NBN 2025 REPLACEMENT MODULE APPLICATION

CONSULTATION PAPER TWO

February 2025

VERSION CONTROL

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PREFACE

How to navigate this Consultation Paper

Acknowledgement of country

nbn acknowledges First Nations peoples and recognises their role as the traditional owners of the lands and waters across Australia. We are privileged to work across all corners of this vast country and pay our respects to all Elders past, present and emerging.

PART A
OUR PAPER AT A GLANCE

Our purpose

nbn's purpose is to lift the digital capability of Australia. The company aims to achieve its purpose by providing fast, reliable and affordable connectivity via wholesale broadband services which meet the current and future needs of Australian households, communities and businesses. Providing equitable access to affordable and reliable wholesale broadband services is essential in enabling access to key services all across Australia, including health services, maximising employment and educational opportunities, supporting economic growth and promoting digital inclusion.

Our operating context

nbn operates in a dynamic and evolving telecommunications landscape, focusing on building and improving Australia's national broadband access network. The company also operates on a commercial basis and must be commercially sustainable to support its ongoing prudent and efficient investment in the network, to service and repay its debt obligations, and to ultimately achieve and maintain a standalone investment grade credit rating.

Our regulatory context

nbn is a Government Business Enterprise that was established as a wholesale-only business to improve retail competition and choice for customers. The company operates in a regulated environment, which includes obligations overseen by the Australian Competition and Consumer Commission (ACCC) to ensure non-discriminatory access to its network for all retail service providers (RSPs). In order to meet its obligations and successfully deliver on its purpose, nbn invites stakeholders to help shape its future priorities.

The regulatory framework established under nbn's Special Access Undertaking (SAU) accepted by the ACCC in November 2023 provides a level of regulatory certainty to nbn, RSPs and customers regarding nbn's prices and certain key terms of supply.

The SAU requires nbn to periodically set out its proposals on certain matters for the coming years in a Replacement Module Application (RMA). In July of 2024, the ACCC formally notified[1] nbn of the required timing for the RMA for the next Regulatory Cycle.

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[1] See https://www.accc.gov.au/by-industry/telecommunications-and-internet/national-broadband-network-nbn-access-regulation/nbn-co-sau-replacement-module-regulatory-cycle-commencing-2026/accc%E2%80%99s-notice

The RMA continues nbn's operationalisation of its obligations under the varied SAU, with the first RMA due to be submitted to the ACCC on 2 July 2025, covering the next three-year Regulatory Cycle FY27-29. **nbn will develop the RMA in accordance with the provisions in the SAU, and will include proposals for the upcoming Regulatory Cycle on:**

- expenditure (as part of the Building Block Model Proposal);

- minimum service standards, known as Benchmark Service Standards (the Service Standards Proposal);

- the Entry Level Offer which will be subject to an individual price control of CPI in addition to being included in the weighted average price control (the Entry Level Offer Proposal); and

- length of the Regulatory Cycle, for which nbn is proposing a three-year Regulatory Cycle. nbn is not seeking views on the length of the Regulatory Cycle as part of this consultation paper.

Figure 1: SAU phases
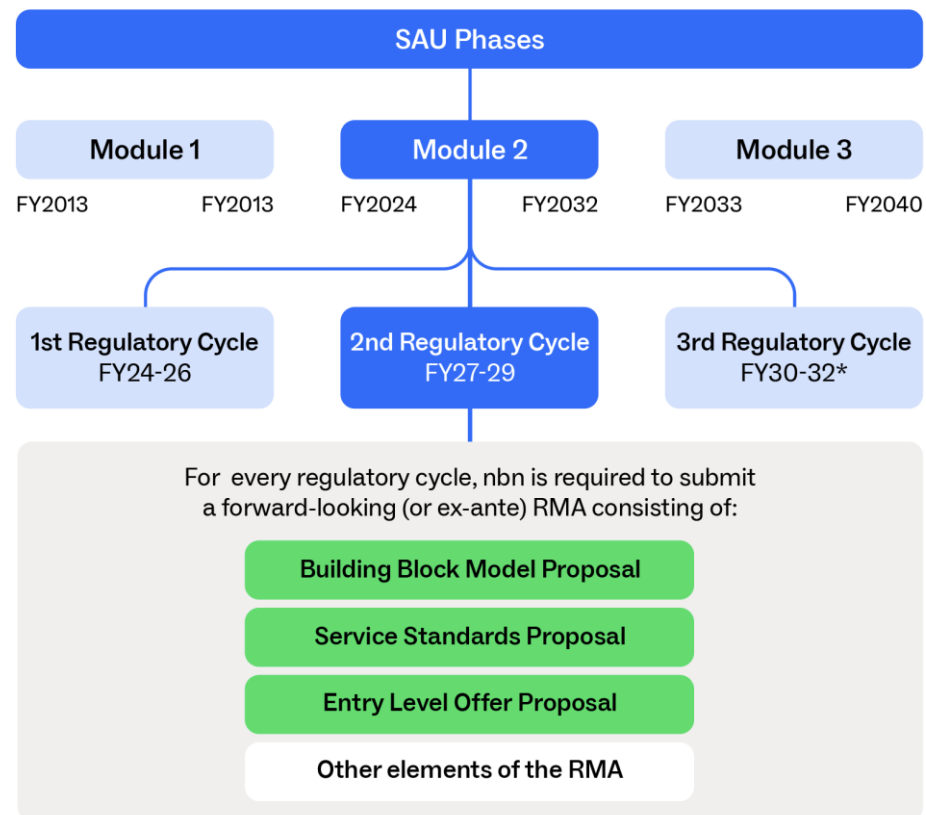
*nbn is proposing a three-year Second Regulatory Cycle as part of the RMA. The SAU provides for the ACCC to determine the length of the Second Regulatory Cycle in the Replacement Module Determination (RMD).

The RMA will be informed and shaped by a wide range of factors, including feedback from consumer advocacy groups, RSPs and customers of broadband services supplied over the nbn network. More information on nbn's multi-channel RMA Stakeholder Engagement Strategy can be found here. The ACCC will review the RMA and can conduct its own consultation process during Financial Year 2026 and make a Replacement Module Determination (RMD) on nbn's proposals.

Delivering for customers

In developing its regulatory proposal, the company needs to understand and balance the diverse needs of all residential and business customers with its need to deliver services and be sustainable. Proactively seeking the views of customers and other stakeholders enables nbn to make better business decisions and ultimately, deliver on its purpose to lift the digital capability of Australia. The RMA engagement process provides an opportunity to seek input from stakeholders on potential options and proposals that will benefit and deliver for residential and business customers.

Purpose of this document and how to navigate it

This document is the second of two planned consultation papers which invites nbn's stakeholders to provide input into the RMA engagement process. As set out in nbn's RMA Stakeholder Engagement Strategy, the consultation papers complement the activities being undertaken in three separate stakeholder engagement streams.

Consultation Paper 1 was released on 20 November 2024 and sought views on:

- nbn's overall expenditure plans and high-level expenditure priorities
- specific expenditure topics including climate transition, resilience, and investments required to enable greater than 2Gbps speeds
- entry level offer.

Feedback on those topics was received in January 2025 and is being considered by nbn as part of the development of the RMA.

Building on previous engagements, Consultation Paper 2 addresses and seeks views on:

- Proposals to manage Australia's migration to fibre that have a potential impact on our expenditure forecast and customer operations – Part B; and
- Potential improvements to our Benchmark Service Standards – Part C.

In this paper, nbn also provides an update on the expenditure forecasts set out in Consultation Paper 1 to explain the incremental impact of the recent announcement regarding the upgrade of the remaining 622,000 Fibre to the Node (FTTN) premises. This is relevant to the topic of managing Australia's migration to fibre, and addresses requests made by stakeholders in their feedback on Consultation Paper 1.

Table 1: What are we seeking feedback on

Section	Purpose of the section	What are we seeking feedback on
Part B – Managing Australia's migration to fibre	- Provides context on current and recently announced investments to upgrade and expand the fibre upgrade program. - Sets out the key customer, industry and efficiency benefits of full fibre services. - Summarises how nbn's approach compares with global trends on fibre rollout. - Covers nbn's forecast expenditure plan for FY27-29 recognising the FTTN upgrade announcement in January 2025, and how these updated forecasts compare with those provided in nbn's Consultation Paper 1. - Presents how we currently connect customers to the fibre network and our proposals for a timely migration to fibre and expenditure implications.	1. What do you see as the benefits/barriers to customers and/or RSPs of these potential new capabilities? 2. Are there any additional capabilities that nbn should consider to support an efficient and smooth migration from FTTN and FTTC to fibre? 3. What are your views on when and how the existing and proposed new capabilities could be used/phased to support (a) the shift from early on demand upgrades to mass upgrades and (b) mass upgrades to managed upgrades to complete the final transition? 4. Are there any future considerations/criteria that should be applied over time to further accelerate or slow down the migration timing? 5. What success factors and/or lessons from previous migrations (e.g. global benchmarks, 3G, Digital TV, nbn initial network rollout) should be taken into consideration for the migration from copper to fibre? 6. What are your views on when nbn, working with RSPs, should complete the migration of connections from legacy copper to fibre? Please provide any context for your response.
Part C – Improving our Benchmark Service Standards	- Provides an overview of the nbn service context and overview of the Benchmark Service Standards - Summarises the evolution of Service Standards and the engagement process with RSPs ahead of developing this consultation paper - Details a set of potential Benchmark Service Standard updates under consideration including: planned improvements during this Regulatory Cycle; potential changes during the next Regulatory Cycle; existing Service Standards proposed to be carried forward; existing Service Standards proposed to be removed as no longer relevant, Service Standards requiring further development, our assessment of rebates for the next Regulatory Cycle; and a proposed annual review process for the next Regulatory Cycle. - Outlines nbn's reasons for not proceeding with other proposed changes at this time	1. To what extent do you support the proposed enhancements to Benchmark Service Standards? Please specify which of the proposals you support or oppose. 2. In order of priority, which enhancement or enhancements would add the greatest value to the customer experience and why? 3. What is your view on the proposed timing for the potential enhancements? 4. To what extent do you support the proposed changes to the Corrective Action process? 5. Are the current rebate arrangements between nbn and RSPs sufficient to ensure customers are appropriately compensated for nbn missing its Service Standards? 6. Would you support an Annual Service Standards Review process?

Why are these topics important?

In Australia and across the world, broadband connectivity is recognised as an essential service, supporting social prosperity and economic productivity. As Australia's wholesale national broadband network operator, our role is to provide a network that meets customers' current and future needs for fast, reliable and secure connectivity, supported by great service, and delivered in a way that is financially and environmentally sustainable.

For nbn, fibre provides a superior customer and retailer experience and far lower operating costs, compared to maintaining the copper network.

As a result, we are seeking stakeholder views on our proposal to support Australia's migration to fibre, helping to enable the eventual decommissioning of legacy copper networks, and our proposals to improve our regulated Service Standards on fibre, as well as our HFC and Fixed Wireless networks.

Plans for the future of our Sky Muster satellite services are not yet sufficiently developed to consult on, and nbn will share further developments as they are progressed.

The benefits of fibre

Broadband connectivity is well recognised as an essential service, supporting social prosperity and economic productivity.

When compared to copper-based Fibre to the Node (FTTN) and Fibre to the Curb (FTTC) services, full fibre has many advantages.

For customers, fibre provides a far faster and more reliable connection, delivering a better experience (stable, secure, resilient) not just now but for decades to come. This is true no matter what customers use the internet for, whether that's working or studying from home, enabling more convenient access to healthcare, government services, security monitoring, or entertainment and supporting the continued growth in internet-connected devices. Projections indicate an average of 33 devices per household by 2026, equivalent to more than 350 million internet-connected devices in total in Australia.

Fibre is also more resilient, making it more reliable in our unpredictable Australian climate. Due to the characteristics of the copper network, it suffers from higher fault rates and is less resilient in severe weather events than full fibre. On average, fibre is eight times more reliable, meaning customers experience fewer drop-outs and raise fewer faults with RSPs and nbn.

For retailers, fibre's superior speed capabilities, resilience and reliability make it more attractive to sell to customers, delivering a greater customer experience and a lower fault rate, meaning fewer inbound calls to contact centres and reduced cost to serve for retailers.

For the nation, fibre's speed and reliability means greater opportunities and enhanced productivity for industry, businesses and communities. Recent Accenture research shows that the increases in average broadband speed, driven by fibre and HFC, have contributed to GDP enhancements, increased employment and business creation.[2]

For nbn, full fibre means better customer and retailer satisfaction and far lower operating costs, compared to maintaining the copper network. Today, approximately 4.3 million homes and businesses across Australia in the legacy copper FTTN and FTTC footprint already have access to full fibre. And we're on track to expand this to 5 million premises by the end of 2025. nbn and the government have also announced additional investment to deliver upgrade pathways for the remaining 622,000 FTTN premises which use ageing copper to deliver broadband services by the end of 2030 (full details in media release).

As of 31 January 2025, one in seven (610,000 or 14% of) eligible premises have taken up the opportunity to upgrade from FTTN and FTTC to full fibre and momentum is growing with 400,000 of those premises connected in 2024.

Australia's data use has doubled in the last five years and data demand is predicted to continue to grow in the next 10 years, as is demand for high speed, reliable and secure broadband services.

[2] See here.
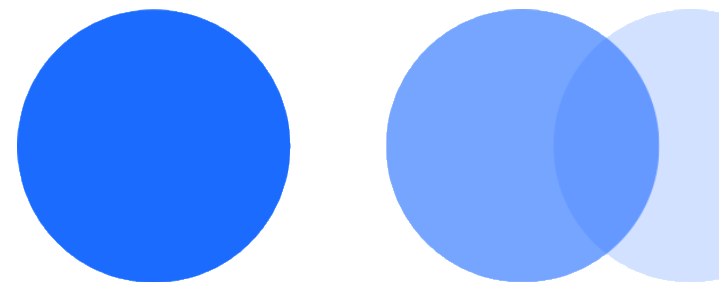
Managing Australia's migration to fibre

Like many critical infrastructure operators around the world, nbn is working to support this transition from legacy copper networks on to a more reliable and stable full fibre network. Such a transition will help ensure nbn and retailers can deliver carefully managed upgrade experiences for customers, delivered in a timely way, while minimising the financial costs associated with maintaining and repairing legacy technology.

To achieve this objective, nbn is considering introducing new capabilities ahead of, or within, the second Regulatory Cycle. The company has identified three areas that could help achieve this objective and it is seeking stakeholder feedback on:

- **Proactive assurance-led migrations** – Making fibre an option when repairs are made or faults are found (on copper-connected nbn technologies).

- **Reconnections to the network default to fibre** – Making fibre the default for reconnections when people move house or re-connect their nbn service.

- **Network-led targeted migrations** – Working with RSPs to migrate customers from legacy copper for network efficiency reasons.

These new capabilities will complement existing incentives and processes to drive demand and support upgrades from copper to full fibre, which include high speed tier-driven upgrades, under- and poor-performing line upgrades and marketing and information campaigns.

These proposed initiatives will require development investment by nbn and RSPs and hence nbn is seeking feedback on the timing, approach, and extent to which nbn should consider them to support the mutually beneficial industry goal of achieving an efficient and smooth migration to fibre.

