrangements, as well as to incorporate the MTM technologies, we consider that at its core the SAU continues to meet the objectives that it was designed to meet and which are set out below in section 2.2.

## 2.2 Objectives of the SAU

The objectives of the SAU are tied not only to the role that **nbn** plays as a network operator but the context in which the **nbn™** network was deployed. **nbn** was established for two key policy reasons:

> (1) **To bridge the digital divide**: ensuring that all Australians have access to high speed broadband that fosters productivity and delivers economic and social benefits for all Australians; and
>
> (2) **To institute market reform** and establish a more competitive market for retail broadband and telephony services.

The objectives of the SAU reflect the reasons for which **nbn** was established, as well as the expectations that government and taxpayers have of **nbn** to operate as a commercial entity. These SAU objectives are:

1. **Supporting the delivery of Government policy objectives for nbn:** In establishing **nbn**, Government laid out a number of key policy objectives that **nbn** was expected to deliver, including speed and network coverage requirements. These requirements have been updated in successive Statements of Expectations from our Shareholder Ministers, and include a requirement to deliver the Government's broadband policy objectives at least cost to taxpayers. The SAU is designed to support the delivery of these objectives and to allow **nbn** to recover their costs over time from end-users.
2. **Enabling a sustainable and competitive retail environment:** In addition to providing Australians with access to high speed broadband services, **nbn** was established as a vehicle for market reform; a wholesale-only provider created to foster a vibrant and sustainable retail market in which end-users could access innovative products from competing retailers at affordable prices.
3. **Supporting efficient investment in the network as well as efficient use of the network:** The **nbn™** network was rolled out to provide all Australians with access to high speed broadband. Connectivity to the network would serve little purpose if end-users were unnecessarily constrained in their ability to access these speeds and the network's potential was not utilised. Facilitating access to the network needs to be achieved in a way that encourages **nbn** to continue to efficiently invest in the network to meet evolving end-user demand.
4. **Supporting continued investment to lift the digital capability of Australia: nbn** requires the ability to earn revenues that allow it to invest efficiently in future network upgrades, capacity enhancements and to continue to meet the needs of all end-users across all geographies, including to meet our obligations as a Statutory Infrastructure Provider (SIP).
5. **Providing nbn with the opportunity to recover efficiently incurred costs:** The SAU is designed to provide **nbn** with the opportunity to recover the significant investments and operational expenditure (including an appropriate return on investment) that **nbn** has efficiently incurred to deliver enhanced broadband capability across the country to bridge the digital divide that existed prior to **nbn**'s formation. This was a key basis on which the SAU was given by **nbn** and accepted by the ACCC in 2013, and is a standard tenet of infrastructure pricing and revenue regulation. In particular, **nbn** must have the opportunity to earn revenues sufficient to meet its external financing commitments.
6. **Providing nbn with the flexibility to respond to market dynamics: nbn** operates in a competitive telecommunications infrastructure market, and requires the ability to respond to evolving market dynamics. It is important that **nbn** retains sufficient pricing flexibility (including through the targeted use of discounts) to allow it to innovate its pricing, respond to specific end-user requirements, and maximise efficient use of its network.

**nbn** understands that the weight given to each of these objectives may differ between industry stakeholders. Acknowledging that stakeholders may wish to raise additional matters in responding to this Discussion Paper, our engagement with the industry to date suggests the core concerns to be:

7. **Price certainty:** RSPs seek the ability to build a sustainable business and require greater price certainty from **nbn** to do this; and
8. **Efficiency of costs incurred:** To ensure that **nbn**'s long-term revenue constraints are appropriately defined, **nbn** should continue to incur future costs in a prudent and efficient manner to be included in its regulatory asset base and long-term cost recovery mechanism.

Considerations (7) and (8) are not necessarily additional to, or at variance with, the underlying objectives of the SAU in (1) to (6) above. In order to encourage efficient use of the network, and support a competitive retail industry, **nbn** needs to enable RSPs to operate sustainable business models. As a wholesale-only service provider, entirely reliant on RSPs to market and sell our products, **nbn**'s inherent incentives are already strongly aligned with RSPs. This alignment of incentives was reflected in the significant enhancements that **nbn** delivered under WBA4. The operation of these incentives is also apparent in **nbn**'s discounting of prices below the Maximum Regulated Prices we are permitted to charge under the SAU, for example by offering bundle discounts of TC-4 AVC and CVC.

Similarly, the concern that **nbn** future investments are made efficiently are aligned with objectives (3) and (5) above and is a principle that is fundamental to the current SAU.

In considering the proposed changes for this SAU variation, particularly those pricing changes set out in section 3 below, **nbn** is looking to ensure the SAU continues to strike the appropriate balance between the various objectives it is seeking to achieve. **nbn** appreciates that there may be additional pricing constructs which the industry would like to propose – and which stakeholders may consider better enable RSPs to operate with certainty on pricing and revenue over the long term. We encourage RSPs and other stakeholders to put forward such alternative long-term pricing constructs for discussion as **nbn** further develops its approach to the 2021 SAU variation.

## 2.3 Broader SAU reforms

**nbn** recognises that there have been substantial changes to the telecommunications industry since the SAU was accepted. There have been four iterations of our Wholesale Broadband Agreement (WBA), the introduction of 4G and then 5G mobile technologies, the acquisition and consolidation of RSPs, and the migration of over 8 million premises from legacy networks to the **nbn**. The SAU was developed in the context of **nbn** being primarily a network builder, with products that had only recently been introduced as commercial services.

With the experience gained over the more than seven years since the SAU was accepted, it is reasonable to consider what other changes to the SAU beyond those proposed below in this Discussion Paper could be made in order to ensure it continues to promote the long-term interests of end-users over the remainder of its term. **nbn** is open to broader engagement with the ACCC and RSPs on these potential reforms as we develop our SAU variation for lodgement. For example, the SAU says nothing about the rate at which **nbn** should be permitted to recover the ICRA once actual revenue exceeds the ABBRR. It may be appropriate to introduce either detailed terms, or at least principles, that address the rate of recovery of the ICRA. This would then form part of the ACCC's consideration of Replacement Module Applications by **nbn** during the Module 2 period of the SAU.

**nbn** is proposing pricing constructs and SAU price controls that will increase regulatory and price certainty for RSPs and **nbn**. We anticipate that all parties will want the opportunity to review prices periodically. Given the SAU has already built in a regular "Replacement Module" process under Module 2 relating to **nbn**'s future investments and cost recovery, it may be appropriate to expand these arrangements to also incorporate a role for a pricing review process, subject to appropriate protections to ensure **nbn** can earn a reasonable rate of return on its efficient investments to deliver its policy mandate. **nbn** is open to industry views on whether there would be merit in such an option. Consistent with other aspects of Module 2 (which runs until 2040), we believe it would be reasonable to establish appropriate fixed principles in the SAU so that parties retain an appropriate degree of regulatory certainty.

In addition, given the significant changes to our pricing construct proposed in this Discussion Paper, it is appropriate to consider the price control arrangements in the SAU. We suggest a number of options in section 3.3.4 below, but **nbn** is willing to consider alternative forms of price controls that could apply in conjunction with the pricing proposals we are putting forward.

The SAU was also developed in a context where the market dynamics facing **nbn** were assumed to reflect **nbn** operating as a monopoly provider of broadband services. In reality, there are substantial market segments where this is not the case. **nbn** faces significant competition in the enterprise, business, and new developments markets from existing infrastructure providers, and also faces increasing competition from 4G, 5G and fixed wireless services in the residential market. The fact that almost 1 in 3 households (~4M out of ~12M) is not using the **nbn** today, illustrates the dynamic nature of the market. Recent examples of this include:

- Telstra's 5G network currently covers 50% of the Australian population, and it has announced this will expand to reach 75% of the Australian population by the end of June 2021.
- Optus's marketing of its "5G Home Internet" service as "Australia's best **nbn** alternative".

These market developments raise questions about the ongoing appropriateness of some elements of the current SAU. For example, in competitive enterprise markets, the relevance of the SAU's price controls are less obvious, as are the commitments around product development and withdrawal. **nbn** has not finalised views on whether it will seek to incorporate changes to the SAU to address such issues, but raises them here to highlight that there is a range of matters in the SAU which could be considered as the 2021 variation is further developed. We welcome feedback from the ACCC and the industry on any other SAU matters which may be appropriate to consider as part of this variation.

In considering any such additional changes, **nbn** would be guided by the objectives outlined in section 2.2 above.

## 2.4 External context for the current SAU variation

On 9 October 2020, the Minister for Communications, Cyber Safety and the Arts (**Minister**), made a Statement of Expectations (**SoE**) in relation to the ACCC's telecommunications functions and powers. Amongst other things, this SoE outlined the Minister's expectation that: [3]

> *…the ACCC should work constructively with my Department and NBN Co on how best to develop a comprehensive regulatory solution on NBN's wholesale pricing that delivers certainty for all stakeholders, including a Special Access Undertaking (SAU) variation to incorporate all of the Multi-Technology Mix networks.*
>
> *In developing an agreed SAU variation with NBN Co, the ACCC could have regard to the Vertigan Panel's Recommendation 19 that the ACCC should use a "building block" cost model. In my view, work could begin on such a model immediately in accordance with the framework under the SAU and the ACCC could include NBN technologies not currently covered by the SAU in this building block cost model. The cost model could be based on NBN Co's actual prudently incurred costs in accordance with the methodology set out in the existing SAU.*

In that SOE, the Minister also articulated that their "*…policy and regulatory priorities for the telecommunications sector include… ensuring that policy and regulatory settings… support sustainable investment in telecommunications*", and that as a result, *"…it is preferable that wholesale providers, including [**nbn**], have reasonable flexibility to set prices in response to market developments."*[3]

The ACCC responded to the Minister's SoE via a Statement of Intent (SoI) in December 2020. In relation to the expectations around **nbn**'s SAU, the ACCC stated that it would continue to work closely with the Minister's Department and **nbn** on developing a comprehensive regulatory framework for **nbn**: [4]

> *This includes developing options for a variation to the [SAU] to include all NBN access technologies. This work would complement the formal assessment and consultation processes the ACCC is required to follow for variations to the SAU.*
>
> *The ACCC notes the current SAU includes core elements of the building block model, which was designed to account for NBN Co's changing operating environment over time.*

These statements from the Minister and the ACCC provide further context for the current SAU variation proposal, reiterating the importance of achieving a variation that provides ongoing certainty to the industry.

[3] https://www.communications.gov.au/statement-expectations-australian-competition-and-consumer-commission

[4] https://www.accc.gov.au/system/files/ACCC%20-%20Statement%20of%20intent%20-%20Telecommunications.pdf

# 3 Long-term pricing reform

## 3.1 Introduction

The "user pays" principle is central to **nbn**'s pricing construct as set out in the SAU. That is, as end-users acquire higher speed services or increase their demand for data, the expectation has been that they should pay for using that additional network capability. While maintaining that principle, **nbn**'s pricing approach has evolved substantially since 2013 to better meet the needs of the industry, as the retail market for **nbn** services developed.

The implementation of new pricing approaches over the past decade (including, for example, dimension-based discounts for CVCs and the current TC-4 Bundles Discount[5]) was made possible by the flexibility provided in the SAU to discount prices to incentivise uptake of our services and to deliver improved end-user outcomes, such as increased affordability of higher-speed services and a reduction in congestion during peak usage periods. However, this approach has also generated concerns in relation to the predictability of costs for RSPs as a result of **nbn** using discounts rather than maximum regulated prices to set charges for our core mass-market services.

Ten years on from the original pricing model introduced by **nbn**, it is appropriate to again consider how **nbn**'s pricing can best deliver sustainable long-term outcomes that promote efficient use of our network, while allowing **nbn** to continue to invest in the network to meet the changing needs of Australians, including by recognising the substantial network investments already made.

This Discussion Paper continues **nbn**'s 2021 Pricing Review, in particular the development of **nbn**'s long-term pricing approach. The options presented in this section are likely to require changes to the SAU in order for **nbn** to introduce sustainable long-term pricing reforms. It is therefore appropriate to seek integrated feedback from RSPs and the ACCC on both our proposed pricing and the broader changes to the SAU that we will ultimately include in the 2021 SAU Variation. This process is intended to complement the industry "Round Table" on pricing and SAU matters recently announced by the ACCC. In this way, **nbn** hopes that all relevant views from interested parties will be able to be raised and addressed prior to lodgement of any SAU variation.

The options presented in this section have been included to provide RSPs with specific examples of pricing constructs to facilitate discussion with the industry on the evolution of **nbn**'s pricing, but we appreciate that RSPs may have other models to suggest, or wish to raise other matters related to **nbn**'s pricing, which this paper is also intended to facilitate.

Following this consultation, **nbn** will seek to include the resultant pricing construct as a regulated offer under the SAU, potentially replacing the existing "Basic" AVC/CVC (TC-4) offers in the SAU. This would be done with a view to providing ongoing price certainty, as the proposed option would be subject to the SAU's price controls and product withdrawal provisions. **nbn** is not proposing to make any changes to the services provided over our satellite network as part of this process.

[5] The TC-4 Bundles Discount applies to the **nbn**™ Ethernet Product and comprises a set of discounts on wholesale charges made available to RSPs under the WBA when they order and associate product components of **nbn™** Ethernet, the AVC and CVC, with one another.

## 3.2 Feedback from initial Pricing Review consultation

In their submissions to the first Pricing Review consultation paper, a number of RSPs expressed the view that **nbn**'s variable (overage[6]) charges are driving upward pressure on RSPs' costs as usage grows, and that volatility of usage also creates financial risk, preventing innovation and constraining end-user experience for high bandwidth applications. Some RSPs suggested specific pricing structures in their responses in order to reduce or remove these perceived risks, albeit with models that that may have significant detrimental revenue impacts for **nbn**. These suggestions included "AVC-only", or a flat rate pricing, on some or all of **nbn**'s wholesale speed tiers.

In putting forward pricing proposals in this paper for discussion, **nbn** has considered and is responding to previous feedback from the industry, has taken into account the SAU objectives noted in section 2.2, and developed proposals that:

- Would incorporate **nbn**'s current bundles discounts as regulated prices under the SAU, establishing Maximum Regulated Prices for those bundles targeted at mass-market residential services.
- Provide increased long-term price certainty and predictability for RSP.
- Further reduce the proportion of **nbn**'s charges which are usage-based, and in many cases, eliminating charges based on CVC usage, thus increasing long-term predictability for RSPs even as end-user demand shifts and grows.
- Create optionality for RSPs to mitigate variable (overage) charges while still enabling the ability to offer low-cost plans for low usage customers and allowing RSPs to provide a differentiated service offering.
- Reduce variable (overage) charge sensitivity to lower any real or perceived barriers to driving innovation and delivering superior customer experience on high-speed tiers.
- Support retail competition, based on price, performance, and service.

**nbn** welcomes feedback from the industry on how effectively these proposals address issues that have previously been raised.

## 3.3 Long-term pricing options

### 3.3.1 Introduction

The pricing constructs proposed below have been designed to continue to reduce variable, usage-based charges faced by RSPs, with a view to reducing their exposure to cost uncertainty and unpredictability, while also seeking to mitigate any significant adverse impacts on low-usage customers or on the **nbn** revenues required to recover **nbn**'s existing investment and to continue to efficiently reinvest in the network.

In conjunction with the proposed pricing constructs, **nbn** is considering updated price controls that would apply to any new pricing construct that is implemented. In exchange for **nbn** foregoing the opportunity for future revenue growth that would otherwise have been generated by ongoing growth in usage, some of these price control options would provide some opportunity for **nbn** to achieve future revenue growth through indexation of the fixed component of its prices. Any such price increases would be expected to be executed on an annual basis in alignment with the start of each financial year.

[6] Under the current TC-4 Bundles Discount, Overage is the charge applied when an RSP's CVC TC-4 aggregate ordered bandwidth exceeds its aggregate CVC TC-4 inclusions.

## 3.3.2 Proposed TC-4 pricing constructs for consideration

Table 1 outlines three pricing construct options and indicative wholesale price points that **nbn** is currently considering for the new **nbn**™ Ethernet TC-4 offers that would be included in the SAU. Each of these options incorporates an element of "rebalancing" the total charges faced by RSPs from variable charges to fixed charges. Construct 1 is the closest construct to the current pricing construct, with a significant reduction to the overage rate. Construct 3 provides flat rate pricing across all TC-4 fixed line and fixed wireless speed tiers ("AVC-only"), but with likely adverse impacts on **nbn** accessibility and affordability, particularly for low usage customers. Construct 2 is intended to strike a balance between RSPs' need for certainty and to minimise potential adverse impacts on key end-user segments. In section 3.3.6, **nbn** also proposes implementation options that should reduce CVC management overheads for RSPs.

**Table 1: Proposed nbn™ Ethernet TC-4 Pricing Constructs[7]**

| Proposed Pricing Constructs | Bundle pricing type | Construct 1 | | | Construct 2 | | | Construct 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Prop. Effective Charge | Prop. CVC Inclusion (Mbps) | Prop. Overage Rate (Mbps) | Prop. Effective Charge | Prop. CVC Inclusion (Mbps) | Prop. Overage Rate (Mbps) | Prop. Effective Charge | Prop. CVC Inclusion (Mbps) | Prop. Overage Rate (Mbps) |
| ELB [12/1] [8] | Entry Level Bundle | $25.5 | 0.15 | $6 | $22.5 | 0.15 | $8 | $35.0 | NA | $0 |
| B25 [25/5, 25/10] [9] | Standard Bundles | $39 | 1.60 | | $37 | 1.60 | | $40-$45 | NA | |
| B50 [50/20] and Wireless Plus [10] | | $48 | 2.65 | | $50 | 3.00 | | $51-$55 | NA | |
| Home Fast [100/20] [11] | High Speed Bundles | $60 | 4.70 | | $60-$63 | NA | $0 | $60-$63 | NA | |
| Home Superfast [250/25] | | $70 | 6.40 | | $70-$76 | NA | | $70-$76 | NA | |
| Home Ultrafast [up to ~1000/50] [12] | | $82 | 7.00 | | $82-$100 | NA | | $82-$100 | NA | |
| Premium Bundle [100/40] [13] | | $67 | 4.70 | | $67-$68 | NA | | $67-$68 | NA | |
| Premium Bundle [250/100] | | $105 | 6.40 | | $105-$110 | NA | | $105-$110 | NA | |
| Premium Bundle [500/200] | | $165 | 7.00 | | $165-$170 | NA | | $165-$170 | NA | |
| Premium Bundle [1000/400] [12] | | $235 | 7.00 | | $235-$245 | NA | | $235-$245 | NA | |

[7] These pricing constructs relate to the monthly recurring charges for the AVC TC-4 and CVC TC-4 product components of the **nbn**™ Ethernet product on fixed line and fixed wireless technologies. References to speeds in this document are to layer 2 wholesale peak speeds, not end customer speeds. End customer experience, including the speeds actually achieved over the **nbn**™ broadband access network, depends on the **nbn**™ access network technology and configuration over which services are delivered to their premises, whether they are using the internet during the busy period, and some factors outside of **nbn**'s control (like their equipment quality, software, chosen broadband plan, signal reception, or how their provider designs its network).

[8] Note that ELB does not include the 12/1Mbps AVC TC-4 bandwidth profile on fixed wireless technology – **nbn** has not set out proposed prices for that fixed wireless speed tier in this paper, but intends that pricing for that speed tier would follow the broader long-term pricing construct adopted.

[9] B25 includes the 25/5Mbps, 25/5-10Mbps and 25/10Mbps AVC TC-4 bandwidth profiles, depending on technology used.

[10] B50 includes the 25-50/5-20Mbps and 50/20Mbps AVC TC-4 bandwidth profiles, depending on technology used. **nbn** also proposes that its Wireless Plus construct would be subject to the same pricing as B50.

[11] Home Fast includes the 25-100/5-20, 50-100/20 and 100/20Mbps AVC TC-4 bandwidth profiles, depending on technology used.

[12] Regardless of the retail service that end customers purchase, the actual wholesale speeds delivered by **nbn**'s highest wholesale speed tiers of 500 to close to 1000 Mbps will be less than 1Gbps due to equipment and network limitations and the peak information rate may fall anywhere in this range. In addition, the HFC Home Ultrafast bandwidth profile downstream service provided to retail providers is a ranged profile with a maximum sustained information rate of 750Mbps, with the potential to burst up to a maximum of 990Mbps (depending on but not limited to, the Frame Size and line speed capability) at potential burst durations between 1 to 50 seconds at least once a day.

[13] Premium Bundle 100/40 includes the 25-100/5-40, 50-100/20-40 and 100/40Mbps AVC TC-4 bandwidth profiles, depending on technology used.

Given the ongoing role that usage growth plays in proposed pricing Constructs 1 and 2 **nbn** has initially based its proposed pricing constructs on an average CVC provisioning per Service in Operation (SIO) across all services at 3.0Mbps.[14] **nbn** believes this provides a reference point to enable RSP modelling of the impact of the proposed pricing constructs, however the outcome of any modelling will be heavily dependent on an RSP's current and future end-user customer cohort behaviour, their view of their own retail strategy and the resulting distribution of usage profiles across speed tiers within their customer base. Further, **nbn** notes that the price points and CVC inclusions (if applicable) to be included in the SAU variation will be subject to change, taking into account feedback from RSPs and the ACCC, the likely start date of the new pricing regime, and **nbn**'s final assessment of the pricing against the criteria noted in this Discussion Paper.

Table 2 provides additional reference points for consideration by RSPs, including the permitted Maximum Regulated Prices (MRPs) of TC4 bundles discounts in the current roadmap period, based on current MRPs in the SAU for AVC and CVC. The proposed pricing constructs represent a substantial reduction of the MRPs that **nbn** is currently operating under, and a varied SAU with the new prices proposed as MRPs would deliver significantly improved price certainty to the industry in the longer term. The table also provides the industry with a view of the current TC-4 Bundles Discount roadmap prior to transitioning to the proposed pricing constructs, including estimated average wholesale charge for each speed tier with an overall CVC provisioning requirement at 3.0Mbps.[15]

[14] Weighted average across all speed tiers.

[15] Based on **nbn** modelling of estimated CVC provisioning per speed tier within the roadmap period. RSP views will differ depending on speed tier mix and usage profile distribution.

### Table 2: Reference Prices for Proposed nbn™ Ethernet Pricing Construct

| Proposed Pricing Constructs | Bundle Pricing Type | Regulated Prices in the SAU | | | May-22 Roadmap |
|---|---|---|---|---|---|
| | | AVC List Price | CVC List Price ($/Mbps)[16] | MRP for May-22 Bundles using SAU prices | Estimated Average Wholesale Charge[17] |
| ELB [12/1] [18] | Entry Level Bundle | $24.0 | $15.75 | $26.4 | $30 |
| B25 [25/5, 25/10] [19] | Standard Bundles | $27-$30 | | $55-$58 | $38 |
| B50 [50/20] and Wireless Plus [20] | | $34.0 | | $76 | $51 |
| Home Fast [100/20] [21] | High Speed Bundles | $37.0 | | $108 | $58 |
| Home Superfast [250/25] | | $68.0 | | $159 | $78 |
| Home Ultrafast [up to ~1000/50] [22] | | $80.0 | | $190 | $95 |
| Premium Bundle [100/40] [23] | | $38.0 | | $109 | $65 |
| Premium Bundle [250/100] | | $70.0 | | $161 | c-i-c[24] |
| Premium Bundle [500/200] | | $100.0 | | $198 | c-i-c[24] |
| Premium Bundle [1000/400] [22] | | $150.0 | | $260 | c-i-c[24] |

## Construct 1

**Construct 1** offers a 25% reduction in the variable (overage) charges, whilst rebalancing some of this variable revenue reduction by increasing some headline bundle prices as well as increasing CVC inclusion levels on most "high-speed" tiers relative to the TC-4 Bundles Discount Roadmap. **nbn** intends that voice-only services will maintain their current wholesale effective charge of $22.50 per month, and will develop pricing proposals to achieve this. **nbn** believes Construct 1 will provide an immediate reduction in RSPs' overage exposure and help reduce the sensitivity of wholesale prices to end-user demand growth in the short to medium term. While this option is most similar to **nbn**'s current pricing approach, a key difference is that if implemented, it would be included within the regulatory framework of the SAU, rather than via use of discounts, thus significantly increasing pricing certainty for RSPs.