A fibre migration so that FTTN and FTTC can be retired more quickly would enable the full realisation of benefits from fibre and put Australia on a similar path to many other countries. The extent to which this is prudent and efficient will depend on a range of practical and financial considerations.

Delivering great experiences

Customer experience is paramount – for the retailers we sell through and the customers we jointly serve. Great experiences are underpinned by three things – speed, reliability and value. As a company, we are committed to continually enhancing each of these areas, through prudent investment in:

- Fibre (one of the key themes of this consultation paper), as well as our HFC, Fixed Wireless and Satellite upgrade programs and product improvements.
- Service initiatives that support customers' experiences on our network and the value they derive from it, for example our speed increase program which will deliver significantly faster wholesale download speeds on three of our higher speed plans (more information in our media release), ongoing public education, marketing campaigns and tools to help customers understand and optimise their plan selection and setup, and by optimising operational processes and network outage management during upgrades.
- The service standards that we commit to deliver, including our Benchmark Service Standards which is another key theme of this paper.

Improving our Benchmark Service Standards

Regulated as part of the SAU, which was approved by the ACCC, the Benchmark Service Standards prescribe the minimum service metrics and standards of performance that nbn is required to offer RSPs, allowing them to pass on equivalent or similar commitments to customers and providing confidence in the level of service they can expect to receive for specific broadband services. Benchmark Service Standards are reviewed and set by the ACCC for each regulatory cycle, as part of the RMA/RMD processes.

In the context of nbn's customer service priorities - speed, reliability and value – Benchmark Service Standards help to improve access to high speed and reliable services, which will also contribute to improved perceptions of value.

The Benchmark Service Standard enhancements being considered for the second Regulatory Cycle are focused on the FTTP, HFC and Fixed Wireless technologies, reflecting nbn's investment in these technologies and the growing number of customers they're expected serve, as people migrate off copper-based networks.

Specifically, the package of enhancements nbn is considering aims to:
- Simplify and improve the timeframes for customer connections.
- Provide enhanced confidence in the reliability of service connections and fault repairs, mitigating against repeat faults and appointments.
- Enhance RSP confidence in network speed performance at a more granular level, further helping RSPs in setting accurate expectations for customers.
- Provide RSPs and customers with greater confidence in restoration of services experiencing degraded performance on the HFC and Fixed Wireless networks.
- Provide annual adjustment of rebates, ensuring any price increases are accompanied by a corresponding increase in relevant rebates.

Following extensive engagement with industry on service standard priorities, including through the Annual Service Performance Review process, **this paper outlines for feedback**:
- Enhancements being considered for Benchmark Service Standards, together with the reasons and indicative timing. This is covered further in Table 2 below.
- Existing Benchmark Service Standards that are proposed to remain unchanged in the next Regulatory Cycle.
- Potential changes workshopped with RSPs recently but that we propose not to proceed with, together with the reasons.

In identifying potential improvements to Benchmark Service Standards considered in Part C of this paper, we have factored in the long-term interests of customers, stakeholder views on industry priorities, positive outcomes for RSPs and customers, and nbn's legitimate business interests (strategic and financial).

Table 2: Potential Benchmark Service Standards and annual review process for next Regulatory Cycle

	Details
Service Standard improvements to be made before next Regulatory Cycle	• Improved Service Standards for Automated Transactions • Annual Rebate Adjustment
Improvements considered for next Regulatory Cycle	• Connection timeframes (**Enhancement** to existing Service Standards) • Connection Reliability (**New** Service Standard) • Service Request Orders and Addressing queries (**New** Service Standard) • Amendments to Accelerated Connections (**Clarification** of existing Service Standard) • Fault Rectification Reliability (**New** Service Standard) • Network Performance Advice/Network Activity Tickets for HFC and FW (**New** Service Standard) • Service Standards for Speed for FTTP, HFC, FW (**New** Service Standards)
Potential Benchmark Service Standards requiring further development	• Further consideration required in relation to Planned Outages.
Existing Benchmark Service Standards to be carried forward	• Significant number of existing Benchmark Service Standards to be carried forward in their existing form
Removing unutilised Service Standards	• Interference Mitigation Service Standard (No longer relevant)
Corrective Action	• Proposed updates to ensure Corrective Action directed at material underperformance
Annual Service Standards Review	• Potential continuation of an Annual Service Standards Review process (Note: This would not be a Benchmark Service Standard)

Throughout this paper we use the term customers to refer to what are more formally termed end users in the Competition and Consumer Act 2010.

How to provide feedback

nbn invites stakeholders to provide feedback on the questions and topics contained in the paper. Feedback will be reviewed and considered as nbn finalises its plans for the next Regulatory Cycle. nbn is committed to listening to and reflecting on stakeholders' views and priorities in its proposals for the next Regulatory Cycle.

nbn's RMA will be accompanied by a report on the feedback it has received, and how that feedback has informed its RMA. As part of this consultation, nbn welcomes the opportunity to meet with Product Development Forum (PDF) and non-PDF participants to discuss the content and questions in more detail and obtain feedback:

PDF participants

Please contact your nbn Account Executive or email pdf@nbnco.com.au to request a meeting.

Non-PDF participants

Please email RMAengagement@nbnco.com.au to request a meeting or to provide written feedback.

Submissions from interested parties are required by 5pm on 2 April 2025. nbn may elect to extend the closing date for submissions. If so, this will be noted on nbn's website. nbn may choose to publish submissions, subject to any claims of confidentiality. Please note and identify any information in your submission that should be treated as confidential and not for public disclosure when providing it to nbn.

Part B – Managing Australia's migration to fibre

2 Managing Australia's migration to fibre

The purpose of this section is to:

- provide context on nbn's current and recently announced investments in upgrading and expanding on the fibre upgrade program – **Section 2.1**;
- set out the key customer, industry and efficiency benefits of full fibre services – **Section 2.2**;
- summarise how nbn's approach compares with global trends on fibre rollout – **Section 2.3**;
- summarise nbn's current approach to connecting customers to the fibre network in the upgrade footprint – **Section 2.4**;
- set out a number of proposals to further facilitate fibre migration in specific circumstances – **Section 2.5**;
- explore some relevant considerations for realising the benefits of fibre migration – **Section 2.6**.

2.1 Context

nbn has been investing in upgrading and expanding the network to be fibre ready

Our fibre upgrade program is aimed at enhancing the reliability and speed of internet services across Australia. The program focuses on upgrading premises currently served by Fibre to the Node (FTTN) and Fibre to the Curb (FTTC) to Fibre to the Premises (FTTP).

Connection upgrades have been made available progressively to premises in the existing upgrade footprint as the corresponding network rollout has been completed. The first customer connection upgrades were performed in March 2022.

In recent years, nbn has undertaken a significant program to upgrade and expand more of the network to be fibre ready. Around 5 million premises served by legacy copper technology (i.e. FTTN and FTTC) will be able to access a full fibre (FTTP) service by the end of 2025. This existing program covers all 1.5 million FTTC premises and 3.5 million FTTN premises – and the works to upgrade the remaining FTTN premises are expected to be completed by the end of 2030, with service connections continuing beyond this timeframe.

By the end of December 2024, we completed over 590,000 fibre connection upgrades to eligible premises previously served by either FTTN or FTTC, including nearly 400,000 connections in 2024. This reflects growing momentum for fibre connection upgrades as the ready for order (RFO) footprint continues to grow and RSPs enhance their product offerings to encourage fibre connections.

Earlier this year a further investment in upgrades was announced to cover 622,000 FTTN premises

nbn continues to upgrade and improve the nbn network with the aim of enhancing service quality and customer experience, improving network reliability and meeting both current and future customer demand. This includes the delivery of the large-scale upgrade programs to increase fibre access.

In January 2025, nbn announced it will upgrade the remaining FTTN network across Australia, backed by an equity investment of up to $3 billion from the Australian Government, in addition to more than $800 million from nbn.

This investment will benefit around 622,000 homes and businesses across the country, with more than half located in regional Australia. It is expected that more than 95% of these homes and businesses will have the option to upgrade to nbn full fibre via FTTP. The remaining five per cent require further design work to confirm the appropriate upgrade path.

Work on the upgrades will start immediately and be completed progressively. The works to upgrade the network are expected to be completed by the end of 2030 while connections of individual premises to the upgraded network will also occur progressively and continue beyond 2030.

Appendix A provides an explanation of the incremental impact of the upgrade of the remaining 622,000 FTTN premises on the expenditure forecasts set out in Consultation Paper 1.

Although this consultation paper focuses on the potential for further investment in the fibre network, nbn continues to be focused on HFC, as well as improving the service experience of customers in Fixed Wireless and Satellite network footprints. For completeness, see Box 1 for further information on nbn's investments relevant to regional and remote areas.

Box 1 – Our investments are improving the service offering to customers in regional and remote areas

The company prioritises the delivery of high-speed broadband across the country including regional, rural and remote Australia. By the end of December 2024, approximately 82 per cent of homes and businesses in regional Australia were served by Fixed Line technology and the company's network upgrades are on track to enable approximately 1.61 million premises in regional Australia to upgrade to full fibre connections and have access to its highest speed services by December 2025

Customers served by our Fixed Wireless network

We have completed the enhancements of the nbn Fixed Wireless network improve speeds and coverage in regional Australia via a $750m investment (made up of $480 million from the Commonwealth Government and $270 million from nbn). We have added significant capacity into the Fixed Wireless network via the installation of more than 25,000 new wireless cells and doubled the capacity across the Fixed Wireless network. As a result:

- o   More than 800,000 homes and businesses can access faster speeds with nbn Fixed Wireless.

- o   We can now deliver typical wholesale busy period download speeds of at least 50 Mbps across all of the Fixed Wireless network (Note 1).

- o   Enabled the introduction of two new higher speed plans in July 2024 (200-250/8-20 Mbps and 400/10-40 Mbps (Note 2) – these will be progressively available from participating retail service providers in eligible upgrade areas

Customers served by our Satellite network

In 2023 we expanded the range of Sky Muster Plus Premium plans available. We now provide more options for uncapped data use for customers (Note 3).

As part of the Fixed Wireless and Satellite upgrade program, approximately 120,000 satellite-only premises were earmarked to be migrated to the improved Fixed Wireless network. nbn exceeded this target, by the end of 2024. The migration of Satellite customers to the Fixed Wireless network has and will continue to release capacity on the nbn Satellite network.

The emergence and maturation of Low Earth Orbit (LEO) satellite technology has accelerated over the last few years and nbn is actively exploring options for a LEO satellite technology to complement its existing services well before our geostationary satellites reach their end of life in the early 2030's. In June 2023, nbn released a Request for Information (RFI) to LEO satellite providers to further understand offerings better and evaluate if LEO satellites could enhance the company's network capabilities. This exploration is part of nbn's broader strategy to ensure the delivery of reliable broadband services, across all of Australia.

Note 1 - This measure will be an estimate based on a sample of nbn® Fixed Wireless wholesale services and will measure the average speed at certain points in each hour of the busy period between 7-11pm to identify a 'typical busy period speed', in line with the methodology outlined in the ACCC's Broadband Speed Claims Industry Guidance Paper (October 2022). For each sample measured it will take into account factors outside nbn's control such as environmental impact on radio signal strength, but will not take into account retail level, in-premises or user factors that could impact the end user service.

Note 2 – An end user's experience, including the speeds actually achieved over the nbn® network, depends on the nbn® network technology and configuration over which services are delivered to the premises, whether they are using the internet during the busy period, and some factors outside nbn's control (like the end user's equipment quality, software, chosen broadband plan, signal reception and how their service provider designs its network). Speeds may be impacted by the number of concurrent users on nbn's Fixed Wireless network (including during busy periods).

Note 3 – Fair Use Policy and shaping apply.
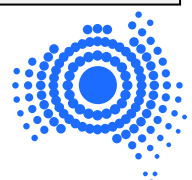
2.2 Why fibre is superior to legacy copper technologies

Fibre upgrades deliver many positive customer outcomes, and commercial and sustainability benefits compared to legacy copper technologies, including:

- **Improved reliability (number of faults per customer)** – faults requiring an nbn technician attendance to resolve are more infrequent on FTTP than on FTTC and FTTN per annum. This benefits customers with improved reliability, and both RSPs and nbn with lower costs through reduced customer interactions and fault resolution effort. Furthermore, fibre networks are more resilient to extreme weather events, with reduced prolonged outages and network restoration timeframes.

- **Improved availability (percentage of time service is available per customer)** – fibre has substantially fewer short-duration service drop-outs, where the nbn network resynchronises with the customer premises device – with annual drop-outs for fibre less than 2% of the average drop-outs recorded on FTTN and FTTC.

- **Higher customer satisfaction** – customers on fibre enjoy a better experience and have higher levels of satisfaction with their nbn service than those on legacy copper technologies.

- **Higher speeds** – fibre services are currently offered at wholesale download speeds close to 1,000Mbps and will from September 2025 be offered at up to 2,000Mbps[3]. These services can in future be upgraded to at least 8,000Mbps[4], available to 100% of the fibre footprint, via readily available Passive Optical Network (PON) technologies, whereas due to the characteristics of the copper network, on FTTC and FTTN maximum attainable speeds are only 100Mbps, with degradation occurring over time.

- **Simpler for retailers** – the eventual decommissioning of the FTTC and FTTN networks will rationalise the number of technologies used by nbn, which will make it simpler for nbn and RSPs to develop, market and support products and services.

- **Improve efficiency by lowering operating costs** – the passive nature of fibre networks does not require active electronic equipment to be located within the street, unlike legacy copper technologies with powered electronic nodes either housed in cabinets (FTTN) or within pits (FTTC). The operating costs of these nodes, including powering and maintenance, makes total operating costs for legacy technologies nearly two to three times that of fibre.

- **Improved energy efficiency** – related to operating costs, the total power consumption of fibre networks is significantly lower than copper technologies, with estimates that nbn will require approximately 60GWh less power on a full fibre network per annum. Looking ahead, nbn has also confirmed its intention to deploy a new 1-port Network Termination Device (NTD) in customer

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[3] See https://www.nbnco.com.au/corporate-information/media-centre/media-statements/higher-speed-tiers-multi-gigabit-speeds-in-2025 .

[4] Based on XGS-PON platform, including upgrades to customer premises equipment. Most of nbn's FTTP network is currently on the precursor GPON platform, or in the early stages of transitioning to XGS-PON. All speeds in this paper refer to layer 2 wholesale peak information rates, unless otherwise stated.

premises for new connections to the FTTP network. Amongst other benefits (including the ability to support up to 2Gbps download speeds), the new NTD could reduce energy usage by around 40% for customers as compared to the existing NTD.

Migration to fibre will ensure nbn can meet the evolving needs of Australian households and businesses by providing a future-ready network capable of reliably delivering high-speed broadband that is resilient to the physical effects of climate change and that delivers a great overall customer experience.

2.3 Our approach to fibre upgrades is aligned with global trends

Globally, major wholesale and vertically integrated telecommunications companies are upgrading copper customers to fibre at an increasing rate. The speed of copper to fibre upgrade varies across countries, driven by local context, with some already completed or planning to complete their upgrade programs before end 2025, including Telefonica[5] and Telenor[6] in Europe, with Chorus in New Zealand on-track to fully retire the copper network within its fibre footprint by the end of 2026[7].