[16] Based on the reduced CVC price of $15.75/Mbps that **nbn** announced it would introduce in Pricing Consultation Paper 2, released on 28 April 2021.

[17] Estimated average wholesale cost of AVC and CVC product components, based on May-22 TC-4 Bundles Discount Roadmap charges including $8/Mbps Overage rate and expected usage growth to 3.0Mbps within the roadmap period.

[18] Note that ELB does not include the 12/1Mbps AVC TC-4 bandwidth profile on fixed wireless technology – **nbn** has not set out proposed prices for that fixed wireless speed tier in this paper, but intends that pricing for that speed tier would follow the broader long-term pricing construct adopted.

[19] B25 includes the 25/5Mbps, 25/5-10Mbps and 25/10Mbps AVC TC-4 bandwidth profiles, depending on technology used.

[20] B50 includes the 25-50/5-20Mbps and 50/20Mbps AVC TC-4 bandwidth profiles, depending on technology used. **nbn** also proposes that its Wireless Plus construct would be subject to the same pricing as B50.

[21] Home Fast includes the 25-100/5-20, 50-100/20 and 100/20Mbps AVC TC-4 bandwidth profiles, depending on technology used.

[22] Regardless of the retail service that end customers purchase, the actual wholesale speeds delivered by **nbn**'s highest wholesale speed tiers of 500 to close to 1000 Mbps will be less than 1Gbps due to equipment and network limitations and the peak information rate may fall anywhere in this range. In addition, the HFC Home Ultrafast bandwidth profile downstream service provided to retail providers is a ranged profile with a maximum sustained information rate of 750Mbps, with the potential to burst up to a maximum of 990Mbps (depending on but not limited to, the Frame Size and line speed capability) at potential burst durations between 1 to 50 seconds at least once a day.

[23] Premium Bundle 100/40 includes the 25-100/5-40, 50-100/20-40 and 100/40Mbps AVC TC-4 bandwidth profiles, depending on technology used.

[24] **nbn** considers this information to be commercial in confidence, noting that take up of these wholesale speed tiers is low and only by a small number of RSPs.

## Construct 2

In contrast, **Construct 2** provides RSPs with additional opportunities to reduce variable cost exposure by isolating CVC for high usage customers on "high-speed" bundle pricing and reducing the associated variable (overage) charges to $0/Mbps, effectively making them "AVC-only" speed tiers.

The rationale for the "High-speed" bundles pricing demarcation in Construct 2 is:

- Under the current pricing structure, services on 100Mbps and faster wholesale speeds represent a higher commercial risk to RSPs due to their higher throughput capability, and typically higher-use end-users on these speed tiers.
- Retail data-capped plans and entry level products are primarily concentrated on 50Mbps and below wholesale speed tiers and a usage-based charge remains a key element in enabling these retail plans.
- The ELB has limited CVC inclusions, which keeps the effective headline price low. Maintaining the bundled pricing construct on wholesale speed tiers up to 50Mbps allows RSPs to benefit from pooled CVC inclusions across all those speed tiers, which may reduce their need to purchase additional CVC capacity, specifically for ELB services.

In response to RSP feedback from the 2021 pricing consultation, **nbn** also proposes to rebalance between fixed and variable charges in the bundle pricing for the 50Mbps speed tier. This would be achieved by increasing the current effective wholesale charge from $45 per month and significantly increasing CVC inclusions from the May-22 Roadmap level of 2.65Mbps. This would have the effect that the majority of RSPs could reach a $0 overage bill overall (whist retaining the implicit wholesale input cost difference between low and heavy data users), based on the expected take-up of "AVC-only" speed tiers by heavy network users who would no longer attract variable (overage) charges.

**nbn** believes the division between the "Standard" and "High-speed" tiers in Construct 2 provides a meaningful choice for RSPs in how they serve their end-users. RSPs would have a reduced exposure to overage-related risk from those end-users with high bandwidth requirements and high data consumption. As a result, they may choose to develop cheaper retail pricing on higher speed tiers (dispensing with any usage charge "buffer"). At the same time, they would retain the ability to provide end-users with low bandwidth and usage requirements with options for cheaper monthly retail plans based on their needs. **nbn** expects that this construct will allow for variable (overage) charges to be more effectively managed through RSP base management activities that target heavy network users with a view to transitioning those end-users to the most appropriate speed tier. In most cases, **nbn** expects that RSPs would be able to achieve little to no overage exposure.

## Construct 3

**Construct 3** directly responds to the industry's calls for an "AVC-only" pricing construct across all speed tiers. This construct would reduce the variable (overage) charges to $0/Mbps across all TC-4 fixed-line and fixed wireless speed tiers in exchange for increased fixed charges, transferring all CVC usage related financial risks for those speed tiers from the industry to **nbn**. Under this construct, **nbn** expects CVC management by RSPs would be largely irrelevant for pricing purposes for those speed tiers.

However, **nbn** is concerned that Construct 3 would not deliver a number of outcomes that usage-based charges were designed to achieve, and would impact not just the affordability of the **nbn** broadband network for low usage customers, but also the take up of **nbn** services. **nbn** estimates that between 69,000 to 170,000 end-users would no longer be able to afford or be willing to take-up **nbn** broadband under Construct 3, primarily as a result

of the removal of data-capped plans in market and retail price increases. The initial pricing proposal under Construct 3 has been adjusted to account for potential losses in **nbn** take-up.

Further, **nbn** believes Construct 3 would also be likely to result in significant "value transfers" between RSPs. For example, the wholesale price averaging that takes place under an "AVC-only" construct would financially benefit RSPs with customer bases that have above average usage profiles (as their average wholesale input costs will reduce for the same end-user demand) whilst adversely impacting RSPs with predominantly below average usage customers (as their average wholesale input costs will likely increase). A likely outcome is a narrowing of price ranges and differentiation in the retail market, reducing end-user choice as discussed in Section 3.3.3.

Lastly, while not shown in the tables, **nbn** intends that voice-only services would maintain their current effective wholesale charge of $22.50 per month and will develop proposals to achieve this.

### 3.3.3 Pricing construct: design considerations

**nbn** originally adopted a usage-based charge as part of a wider approach to cost recovery that reflects the "user-pays" principle that as people use the network more and receive greater utility from it, it is appropriate that **nbn** captures a reasonable share of the value created by the network. That is, **nbn**'s usage-based charge is a price mechanism to enable recovery of fixed costs amongst users of **nbn**'s network in the most efficient manner (i.e., allocative efficiency). The use of two-part pricing reflecting "access" and "usage" charges is a relatively standard construct in network utility pricing, and is generally accepted as the efficient way of recovering costs in industries with high degrees of fixed costs.

Recognising the challenges that two-part pricing has created in some instances, the three proposed wholesale pricing constructs outlined in this paper have instead been designed to provide a balanced approach to meeting the three design considerations described below, acknowledging there are trade-offs involved.

#### 3.3.3.1 Improving accessibility and affordability of broadband for Australians

Usage-based charges enable lower cost capped plans that improve accessibility and affordability of **nbn** services for some end-user cohorts. To understand the effects of removing usage-based charging from **nbn**'s wholesale pricing framework, **nbn** commissioned independent third-party research from Accenture to examine the likely impacts of Construct 3 (published with this Discussion Paper). This research shows that "AVC-only" pricing across all speed tiers will have significant adverse impacts on low data usage end-users, particularly those currently on data capped retail offerings. The research estimated that in March 2021, there were 1.4 million households accessing the **nbn** network through data capped retail offers, with the vast majority of those end-users purchasing services based on **nbn**'s wholesale speed tiers of 50Mbps or below (approximately 88% of all capped plans), and that under "AVC-only" pricing, these end-users would likely face a significant "price shock", an average increase of $120 a year in their **nbn** retail prices, as RSPs transition these end-users onto unlimited data retail offers.

The research also highlighted that consumers on data capped plans have a higher prevalence of specific socio-economic cohorts, including retirees, low-income households, and households receiving government subsidies, which exacerbates the impact of such a "price shock" on their household budget. The report concluded that "AVC-only" pricing across all speed tiers would lead to significant degradation to consumer value over the **nbn** network; this would be in the order of a $213M per annum reduction in consumer surplus, including a $155M loss for end-users absorbing the "price shock" either by remaining on their current speed tier and paying more, or downgrading to a lower speed tier to achieve budget savings. An additional $58M loss is estimated for 69,000

end-users losing access to broadband over the **nbn**, due to reduced affordability and value for money compared to alternatives.

The report also notes that two-part tariffs, with a fixed and variable usage-based component, are used in other infrastructure settings such as for electricity, water and gas utility networks, where volumetric pricing is commonly used to ensure equitable recovery of fixed cost investment in the network.

#### 3.3.3.2 Enabling retail differentiation

Usage-based charging provides an important mechanism for RSPs to differentiate and compete, both in terms of end-user experience based on the level of CVC provisioning as well as in terms of wholesale costs borne by RSPs. Under the existing pricing construct, RSPs targeting low usage customer segments (e.g. older Australians) experience lower overall wholesale costs compared to RSPs targeting heavy usage customers (e.g. gamers). This differentiation in wholesale input costs enables RSPs to offer corresponding differentiation in retail prices to their respective customer bases, promoting competition and pricing efficiency. Removing variable charges in their entirety in lieu of fixed charges based on the industry averages will result in substantial value transfer between RSPs depending on their current level of exposure to variable charges. In addition, in submissions to the 2021 pricing consultation paper, some RSPs saw CVC provisioning as a key service quality differentiator in the retail market, particularly its impact on peak hour congestion and service performance.

#### 3.3.3.3 Providing greater wholesale price and cost certainty to RSPs

As described in section 3.2, RSPs have previously expressed the view that **nbn**'s variable (overage) charges are driving upward pressure on their costs as end-users' demand for data grows, and that this volatility of usage creates financial risk, preventing innovation and constraining end-user experience for high bandwidth applications. Addressing this issue has been a key focus of the pricing options proposed by **nbn** in this paper.

#### 3.3.3.4 Comparison of pricing constructs against design considerations

Table 3 summarises the key trade-offs between the constructs against each of the design considerations

**Table 3: Comparison of the three proposed pricing constructs against our design considerations**

| | Construct 1 | Construct 2 | Construct 3 |
|---|---|---|---|
| Affordability, penetration for lower utility end-users | +++<br>Usage-based charging provides the best way (of the three options) to match **nbn** wholesale pricing to underlying broadband demand, satisfying the needs of all customer segments. | ++<br>Usage charging on the lower speed tiers provides a path to ensure affordable broadband plans to the majority of end-users. | +<br>Higher prices on the lower speed tiers reduces affordability and choice for end-users with lower utility for broadband. |
| Enabling retail differentiation | +++<br>Usage charges enable retail product differentiation across the entire market. | ++<br>Enables differentiation on lower speed tiers. | +<br>Reduces retail differentiation due to fixed input costs. |
| Wholesale cost certainty | +<br>Two-year inclusions roadmap provides certainty on input cost to RSPs.<br>Overage rate reduction of 25% reduces usage growth risks for RSPs. | ++<br>Higher inclusions on standard bundles and "AVC-only" on higher speed tiers allows RSPs to optimise their fixed and variable input costs to the level of certainty that they need. | +++<br>Fixed input costs provide greater certainty across all speed tiers. |

### 3.3.4 SAU price controls

The pricing constructs described in this paper would significantly change the balance between fixed and variable charges. This change has significant implications for **nbn**'s ability to earn the revenues required to recover its efficient costs and to support its ongoing efficient investment in the network under the SAU's current price control arrangements. The price controls in the SAU assumed that a significant driver of future revenue growth would be increased usage of the network, and **nbn**'s ability to capture a share in the value created by that usage. Under Constructs 2 & 3, this would no longer be the case. If **nbn**'s underlying pricing model changes, it is appropriate that the applicable price controls should change too.

In general, **nbn** proposes that where the pricing proposals outlined in this paper restrict or entirely remove **nbn**'s ability to recover its costs through usage-based charges in the form of CVC as applied to increasing bandwidth usage, **nbn** should have the opportunity to recover those costs by increasing fixed charge pricing components in real terms (i.e. an increase above the rate of inflation, reflecting the rapid growth in usage and hence capacity). This is critical to allowing **nbn** the opportunity to generate additional revenue to recover efficient existing and future investments needed to sustain growing bandwidth requirements as well as network upgrade programs to uplift the capability of the network. This approach also reflects that the increased utility derived by end-users of the service as their usage of the network increases should be appropriately reflected in the revenues that **nbn** is able to earn.

There are a number of potential approaches to formulating new price controls in the SAU that reflect the adoption of pricing constructs proposed in this paper. One option (Option 1) would be to continue something similar to the current SAU arrangement, where each **nbn** offer introduced into the SAU would be subject to individual pricing constraints on a "use it or lose it" basis, but with a different annual indexation factor. Another option (Option 2) would be to introduce a more holistic approach across the services covered by the proposed pricing constructs, where **nbn** pricing would be constrained by a weighted average "basket" of prices (inclusive of fixed and variable charges). Of course, other approaches are also possible, including an increased reliance on the "anchoring" effect of entry level services, with less constraints on the prices of higher-speed services, or those which are offered in competitive markets.

Under **Option 1** (individual SAU price controls), **nbn** envisages that different price controls would apply for the different bundle types described for the three pricing constructs above. For example, a separate price control level could apply for the Entry Level Bundle, Standard Bundles and High Speed Bundles. In the case of the High Speed bundles, where there are no CVC usage-based charges, **nbn** considers it reasonable to have the opportunity to index prices above the level of inflation.

Under **Option 2** (basket price control), **nbn** proposes that the SAU would move away from constraining individual price components and move to an overall price control over a basket of products. Specifically, **nbn** proposes that the price control would be applied to the weighted average price across all applicable TC-4 products based on average SIO volume of the preceding year. **nbn** believes that such a broad basket price control could be a viable alternative to the existing SAU price control arrangements. It may be appropriate to exclude some products from the overall basket – for example, it may be more appropriate to maintain a separate price control for the Entry Level Bundle. **nbn** believes that a weighted average price control based on an evolving product set could deliver greater pricing certainty on the long-term, and lessen the risks of individual prices diverging from market demand and relativities to other prices over time.

Recognising that any proposed price cap which allows **nbn** to increase prices above inflation would need to reflect efficient future network investments required to meet end-user demand, **nbn** proposes that establishing

the precise value of such a price cap would form part of the Replacement Module Application process that will take place under Module 2 of the SAU. Under this regime, at periodic intervals, **nbn** will be required to provide 3-5-year forecasts of the inputs to the LTRCM, including capex. These LTRCM Proposals will be assessed by the ACCC, and if accepted, will form the basis for the inputs to the LTRCM for each 3-5-year Regulatory Cycle. As part of that process, we propose that the SAU could be varied to require **nbn** to propose the specific price control that would apply to any products where real price increases were permitted. This means the specific price controls would be established for each Regulatory Cycle, reflecting the revenue required by **nbn** to make the planned efficient investments in the network during that Regulatory Cycle, and subject to ACCC review and approval. **nbn** notes that the potential linkage of the SAU variation to Replacement Module Application process could be at odds with industry calls for immediate pricing reform. Therefore, **nbn** proposes that the price cap would be initially set to reflect inflation until the LTRCM proposal under Module 2 of the SAU could be assessed and accepted by the ACCC.

As described in section 3.3.5 below, there are specific considerations in relation to the pricing of the Entry Level Bundle. Reflecting feedback from the ACCC and the industry, **nbn** acknowledges that there is a need to ensure that the Entry Level Bundle continues to support the needs of end-users of this service, and is prepared to commit to increasing the level of CVC inclusions associated with the ELB. However, as the value of this service to end-users continues to grow over time (through the increased CVC inclusions), **nbn** considers it is appropriate that the wholesale charges for the ELB should not be restricted by the SAU from at least be able to remain flat in real terms.

In order to provide increased certainty to RSPs about the operation of any new price controls, **nbn** believes it would be appropriate to apply any price changes (where those changes are to increase prices) on an annual basis, potentially to line up with the start of each financial year (subject to RSP feedback on whether an annual price cycle is the appropriate frequency). **nbn** believes this would set clear market expectations for pricing changes, enabling the industry to conduct long term commercial planning based on clearly defined wholesale price cycles.

**nbn** is open to views from the industry on future approaches to price controls, including **nbn**'s options and proposals regarding:

- a separate price control approach for the Entry Level Bundle;
- a basket price control to provide price certainty to the industry in the longer term;
- a clearly defined annual approach to any price changes; and
- real price increases for services with growing usage, but which do not have a CVC usage-based charge.

### 3.3.5 Entry level price control

Following the ACCC's 2019-20 inquiry into **nbn** access pricing, **nbn** made commitments in WBA4 which resulted in a $35 effective wholesale charge for RSPs acquiring a service on the modified Entry Level Bundle discount (mELB) with 1.7Mbps of CVC TC-4 capacity from 1 May 2021 until 30 November 2022. These commitments reflected the ACCC's proposed 20% annual growth rate for mELB CVC inclusions, averaged over that period. They were also designed to support a key objective identified by the ACCC that **nbn**'s wholesale pricing should support retail price points of $60 per month for unlimited plans based on a wholesale 12/1 Mbps service.

As noted by **nbn** at that time, we do not consider that setting wholesale entry level pricing on the basis of supporting an arbitrary retail price point will lead to efficient outcomes for end-users, nor is it reasonable to expect prices for entry-level services to continue to decline in real terms in perpetuity, while the included value

in those services continues to grow. This is not consistent with the application of a "user pays" principle to **nbn**'s pricing. **nbn** notes that the ACCC has previously expressed views that are consistent with this principle:[25]

> *"…, the SAU should deliver a framework for the regulation of NBN Co's services which:*
>
> *• ensures consumer and business get services of broadly the quality they get today for broadly the price they get today; **consumer and businesses would only pay more for services and/ or usage noticeably beyond what they get today**;" (emphasis added)*

As the SAU is intended to operate until 2040, **nbn** considers it reasonable that as end-users use our network "noticeably beyond what they get today", that the wholesale charges for the mELB services they consume would at least remain flat in real terms.

Moreover, we do not consider there was strong evidence for an ongoing 20% annual growth rate in data usage on 12/1Mbps services. Indeed, since making those commitments in WBA4, we have observed that average CVC utilisation on mELB services is declining, mostly due to higher data users who were previously on the mELB migrating onto higher speed services. In the period from April 2020 to April 2021, average utilisation on mELB services declined materially, and is significantly below the 1.7 Mbps of CVC capacity that was assumed to be necessary to achieve an effective wholesale price of $35 per month for the mELB.

In light of the above, **nbn** does not consider it would be reasonable or appropriate to make commitments in respect of entry-level services that result in reductions in prices in real terms over the remainder of the SAU, while the included value in those entry-level services continues to grow based on forecasts of future usage growth.

**nbn** understands that providing pricing certainty on entry-level services is important, and that price controls on these services can provide a meaningful anchor on prices of higher value services. Accordingly, we are proposing a price control of CPI for entry-level services, to enable the price to remain constant in real terms over time. In addition, we are proposing to commit to increase CVC inclusions on the mELB based on the actual usage growth of end-users on that service.

One way to do this would be for **nbn** to report Mean Busy Hour Throughput, and the associated change over time, for mELB services as part of an annual pricing review process. CVC inclusions for mELB would then be increased annually based on the observed usage from the previous year. The effect of this would be that entry-level wholesale prices could remain constant in real terms, while the included value in the entry-level service would grow in line with actual usage growth on that service.

In summary, under both price control options, **nbn**'s pricing would be constrained by two critical price anchors at either end of its product set. On the top end, the overall price of the "high speed" bundles will be significantly constrained by their fixed price component, as variable (overage) charge growth is substantially reduced in proposed Construct 1 and removed altogether in Constructs 2 and 3. Thus, the single "AVC-only" price point provides the only means in which **nbn** could meaningfully increase prices on these products to at least have the opportunity to earn additional revenues to reflect the increasing demand on the network. On the low end:

[25] Rod Sims, "*Dealing with our continuing communications industry revolution*", Speech to Australia-Israel Chamber of Commerce,11 April 2013, https://www.accc.gov.au/speech/dealing-with-our-continuing-communications-industry-revolution

- **nbn**'s commitments in WBA4 provide for entry level pricing at an effective wholesale charge of $35;[26]
- after those commitments expire, the entry level product would be subject to a price cap which could be adjusted for inflation annually during the course of the SAU, ensuring ongoing affordability in real terms, and more importantly, providing meaningful price anchoring effects to other **nbn** offers. This CPI price control would be applied on the same "use it or lose it" basis as the current individual price increase limit in the SAU.

**nbn** considers this proposed approach to be in line with regulatory arrangements in other sectors in Australia as well as in broadband market overseas. As an example, Openreach price regulation in the UK focuses on an entry level anchor product (i.e. MPF and FTTC/P 40/10), where a CPI indexed price cap applies, however the prices for higher bandwidth products are largely left to Openreach's discretion, subject to demand and competition.[27]

### 3.3.6 Implementation and Network impacts of the Pricing Constructs

While **nbn** would consult with the industry in more detail on implementation of the pricing construct that is ultimately selected, below are **nbn**'s preliminary views on implementation of the various constructs.

**Table 4: Implementation options and CVC management simplification for the different pricing constructs**

| | Construct 1 | Construct 2 | Construct 3 |
|---|---|---|---|
| **CVC Type** | Single CVC type – "Bundles" | Two CVC types – "Bundles" & "AVC-only" | Single CVC type – "AVC-only" |
| **Overage Calculation** | Provisioned CVC capacity (Mbps)<br>Or<br>Usage-based billing based on measured CVC throughput (Mbps) | Provisioned CVC capacity (Mbps)<br>Or<br>Usage-based billing based on measured CVC throughput (Mbps) | N/A |
| **Network management** | E-NNI overbooking*<br>Removal of CVC utilisation conditions* | E-NNI overbooking*<br>Removal of CVC utilisation conditions* | E-NNI Overbooking<br>Removal of CVC utilisation conditions |

**Conditional on average being calculated using measured CVC throughput (Mbps)*

**nbn** is open to exploring usage-based billing on the "Bundles" CVC type (i.e. National Overage would be calculated based on Measured CVC throughput (Mbps) instead of total Provisioned Bandwidth (Mbps)). If RSPs prefer this form of usage-based billing, **nbn** would also consider removal of CVC Utilisation conditions and the introduction of E-NNI overbooking capability, allowing the total provisioned CVC bandwidth to exceed the E-NNI bandwidth, conditional on adequate NNI provisioning. This would reduce CVC management as RSPs could "set and forget" CVC bandwidth to the maximum of 10Gbps (until it can no longer accommodate any more AVC services, then a new CVC will need to be established), while **nbn** calculates overage based on the utilisation within the "Bundles" CVC. Transitioning to usage-based billing will require **nbn** to revisit the price points and inclusions proposed in this paper. **nbn** is open to the industry's views on whether this billing approach would meaningfully improve CVC management and associated operational issues. For usage-based billing, **nbn**

[26] In particular, **nbn**'s commitments in WBA4 result in a $35 effective wholesale charge for RSPs acquiring a service on the modified Entry Level Bundle discount (mELB) with 1.7Mbps of CVC TC-4 capacity.