Upgrades typically proceed in three broad phases:

- commencing with an on-demand upgrade phase,
- followed by a mass upgrade phase where the benefits of upgrading compel a broad audience to action, and
- finally, a managed upgrade phase where legacy services are ceased and customers are required to move to fibre, supported by migration plans.

By comparison, nbn has been operating in the first of these phases.

2.4 Current approach to fibre connections

To date, nbn has upgraded connections from FTTN and FTTC to FTTP primarily on an "on-demand" basis. The upgrade is triggered through a request from a participating RSP on behalf of a customer for a fibre service. In most cases, an order for a product based on nbn's higher wholesale speed tiers (currently nbn® Home Fast (100/20 Mbps) or higher) is required to be eligible for an upgrade to FTTP. Where an upgrade is provided, nbn applies an installation charge to the RSP if a minimum speed tier is not retained for 12 months in some circumstances.

Around 10% of single dwelling unit (SDU) locations can upgrade without ordering a specific qualifying wholesale speed tier. This applies to specific premises selected by nbn, typically where nbn has identified that there are compelling customer experience (CX) reasons such as that the existing copper-based service

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[5] Body for European Regulators for Electronic Communications (BEREC), 2024. *Draft BEREC Progress Report on managing copper network switch-off*. p.9. Available here.

[6] Ibid.

[7] See CommsDay, 23 January 2025.

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is not meeting performance expectations or the premises has never connected to an FTTN or FTTC service previously.

For premises in more complex multi-dwelling units (complex MDUs are typically >3 dwellings or multi-storey) nbn currently requires a co-contribution from strata or authorised management body towards the build cost. Once the build is completed, an RSP can order a wholesale fibre service on any wholesale speed tier.

This first 'on-demand' phase of fibre upgrades has resulted in order volumes that are significantly exceeding plan for FY25, demonstrating strong customer demand for fibre and the product or experience benefits it facilitates, over legacy FTTN and FTTC technologies. Completing the upgrade of customers to fibre provides significant customer, RSP, nbn and national-interest benefits, as outlined earlier in this paper.

2.5 Proposed capabilities for the next phases of fibre migration

To foster the ongoing adoption of fibre, nbn plans to introduce new capabilities ahead of, or within, the second Regulatory Cycle (FY27-FY29). In the context of the RMA, we are seeking feedback to help inform our expenditure and other forecasts for the next Regulatory Cycle and it is important to note that outside the RMA process, nbn will undertake further and more detailed consultation with RSPs.

The new capabilities being considered to assist with an efficient and smooth fibre migration include:

- **Proactive assurance-led migrations;**
- **Reconnections to the network default to fibre; and**
- **Network-led targeted migrations.**

Where one of these is used to migrate a premises to FTTP, nbn does not anticipate the need for a minimum wholesale speed tier to be ordered to qualify for the upgrade.

These capabilities will promote the long-term interests of customers and enable an efficient and smooth transition from legacy copper to fibre. In so doing, they will assist nbn in managing the pipeline of upgrade connection work for the purpose of consistently achieving service standard timeframes for such connections. The proposals may require additional development investment by nbn and RSPs. These proposed capabilities are additional to the existing tools (see Box 2 below) used to encourage fibre adoption.

Box 2 – Current tools to support fibre adoption

- Product benefit-led upgrade demand (such as accessing higher speed tiers).
- Reliability-led upgrade demand (such as addressing under/poor-performing copper lines).
- Commercial incentives for RSPs such as rebates and co-funded marketing.
- Customer information, education and marketing from nbn.

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nbn will consult further with RSPs on how to operationalise such proposals prior to introducing any new customer or RSP-impacting capabilities to seek feedback on the proposal and its implementation.

2.5.1 Proactive assurance-led migrations

Proactive Assurance Migrations would occur where service or network faults are addressed by migrating customers to fibre, rather than via the restoration of the copper-based service. This would prevent wasted investment repairing legacy copper lines and reduce repeat assurance issues.

This capability requires a near real-time technology change-over, which is likely to occur on-the-day, or within a short period of the fault occurring (with a temporary copper restoration deployed in the interim where appropriate).

nbn already has examples of where it has worked collaboratively with RSPs to resolve faults through fibre migration – including network faults in Queensland (FTTC network damaged by a storm), NSW (FTTN node damaged by a vehicle) and in individual premises (e.g., an active order for fibre with a future appointment that coincides with a new service fault). Under current arrangements, significant effort from RSPs and nbn is required to trigger a fibre upgrade order in the event of a service assurance fault.

There are no automated mechanisms to change the technology used to supply a service from FTTN/FTTC to FTTP without the requirement for the RSP to submit a connection or disconnection order. In the examples above, manual interactions between nbn and RSP operational teams were required to achieve migration outcomes. A process for changing technology on-the-day (where possible) would be desirable and could be used for all migration capabilities described in this paper.

Before further progressing, nbn would seek to consult on this proposal with RSPs. As part of this consultation, nbn will seek to develop processes with RSPs to enable efficient scaling of Proactive Assurance Migrations, including notification mechanisms to RSPs of Proactive Assurance Migration eligibility, treatment for circumstances where the fibre upgrade cannot be completed on-the-day, and where customers are unable to agree to a fibre upgrade at that time (e.g., in the event that the customer requires landlord permission to upgrade to full fibre or the customer is currently completing renovations).

nbn's current plans (based on IOP25[8]) do not include fibre migration volume estimates for Proactive Assurance Migrations, pending consultation with industry. However, such estimates and the associated forecasts of expenditure are expected to be included in the RMA (which will be based on IOP26).

2.5.2 Reconnections to the network - default to fibre

A reconnection occurs when a connection order is received in respect of a premises that has previously been connected to the nbn network but has subsequently been disconnected for any period. This is often associated with people moving premises, or in 'knock-down / rebuild' scenarios. nbn estimates that up to one million premises annually are subject to these events across the nbn footprint.

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[8] IOP refers to nbn's Integrated Operating Plan, which is updated annually.

Currently, reconnections of premises served by FTTN and FTTC networks default to the legacy copper technology even if they are in a fibre upgrade eligible footprint (unless subject to a CX or other overlay).

nbn proposes to introduce capability that, upon completion of a disconnection request on the legacy FTTN or FTTC service, changes the default technology for the reconnection of that premises to fibre.

Where the reconnections on the legacy technology would otherwise be 'logical only' – i.e. not requiring a site visit to complete the connection works, nbn would propose to temporarily reconnect the legacy technology service while the fibre upgrade activity occurs in parallel, with the legacy service to be discontinued (and in-premises equipment recovered) immediately on completion of the fibre upgrade service.

nbn seeks to develop processes with RSPs that enables the migration of premises to fibre during trigger events, such as moving premises, that minimises customer impact and reduces the need for more active promotion of fibre benefits to achieve take-up.

2.5.3 Network-led targeted migration

During the fibre migration period, nbn operates dual/overlapping networks. Although unavoidable, it is associated with increased network operating costs, but once dual operation ceases, efficiencies can be expected in nearly all aspects of customer connection and assurance processes. In the meantime, there are some opportunities to improve overall cost efficiencies.

With upgrade eligibility approaching three years for the first upgrade eligible areas, nbn has observed fibre take-up rates of over 50% of active services in some fibre upgrade eligible areas such that the legacy copper FTTN and FTTC networks now service the minority of premises. For example, nbn has some FTTN nodes supporting a small number of active services, such that annual gross service revenues are below ongoing fixed node support, maintenance and restoration costs.

In parallel, nbn is observing an increasing cost to replace legacy equipment when it fails due in part to lack of global demand for such legacy technology. It would reduce costs overall if nbn could reuse legacy equipment from areas where fibre migration is complete to maintain the FTTN and FTTC networks in areas where fibre migration is ongoing.

nbn proposes to introduce a Targeted Migration process that would enable the company to decommission and recover network elements, including where it is no longer viable for nbn to continue to operate and maintain those elements. This Targeted Migration process would need to consider notification timelines and methods, complex multi-dwelling unit fibre readiness, service continuity requirements (including vulnerable customers) and extension eligibility criteria.

2.6 Realising the benefits of fibre migration

As described earlier in this paper, when compared to legacy copper technologies, fibre upgrades deliver many positive customer outcomes, and commercial and sustainability benefits. These benefits include: improved reliability; improved availability; higher customer satisfaction; higher speeds; simplicity for RSPs; improved efficiency from lower operating costs; and improved energy efficiency.

A migration to fibre so that FTTN and FTTC can be retired more quickly would enable the full realisation of benefits from fibre and put Australia on a similar path to many other countries. The extent to which this is prudent and efficient will depend on a range of practical and financial considerations

In this context, nbn is seeking feedback on the timing of fibre migration and the potential initiatives to support a smooth and timely migration from legacy copper to fibre.

Consultation Questions

1. What do you see as the benefits/barriers to customers and/or RSPs of these potential new capabilities?
2. Are there any additional capabilities that nbn should consider to support an efficient and smooth migration from FTTN and FTTC to fibre?
3. What are your views on when and how the existing and proposed new capabilities could be used/phased to support (a) the shift from early on demand upgrades to mass upgrades and (b) mass upgrades to managed upgrades to complete the final transition?
4. Are there any future considerations/criteria that should be applied over time to further accelerate or slow down on migration timing?
5. What success factors and/or lessons from previous migrations (e.g. global benchmarks, 3G, Digital TV, nbn initial network rollout) should be taken into consideration for the migration from copper to fibre?
6. What are your views on when nbn, working with RSPs, should complete the migration of connections from legacy copper to fibre? Please provide any context for your views.

Part C – Improving our Benchmark Service Standards

Improving our Benchmark Service Standards

This part of the Consultation Paper provides:

- An Executive Summary of Benchmark Service Standards, and the potential Benchmark Service Standard changes being considered for the next Regulatory Cycle (**Section 3**).

- An overview of the nbn service context, and the complementary roles of service quality initiatives and Benchmark Service Standards (**Section 4**).

- A summary of the evolution of Service Standards and the engagement process with RSPs ahead of developing this consultation paper (**Section 5**).

- Potential Benchmark Service Standard updates for the next Regulatory Cycle (**Section 6**) including: planned improvements during this Regulatory Cycle; potential changes during the next Regulatory Cycle; existing Service Standards proposed to be carried forward; existing Service Standards proposed to be removed as no longer relevant; our assessment of rebates for the next Regulatory Cycle; and a proposed annual review process for the next Regulatory Cycle.

- Reasons for why several other proposed changes proposed by nbn and RSPs for consideration were not progressed (**Section 7**).

There are several supporting appendices on this topic:

- For completeness **Appendix B** reiterates the update provided to RSPs in November 2024 regarding Service Standard changes that were not being considered further.
- **Appendix C** provides an overview of current rebates.
- **Appendix D** includes a summary of the feedback from RSPs.

3 Executive Summary

3.1 Service Quality and the SAU

Great service is at the heart of great experience. In addition to continuing to invest in upgrading the network and the initiatives that enable the delivery of great experiences over it, Service Standards play an important role, protecting service quality in the areas that matter most.

When it comes to important areas like the time taken to connect a service, how long nbn takes to restore individual services, the reliability and availability of services, and the performance of services during the busy hour, nbn is aligned with industry on the importance of evolving the service experience to best meet the interests of customers.

When evaluating service quality for RSPs and customers, nbn considers two complementary facets: (1) service quality initiatives; and (2) Service Standards. The former is a combination of the investments nbn makes and the initiatives nbn undertakes to continually improve the network, product capabilities and operating environment. For example, as covered in Part B, the fibre upgrade programs deliver a range of quality benefits, as well as operational efficiencies.

While service quality initiatives are critical and will, in many cases, influence delivery to Service Standards, it is nbn's Service Standards that are the focus of Part C of this consultation paper. The Benchmark Service Standards were established under nbn's SAU and provide a regulatory baseline for the Service Standards that nbn offers in its Standard Form of Access Agreement (e.g. the WBA) to RSPs. This allows RSPs to then pass on equivalent or similar commitments to customers, and provides confidence in the level of service that is received for specific broadband services. The Benchmark Service Standards cover nbn's main product – nbn® Ethernet.

As part of the RMA that nbn will be submitting on 2 July 2025, nbn will include a Service Standards Proposal – setting out those minimum standards that should apply for the next Regulatory Cycle commencing on 1 July 2026. The ACCC will then decide the Benchmark Service Standards that apply for the next Regulatory Cycle as part of its RMD, taking into account relevant matters including whether its determination promotes the long-term interest of customers and the legitimate business interests of nbn. The ACCC's RMD may adopt some or all of nbn's proposed Benchmark Service Standard changes.

This consultation provides the opportunity for engagement with RSPs, customer and consumer advocacy stakeholders to test if the proposed enhancements to nbn's Benchmark Service Standards will add value to the nbn service experience from an RSP and customer perspective.

It is important to note that nbn's Service Standards only measure the performance of those activities nbn undertakes - e.g. the time taken by nbn to complete its part of the connection process, the time nbn takes to resolve faults in its network, or the wholesale speeds it makes available to RSPs. In many cases the actual customer experience may be quite different as it can also be influenced by a diverse range of non-nbn related service factors (e.g. in premises equipment, RSP systems, networks, and products, etc).

3.2 Service Standards overview

3.2.1 Evolution of nbn Service Standards

Many of the nbn® Ethernet Service Standards were introduced with the first nbn WBA in 2011 to support the delivery of services on the FTTP, Fixed Wireless and Satellite networks. The Service Standards were subsequently amended to account for the introduction of the Multi Technology Mix which brought about the inclusion of HFC**,** FTTN, FTTB and FTTC into the nbn network technology suite, with refinements of the Service Standards occurring since then – including with each WBA revision negotiated between nbn and RSPs. In 2018 and 2020 the Wholesale Service Standards Inquiry undertaken by the ACCC resulted in some material changes to the WBA - particularly through the inclusion of new and enhanced performance rebates to RSPs for select Service Standards.

As part of the SAU Variation that occurred in 2023, the Benchmark Service Standards framework was incorporated into the undertaking. This process provides for a set of Benchmark Service Standards to be established at the start of each Regulatory Cycle, with the potential for them to be updated during the Regulatory Cycle in specific circumstances where approved or determined by the ACCC.

As part of the SAU Variation, during the first Regulatory Cycle, nbn also committed to consult with RSPs and publish an Annual Service Improvement Plan (**ASIP**) and an Annual Service Performance Review (**ASPR**) – to further enhance transparency of nbn's investment in service quality, ensure that RSP priorities are appropriately factored into nbn's annual planning processes, and identify potential Service Standard improvements where possible.

3.2.2 Recent Service Standards Review Process

Following consultation with RSPs and also taking into consideration feedback during the SAU and WBA5 consultations, nbn published the first ASPR in June 2024. The report identified several potential areas in which Service Standards could be improved or revised to the benefit of customers. nbn proposed that a collaborative co-design process be conducted with RSPs to define and consider contemporary Service Standards focusing on the key areas of service activation, modification, faults, network performance, network availability and speed performance.

nbn invited all RSPs[9] to participate in the co-design workshops, with seven RSPs participating in 26 workshops throughout August and September 2024. In addition to proposed changes to Service Standards, RSPs also came forward with proposals on opportunities for nbn and the industry to develop and implement process or solution-based initiatives to improve service quality.