[27] Ofcom – Promoting competition and investment in fibre networks: https://www.ofcom.org.uk/__data/assets/pdf_file/0022/216085/wftmr-statement-volume-1-overview.pdf

proposes it would build on the existing functionality **nbn** currently has in place for the Entry Level Bundles, extending it to other speed tiers associated with a "Bundles" CVC type. Key implementation considerations would include the system reporting and transparency requirements that RSPs need for usage-based billing. For Construct 2, a new CVC type – "AVC-only" - would be introduced for the 100Mbps and above speed tiers only.

**nbn** also notes that the potential start date of the new pricing regime will be subject to a range of factors, including the length of the "pre-lodgement" SAU variation consultation process, the time taken to assess **nbn**'s formal SAU variation application by the ACCC, any system changes needed to support the new pricing construct, as well as the service migration periods required. **nbn** is open to industry views on the potential implementation timeline and the appropriate balance between timeliness of reform and the scope of change.

The proposed pricing constructs which remove variable (overage) charges will likely result in increased traffic particularly during surge events such as game updates entering the **nbn** network. As some RSPs have acknowledged in the Round 1 feedback, **nbn** would likely need additional safeguards to manage network capacity and ensure a good experience for everyone on the network. **nbn** proposes to consult on these safeguards with the industry through the WBA5 process and may also consider a review of NNI pricing to encourage efficient traffic management and cost recovery.

### 3.3.7 Feedback on Long-term Pricing Options

As **nbn** looks to further develop the pricing construct and price control options described above, we recognise that an increased understanding of the likely retail implications is important. **nbn** has provided indicative pricing where possible to enable RSPs to form an informed view of their commercial position and preferences for the pricing construct options. The prices that would ultimately be proposed by **nbn** would be reflective of feedback provided by RSPs about their expectations for retail service mix and distribution of usage patterns. We see this pricing consultation as providing **nbn** with the opportunity to partner with RSPs on our pricing to maximise the social and economic value to end-users of the **nbn** network. Hence, the better we understand how RSPs expect their end-users may change their demand in light of these potential changes, and how RSPs may adjust their strategies in response to the options proposed, the better **nbn**'s pricing will be at addressing matters raised by RSPs, and the better the outcomes will be for end-users. The questions posed below have been framed to assist **nbn** to better understand the implications of our pricing on retail outcomes.

**Question:** What impact would you expect **nbn**'s proposed pricing constructs and price control options to have on your organisation's speed tier mix and volume?

**Question:** How would **nbn**'s proposed pricing construct and related price control options impact your organisation's overall **nbn** charges in the medium to long term?

**Question:** How would you rank the proposed pricing constructs and price control options for **nbn**'s future wholesale pricing construct, and what factors influenced your ranking?

**Question:** Does your organisation foresee any transitional issues in any of the constructs including commercial and operational complexities?

**Question:** To assist **nbn** in capacity management, in the case of Constructs 2 and 3 (with "AVC-only" speed tiers), what would be the additional traffic that you anticipate **nbn** could see enter the network during surge events such as game updates? How would you manage traffic into the **nbn** network under these construct options?

**Question:** One of the original principles behind **nbn**'s use of CVC in the product construct was to enable performance-based differentiation for RSPs. How do **nbn**'s proposed pricing constructs and price control options

impact your organisation's ability to differentiate and compete in the retail market? What are your performance expectations for "AVC-only" speed tiers, mindful that high performance standards will have cost implications?

**Question:** Could **nbn** enable greater differentiation through service add-ons bundled into higher speed tiers (e.g., prioritised appointments, business operations centre)?

**Question:** What, if any, difference do you see in performance for your target customer segments?

### 3.3.8 Options for low-income households

To lift the digital capability of Australia, **nbn** has sought to improve broadband affordability for more vulnerable cohorts of end-users. **nbn** has implemented a number of measures designed to improve affordability of our Entry Level Bundle, including discounting the AVC charge to $22.50, and making WBA4 commitments to offer sufficient CVC inclusions at a $35 effective wholesale charge to support the provision of "unlimited" 12/1Mbps retail plans at a $60 price point.[28] In the past year, **nbn** also launched the COVID-19 relief package to support remote learning for low-income families, as well as provided the "Illuminate" rebate, which sought to lower wholesale costs for unconnected households, a significant proportion of which are low-income and/or elderly. In addition, **nbn** has conducted co-design workshops with interested industry stakeholders to address the needs of older Australians. As an outcome, and the next step of these initiatives, **nbn** is committed to working with the industry in developing solutions to further address the needs of low-income households.

In crafting a low-income offer, the biggest challenge is how to create a commercially sustainable business case for **nbn** and RSPs. By definition, low-income offers require lower retail and wholesale prices, so that they provide meaningful benefits to the target segments. This challenges the economics of supply for both **nbn** and RSPs.

In the 2021 Pricing Consultation, **nbn** proposed targeted eligibility criteria to minimise significant financial exposure, such as a single speed tier (25/5), a data cap (150GB) and a requirement for the premises to be currently disconnected from the network. Feedback from RSPs and the wider industry was supportive of **nbn** bringing a low income offer to market, but with less targeting (i.e., broader eligibility), and lower prices across a broader set of products. A broad-based low-income offer made available to a large eligible cohort would be financially challenging for **nbn** and the industry. As an example, **nbn** believes that, based on Age Pension and Disability Support Pension recipients alone, there would be over 1 million eligible premises, or over 8% of total premises in Australia.

**nbn** therefore considers there are two main options moving forward, which **nbn** welcomes feedback on:

| | |
|---|---|
| **Option 1:**<br>**Broader eligibility –requiring SAU variation** | To broaden the low-income eligibility conditions as per the industry's feedback while still recovering efficiently incurred costs, **nbn** would require the ability to adjust prices on "full price" services to recoup the revenue dilution incurred by a broad-based low-income offer.<br>For example, we anticipate that a broad-based low-income offer made available to a large cohort of welfare recipients such as Age Pension and Disability Support Pension recipients would require an offsetting price adjustment comparable to about 4-7% of the wholesale ARPU on all other TC-4 services.<br>This significant upward price adjustment to broadly address low-income households is not an approach that **nbn** specifically supports. However, **nbn** welcomes feedback on this.<br>Should this option be pursued, a form of price adjustment mechanism would need to be built into the SAU variation. |

[28] As noted above, **nbn**'s commitments in WBA4 result in a $35 effective wholesale charge for RSPs acquiring a service on the modified Entry Level Bundle discount (mELB) with 1.7Mbps of CVC TC-4 capacity.

| | |
|---|---|
| **Option 2:**<br>**Targeted solutions – outside of SAU variation** | **nbn** will continue progressing its efforts in lifting the digital capability of Australia by progressing targeted approaches to reach low-income households, including exploring the options put forward in the 2021 Pricing Consultation.<br>These will be explored outside of the scope of this Discussion Paper, as **nbn** does not believe such targeted solutions would require a variation to the SAU to implement. |

### 3.3.9 Potential withdrawal of "Basic" AVC and CVC Offers

As part of implementing a new long-term pricing construct, **nbn** is considering the option of withdrawing the existing AVC and CVC Offers (TC-4) in the fixed line and fixed wireless footprints (usually referred to as "Basic" AVC and CVC). **nbn** is not considering equivalent changes in respect of services provided over our satellite network.

We are seeking feedback from RSPs on the potential impacts (financial and operational) of **nbn** removing the existing AVC and CVC Offers (TC-4) from the SAU to ensure we have a comprehensive understanding of both the benefits and costs of removing these offers.

Removing "Basic" AVC and CVC (TC-4) services may help to promote simplicity and reduce operational costs for RSPs by reducing the number of CVC "types" RSPs are required to manage. This will be particularly relevant if the preferred long-term pricing construct includes a split between "Standard" and "High Speed" Bundles. However, removing Basic AVC and CVC (TC-4) services may have implications for the terms of the Business Bundles discounts and, separately, for the value proposition for TC-2 services.

Below are some key considerations and potential impacts on which we are seeking feedback from RSPs:

1. **Remaining Basic AVCs (TC-4) and the interaction with TC-1 and TC-2 -** The current number of Basic AVCs (TC-4) supplied in the fixed-line and fixed wireless footprints is less than 5,000. We understand that over 90% of these remaining Basic AVC (TC-4) services are being acquired for the purpose of supporting TC-2 AVCs and are not being used to provide TC-4 based services to end-users. If **nbn** was to remove Basic AVCs (TC-4) from the SAU, there may be an associated impact on the value proposition for TC-2 services. We understand that RSPs are not currently acquiring Basic AVC (TC-4) services for the purpose of supporting TC-1 AVCs, so there would be no impact to RSPs' ability to provide TC-1 services.
2. **Interaction with TC-4 Business Bundles discounts** - The TC-4 Business Bundles Discount is currently available in respect of both Basic and Bundled TC-4 services. If Basic services were removed from the SAU, the TC-4 Business Bundles discount would need to be amended to remove options in respect of Basic CVCs, and to make any other changes required to reflect the new long-term pricing construct in the SAU.

**Question:** Does your organisation support the withdrawal of Basic AVC and CVC (TC-4) services from the SAU (for fixed-line and fixed wireless services only), and thereby from supply?

**Question:** What are the impacts your organisation foresees if existing Basic AVC and CVC (TC-4) services were to be withdrawn?

**Question:** Would the withdrawal of existing AVC and CVC (TC-4) services reduce complexity and operational costs for your organisation?

**Question:** If **nbn** was to withdraw Basic AVC (TC-4), how would this impact your organisation's demand for TC-2 services?

### 3.3.10 Use of targeted discounts remains relevant and appropriate

RSPs and the ACCC have raised concerns about **nbn**'s use of discounts to establish the charges for our key mass-market services. Amongst the concerns raised were:

- **nbn** may allow the discounts to expire at the end of their term, which would see prices revert to the Maximum Regulated Price (MRP) permitted under the SAU. In the unlikely case this were to happen, RSPs would face significant price increases.
- **nbn** has some flexibility to change the terms and conditions of the discounts (subject to the contractual change rights inherent in **nbn**'s access agreements, and as introduced with each discount), which does not provide the same degree of certainty as MRPs under the SAU.
- Discounting can create complexity for RSPs in managing their commercial constructs, and requires them to implement new systems and processes to take advantage of them.

**nbn** understands the potential uncertainties that discounting can introduce, and the challenges that it can create for long-term commercial planning by RSPs. We believe the proposals put forward in this paper for consultation address a number of the issues raised, and welcome feedback from RSPs on how effectively they do so.

However, **nbn** considers that its ability to offer discounts in certain situations remains an important part of its overall approach to pricing, and leads to more efficient pricing outcomes. Discounts allow **nbn** to provide targeted incentives to RSPs to ensure efficient take-up of services by end-users. They also allow **nbn** to determine whether price changes will achieve their intended outcomes, without being exposed to unacceptable long-term commercial risk. If **nbn** were not able to employ discounts, we would be less likely to test and then offer, changes to our prices. We therefore consider it reasonable that the discounting arrangements in the SAU continue to apply, subject to the MRPs being adjusted, as discussed above.

The benefits of **nbn** being able to offer discounts has also been discussed by the ACCC:[29]

> *Since their introduction, these discounts have improved end-user experience, as was highlighted through the improved congestion outcomes following the introduction of the Focus on 50 promotion. The use of discounts also allows NBN Co the flexibility to respond to market demands or changes in a timely way.*

Further, it is important to not conflate pricing certainty regarding the MRP (i.e. the most RSPs would expect to pay for a service in a given period) with pricing certainty regarding a price floor. **nbn** understands that RSPs' core concerns are in relation to the former, and it is unlikely that RSPs would advocate for a model that prevents **nbn** from implementing temporary price reductions via discounts. While the Constructs proposed significantly reduce the potential for **nbn** discounts on the scale offered today via TC-4 Bundles Discounts, it is likely that the ability to discount would still be beneficial to enable **nbn** to respond to competition and market behaviour, particularly as **nbn** cannot perfectly predict RSP and end-user demand with respect to speed tier take-up and usage.