Following the workshops nbn considered the proposed amendments to existing Service Standards and the new ones put forward, as detailed further in **Section 5**. Where nbn does not intend to progress with proposed Service Standards (new or amended), further explanation is contained within **Section 7** and **Appendix C** of this paper.

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[9] ACCAN and IAA were also invited to participate in these ASPR co-design workshops.

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3.3 Proposed Benchmark Service Standards

As detailed in Part B of this paper, over the coming years nbn will be increasingly working with RSPs to progressively upgrade customers from the FTTN and FTTC **(FTTN/C)** networks onto the FTTP network. In addition to access to higher speeds, these upgrades will provide customers with a more reliable and consistent service experience than the FTTN/C networks. At the same time, nbn is considering options to serve customers in the satellite footprint as the Sky Muster Satellite network approaches its end of life.

Consistent with this network investment strategy, the majority of proposed changes to Benchmark Service Standards being considered through this consultation are focussed on nbn's future networks - FTTP, FW and HFC.

Throughout the transition period nbn proposes to maintain the existing level of Service Standards that apply to FTTN/C and Sky Muster Satellite services. We are not proposing to enhance Benchmark Service Standards for FTTN/C or Sky Muster Satellite services as they:

- are less likely to promote the long-term interest of customers as it would be incentivising nbn to invest in copper and the existing satellite network infrastructure at the same time that we expect customers to migrate off those networks and onto the FTTP, HFC and FW networks;
- are less likely to promote the long-term interest of customers if investment in Sky Muster Satellite services does not account for the growth in popularity of LEO services and nbn's exploration of connectivity solutions with LEO providers;[10]
- would involve trading off Service Standard improvements on the future access technologies of FTTP, HFC and FW; and
- are constrained by the underlying capabilities of these networks (e.g. technical limitations of copper in comparison to fibre).

This consultation sets out potential updates to the Benchmark Service Standards for the next Regulatory Cycle based on six categories:

1. **Amendments to Benchmark Service Standards due to improvements made to WBA Service Standards during the current Regulatory Cycle**

As a result of the ASPR and subsequent co-design workshops, it was recognised that opportunities existed to commit to quicker timeframes and higher levels of performance in relation to the performance of nbn's automated transactions than what currently exists, and measure the achievement of those higher levels of performance separately from corresponding transactions requiring manual work. In November 2024 nbn advised RSPs that it was planning to implement new Service Standards under the current WBA for five automated activities in July 2025. These include Service Standards specific to new service orders where physical connections are in place, and service modifications which, together, account for over 80% of automated service requests. nbn also proposed to introduce an annual adjustment to rebate values in line with its annual price increases. Details of these changes are set out in **Section 6.1**. These new service standards exceed the current Benchmark Service Standards and nbn proposes that these commercially

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[10] See here.

offered Service Standard improvements be incorporated into the Benchmark Service Standards for the next Regulatory Cycle.

2. Potential Enhancements to Benchmark Service Standards for the next Regulatory Cycle

In addition to the changes announced for the current Regulatory Cycle, nbn has developed a number of potential enhancements to Benchmark Service Standards for the next Regulatory Cycle, as well as the proposed introduction of new Benchmark Service Standards, including:

(a) Enhancements to existing Benchmark Service Standards

Potential enhancements for consideration by stakeholders include improvements and consistency of Connection timeframes for FTTP and HFC. Details are set out in **Section 6.2**.

(b) Introduction of new Benchmark Service Standards

Five new Service Standards have been developed for consideration by stakeholders. The first two of these would establish a quality-based standard for connection and fault repair activities. The third would establish a Service Standard for nbn's performance in response to RSP addressing queries prior to an order being placed, aimed at improving connection times for customers impacted by these order queries. The fourth would establish a Service Standard for the time to complete remediation of network issues on the HFC and FW networks resulting in improved network availability and reliability for customers. The fifth would establish a Service Standard for speed performance on the FTTP, HFC and FW networks ensuring greater confidence for RSPs in communicating their speed offerings to customers. Details of these potential Service Standards are set out in **Section 6.2**.

3. Existing Benchmark Service Standards proposed to continue

Following the co-design workshops and nbn's impact assessment there were 15 core Service Standards that nbn considers are appropriate to be carried forward in their existing form for the next Regulatory Cycle. Details of these are set out in **Section 6.3**.

4. Benchmark Service Standards considered for removal

nbn proposes to remove the Service Standard for Interference Mitigation as there have not been any requests from RSPs related to this Service Standard in the last two years. Further details are set out in **Section 6.4**.

5. Potential Benchmark Service Standards requiring further consideration

There are certain areas of the service experience that nbn understands are a priority for RSPs and customers but where an appropriate Benchmark Service Standard (that balances individual service experience with network maintenance and upgrade activities) has not yet been identified. nbn considers that further engagement with industry stakeholders is required on these areas, specifically in relation to Planned Outages, before determining if there are potential Benchmark Service Standards that should be proposed for the next Regulatory Cycle. Further details are set out in **Section 6.5**.

6. Rebates

nbn considers that the current suite of rebates provides appropriate payments to RSPs in respect of the potential RSP and customer impacts of nbn missing specified Service Standards, and operate as an

effective incentive on nbn to meet its Service Standards without being disproportionate or unnecessarily onerous. With the annual rebate adjustment process to be introduced in July 2025, these rebates will increase annually by the same percentage as the weighted average price increase for services subject to the WAPC in each year of the next Regulatory Cycle to ensure that they remain at appropriate levels. Further details are set out in **Section 6.6**.

Annual Service Standards Review

nbn recognises that service quality and the associated Service Standards should continue to evolve with the performance and capability of the network, and that evolution should not pause between Regulatory Cycles. To support this nbn proposes to establish an Annual Service Standards Review (**ASSR**) process leveraging those elements of the current ASPR process that are considered effective while taking the learnings from this process to simplify the annual review. Further details are set out in **Section 6.7**.

4 Our Service Context

In order to appropriately focus the consultation on Benchmark Service Standards, it is necessary to distinguish between the two complementary facets of the nbn service environment:

1. **Service quality / customer experience initiatives beyond Service Standards:** This refers to what nbn does as part of its core business practices (beyond meeting committed standards) to improve the service experience for RSPs and customers acquiring or using nbn networks and products (e.g. technology changes, process improvements, provision of information and education materials, simplification, systemisation, workforce capability, etc). While these initiatives are not the focus of the consultation, an overview of some of these activities is included below to provide stakeholders with a more complete view of nbn's approach to service quality and customer experience (**CX**).

2. **Service Standards:** These are minimum standards of measured performance for our main broadband product that nbn holds itself to in both a regulatory and contractual context. An overview of what Service Standards are, and specifically Benchmark Service Standards, is set out below. It is this component of the service environment that the Benchmark Service Standards proposal deals with – and which this consultation is seeking feedback on.

nbn's Service Quality Initiatives

The majority of nbn's service quality and CX initiatives are found in the Annual Service Improvement Plan that nbn publishes at the start of each Financial Year. nbn has issued two Annual Service Improvement Plans for FY24 and FY25, with a third currently in development for FY26. The current plan, ASIP-25, details initiatives focused on:

    (1) Expanding and augmenting the FTTP, HFC, and Fixed Wireless networks;

    (2) Simplifying and automating key network management and operational activities;

    (3) Continuously improving and redesigning processes; and

    (4) Enhancing workforce capacity and capability.

The service benefits to RSPs and customers from these initiatives are multi-faceted and include increased access to high-speed services, improved connection times and experience, improved network reliability and reduced faults, improved assurance processes and information, and a greater consistency of experience across the network. Further detail on the benefits delivered by specific initiatives is set out in the ASIP-25 published on nbn's website.[11]

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[11] See here.

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nbn also has a number of service improvement activities in progress that are not captured in ASIP-25. These include:

- Ongoing development and refinement of **fibre upgrade installation guidance material** published on the nbn website and provided to RSPs to better prepare customers for their fibre installation. This has included the creation of customer-friendly videos describing the fibre upgrade process and what customers should expect on the day.
- The **movers program**, which nbn recently consulted RSPs on through the Product Development Forum, aimed at helping RSPs connect customers faster and more seamlessly at their new home.
- A **customer education program** based on feedback received during the recent consultation on speed increases, which aims to increase customer awareness and understanding of how to choose the right plan and optimise and improve their in-home set up so that they can maximise the performance of their nbn service.

- **Digital improvement initiatives** including advancing API integration, enhancing test and diagnostic capabilities, implementing process automation, and leveraging Agentic AI. These efforts aim to streamline operations, improve efficiency and elevate service quality for RSPs.
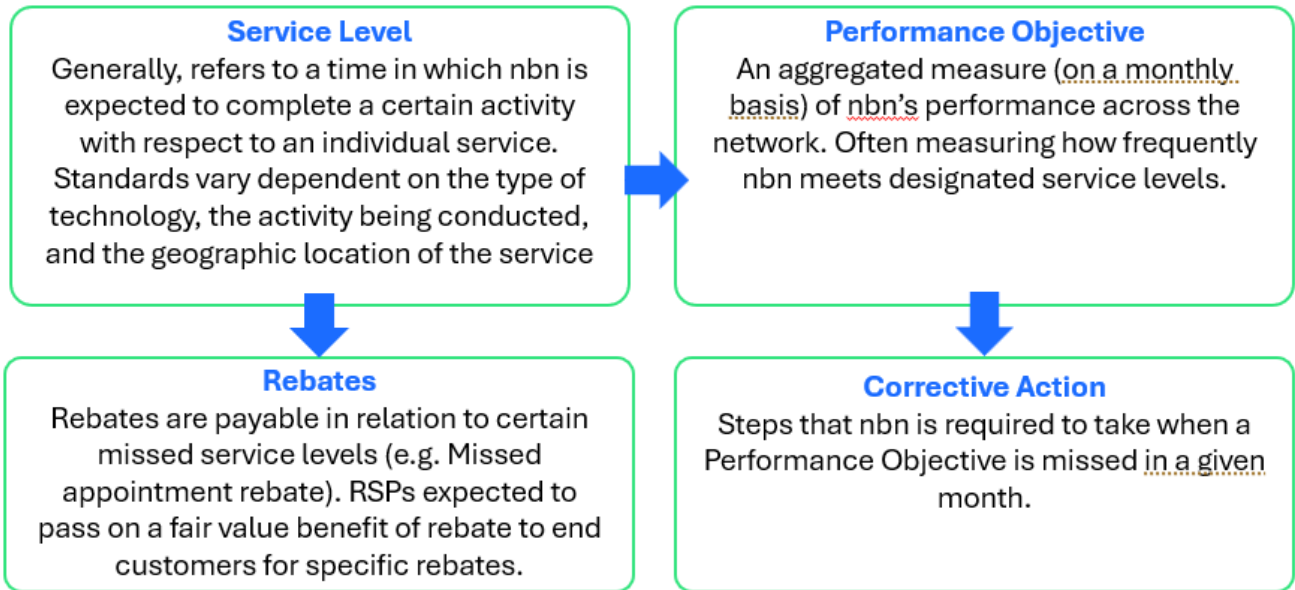
As noted above, while nbn's investment in these service quality initiatives may have a bearing on nbn's performance against Service Standards, it is the Benchmark Service Standards themselves that are the focus of this consultation. Detail on what these Benchmark Service Standards contain is set out below.

Overview of Benchmark Service Standards

nbn's Benchmark Service Standards under the SAU form part of the broader regulatory framework that applies to nbn's supply of the nbn Ethernet product. Benchmark Service Standards are a set of Service Levels and Performance Objectives, along with associated rebates and corrective action commitments, that provide an appropriate baseline to the commitments that nbn makes available to RSPs under its Standard Form of Access Agreement. An overview of the types of Service Standard is set out below.

Figure 2: Types of Service Standard

Service Level
Generally, refers to a time in which nbn is expected to complete a certain activity with respect to an individual service. Standards vary dependent on the type of technology, the activity being conducted, and the geographic location of the service

Performance Objective
An aggregated measure (on a monthly basis) of nbn's performance across the network. Often measuring how frequently nbn meets designated service levels.

Rebates
Rebates are payable in relation to certain missed service levels (e.g. Missed appointment rebate). RSPs expected to pass on a fair value benefit of rebate to end customers for specific rebates.

Corrective Action
Steps that nbn is required to take when a Performance Objective is missed in a given month.

The suite of Benchmark Service Standards that apply for the current Regulatory Cycle FY24-FY26 are set out in Module 4, Attachment I of the SAU. While this consultation is focused on the set of Benchmark Service Standards that should apply for the next Regulatory Cycle, it is important to note that Benchmark Service Standards may be amended mid-cycle as a result of either nbn or ACCC initiated changes.[12]

The final set of Benchmark Service Standards that are determined for the next Regulatory Cycle will be reflected in the WBA6 SFAA. nbn's proposal for the timing for implementation of any changes will be dependent on a range of factors, including the operational and systems changes required by either nbn or RSPs in order to affect a particular Service Standard.

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[12] See section 2I.2.2-2I.2.3 of Module 4, Attachment I of the SAU.

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5 Evolution of Service Standards and approach to our Review

5.1 Evolution of nbn Service Standards

When nbn committed to the inclusion of minimum Benchmark Service Standards under the SAU, the initial set of benchmarks reflected the majority of nbn Ethernet Service Standards that had been negotiated through successive WBAs and interim refinements. While the Benchmark Service Standards for the first Regulatory Cycle (FY24-FY26) provided some adjustment to the previous WBA4 Service Standards (e.g. reduction of the customer fault dropout threshold for HFC, FTTN and FTTC), RSPs were clear in their views that nbn should continue to pursue enhancements to Service Standard commitments in the short term.

In addition to feedback from RSPs, the ASPR published in June 2024 (ASPR-24) included the following key insights:

- **nbn performance against current Service Standards:** ASPR-24 detailed nbn's performance in the review period 1 December 2022 to 30 November 2023 covering 165 Service Levels and 35 Performance Objectives. During this period nbn completed 11.73 million service requests (e.g. connections, fault repair, service modifications). While nbn completed most of these requests within the applicable Service Standards, the report also identified areas in which nbn did not meet Performance Objectives and the reasons behind it. These areas were particularly associated with: (1) physical activities – e.g. high connection volumes, rectification of damaged nbn infrastructure, and additional civil works beyond standard installation activities; (2) process, compliance, or system configuration challenges and events outside of nbn's control; and (3) on-demand fibre connections, caused by high or variable demand.

- **Effectiveness and relevance of current service standards:** A significant number of the Service Standards for nbn Ethernet services were developed to support a highly manual environment in the early years of the nbn FTTP network rollout. Over the years, however, nbn has transformed its operating environment from predominantly manual processes with low volumes of transactions into a highly automated environment capable of transacting tens of thousands of service requests each day.

Taking into account RSP views and the insights from ASPR-24 analysis, nbn proposed a process to evolve Service Standards through a collaborative engagement with the industry aiming to define contemporary, fit-for-purpose metrics. Throughout August and September 2024, nbn and RSPs conducted co-design workshops where participating RSPs shared their perspectives on how Service Standards may need to evolve to improve the customer experience and increase predictability and confidence for RSPs. During the co-design workshops nbn and participating RSPs worked through all current and potential new Service Standards at a detailed level as well as discussing broader operational concepts and process changes that may be required. Service Standards were considered according to the following aspects of the service experience:
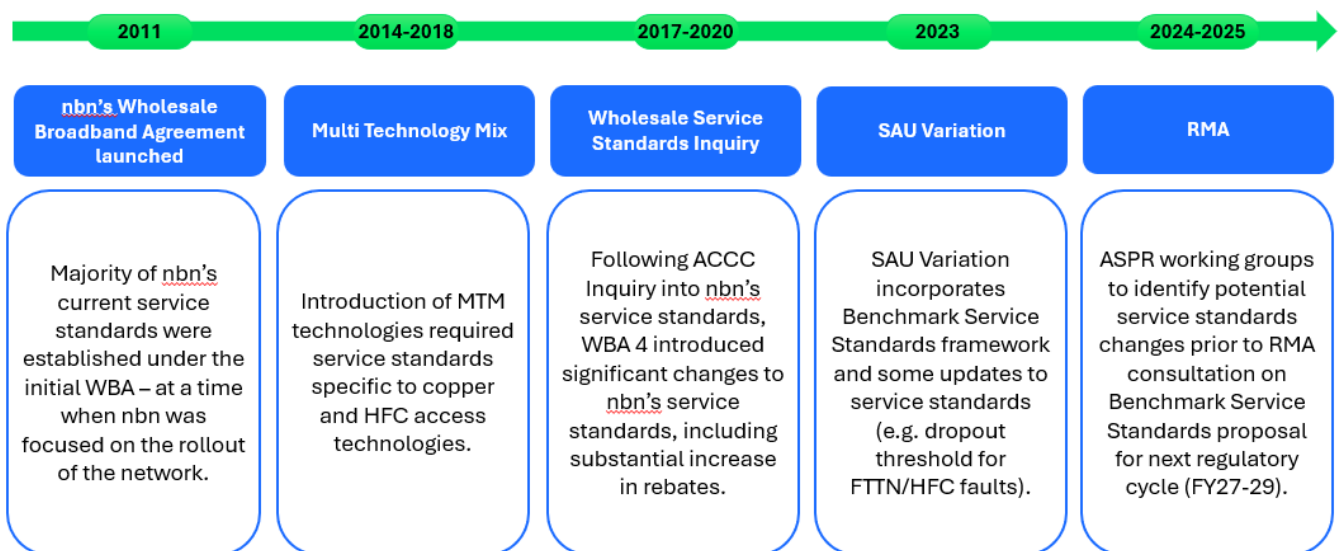
1) **Activations & modifications:** Commitments related to the ordering and activation of nbn Ethernet services (e.g. Connection timeframes and appointments).

2) **Faults & assurance:** Commitments related to repairing faults impacting individual nbn Ethernet services (e.g. Fault repair timeframes and appointments).

3) **Network performance and availability:** Commitments related to the performance and availability of individual services and the network at an aggregate level (e.g. Network Faults impacting multiple services, outages and network capacity, dropouts).

4) **Speed:** Commitments related to the expected speed of layer 2 nbn Ethernet services.

While the focus of the co-design activity was on the Service Standards themselves, RSPs also expressed a wide variety of different views, ideas and priorities with some common themes around improving customer experience through process improvements. The key Service Standard concepts and feedback provided by RSPs during these workshops was sometimes variable and representative of the broad cross section of RSP views and priorities. **Appendix D** provides a summary of key feedback themes.

To date, reflecting nbn's role as a wholesaler, nbn's engagement on Service Standard evolution has primarily involved interaction and consultation with RSPs. While the RMA consultation will now test that the proposed changes to Benchmark Service Standards will add value to the service experience from a customer perspective, it has been critical that nbn understand RSP views of customer pain points and priorities in designing potential Service Standard changes - given the direct and daily relationship that RSPs have with customers, and the critical role RSPs play in influencing the experience of the customer.

Figure 3: Evolution of nbn Ethernet Service Standards

2011	2014-2018	2017-2020	2023	2024-2025
nbn's Wholesale Broadband Agreement launched	**Multi Technology Mix**	**Wholesale Service Standards Inquiry**	**SAU Variation**	**RMA**
Majority of nbn's current service standards were established under the initial WBA – at a time when nbn was focused on the rollout of the network.	Introduction of MTM technologies required service standards specific to copper and HFC access technologies.	Following ACCC Inquiry into nbn's service standards, WBA 4 introduced significant changes to nbn's service standards, including substantial increase in rebates.	SAU Variation incorporates Benchmark Service Standards framework and some updates to service standards (e.g. dropout threshold for FTTN/HFC faults).	ASPR working groups to identify potential service standards changes prior to RMA consultation on Benchmark Service Standards proposal for next regulatory cycle (FY27-29).

5.2 Assessment criteria informing potential enhancements

The set of potential enhancements to the Benchmark Service Standards set out in **Section 6.1** and **Section 6.2** have been informed by extensive stakeholder engagement under the ASPR, insights gained from customer experience surveys over time and internal assessment. In reviewing potential changes identified by nbn and RSPs under the ASPR engagement, nbn considered several factors in order to first determine those changes that warranted further detailed review, and those that were not practical or a high priority to progress. The reasons for those Service Standards that nbn identified would not be considered further from December 2024 were communicated to RSPs in a *Service Standards Evolution Update* in December and are set out in **Appendix B**.

Of the remaining Service Standard proposals, nbn then undertook a further detailed internal assessment to determine a refined set of potential enhancements for consultation. The criteria against which these potential changes were considered is set out below:

1. **RSP prioritisation and value:** Feedback received from RSPs through the ASPR working groups, including on the relative importance of different Service Standard enhancements, and their expected impact on RSPs and the experience of their customers.
2. **Impact on customer experience and value:** Expected impact of potential Service Standards on nbn customer experience and value perception, and flow-on impacts to customer retention, acquisition, and take-up and usage of services provided over nbn's network.
3. **Activity volume:** In order to help gauge the importance and impact of a particular Service Standard, nbn considered the volume of activities per annum.
4. **Operational impact:** Expected resourcing, process and systems changes required to deliver the Service Standards enhancement – including the impact the change has on nbn's ability to continue to maintain and upgrade the network.
5. **Cost to implement:** Estimated capex and opex required for nbn to implement/meet new or enhanced Service Standard.
6. **nbn Network Investment Strategy:** Alignment of proposed new or enhanced Service Standard with nbn's network investment strategy – with material changes focused on future access technologies of FTTP, FW and HFC.

These criteria align with key factors that will be central to the ACCC's final decision on nbn's Benchmark Service Standards proposal, specifically:

1. promoting the long-term interests of customers of nbn Ethernet services;
2. the legitimate business interests of nbn and nbn's investment in facilities used to supply nbn Ethernet services;
3. the interests of all persons who have rights to use nbn Ethernet services;
4. the direct costs of providing access to nbn Ethernet services;
5. the value to a person of enhancements to nbn Ethernet service capability whose cost is borne by someone else;

6. the operational and technical requirements necessary for the safe and reliable operation of nbn Ethernet services, and the nbn network; and

7. the economically efficient operation of nbn Ethernet services, and the nbn network.

6 Benchmark Service Standards for consultation

Informed by the extensive RSP engagement and current customer insights, nbn has identified a number of potential updates to the Benchmark Service Standards for the next Regulatory Cycle. This section sets out:

	Category of Service Standard	Section
1	WBA 5 improvements proposed to be included in Benchmark Service Standards for next Regulatory Cycle	6.1
2	Potential Service Standard changes for next Regulatory Cycle beyond WBA 5 improvements	6.2
3	Existing Benchmark Service Standards that are proposed to be carried forward	6.3
4	Benchmark Service Standards being considered for removal in the next Regulatory Cycle	6.4
5	Potential Benchmark Service Standards requiring further consideration	6.5
6	Consideration of rebates	6.6
7	Proposed inclusion of Annual Service Standards Review process	6.7

6.1 Improvements within the current Regulatory Cycle

During the SAU variation process, and subsequent ASIP and ASPR engagement, RSPs have provided consistent feedback that the length of the Regulatory Cycle should not be a barrier to nbn implementing enhanced Service Standards, and that improvements should be made during the first Regulatory Cycle. Recognising this, nbn has been actively investigating options to make changes to Service Standards in the near term, resulting in:

- the planned uplift in Service Standards for automated transactions (see **Section 6.1.1** below); and

- the introduction of an annual rebate adjustment (see **Section 6.1.2** below).

6.1.1 Improved Service Standards for automated transactions

Of the 11.73 million service transactions reviewed under ASPR-24, 9.54 million (81%) were related to service connections, service modifications, service disconnections and service transfers. 95% of these were fulfilled automatically without the need to visit a customer premises - referred to as 'logical' activities.

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In November 2024 nbn announced that it would be implementing improvements to specific logical activity-based Service Standards in the WBA. These enhancements – set out in Table 3 below – aim to align the Service Standards for those activities as closely as practicable to nbn's current operational capability.

As these improved Service Standards that nbn intends to introduce in the current WBA will exceed the existing Benchmark Service Standards, nbn intends to incorporate these improvements in the Benchmark Service Standards for the next Regulatory Cycle.

Table 3: Improved Service Standards in the current Regulatory Cycle

Logical Activities	Existing Service Levels and Performance Objectives	New Service Level*	New Performance Objective
AVC Connections	1 Bus Day ≥ 90%	1 Operational Hour	≥ 95%**
AVC Modifications	4 Hours ≥ 90%	1 Operational Hour – Single 6 Operational Hours – Bulk	≥ 95%
Service Transfer	1 Bus Day ≥ 95%	1 Operational Hour – Single 6 Operational Hours – Bulk	≥ 95%
Disconnections	4 Hours ≥ 99%	1 Operational Hour – Single 6 Operational Hours – Bulk	≥ 95%
CVC Modification	4 Hours ≥ 90%	1 Operational Hour	≥ 95%

Existing rebate frameworks will continue to apply (e.g. a rebate will only be payable on SC3 Standard Connections where the connection takes longer than 1 Business Day).

** New Performance Objective for logical connections will be 95% (disaggregated from the Performance Objective for physical connect orders)

BENEFIT TO RSPs AND CUSTOMERS

The enhancements to these Service Standards for logical activities should provide greater confidence to RSPs, and in turn customers, regarding the timeframes in which nbn will complete logical connection and modification activities.

6.1.2 Annual Rebate Adjustment

In conjunction with the enhanced Service Standards for automated transactions, nbn has announced in its *Service Standards Evolution Update* from 4 December 2024 that it intends to apply an annual CPI adjustment to specified Service Standard rebates for nbn Ethernet and nbn Smart Places (excluding any commercial rebates where the value is already linked to our prices, such as the Failed Connection Rebate).

Further detail on how we intend to introduce this change is, that instead of an annual adjustment directly linked to CPI, nbn will change the value of commercial rebates by the weighted average percentage change

in nbn's prices that are subject to the SAU's Weighted Average Price Control (**WAPC**) (excluding any commercial rebates where the value is already linked to our prices such as the Failed Connection Rebate). Currently, the WAPC allows nbn to increase prices on most services, on average, up to December Quarter CPI each year. This will ensure that where nbn's average prices change by X% at the start of a financial year, so do the associated Service Level rebates. For example, where average prices are increased by CPI, so too will the relevant Service Level rebates. This adjustment process will take place at the same time as nbn's annual SAU price adjustment process at the start of a Financial Year.

This change responds to RSP concerns that where there is an increase to pricing of nbn Ethernet services, the rebates that apply to those services should also increase. The annual rebate adjustment process is planned to be included in the WBA Service Levels Schedule for nbn Ethernet from 1 July 2025 and will also be incorporated into the Benchmark Service Standards for the next Regulatory Cycle.

BENEFIT TO RSPs AND CUSTOMERS

This change means that, where prices increase, the same increase rate will be applied to each applicable rebate. It is expected that RSPs pass on a fair value benefit to the customer in respect of certain rebates paid by nbn - which recognises the inconvenience caused to the customer. While any benefit offered to customers is determined by each RSP, it is expected that any rebate increases arising from the annual adjustment process would also benefit customers where appropriate.

6.2 Potential Service Standards changes for next Regulatory Cycle

The potential changes to the Benchmark Service Standards set out below are being considered in response to a number of the priorities identified by RSPs during the co-design workshops and during ASPR-24. nbn has actively listened to, evaluated and where applicable incorporated RSP feedback into the potential changes.

A key aspect of these potential changes is that they are directed at the 'forward looking' access technologies of the nbn network. While nbn is committed to at least maintaining the existing Service Standards applicable to each of its access technologies, it is appropriate that any material investment in improving Service Standards is aligned with nbn's broader network investment strategy. For example, improved Service Standards that could drive material capital or operating expenditure on copper networks would raise potential prudency and efficiency concerns given the ageing FTTN and FTTC access technologies which are being superseded by fibre.

The quicker customers can be connected to the nbn FTTP network the better the service experience for those customers. This is evidenced by the declining volume of Network Activity Tickets (**NAT**) on nbn's FTTN network as customers experiencing stability or other performance concerns are moving to FTTP where nbn has made that available. These tickets reflect performance issues on a relevant network that nbn is seeking to address – for example, where services may be meeting committed peak speeds but are experiencing stability or other performance concerns.

As the FTTP network has been rolled out and customers have been upgraded to this access technology, the number of NATs in progress on nbn's FTTN network have reduced by 1,000 in the 12 months to December 2024. At the end of January 2025 nbn had 1,746 NATs on hand of which 84% are planned to be

resolved by FTTP as the network upgrades progressively roll out. The remaining 16% are still being investigated. nbn has also seen a reduction in the number of NATs on nbn's FTTN network being created each month, declining from 688 per month in Q1 2023 to 356 per month in Q4 2024.

Table 4: Potential new and changed Service Standards for next Regulatory Cycle

	Service Standard	Indicative timing	Section
Connect			
1	Connection timeframes for FTTP and HFC	FY27	6.2.1
2	Connection Reliability	Late FY27	6.2.2
3	Service Request Orders and Addressing queries	FY27	6.2.3
4	Priority Assistance / Accelerated Connections (terminology)	FY27	6.2.4
Repair			
5	Fault Rectification Reliability	Late FY27	6.2.5
6	Network Performance Advice / Network Activity Tickets	FY28	6.2.6
Use			
7	Performance Objective for Speed for FTTP, HFC, FW	Late FY28	6.2.7
Other			
8	Corrective Action Plans	FY27	6.2.8

6.2.1 Connection timeframes (Potential changes to Existing Service Standard)

ASPR FEEDBACK

During the consultation processes the feedback received from RSPs in relation to Connections included views that:

- nbn should incorporate Fibre Connect Service Standards with Standard Connections in the WBA, simplify and standardise connection Service Standards; and
- nbn should set improved Service Standard timeframes with higher targets for physical and logical connections.

In determining the optimal structure for Service Standards related to physical connections, nbn explored various models aimed at providing an optimal and expedient connection for customers, meeting the expectations of RSPs, and ensuring that nbn's operational capabilities could support the proposal in a reliable, consistent and effective way.