Whilst we believe that the ability to offer discounts is normal market practice, it is appropriate that **nbn** considers the impacts of its price changes and the need for predictability for RSPs. Recognising issues raised by the industry on the degree of flexibility **nbn** had to change discounts, we introduced changes in WBA4 to provide greater certainty to RSPs. This included moving the TC-4 Bundles Discount into the WBA4 Price List, committing to a 2-year roadmap for the evolution of bundle discount charges and CVC inclusions, and providing greater commitments over our ability to vary or withdraw discounts. If RSPs wish to propose further enhancements to **nbn**'s discounting arrangements, **nbn** is open to considering any feedback provided.

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[29] ACCC, *Update on ACCC assessment of NBN Co's SAU variation*, 2 November, 2018, page 3. https://www.accc.gov.au/system/files/NPC%20-%20final%20-%20SAU%20variation%20-%20Public%20statement%20on%20withdrawal%20-%202%20November%202018.pdf

# 4 Inclusion of the MTM technologies

A core feature of the SAU variation that **nbn** proposes to lodge in 2021 is the inclusion of the Multi Technology Mix (MTM) technologies that had not been launched at the time of the SAU's acceptance in 2013. This will place all Layer 2 services delivered over the **nbn** network on the same regulatory footing. The variation will seek to include FTTB, FTTN, HFC and FTTC services within the SAU's framework.

On 27 May 2016, **nbn** applied to vary the SAU to support the transition of the **nbn** network to an optimised MTM model (**2016 SAU Variation**).[30] This variation focused on incorporating the additional technologies being supplied at that time (i.e. FTTB, FTTN and HFC) into the regulatory construct established by the SAU. Following the ACCC's draft decision in relation to the 2016 SAU Variation, and further consultation with the industry, **nbn** withdrew the 2016 SAU Variation. **nbn** then submitted a further SAU variation application that incorporated amended terms in response to the ACCC draft decision and its subsequent consultation process (**2017 SAU Variation**).[31]

At that time, the ACCC indicated it had several concerns with **nbn**'s approach to pricing, particularly the use of discounts for key mass-market services. While the MTM changes proposed by **nbn** in 2017 were relatively uncontroversial, it was apparent that concerns with pricing would need to be addressed before those changes could be accepted by the ACCC. As a result, **nbn** withdrew its SAU variation in October 2018.

We believe that the pricing proposals outlined in this Discussion Paper would address the matters raised by the ACCC when considering our previous SAU variations designed to incorporate the MTM technologies. In particular, we believe that our proposed inclusion into the SAU of whichever pricing option is adopted will materially address the concerns that have previously been raised about potential price uncertainty.

The approach proposed to be adopted in this current variation in relation to the MTM technologies is consistent with that taken by **nbn** in the 2016 and 2017 SAU Variations, with the addition of FTTC. However, given the passage of time since the original variations were lodged, and the significant additional operational experience gained with these technologies since then, the proposed SAU variation drafting will reflect changes that were incorporated in the negotiation and finalisation of WBA4, which also reflected the outcomes of the ACCC's three-year inquiry into **nbn**'s Wholesale Service Standards and their 2019-20 inquiry into **nbn**'s Access Pricing.

Other than to reflect the WBA4 outcomes, **nbn** does not propose to materially change the SAU drafting for the MTM technologies beyond that previously included in the 2016 and 2017 variations. We anticipate being able to share a draft version of the updated SAU changes with RSPs in July, in advance of formal lodgement of the SAU variation with the ACCC, to afford RSPs the opportunity to provide comments on the details of the proposed MTM changes. However, **nbn** acknowledges the potential for further changes to the SAU to account for other issues addressed in this paper, which will be influenced by the ACCC's proposed SAU round table forum in June.

[30] https://www.accc.gov.au/regulated-infrastructure/communications/national-broadband-network-nbn/nbn-co-sau-variation

[31] https://www.accc.gov.au/regulated-infrastructure/communications/national-broadband-network-nbn/nbn-co-sau-variation-2017

In line with the 2016 and 2017 variations, **nbn**'s approach to incorporating MTM technologies in the SAU is to:

**1. Expand the service description in Attachment A of the SAU to include FTTB, FTTC, FTTN and HFC**

In the SAU the description of the NBN Access Service, when read together with the definition of NBN Co Network, is currently limited to situations where the NBN Access Service is supplied on the NBN Co Fibre Network, the NBN Co Wireless Network and the NBN Co Satellite Network. As a consequence, most aspects of the SAU (e.g. the price controls and product development and withdrawal provisions) do not apply to the otherwise similar services supplied by **nbn** over the additional MTM network technologies.

To update the service description for the transition to the MTM model (and thereby broaden the application of most aspects of the SAU), **nbn** proposes:

- a wider definition of NBN Co Network to incorporate the NBN Co FTTB Network, NBN Co FTTC Network, NBN Co FTTN Network and NBN Co HFC Network;
- consequential changes to the description of the NBN Access Service to account for the fact that the UNI will not be located on an NTD in all cases;
- an expanded definition of "Premises" to facilitate incorporation of a greater range of locations within the scope of the NBN Access Service; and
- updating of the provisions relating to the network boundary points, reflecting the different locations of the boundary points for each access technology.

**2. Make changes to some other parts of the SAU to incorporate the initial products and prices for FTTB, FTTC, FTTN and HFC**

As set out in the supporting submissions for the 2016 and 2017 variations, for the SAU to accommodate the MTM technologies, there are a number of consequential changes required to the SAU beyond updating the description of the NBN Access Service. Key changes include:

- incorporating an appropriate set of Initial Products in respect of the NBN Co FTTB Network, NBN Co FTTN Network, NBN Co FTTC Network and NBN Co HFC Network. These Product Components and Product Features are already included in the WBA and have each been consulted on with access seekers as part of the development of the relevant product constructs;[32]
- changes to ensure the price-related terms and conditions sufficiently accommodate the additional MTM technologies (e.g. inclusion of FTTB, FTTC, FTTN and HFC in NBN Offers, Other Charges and initial Maximum Regulated Prices and the introduction of relevant standard installation definitions); and
- updates to the way in which **nbn** will implement the services covered by the SAU as set out in Schedules 1A and 2A. This includes changes to the UNI, AVC, NNI and Maximum Data Transfer Rate provisions and the introduction of new provisions regarding co-existence and network activity (formerly termed "remediation"). These co-existence and network activity provisions were the only non-price matters that the ACCC indicated required further review in its 2018 update on the assessment of the 2017 variation. In particular, the ACCC noted that "*there is a potential for the co-existence provisions to be used to refuse some trouble tickets and, in the case of remediation, end-users*

[32] Attachment D of the SAU sets out a list of Initial Products, which identifies the Product Components and Product Features that can be introduced by **nbn** (following acceptance of the SAU by the ACCC) without needing to apply the product development provisions set out in Schedule 1I (in respect of the Initial Regulatory Period) and Schedule 2D (in respect of the Subsequent Regulatory Period). Currently, Attachment D only identifies the initial Product Components and Product Features with respect to the NBN Co Fibre Network, NBN Co Wireless Network and NBN Co Satellite Network (and **nbn** does not propose general changes to the Initial Products list in respect of these networks).

*may have to pay for higher speed services when the line is not capable of achieving those speeds before remediation is completed. This is likely to have a direct effect on the experience of end-users*." [33]

**nbn** is confident that the significant changes made in WBA4, particularly in relation to the PIR Objective rebate, should address these concerns. These changes were included in WBA4 in response to issues raised in the ACCC's Wholesale Service Standards Inquiry (WSSI). Under the new PIR Objective rebate, where an FTTB, FTTC or FTTN service is unable to meet the PIR Objective and **nbn** has identified that the issue lies on its network and designated that service for remediation under a Network Activity, a rebate will be payable until the service is remediated by **nbn** and performs above the PIR Objective. The PIR Objective for an FTTN service is 12/1Mbps while that service is in co-existence with a legacy network, and otherwise depends on the bandwidth profile of the service and the network technology used. The ACCC has previously acknowledged **nbn**'s existing commercial incentives to end the co-existence period and remediate copper quickly to drive the take up of high value services and traffic on the network. These incentives are further strengthened with a monthly rebate that increases over time, ultimately reaching a level of $20 per month if the service has been eligible for more than six months.

While the MTM technologies have not formally been part of the SAU, since their introduction **nbn** has operated on the basis that they should be treated in an equivalent manner to the technologies that are covered by the SAU. Thus, we have conducted product development for the MTM services using the same Product Development Forum (PDF) processes, adopted a consistent approach to pricing and use of discounts, and provided the same type of rollout reporting information as for the networks covered by the SAU. Given the extensive previous consideration of the MTM technologies in the context of the previous SAU variations, and the ongoing engagement with the industry on them in the development of successive WBA updates, **nbn** considers that RSPs will be familiar with the MTM drafting changes **nbn** proposes to provide in advance of lodgement.

**Question:** Do RSPs consider that **nbn**'s proposed approach to including the MTM technologies in the SAU, i.e. adopting similar drafting to that proposed in 2016/17, but reflecting the addition of FTTC and the outcomes of the WBA4 negotiations is reasonable? Are there other matters relevant to the introduction of the MTM technologies that you consider should be included?

**Question:** Do RSPs wish to have the opportunity to review and provide feedback on the details of the proposed SAU drafting that incorporates the MTM technologies prior to **nbn** formally lodging the SAU variation with the ACCC?

[33] https://www.accc.gov.au/system/files/NPC%20-%20final%20-%20SAU%20variation%20-%20Public%20statement%20on%20withdrawal%20-%202%20November%202018.pdf

# 5 Other proposed SAU changes

In addition to the SAU variations necessary to incorporate the MTM technologies into the SAU framework, and changes required to support the pricing approach developed as part of the ongoing pricing consultation, there are a small number of other changes that **nbn** proposes to include in the 2021 SAU Variation. We anticipate that these changes should not be contentious, but invite feedback from RSPs on the following proposals:

- **Correction to the Cumulative Inflation Factor (CIF) equation**. This is a minor technical fix to the equations used in Module 1 and Module 2. This change was proposed in the 2016 SAU Variation and would be drafted in the same manner as that proposed change. It addresses an error in the formula used to calculate the CIF in respect of years prior to the First Financial Year (2013-14). It also clarifies that the first LTRCM Determination made immediately after the varied SAU is accepted will apply the corrected CIF formula to the values of the RAB, ABBRR and ICRA as though that formula had applied from the SAU commencement date.
- **Minor changes to the Dispute Management arrangements to clarify, enhance and refine the existing provisions in the SAU.** These changes were proposed in the 2016 and 2017 SAU Variations, and include:
    - Permitting **nbn** to appoint an additional Resolution Advisor or additional Nominated Person in respect of an existing Resolution Advisor where necessary, and after notifying the ACCC;
    - Clarifying that a Resolution Advisor may be a body corporate;
    - Clarifying that **nbn** can appoint new Pool members after the establishment of the initial Pool at such times as **nbn** reasonably considers that to be required; and
    - Clarifying that the Resolution Advisor may appoint Panel Members from outside the Pool, provided it is in accordance with the Dispute Resolution Rules and notified to the ACCC and **nbn**.
- **Withdrawal of Multicast (Fibre) services. nbn** withdrew these services in May 2021, having followed the SAU's formal withdrawal processes. References to these products and their prices would be removed from the SAU.
- **Withdrawal of Interim Satellite Service**. The ISS was withdrawn in 2017, following the introduction of **nbn**'s Long-term Satellite Service (LTSS). Reference to this service and its prices would be removed from the SAU.
- **Removing TC-3 Offers from the SAU**.TC-3 has never been productised by **nbn**.
- **Updating the Labour Rate Price Index**. **nbn** is considering substituting the defined SAU term "*ABS Labour Price Index for Private Sector Construction*" (**ABS LPI**) with "*Wage Price Index*". The last regular ABS LPI was published in the September quarter 2011, although it was temporarily re-introduced during 2020 to account for the JobKeeper wage subsidy package. We consider that generally, the Wage Price Index acts as a reasonable proxy measure for the rising price of labour after the discontinuation of the ABS LPI.
- **Minor changes to Product Development Forum requirements. nbn** considers that the PDF continues to serve an important function by ensuring effective engagement with access seekers and consumer advocacy groups in product development. This aligns with the recent extension of the non-price SAU terms (including PDF processes) to the end of the Initial Regulatory period. While **nbn** does not propose any substantive changes to the PDF, we would like to consider whether there are any PDF requirements that access seekers receive little benefit from and which could potentially be removed. For example, it is not clear that the Product Ideas Register which **nbn** is required to maintain provides PDF members with

any additional utility given the recently updated PDF portal (that enables easier searching of PDF materials and identification of open consultations) and the detailed information provided to RSPs on a monthly basis via the Enhanced Integrated Product Roadmap.