POTENTIAL CHANGE

As detailed in **Section 6.1.1**, nbn is already progressing with changes to Service Standards which separate out the 2.3m automated connection transactions from those connections which require a physical visit.

In considering what changes might apply for physical connections it was important to understand what the demand might look like for the next Regulatory Cycle, particularly what the mix of order types might be given the plans detailed in **Section 2**:

- In 2024 over 570k physical connections were completed with upgrades from FTTN/C to FTTP dominating the mix. With nbn's *Managing Australia's migration to fibre* plan, the mix will weigh even heavier toward upgrades for at least the next Regulatory Cycle.
- Currently FTTP physical connections represent ~82% of all connections across FTTP, HFC and FW. As we move forward with the migration program, we anticipate the mix of FTTP physical connections will shift to ~87%.

Taking the changing mix into consideration nbn has looked at ways to simplify the Service Standards for physical connections across FTTP, HFC and FW, in a way that responds to feedback from RSPs and complements nbn's operating processes without requiring high cost operational and process reengineering. Following this analysis, nbn has identified a potential Service Standard change for FTTP and HFC in particular.

Typically, most RSPs set connection date expectations with customers based on the appointment date the customer selects for their connection to be completed. nbn attends the premises on the day of the appointment the customer agrees with the RSP, with many connections fully completed by nbn on the first appointment. However, for various reasons including challenges with access to the premises, and cabling and provisioning of the network at the property, some connections cannot be completed on the day of the appointment.

Provisioning of the network at the property constitutes a large proportion of these delays, with approximately 20 to 25% of connections requiring some form of network remediation in order to connect the service. Common activities include cleaning out blocked ducts and repairing, replacing or provisioning a new lead-in conduit from the street to the premises - which requires specialised equipment and skills. In other cases more comprehensive network augmentation may be required. All these activities take longer than the appointment day to complete and sometimes require third party utility, council and/or other third party approval to conduct civil works.

nbn is considering a new Service Standard for all physical Service Class 1 FTTP and Service Class 21 HFC connections (including Fibre Connect orders) that sets a faster standard for those that don't require complicated network provisioning at the property and a longer timeframe for those that do. This represents a substantial improvement for customers placing a Fibre Connect order, which will be a majority of physical connections for those customers covered by this proposed Service Standard. Current Service Levels for Fibre Connect orders range from 19 Business Days to 29 Business Days depending on existing technology and Service Level region.

This new Service Standard would apply to all Service Class 1 FTTP and Service Class 21 HFC connections requiring a physical visit to the customer premises and would not distinguish between a new connection or an upgrade.

Standard Connection and Upgrade FTTP/HFC (Service Class 1 & Service Class 21)*		
Performance Objective	75% or more connected in	95% or more connected in
Urban	10BD	25BD
Major / Minor Rural	15BD	25BD
Remote	15BD	25BD

* *Service Class 2, 22 and 23 connections will remain at existing Service Standards with the existing Performance Objective of 90% applying.*
No premise serviced by the HFC Network is located in an area other than an Urban Area

For any connection unable to be completed on the day, nbn would endeavour to complete all in-premises work while at the premises. This would limit instances where customers need a second appointment as nbn may be able to remotely complete the connection once the network has been provisioned outside the premises boundary.

The benefits of this change would be supported through RSPs setting customer expectations of the connection process:

- When setting the appointment the customer can often get an nbn appointment within a week or two, with high confidence that nbn will turn up on the day (based on nbn's appointment commitments and performance).
- nbn will aim to complete the connection on the day. However, sometimes nbn may need to do extra work to get the customer service connected.
- If this happens, the RSP would keep the customer informed about what is happening, with the goal of completing the service connection within 25 business days (as an example in areas other than Isolated Areas).
- Ensure that the customer has powered on any nbn installed equipment and set up the RSP modem so as to facilitate connectivity.

We acknowledge that the existing rebate structure does not logically fit within the above two-tiered structure. nbn is still considering how rebates would best apply to the above Service Standard.

BENEFIT TO RSPs AND CUSTOMERS

This would be a significantly simplified Service Standard and therefore potentially result in simpler fulfilment processes for RSPs, as new connections and upgrades would be treated the same and there would be no distinction between premises based on whether there was an active service at the premises or whether the premises was the subject of an upgrade from copper to FTTP.

It is expected that this simplification would enable RSPs to provide greater clarity regarding connection expectations to customers up front.

In that regard, nbn also intends to incorporate the Fibre Connect Program Letter Agreement into the WBA. This will align fibre upgrade Service Standards with Standard Connection Service Standards.

POTENTIAL TIMING

nbn's analysis of this change is based on introduction in FY27, noting that nbn will need to make certain operating system and reporting changes, and changes may need to be made to RSP order fulfilment processes.

6.2.2 Connection Reliability (New Service Standard)

ASPR FEEDBACK

Among the key feedback received from RSPs in relation to connections is the importance of prioritising 'Right First Time' connection quality over shorter Service Standards. There was RSP support for the introduction of a new connection quality Service Standard - focused on driving connection reliability and mitigating the possibility of faults being raised shortly following a completed connection and requiring additional appointments.

This feedback has informed the development of a potential Connection Reliability Service Standard.

POTENTIAL CHANGE

Recognising the importance of connection quality to customers, for the next Regulatory Cycle nbn is considering a new Performance Objective that evaluates if services are reliably connected when connect orders are first completed. The new Performance Objective would be across physical and logical connections and aggregated across the three relevant technologies FTTP, HFC and FW.

The Performance Objective being considered is:

Description	Technology	Performance Objective
Customer connection orders that did not have a Service Fault within 20 Business Days of the relevant order being Completed	FTTP, HFC, FW	95% or more

BENEFIT TO RSPs AND CUSTOMERS

The value of a Connection Reliability Service Standard to RSPs and customers is clear. Customers have an expectation that newly connected services should not experience a fault within a short period of time, and the time required to arrange and attend appointments (if required) will understandably add to customer frustration and concerns with the quality of the service. Similarly, RSPs expect that faults should be rare in the period immediately following the connection of a service. In addition to RSP concern for the customer experience, RSPs must play a role in the fault handling process each time a service fault is raised.

A Connection Reliability Service Standard would provide greater focus on this aspect of service quality, so that it can be appropriately tracked and given attention where the Service Standard indicates that nbn performance is dropping. For RSPs this new Service Standard would also be expected to reduce customer contact, potential complaints and rework.

POTENTIAL TIMING

nbn's analysis of this potential change is based on introduction in late FY27.

6.2.3 Service Request orders and addressing queries (New Service Standard)

ASPR FEEDBACK

Among the feedback received from RSPs in relation to Connections is the proposed introduction of committed timeframes for resolving addressing issues that are required before a connection order can be placed.

This feedback has informed the development of a proposed Service Request based Service Standard.

POTENTIAL CHANGE

nbn is considering introducing a new Service Standard related to Service Requests for orders – e.g. addressing, LOC ID or activation support. The Service Standard would establish the time within which nbn should resolve these requests.

The Service Level and Performance Objective being considered is:

Description	Service Level	Performance Objective
Resolve Service Request	2BD	90% or more

BENEFIT TO RSPs AND CUSTOMERS

Establishing a committed timeframe from nbn to resolve Service Requests would offer clear benefits for both customers and RSPs. For customers, having certainty and clear timeframes would help ensure that any issues are resolved promptly, facilitating a smoother and timely connection process, and reducing the frustration associated with delays. For RSPs, it is expected that this would mitigate barriers to sales and minimise delays in getting customers connected. A commitment to clear timeframes to resolving RSP service requests should minimise the need for updates, escalations, and complaints and lead to less time spent by RSPs chasing resolutions, leading to a more efficient and customer-friendly service experience. It would also provide transparency on the volume and performance of resolving these issues.

POTENTIAL TIMING

nbn's analysis of this potential change is based on introduction in FY27.

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6.2.4 Amendments to Accelerated Connections (Amendment to existing WBA Service Standard)

nbn does not propose to change the current Service Standards for Priority Assistance Connections or Accelerated Connections. We are, however, considering updates to terminology for Accelerated Connections to clarify the purpose of this connection type.

Accelerated Connection Service Standards are designed to support nbn connections to "Inactive Premises" that are to be served by fixed line technologies where there is not currently an existing telecommunications service – and where the nbn connection will be used by an RSP to supply a retail standard telephone service. This can include where the RSP has retail regulatory obligations under the CSG Standard or in respect of retail Priority Assistance services. nbn applies a higher level of priority to Accelerated Connections than it does to Standard Connections, which creates operational cost for nbn.

Changing the terminology for "Accelerated Connections" to "Inactive Premises Connections" / "Retail Standard Telephone Connections" aims to clarify and facilitate the appropriate use of the Accelerated Connections by RSPs - to ensure that the right customers are prioritised through the correct use of this connection type.

Location of Premises	Priority Assistance Connection (hours) (Service Class 3, 13, 24 and 34 Premises only)	Inactive Premises Connections/ Retail Standard Telephone Connections (Business Days) (Service Class 1, 2, 11, 12, 21, 22, 23, 31, 32 and 33, 34 (FTTC-NCD Shortfall)3 Premises only)
Urban	24	4
Major Rural	24	9
Minor Rural	24	14
Remote	48	NA
Isolated	48	NA
Performance Objective	100%	90%

6.2.5 Fault Rectification Reliability (New Service Standard)

ASPR FEEDBACK

Among the key feedback received from RSPs in relation to Assurance is the RSP emphasis on quality of repairs, particularly for minor rural and remote areas, in order to reduce recurring faults and multiple appointments.

This feedback has informed the development of a proposed Fault Rectification Reliability Service Standard.

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POTENTIAL CHANGE

Recognising the importance of fault rectification quality to customers and consequently RSPs, for the next Regulatory Cycle, nbn is considering a new Performance Objective that would measure the effectiveness of fault resolution, ensuring that the initial fix was successful. The new Performance Objective would be across physical and logical service faults and aggregated across the three relevant technologies FTTP, HFC and FW.

The proposed Performance Objective being considered is:

Description	Technology	Performance Objective
Initial Service Fault resolution rejected by RSP, where that rejection is accepted by nbn and the Service Fault is ultimately resolved with a fault found; or **Subsequent Service Fault raised within 20BD of previously closed Service Fault (where the previous fault was found and rectified) on the same PRI, and the resolution outcome of the subsequent Service Fault is fault found.**	FTTP, HFC, FW	≤5%

BENEFIT TO RSPs AND CUSTOMERS

The value of a Fault Rectification Reliability Service Standard to RSPs and customers is clear. Customers and RSPs have an expectation that faults are fixed to a certain level of quality. In addition to the impact of a faulty service, the time required to arrange and attend additional appointments where multiple faults occur close in time adds to customer frustration and concerns with the service. In addition to RSP concern for the customer experience, there is an impact on RSPs from consecutive faults through the additional fault handling required each time a service fault is raised.

A Fault Rectification Reliability Service Standard will provide greater focus on this aspect of service quality, so that it can be appropriately tracked and given attention where the Service Standard indicates that nbn performance is dropping. As such this new Service Standard should benefit customers in the reduction of effort, frustration, and time waiting for technicians. Additionally, there should be a positive effect for customers with a reduced need to follow up with RSPs to rebook appointments or report recurring faults, leading to a more seamless and satisfactory service experience. For RSPs, a higher standard of fault rectification will reduce the need for repeated customer contact and rework, which in turn lowers the potential for complaints and associated costs.

POTENTIAL TIMING

nbn's analysis of this potential change is based on introduction in late FY27.

6.2.6 Network Performance Advice/Network Activity Tickets – HFC and FW (New Service Standard)

ASPR FEEDBACK

Among the feedback received from RSPs in relation to Network Performance is that the process for Network Performance Advices / Network Activity Tickets (**NAT/NPA**) on the HFC network requires optimisation.

This feedback has informed the development of a proposed Network Performance Advice / Network Activity Service Standard for the HFC and FW networks.

POTENTIAL CHANGE

nbn raises NAT/NPA tickets on the HFC network when multiple services experience potential performance degradation. These tickets can be triggered proactively by nbn when performance thresholds are breached or reactively upon receiving Service Faults or Performance Incidents from RSPs.

For the next Regulatory Cycle, nbn is considering a new Service Standard aimed at reducing the time to resolve HFC and Fixed Wireless NAT/NPA tickets, providing more certainty to RSPs and customers about when performance issues will be resolved.

Technology	Service Level (Resolve NAT/NPA)	Performance Objective
HFC	5 BD	≥90%
Fixed Wireless	5 BD	

BENEFIT TO RSPs AND CUSTOMERS

This potential new Service Standard would provide RSPs and customers with greater certainty regarding the expected resolution time for performance degradation issues and the restoration of service performance to acceptable levels. It would also offer RSPs increased transparency on performance metrics and volumes related to network reliability issues, as well as greater assurance about how nbn is managing network performance.

POTENTIAL TIMING

nbn's analysis of this potential change is based on introduction in FY28.

6.2.7 Speed Capacity for FTTP, HFC, FW (New Service Standard)

ASPR FEEDBACK

The introduction of an enhanced speed performance Service Standard has been identified as a priority by several RSPs. Key themes of RSP feedback include the importance of providing clear information to customers regarding actual speed expectations, as customers expect to consistently receive the speeds they have paid for - regardless of the speed tier or technology.

6.2.7.1 Speed Capacity Service Standard for FTTP and HFC

POTENTIAL CHANGE

nbn is considering the introduction of a Service Standard for speed performance to enhance the reliability, predictability and transparency of its service offerings. Introducing speed performance information through the Service Standard will help RSPs to determine if a failure to achieve the relevant speed is due to nbn network capacity issues. The new Service Standard being considered would apply to all speed tiers on the FTTP and HFC networks.

Proposed Speed Capacity Service Standard formulation

The proposed Service Standard is a capacity metric and describes how service speed is affected by network load. Importantly, this metric does not consider service performance degradation for other reasons, e.g. network faults, spurious interference, in-home networking, non-nbn network congestion, etc. The intent of the metric is to provide RSPs with an understanding of nbn network dimensioning thresholds. This will complement the existing Service Standards that apply to speed-affecting issues (such as the Service Fault and Performance Incident Service Standards) as well as the new NAT/NPA Service Standard being proposed in section 6.2.6. The proposed Service Standard would measure capacity related performance on a per-service basis, assessing compliance with the following metric:

The nbn network must deliver at least [X]% of the PIR for at least [Y]% of the time on a monthly basis for typical users at layer 2.

The Performance Objective and reporting would indicate the percentage of services that meet this metric [Z]%. Results would be aggregated by speed tier and access technology.

In this formulation the % of the PIR for Downstream (DS) and Upstream (US) and the % of the time that speed threshold is met on a monthly basis would be specified per bandwidth profile and per access technology. The Performance Objective would be the % of AVCs that meet this metric.

Method of measurement

An important aspect of this potential Service Standard is the method by which the speed commitment should be measured. In line with RSP feedback, nbn is considering use of a network simulator methodology as the prime measuring method. This method offers a proactive approach to managing nbn's network performance and helps to ensure the network is dimensioned to meet the Performance Objective for different speed tiers.