**nbn** notes that since the SAU was accepted in 2013, new products and services on networks covered by the SAU have been introduced under the terms of the SAU. These products followed the product development processes outlined in Schedule 1I of the SAU, and once launched were subject to the SAU's commitments in relation to price controls, product development and withdrawal, reporting, and dispute management, amongst others. Examples of such new products include higher speed tiers offered on the FTTP and Fixed Wireless networks, higher capacity CVC offers, larger port sizes on Network-Network Interfaces (NNI), additional enhanced service levels on FTTP, and Enterprise Ethernet services.

These products are already covered by the SAU, and **nbn** does not propose to specifically include them in this variation to the SAU. The SAU is designed to allow for ongoing evolution of the services covered by the SAU, and this will continue to occur over the term of the SAU (until 2040). Including them in an SAU variation process would potentially complicate and prolong the assessment of that variation process, with little corresponding benefit, given that the products and services have already been introduced and are being supplied.

**Question:** Do RSPs consider that the changes to the SAU proposed above are reasonable, and appropriate to include in **nbn**'s 2021 SAU Variation?

**Question:** Are there any other changes to the SAU that RSPs consider necessary as part of the proposed 2021 SAU Variation?

# 6 Next Steps

## 6.1 Responses to this Discussion Paper

As announced on 28 April, the ACCC intends to host an industry "round table" that will allow discussion of **nbn**'s SAU and long-term pricing approach. This forum will take place in June 2021. We anticipate that RSPs who participate in this ACCC event would prefer to provide any formal feedback to this Discussion Paper after it has been held. We also understand that RSPs would prefer an integrated approach between any **nbn** and ACCC consultation processes that run prior to **nbn**'s lodgement of the SAU, and seek the industry's views on how this could best be achieved. Some initial approaches are suggested in this section, but other approaches are welcomed.

**nbn** invites written submissions from PDF participants by close of business **16 July 2021**. The PDF Web Tool private workspace provides a tool to securely share written submissions with **nbn**. To the extent that PDF Participants identify information in their written submissions as being Confidential Information (pursuant to their respective PDF Participation Agreements), **nbn** requests that PDF Participants also provide written consent in their submissions for:

- **nbn** to use that Confidential Information for purposes in connection with this Discussion Paper and **nbn**'s consultation on its SAU and long-term pricing reform; and
- **nbn** to disclose that Confidential Information to the ACCC.

## 6.2 Indicative steps to lodgement of variation

**nbn** understands that the industry would benefit from an understanding of the likely steps that will take place between now and when **nbn** ultimately lodges an SAU variation. Any future steps will of course be dependent on the nature of matters raised by RSPs and the ACCC in response to this Discussion Paper, the outcomes of the ACCC's proposed industry round table, and any other consultation conducted. This feedback could change both the scope of **nbn**'s proposed variation, as well as the timing of it. In addition, the feedback may shape the nature of any additional consultation required. However, based on our current understanding of likely issues, **nbn** anticipates the following steps would be required to allow the lodgement of an SAU variation with similar scope to that proposed by **nbn** in this Discussion Paper:

- This Discussion Paper provided to the industry on 7 June.
- ACCC hosts an industry round table in mid-June.
- **nbn** would potentially provide updates to this Discussion Paper based on issues raised at the ACCC round table discussion.
- RSPs provide feedback on the Discussion Paper and ACCC round table by 16th July.
- **nbn** is open to further discussions with RSPs to clarify any issues relating to the SAU variation or proposed pricing approach, to allow them to further develop their views.
- **nbn** plans to share initial *non-price* SAU drafting to RSPs in the month following the round table. We would be seeking RSP feedback on this drafting a month later.

- **nbn** plans to share an updated pricing proposal with RSPs that reflects feedback received by RSPs, seeking further feedback from RSPs.
- **nbn** would then look to share initial price-related SAU drafting to RSPs after considering their feedback.
- **nbn** would then consider all feedback on drafting and other aspects of our proposals, and develop a complete SAU variation for lodgement with the ACCC. We hope to be in a position to do so in quarter four of 2021.

As noted above, these steps reflect **nbn**'s initial thinking on the future process. Based on feedback received from RSPs, including at the ACCC's round table, this process is likely to evolve, and we welcome any other views from RSPs on steps they consider important.

# Appendix A – Long-term cost recovery under the SAU

A key element of the SAU is the mechanism which describes how **nbn** has the *opportunity* (but not the certainty) of being able to achieve long-term recovery of the significant upfront investments we have made to upgrade the digital capability of all Australians. In Module 1 of the SAU, the mechanism established by the SAU includes:

- A Regulatory Asset Base (RAB): Unlike most regulated network businesses, **nbn** did not have an historical asset base when regulation commenced. Instead, **nbn**'s *actual* capital expenditure (capex) is included in a RAB, subject to that capex complying with the Prudent Cost and Prudent Design Conditions set out in the SAU. The ACCC has an annual role in determining the capex values that are included in the RAB. Thus, rather than relying on a hypothetical, modelled set of costs, or a revaluation of existing assets, **nbn**'s RAB reflects the actual prudently incurred costs associated with establishing an organisation to roll out and operate a national network using the latest technologies available.
- Provisions to allow **nbn**'s actual prudent operational expenditure (opex) to be included in the calculation of **nbn**'s Annual Building Block Revenue Requirement (ABBRR). The ABBRR includes allowances for **nbn** to make a return on its RAB (via a regulated rate of return) and to recover the depreciation of the RAB. These are common features of a building block model (BBM) of regulation.
- Provisions which ensure that, to the extent that **nbn** is unable to earn revenue each year that reflects its ABBRR, the "unrecovered" amount is included in an Initial Cost Recovery Account (ICRA), which is also capitalised each year. Once **nbn** earns revenues greater than the ABBRR, the ICRA will reduce in value. When the ICRA is extinguished, **nbn** will have fully recovered its efficiently incurred capex and opex, inclusive of a regulated rate of return. From that time, the ABBRR would act as an overall revenue cap on **nbn**, in a similar manner to other regulated utility networks.

This long-term revenue constraint methodology (LTRCM) has a number of key features which are important to understand in considering the future arrangements for the SAU, which we discuss below.

## A.1 The ICRA is an integral part of the SAU framework

The inclusion of an ICRA within the overall LTRCM framework in the SAU is consistent with standard regulatory practice. It recognises that network investments are made in advance of being able to earn any revenue at all, and are usually made well in advance of being able to earn revenue that is sufficient to meet an efficient ABBRR. Demand for services takes time to build to the level required to satisfy the ABBRR. In the case of the **nbn** network, it is not just the migration of legacy services to the network that is necessary, but also the uptake of services by end-users that require the capabilities delivered by the new network investment. In product terms, this means the take-up of higher speed tiers, increased utilisation of the network (downloads and uploads) and the adoption of business-grade services.

**nbn** always anticipated that willingness to pay for these services would increase over time. For example, in our supporting submission for the SAU lodged in 2012, we said:[34]

> *NBN Co considers that willingness to pay for its higher speed and functionality services will grow over time (supported by new applications and patterns of use) and NBN Co's Corporate Plan is based on this assumption.*

[34] *Supporting Submission, NBN Co Special Access Undertaking,* 28 September 2012, page 100.

In that same submission, we identified that the ICRA played a central role in the price-related terms and conditions of the SAU, with no expectation that it would constrain our revenues in the short-to-medium term:[35]

> *…a LTRCM that constrains NBN Co over time to recovering no more, on an expected NPV, basis than its prudently incurred costs of supply (noting that this constraint will not directly affect product pricing in the short to medium term because of the extent of initial cost under-recovery)*

**nbn**'s adoption of the ICRA within its broader cost recovery approach is consistent with the principles of good infrastructure regulation, which should:

- provide certainty and predictability to investors in regulated infrastructure that they will have the opportunity to recover their prudently incurred costs, including an appropriate return on investment; and
- provide certainty and predictability to users of regulated infrastructure in respect of the charges they will pay and that these charges will not allow over-recovery of costs by the service provider.

As other investors in telecommunications infrastructure would appreciate, it is in the interests of all parties that an appropriate return on efficient investment in infrastructure, including the ability to sustainably continue to invest, be achievable under the regulatory framework. **nbn** submits that a consistent and predictable approach to the treatment of infrastructure investment should be adopted by regulators.

**nbn** completed the initial rollout of its network in 2020. As described in **nbn**'s submissions in support of the annual LTRCM Determination process conducted by the ACCC, in the five-year period from FY16 to FY20, **nbn** incurred over $29 billion in capex in deploying its network, and also incurred ~$20 billion of opex, including lease payments made to Telstra for access to infrastructure and the migration payments made to Telstra and Optus. The total expenditure over those five years amounts to around 80% of the total spent by **nbn** since it was established in 2009. Thus, the vast majority of the costs that **nbn** is permitted to recover have been incurred in the relatively recent past.

As a result, **nbn** is not yet in a position to start "paying down" the ICRA. This is an expected and natural outcome, reflecting the scale of the **nbn** network and the significant investments made over the past five or so years by **nbn**. As with any large-scale network asset, recovery of the initial investment is a longer-term proposition. Indeed, this is the central premise behind any regulated entity proposing a special access undertaking in the first place – that appropriate regulatory arrangements need to be established up front to provide the certainty required to support significant and long-term investment decisions. This expectation that the ICRA would not be extinguished in the short-term was clearly described by **nbn** in 2012:[36]

> *NBN Co anticipates that the ICRA will grow significantly for at least the next 10 years, and it will take a further extended period for these initial costs to be fully recovered.*

The ICRA continues to play the role that it was always intended to – to recognise that long-term investments take a long time to be paid back and earn a return on. This has been, and remains, **nbn**'s focus – to provide products and services that end-users value, at prices that they are willing to pay. As that willingness to pay increases, **nbn** will have the opportunity to recover its initial investments. Until then, the ICRA provides the mechanism by which the initial under-recovery of those initial investments is recognised.

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[35] ibid, page 101.

[36] ibid, page 114.

This is why the SAU was developed with both the long-term revenue constraint provided by the LTRCM and ICRA, as well as the more immediate constraints on **nbn**'s pricing delivered by the individual price control mechanism. This combination of both long- and short-term controls are part of an integrated approach to providing RSPs and other stakeholders with certainty that **nbn** could not over-recover on the investments it has made, or increase its prices beyond those accepted in the SAU by more than CPI-1.5%. This has been the case.

## A.2 nbn's pricing currently under-recovers its costs

As discussed in the previous section, the ICRA plays a critical role in the overall SAU Building Block Model (BBM) framework. The need for an ICRA is fundamentally driven by the fact that the prices that **nbn** is able to charge for its services do not generate revenue that allows it to contemporaneously recover its ABBRR at this time. To date, **nbn** has under-recovered its prudently incurred costs, with the SAU providing the opportunity to recover those costs (including an appropriate rate of return) over time. However, over the long term, **nbn** can do no more than recover those costs – our prices will ultimately need to be set to allow us to earn no more revenue over the long-term than permitted under a building block revenue model.

In part, this under-recovery to date reflects the approach that **nbn** adopted in establishing its initial prices, which formed part of the accepted SAU. As noted in our Supporting Submission at that time:[37]

> *In developing initial prices, NBN Co has had to form a view about relative willingness to pay for different products, both now and over time.*

That is, the prices **nbn** has established for the various AVC speed tiers and CVC capacity are not based on the underlying costs of each individual product element, but rather reflect a number of other factors, including initial willingness to pay, anticipated demand for higher-value services in future, encouraging a smooth transition from legacy networks to the **nbn** network, and **nbn**'s aligned interests with RSPs to develop downstream markets.

In particular, many of the prices for **nbn**'s key entry-level services were established by reference to existing equivalent services in market at that time, rather than by reference to their underlying costs. If **nbn** seeks to increase its revenues to recover its costs, it can only do so as a result of end-users taking up service offerings beyond our entry-level ones. This creates strong incentives for **nbn** to introduce such services at prices that end-users are willing to pay, and to only incur costs efficiently, given the revenue sufficiency risks we face. This was discussed by the ACCC in its Final Decision on the SAU in 2013:[38]

> *Initial prices in the SAU are set at levels similar to current prices for copper and hybrid fibre coaxial (HFC) services and there is a limit on how much prices can change by each year. In particular, prices cannot increase by more than CPI minus 1.5 per cent each year. This means that NBN Co will only be able to increase its revenue by offering new products or increasing demand, meaning NBN Co has an incentive to innovate and to increase take-up of its services.*

A key example of **nbn**'s pricing approach to date relates to CVC pricing. This has been the subject of considerable comment from RSPs, as the revenues generated by **nbn** from CVC continue to grow over time as usage increases, which increases the costs faced by RSPs. **nbn** acknowledges the concerns raised by RSPs, and we have sought to address these in section 3 of this paper. Here, we simply note that the use of CVCs was a foundational

[37] *Supporting Submission, NBN Co Special Access Undertaking,* 28 September 2012, page 108.

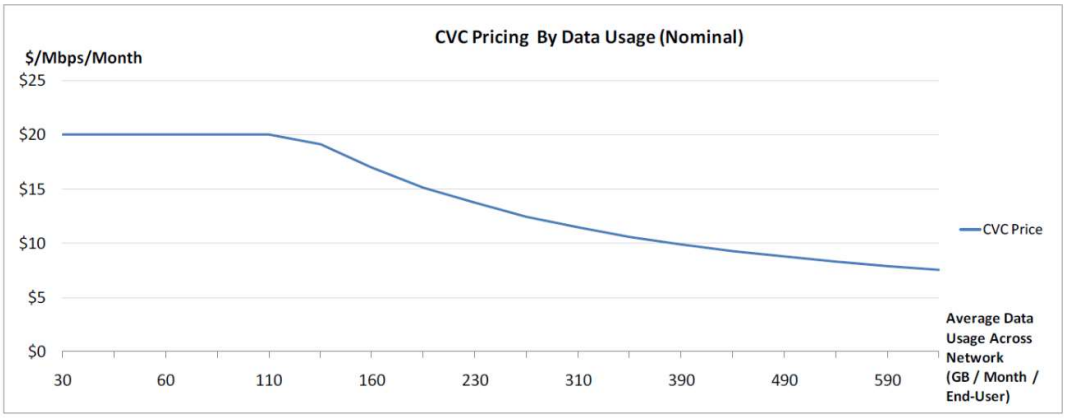
[38] ACCC, *NBN Co Special Access Undertaking – Final Decision*, 13 December 2013, page 11.

aspect of **nbn**'s earliest corporate plan, and reflects the pricing approach articulated in our 2012 SAU Supporting Submission:[39]

> *NBN Co considers that willingness to pay for its higher speed and functionality services will grow over time (supported by new applications and patterns of use) and NBN Co's Corporate Plan is based on this assumption.*
>
> *As a consequence of this expectation, combined with the imperative of encouraging economically efficient take up and usage, … the key element of NBN Co's overarching pricing strategy is a two part pricing approach comprising an access component in the form of the AVC charge and a usage component in the form of the CVC charge. Average Revenue Per User (ARPU) will initially be driven mostly by AVC revenue, but over time it will be driven to a greater degree by CVC revenue as usage of the NBN increases.*
>
> *The ongoing growth in network usage … is based on the anticipated evolution of telecommunications from traditionally voice and email to a much broader service including high definition video, e-education, e-health and other new applications. This will lead to increased usage by the End User and hence increased utility being derived from the NBN service. Overall, this is expected to result in an increasing ARPU even though the individual unit prices (for both AVC and CVC) are expected to decrease.*
>
> *…This pricing strategy should allow NBN Co to balance, over time, the competing needs of maintaining high rates of take-up of the NBN (through affordable AVC prices) with high rates of usage of the NBN (through affordable CVC prices).*

Indeed, in **nbn**'s initial 2010 Corporate Plan, the expected reduction in CVC pricing as average usage increased was described. This anticipated that the TC-4 CVC price would fall from its initial price of $20/Mbps/month to around $7.50 when average usage approach 600 GB/user/month:[40]

*Exhibit 8.16: Forecast CVC Pricing by Data Usage ($ per Mbps per month) (Nominal Dollars)*

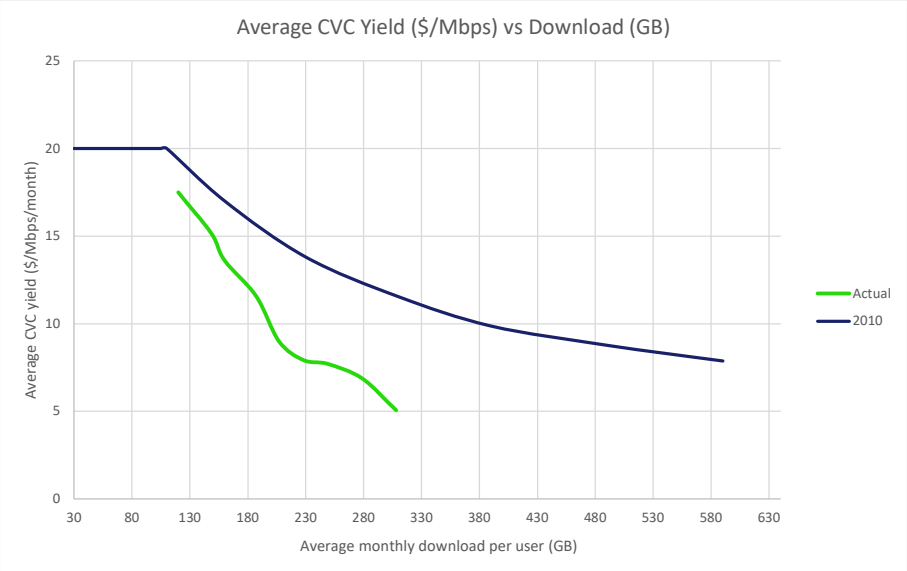



Source: NBN Co

[39] *Supporting Submission, NBN Co Special Access Undertaking,* 28 September 2012, page 100.

[40] NBN Co Corporate Plan 2011-13, page 103.

While **nbn** made no commitments to adjust CVC prices to match the Corporate Plan forecasts, our underlying incentives to set prices that deliver positive end-user experience outcomes and to ensure sustainable commercial outcomes for RSPs have more than delivered against those initial forecasts. As shown below, **nbn**'s actual average yield for CVC capacity acquired by RSPs has always sat significantly below the 2010 projections.




Thus, as a result of **nbn**'s approach to CVC pricing over the past decade, using a range of discounting models, we have delivered significantly lower CVC prices than forecast. While RSPs have raised issues in relation to **nbn**'s ability to potentially increase CVC prices as a result of their effective charge being significantly below the Maximum Regulated Charge (MRP) in the SAU (currently $17.50/Mbps), this issue only arises because **nbn** has in fact charged significantly below that MRP for a sustained period of time. As demonstrated in practice over the past decade, it is **nbn**'s underlying incentives to deliver sustainable outcomes for RSPs and end-users that has been the predominant driver of pricing, not the theoretical MRPs that could be charged. These incentives remain unchanged in an environment where **nbn** faces competition on a variety of fronts (see discussion in section 2.3), and where, in **nbn**'s view, the revenue sufficiency risk described by the ACCC in 2013 continues to exist:[41]

> *The ACCC considers that NBN Co will face a high degree of revenue sufficiency risk for most, if not all, of Module 1. This is due to NBN Co's initial prices and the expected low initial take-up of NBN services. This should provide incentives for NBN Co to invest efficiently.*

This has resulted in Australians paying less for faster internet speeds and increased download volumes over the past decade, as the **nbn** roll-out has taken place (see Figure 1).

[41] ACCC, *NBN Co Special Access Undertaking – Final Decision*, 13 December 2013, page 96. https://www.accc.gov.au/system/files/ACCC%20Final%20Decision%20on%20the%20Special%20Access%20Undertaking%20lodged%20by%20NBN%20Co%20on%2019%20November%202013.pdf

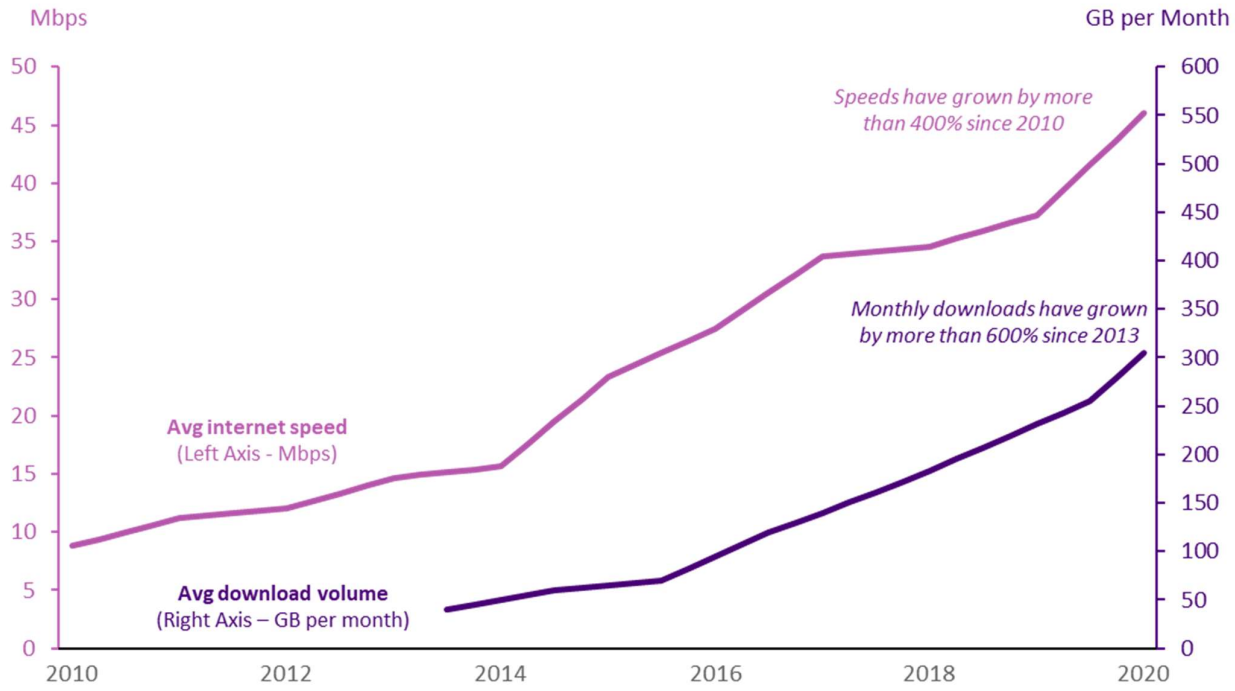



**Figure 1:** Since 2010, average internet speeds have increased by more than 400%. The average download volume for Australian households over the same period increased by 600%. This increase has also persisted through the COVID-19 crisis where high internet volumes were experienced.