The network simulator method is a sophisticated way to predict the performance of nbn's network without overloading it with speed tests. This method runs event-driven simulations to forecast user throughput based on network load and dynamics, and its accuracy can be validated against real-world speed test results. The proposed model would take telemetry data from every AVC across the network in 30-minute

blocks on a monthly basis. This data would be used to make inferences about the speed that each AVC can achieve.[13]

Proposed metric and threshold per access technology across all speed tiers*

Different speed tiers and access technologies may have different levels of speed variability due to the network architecture of each access technology and capacity dimensioning between speed tiers. On this basis nbn is considering the below thresholds for each speed tier across FTTP and HFC access technologies for DS and US measured on a monthly basis for *typical users*. In defining a *typical user* nbn is considering a definition that will characterise typical usage behaviours vs outliers. *Typical user* would be characterised to define those exhibiting typical usage behaviours in the absence of heavy users on the network. In defining a heavy user, we expect this to be above the 98th percentile of users.

	Speed Threshold (% of PIR for Downstream (DS) and Upstream (US)) [X]%		Time on a monthly basis [Y]%	Performance Objective [Z]%
Speed Tier**	FTTP	HFC		
12/1, 25/5, 25/10, 50/20	DS - 99% of PIR US - 99% of PIR	DS - 99% of PIR US - 95% of PIR	95%	98%
100/40	DS - 99% of PIR US - 99% of PIR	DS - 99% of PIR US - 90% of PIR	95%	98%
Home Fast FTTP/HFC 500/50	DS - 90% of PIR US - 90% of PIR	DS - 90% of PIR US - 90% of PIR	95%	98%
Home Superfast FTTP/HFC 750/50	DS - 90% of PIR US - 90% of PIR	DS - 90% of PIR US - 90% of PIR	95%	98%

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[13] nbn also considered an alternative sample test methodology with RSPs during the speed co-design workshops – though this methodology was considered to have notable disadvantages in comparison to the network simulator approach. For example, the sample test methodology only provides a snapshot of network performance at specific times and may miss congestion events that occur outside of sample testing periods. Additionally, conducting frequent speed tests can add substantially to the network load, and results may not fully represent the overall network capacity status. Overall, the network simulator method offers a more reliable and efficient way to benchmark and report compliance to the proposed Performance Objective for speed.

	Speed Threshold (% of PIR for Downstream (DS) and Upstream (US)) [X]%		Time on a monthly basis [Y]%	Performance Objective [Z]%
Home Ultrafast – FTTP/HFC 1G/100[14]	DS - 90% of PIR US - 90% of PIR	DS - 90% of PIR US - 70% of PIR	95%	98%
Home Hyperfast – 2G/200 FTTP & 2G/100 HFC	DS - 70% of PIR US - 70% of PIR	DS - 70% of PIR US - 70% of PIR	95%	98%
Business 250/100	DS - 90% of PIR US - 90% of PIR	DS - 90% of PIR US - 70% of PIR	95%	98%
Business 500/200	DS - 90% of PIR US - 70% of PIR		95%	98%
Business 1G/400	DS - 90% of PIR US - 70% of PIR		95%	98%
Business 2G/500	DS - 70% of PIR US - 70% of PIR		95%	98%

Note: These are layer 2 throughput objectives applied in aggregate across the nbn network and do not include overhead allowance.

**Note: Where the bandwidth profile is expressed as a range, the speed threshold is applied to the lower end of that range*

6.2.7.2   Speed Service Standard for FW

In our commitment to ensuring reliable and consistent internet speeds, we are further considering a speed commitment for FW, which will take a different approach than the commitment for FTTP and HFC set out above under **Section 6.2.7.1**.

For FTTP and HFC, the potential speed commitment would primarily be a capacity commitment. This means we ensure there is sufficient capacity on the network to support the speeds for each speed tier, as set out in the metric above (**Section 6.2.7.1**). Fixed line networks, such as FTTP and HFC, have dedicated physical

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[14] Note that inherent limitations of nbn® Ethernet in relation to service frame overhead means the effective downstream layer 2 peak information rate for these bandwidth profiles will be limited to, depending on the Frame Size, up to a maximum of 970Mbps (at 2,000 Byte Frame Size). The Downstream Speed Threshold for these bandwidth profiles will be measured as against the 970 Mbps effective peak information rate.

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connections that provide consistent performance, making a capacity-based commitment effective in ensuring reliable speeds.

In the case of FW services, we are considering a commitment based on the typical wholesale busy period speed, which is the primary metric nbn has focused on in the Fixed Wireless upgrade program. This metric measures the typical speed during peak usage times and considers not only capacity but also other varying factors that can impact performance. FW networks experience higher variability due to several factors beyond capacity, including factors such as environmental and weather conditions as well as physical obstructions (like buildings and trees), and the distance between the customer's premises and the wireless tower. By adopting a typical wholesale busy period speed metric for FW, nbn aims to provide a more accurate and meaningful measure of the network's performance during times of high demand.

We have more work to do on the details of a potential FW Service Standard, and will provide further detail to interested stakeholders once available.

BENEFIT TO RSPs AND CUSTOMERS

A Service Standard for speed performance would enhance the reliability, predictability and transparency of nbn's network performance and service offerings. This would provide RSPs with greater confidence in nbn's network capacity management further supporting RSPs to provide clear information about speed, set accurate customer expectations, and manage services effectively. In turn it is expected such a Service Standard would help RSPs build greater customer confidence in the performance of nbn's services and further support RSP compliance with their obligations related to product specific marketing claims.

While nbn's existing Utilisation Management commitment achieves a similar purpose, the proposed Service Standards would enhance RSP insight into speed performance at a more granular, speed tier level, allowing nbn to identify and resolve potential issues in relation to the performance of individual speed tiers, not just network capacity more broadly.

RSP representations on anticipated busy hour speeds will continue to rely on the real world performance of an RSP's end-to-end layer 3 speeds. However, where the proposed Service Standards identify an issue in relation to a particular speed tier, it could support RSPs in their engagement with customers. This would enhance both RSP and customer confidence in the network by specifying the source of a speed issue and the intended fix.

POTENTIAL TIMING

nbn's analysis of this potential change is based on introduction in late FY28.

> **Questions for consideration**
>
> 1) *To what extent do you support the proposed enhancements to Benchmark Service Standards set out in **Section 6.2.1 to Section 6.2.7***? Please specify which of the proposals you support or oppose.*
> 2) *In order of priority, which enhancement or enhancements would add the greatest value to the customer experience and why?*
> 3) *What is your view on the proposed timing for the potential enhancements?*

6.2.8 Amendments to Corrective Action - (Existing WBA Service Standard commitment)

nbn considers that there is potential to improve the current framework for Corrective Action in the nbn Ethernet and nbn® Smart Places Service Level Schedules.

Proposed changes under consideration are:

- Corrective Action obligation would be triggered where nbn does not meet a specified Performance Objective for three consecutive measurement periods.

- Where nbn does not meet a Performance Objective for three consecutive measurement periods, we would continue to undertake Corrective Action and report in our Corrective Action Plans on steps we are taking to address non-achievement of that Performance Objective until we meet or exceed that Performance Objective for three consecutive measurement periods of performance.

- Clarifications which require nbn to produce new Corrective Action Plans within 20 Business Days of reporting being made available.

- Reporting obligations on nbn to provide monthly updates to RSPs on progress with active Corrective Action Plans.

> **Questions for consideration**
>
> 4) *To what extent do you support the proposed changes to the Corrective Action process?*

6.3 Existing Benchmark Service Standards not proposed to change

While nbn is considering material changes to the Benchmark Service Standards for the next Regulatory Cycle as outlined in **Sections 6.1 and 6.2** above, it is apparent that a significant number of Benchmark Service Standards are appropriate in their current form. The table below captures those Benchmark Service Standards that nbn is considering carrying forward from the current Regulatory Cycle in their existing form. Changes to a number of these Service Standards were considered as part of the co-design process. Explanations and supporting material of why these changes are not feasible or should not be prioritised at this point of the network evolution are set out in **Section 7** - along with **Appendix B**.

Table 5: Existing Benchmark Service Standards to be carried forward for next Regulatory Cycle

	Benchmark Service Standard	Current BSS Reference*
Connect		
1	End User Connection Appointments and Professional Wiring Service Appointments	Section 2
2	CVC Activation	Section 3
3	NNI Group Activation	Section 3
4	NNI Link Activation	Section 3
5	V-NNI Activation	Section 3
6	Completion Advices	Section 4
Repair		
7	Trouble Ticket management	Section 7
8	End User Fault rectification	Section 8.1
9	Priority Assistance Fault rectification	Section 8.2
10	Performance Incident rectification	Section 9
11	Customer Fault rectification Appointments	Section 10
12	Network Fault	Section 8.3 – Section 8.4
Use		
13	Network Activity	Section 5
14	Network performance and Availability	Section 13.1 – Section 13.3
15	Utilisation Management	Section 13.4

* Refer current SAU, Attachment I (Benchmark Service Standards for First Regulatory Cycle)

6.4 Service Standards being considered for removal from Benchmark Service Standards

As part of updating the Benchmark Service Standards for the next Regulatory Cycle, it is important to consider whether there are any existing commitments that are no longer relevant or appropriate and should be removed from the benchmarks. At this stage, the only Service Standard that nbn has identified for potential removal is the Interference Mitigation Service Standard – further detail is set out in **Section 6.4.1** below.

6.4.1 Interference Mitigation

We propose to remove the existing Service Standard for Interference Mitigation tickets due to the lack of any interference events. Specifically, no interference events were recorded in either calendar year 2023 or 2024. This suggests that the applicable Performance Objective is not a material service commitment, and is no longer relevant for inclusion in the Benchmark Service Standards. The existing Service Standard proposed to be removed is set out below.

Activity	Performance Objective
Interference Mitigation Solution completed on or before the notified Estimated Interference Mitigation Date	90% or more

6.5 Potential Benchmark Service Standards requiring further development

6.5.1 Planned Outages

Context

Planned Outages are a necessary function for any utility network owner and operator. They are the means by which technology upgrades, planned maintenance and certain assurance activity is facilitated. Depending on the type of work being undertaken, outages can impact individual or multiple services. Some upgrade programs will require multiple outages spread out over a range of timings – subject to the access technology. Other planned outages can be initiated by third parties' maintenance or upgrade programs - particularly where the nbn network infrastructure is reliant on mains power supply (29% of HFC outages are caused by power outages).

nbn recognises that any outage can have a direct impact on the customer experience while using their nbn connection, and seeks to minimise the impact of Planned Outages through its operating processes. For

example, where feasible nbn conducts Planned Outages outside the hours when most customers are online (excluding special categories of outages like FTTC Rollout Planned Outages, which have specific considerations). While nbn aims to undertake the majority of scheduled maintenance activities during the Planned Outage Window (2300-0600), there are reasons that these activities may need to occur during the hours of 0600-2300 including OHS considerations, and potential neighbourhood disruption. In other cases it is necessary to perform emergency outages immediately given the severity of potential impacts if network maintenance is not prioritised.

During 2023 a focus group was facilitated by Comms Alliance between nbn and RSPs. While the forum identified many opportunities to improve the management of Planned Outages, reaching consensus on material changes was challenging given complexities such as balancing service interruptions caused by outages and the impacts of delaying outage activity, and trade-offs between over and under notification of outages. nbn has investigated *13* of the initiatives that were identified in the forum and plans to implement improvements throughout 2025 addressing a number of the issues identified.

Industry feedback

During the ASPR consultation and the subsequent co-design process with RSPs in 2024, Planned Outages was raised by most participants as a priority area that nbn should investigate for the potential inclusion of a Service Standard. Key themes from these working groups included:

1. Importance of outage information accuracy;
2. Having less frequent Planned Outages is preferred, even if it requires longer duration Planned Outages;
3. Importance of alignment on guidelines around daytime outages, including governance process;
4. Support for improved Planned Outage reporting / transparency; and
5. Support for the introduction of an 'expedited outage' category.

Suggestions put forward by RSPs included introduction of Service Standards for:

1. **Planned Outage frequency,** establishing a threshold for the volume of Planned Outages per service per month;

2. Accuracy of the **estimated time of interruption** for a Planned Outage;

3. The % of Planned Outages that **exceed the outage window**;

4. The % of **actual outage duration** compared with notified outage window;

5. The % of **failed Planned Outages**;

6. The % of **cancelled Planned Outages**;

7. **Capping the duration** for Planned Outages;

8. The % of outages conducted **in and outside the Planned Outage Window**.

Other proposals included:

9. Changing the Planned Outages Window from 23:00-06:00 to 00:00-06:00 local time; and

10. Introduction of a shorter notice period for expedited outages.

nbn-COMMERCIAL

nbn assessment

nbn is aligned with RSPs on the importance of improving the Planned Outages processes. However, it is important that changes in this area are not introduced without fully evaluating and aligning with industry on the processes and risks, and having in place processes to manage those risks is critical.

For example, introducing a Benchmark Service Standard for Planned Outage frequency would enhance one element of the service experience for customers while giving rise to an unacceptable detrimental impact on other elements of the service experience. It would significantly limit nbn's ability to conduct its technology upgrade programs and undertake necessary maintenance of the network – leading to a potentially degraded experience for many customers.

Proposal to progress

nbn acknowledges that both Planned and Unplanned Outages remain a key source of frustration for RSPs and a point of dissatisfaction for customers when using their nbn service.

nbn's assessment is that some of the current issues with Planned Outages can be addressed by changes to the management of the notification processes for planned power outages (notifications for power related outages make up a significant portion of notices, many of which do not occur) and short duration outages (up to 'x' minutes). An immediate priority for nbn is to make step-change improvements with simplifying and streamlining the end-to-end industry processes for Planned Outage notifications both to RSPs and to customers. nbn will commence consultation in February with RSPs on an improved outage rescheduling capability (to address the high volume of cancellations).

nbn is also planning to commence consultation with RSPs on a redesign of the HFC and Fixed Wireless Network Performance Advice/Network Activity tickets process. These are tickets triggered on the HFC and FW networks when multiple services experience potential performance degradation, and can be initiated proactively by nbn when internal performance thresholds are exceeded or reactively upon nbn receiving tickets for Service Faults or Performance Incidents from RSPs. This consultation is planned to cover 'expedited change' outage notifications, and detail the process changes required to support the new proposed Service Standard for NAT/NPA tickets (refer to **Section 6.2.6**).

During Q1 FY26 nbn will also run workshops with RSPs to:

- Consider a set of appropriate transparency reports for Planned Outages;
- Explore and test the processes, implications and risk management of introducing a potential Service Standard for:
    - Planned Outage frequency; and
    - The percentage of Planned Outages conducted in and outside the Planned Outage window.

nbn anticipates that full definition of any Planned Outage Service Standard will take some time to work through with RSPs. Should agreement be reached on a new Service Standard then nbn would look to introduce the standard into the WBA mid-Regulatory Cycle.

6.6 Rebates

nbn considers that the rebates offered on nbn Ethernet services continue to play an important role in incentivising nbn to meet its service commitments, and provide appropriate payments to RSPs where nbn does not meet those commitments. The current value of nbn's rebates reflect the outcomes of the Wholesale Service Standards Inquiry – with the introduction of new and updated rebates in WBA4 responding to areas of concern identified in that inquiry. Specifically, the following enhancements were made to nbn Ethernet rebates in WBA4:

- **Missed Appointments:** Rebate increased from $25 to up to $75 per missed appointment.

- **Late Connections:** Introduction of daily rebates for connection delays, rather than a one-off payment.

- **Unresolved Faults**: Introduction of daily rebates for fault rectification delays, rather than a one-off payment.

- **Failed Connection Rebate**: Introduction of a rebate for connections that were completed unsuccessfully.

- **Wireless Speed Performance**: Introduction of monthly $20 rebate for underperforming wireless services due to congested cells or transmission backhaul links.

- **PIR Objective:** Introduction of monthly rebate scaling from $10 to $20 for FTTB, FTTN and FTTC services not meeting specified minimum speed objectives and work is required to remediate the network before such speeds can be achieved.

- **FTTB/N/C Connection Performance Rebate:** Introduction of a rebate where nbn is unable to provide accurate information about the performance capability that will be delivered to a premises at the time a service is ordered for that premises,

nbn considers that the current suite of rebates, together with the committed annual rebate adjustment process specified in **Section 6.1.2**, provide an appropriate balance in incentivising nbn to address service issues that are impacting Customers without being disproportionate or unnecessarily onerous. An overview of current rebates, and why these remain appropriate, is set out in **Appendix C**.

One area that nbn will be considering further is whether there are rebate changes that may be appropriate as a consequence of the potential change to the Service Standard for physical connection timeframes for FTTP and HFC discussed in **Section 6.2.1** above.

> **Questions for consideration**
>
> 5) *Are the current rebate arrangements between nbn and RSPs sufficient to ensure customers are appropriately compensated for nbn missing its Service Standards?*

6.7 Annual Service Standards Review

nbn recognises that service quality and the associated Service Standards should continue to evolve with the performance and capability of the network. Technology is continually changing, nbn is continually improving its processes, and RSP and customer expectations are continuously evolving. To support this - and noting that the current ASIP and ASPR processes apply specifically to the first Regulatory Cycle - nbn proposes to establish an Annual Service Standards Review (ASSR) under the WBA, leveraging those elements of the current ASPR process that are considered effective while taking the learnings from this process to simplify the annual review.

As the proposed Annual Service Standards Review is not a 'Service Standard' as defined in the SAU, it would not form part of nbn's proposed Benchmark Service Standards for the next Regulatory Cycle. nbn would therefore look to formalise the ASSR process outside of the RMA.

The Annual Service Standards Review would:

A. Identify opportunities to amend Service Standards as a consequence of improved process and operational capability.

B. Consider the introduction of new Service Standards to support changes on nbn products and/or customer demand.

C. Consult with RSPs and industry stakeholders on A and B.

> *Questions for consideration*
>
> **6.** *Would you support an Annual Service Standards Review process as described above?*

7 Service Standards considered but not proposed to change

As part of the engagement process detailed in **Section 5** above, nbn took a comprehensive view to assessing potential new Service Standards or Service Standard changes that would affect both contracted and regulated Service Standard commitments. Following the co-design workshops with RSPs and nbn's subsequent review of the outcomes, nbn advised RSPs on 4 December 2024 that we would not be further progressing 23 of the proposed new Service Standards and eight of the proposed changes to existing Service Standards. The basis for not progressing these was varied, including prioritisation, alternative options being considered, potential for negative unintended consequences, or that improved or new operational processes would be more suitable. A full list of the Service Standards considered along with the rationale for not progressing can be found at Appendix B.

Of the Service Standards considered in further detail since December, seven of these form the basis of the proposed changes to Benchmark Service Standards set out in **Section 6.2** above. For those Service

Standards that have been deprioritised since the December update, **Section 7.1** below provides an overview of why nbn considers these are not appropriate for inclusion in the Benchmark Service Standards. It is important to note that by not progressing with a particular Service Standard, this does not indicate the particular area of the service experience should be deprioritised – but that at this point in time a Benchmark Service Standard is not appropriate to deliver potential improvements to that area of the service experience.

7.1 Service Standards deprioritised since Service Standard Evolution Update

Table 6: Service Standards deprioritised since Service Standard Evolution Update

	Service Standard	Section
Connect		
1	AVC Modifications	7.1.1
2	Connect Appointments	7.1.2
Repair		
3	Fault Appointments	7.1.2
4	Trouble Ticket Management	7.1.3
5	Recurrent service fault	7.1.4
6	Network Faults	7.1.5
Use		
7	Service dropouts	7.1.6

7.1.1 AVC Modifications (Physical Visit)

Description of Service Standard

This proposal was to modify an existing Service Standard. As the nbn network is evolving there will be increasing necessity and demand to change out network termination devices (**NTD**) at customer premises. Examples of this include: (1) the Fixed Wireless network upgrade program where each customer wanting to take advantage of the improved product offerings will need to have their Wireless Network Termination Device (**WNTD**) changed over; and (2) the planned introduction of an upgraded FTTP NTD to enable new high-speed offerings. Currently a customer may wait up to 9 business days in an Urban Area for this change over (and longer in other geographic areas). The proposal considered was to reduce this timeframe for urban areas to 5 business days.

Basis for not progressing

Currently, the volumes of these NTD upgrade activities are 20k annually with demand expected to grow to $50k annually by FY28. These volumes and the costs of developing the IT capability to support this change were key factors in deprioritising this Service Standard, particularly when considering this potential change against those that nbn is proposing to prioritise under **Section 6.2**.

Potential Impacts

Customers needing to upgrade will still have a committed timeframe of nine business days.

How nbn proposes to manage outstanding concerns

If demand over the next Regulatory Cycle grows beyond expectations, and the volume of NTD upgrades increases significantly, nbn may seek to engage with stakeholders to determine if this Service Standard requires further consideration.

7.1.2 Connect and Fault Appointments

Description of Service Standard

This proposal was to modify an existing Service Standard. nbn currently has Service Standards in place for connection and fault appointments with a Performance Objective of 90%. nbn has consistently exceeded this Performance Objective. RSPs were generally satisfied with the applicable Service Standards, but there was a common view that nbn should raise the bar on the Performance Objective to - at minimum - meet the current level of performance. The proposal considered was to update the Performance Objective to 95%.

Basis for not progressing

nbn is considering a significantly change to the Service Levels and Performance Objectives for FTTP and HFC Connections (refer to **Section 6.2.1**), and a new Service Standard for Connection Reliability (refer to **Section 6.2.2**) which will require an improvement in field resource management and potentially a material increase in field resources. Uplifting the Performance Objective that applies to appointment activities will remove some of the flexibility which currently exists in the workforce deployment practices – which flexibility should help support the proposed enhancements to connection related Service Standards. It would not be good practice to set an expectation of meeting a higher appointment standard until such time as nbn has implemented any new connection Service Standards and the associated adjustments to workforce management.

Potential Impacts

nbn proposes to keep the appointment related Service Standards as they are currently defined, meaning that customers can still expect nbn to continue to meet their appointment at least 90% of the time.

How nbn proposes to manage outstanding concerns

Following the implementation of the amended Service Standards for connections nbn will monitor the progress of appointment Performance Objectives, and if actual performance continues to exceed performance nbn will investigate uplifting the relevant appointment Performance Objective during the next Regulatory Cycle as part of the proposed annual review process.

7.1.3 Trouble Ticket management

Description of Service Standard

This proposal was to modify an existing Service Standard. This Service Standard measures nbn performance in responding to RSP queries related to Trouble Tickets. The measure is broken into three parts: (1) Accept/more info required notification; (2) Confirm RSP compliance to more information request; and (3) Respond to resolve rejection. For each of these activities nbn has a Service Standard of 2 operational hours. Part (1) is a fully automated process, and responses are generally completed within 15 minutes. Parts (2) and (3) require manual intervention to address. The proposal considered was to change the Service Standard for Part (1) from 2 hours to 15 minutes.

Basis for not progressing

Around 1.14 million Part (1) transactions occur each year. Changing the Service Standard will require some incremental cost but there will be no incremental benefit to RSPs or Customers as the current performance has >99% of part (1) transactions being completed within 10 Minutes. While in some cases uplifting Performance Objectives to reflect current performance may provide additional value (e.g. providing RSPs with greater confidence to communicate anticipated connection timeframes), the value of uplifting this specific Performance Objective does not outweigh the anticipated cost. The impact on the current lived experience, value from an RSP customer interaction perspective, and the costs of developing the IT capability to support this change were key factors in deprioritising this Service Standard, particularly when considering this potential change against those that nbn is proposing to prioritise under **Section 6.2**.

Potential Impacts

The lived experience for RSPs and customers will not change.

How nbn proposes to manage outstanding concerns

nbn will continue to monitor performance of Part (1) to ensure the current lived experience does not decline as part of the proposed annual review process.

7.1.4 Recurrent service fault

Description of Service Standard

This was a suggested new Service Standard. The aim of this Service Standard was to introduce a quality measure into the fault repair process that would measure the percentage of fault repairs which had a subsequent similar fault reported and repaired by **nbn** in the 60 days following the initial repair.

Basis for not progressing

nbn is proposing to introduce a new Fault **Rectification Reliability (New Service Standard)** Rectification Reliability Service Standard, that will incorporate an equivalent measure to this proposed separate standard

(refer to **Section 6.2.5**). One of the data points inside the Fault Rectification Reliability Service Standard will be counting the number of fault repairs where a subsequent fault is reported and repaired within 60 days of the initial repair.

Potential Impacts

Given that the Fault **Rectification Reliability (New Service Standard)** Rectification Reliability Service Standard will achieve the same outcome, there are no residual impacts identified through not proceeding with recurrent service faults as a separate Service Standard.

7.1.5 Network Faults

Description of Service Standard

Network Faults are faults affecting elements of the network that impact multiple customers. nbn classifies Network Faults according to levels of Priority (1 to 4), with each Priority attracting different timeframes for nbn to identify, diagnose, and rectify the Network Faults to ensure minimal customer disruption.

For the next Regulatory Cycle, nbn considered the following changes to the management of Network Faults:

1. Change the Service Level for Network Fault Response for Priority 4 from current 4 hours to 2 hours.

2. Change the Performance Objective for Network Fault Response and Network Fault rectification Performance Objective from current 90% to 95%.

These are set out in the table below:

Description	Incident Priority	Network Fault Response (Hours)	Network Fault rectification (hours)
All technologies	1	0.5	6
	2	1	12
	3	2	20
	4	2	28
Performance Objective		95% or more	95% or more

Basis for not progressing

A key reason for reviewing these potential changes to the Network Fault Service Standard was nbn's current performance against the existing Service Standard. The ASPR-24 confirmed that nbn continually outperforms existing Service Levels and/or Performance Objectives with respect to Network Fault response and rectification times. nbn has therefore tested whether lifting the applicable Performance Objectives, and introducing a shorter response timeframe would be feasible for the next Regulatory Cycle.

Following further assessment, it is apparent that lifting the Performance Objective to match existing performance is not practical. In today's MTM model, remote restoration outcomes have been instrumental in enabling nbn's elevated Network Fault rectification performance (which presently exceeds 95%). As nbn reduces the FTTN/B/C footprint and uplifts the network to a broader FTTP footprint, however, it is expected

that the volume of overall network incidents will decline while the proportion of those incidents that require a truck roll will increase. This is because:

- FTTN/B/C technologies include 'active' network devices and are therefore prone to more incidents due to power, weather, etc. These faults represent ~50% of incident volume. From a remote resolution outcome, FTTN/B/C has an overall 77% success rate with 23% requiring a truck roll, which enables an expedited restoration outcome and provides a positive contribution to the elevated rectification performance achieved today. This high volume of remote resolution outcomes will no longer be possible once these FTTN/B/C services are converted to FTTP.

- The FTTP technology is a 'passive' network and less susceptible to outages compared to FTTN/B/C. Faults on FTTP represent ~8% of present overall incident volume. From a remote resolution outcome, FTTP has a 30% success rate with 70% requiring a truck roll for a field technician to assess and remediate the impact. This low volume of remote resolution outcomes for FTTP will have a multiplied impact as the FTTP footprint grows across nbn from ~30% to 45% over the next two years and as high as 70% by FY30.

- As FTTN/B/C customers get migrated to FTTP our annual network incident volume is expected to reduce from ~74k to ~48k incidents post the network upgrade. The calculation of Network Fault rectification performance will therefore have a lower denominator than we have today, and given FTTP network Faults are more likely to require a truck roll, restoration performance is projected to be in the vicinity of 93% by 2028.

While the Network Rectification performance as measured against today's Service Standard is expected to change, we expect to see an improved CX outcome with the expanded FTTP footprint; overall Network Fault volumes are expected to reduce by ~33% and average technology ticket restoration times are expected to remain the same.

Potential impacts

While the performance against this Performance Objective is anticipated to trend down, this is not anticipated to result in a negative outcome in terms of the actual customer experience today. This is because the total volume of Network Faults across the network is expected to reduce as the fibre migration accelerates and the volume of copper-based premises reduces. The resiliency of the fibre network means that the frequency of Network Faults for these customers is reduced – notwithstanding those faults that occur are more likely to require a truck roll.

How nbn proposes to manage outstanding concerns

nbn will continue to monitor performance of Network Faults, and the impact of the changing mix of Network Faults requiring physical and remote rectification, to enable any concerns regarding Network Fault response and rectification times to be identified. In addition, and in response to RSP feedback, nbn plans to further review its Network Fault priority classification to ensure it remains fit for purpose and aligns with industry standards.

7.1.6 Service dropouts

Description of Service Standard

This was a suggested new Service Standard. The proposed Service Standard would measure for the FTTP, HFC and FW networks, the percentage of active services experiencing four or more unexpected dropouts a day on 3 or more occasions in a month.

Basis for not progressing

Unexpected dropouts for customers can be caused by a range of differing factors. For example, errors occurring in the customer premise equipment (modem), power interruptions, RSP equipment and the nbn network itself are all potential locations which could be generating dropouts. Currently nbn does not have sufficient systems or monitoring capability which would enable us to clearly distinguish the cause of each dropout experienced by a customer. As a result, it would not be possible to accurately monitor nbn's performance against an unexpected dropout Service Standard applicable only to those dropouts in its control.

It is important to note that dropouts are still relevant to Service Standards – as the volume of dropouts on a service inform whether or not a service meets the description of a Performance Incident or Fault. These dropout 'thresholds' have been designed to account for the fact that not all dropouts may be caused by the nbn network.

Potential Impacts

nbn acknowledges that unexpected service dropouts can be a source of frustration and dissatisfaction for customers when using their nbn service. This was reiterated in the November 2023 adjustment to the thresholds for dropouts to trigger either a Service Incident or a Performance Incident investigation by nbn. It is also the reason that nbn makes available extensive dropout reporting to RSPs. For each service on the FTTN, FTTC, FTTB, HFC and FTTP networks, nbn provides RSPs with a count of unexpected dropouts in four different time spans:

1. over the previous day;
2. two days prior to the current day;
3. over the previous seven days; and
4. over the previous 30 days.

RSPs are encouraged to use this data to investigate the cause of any dropouts and, if appropriate, submit a repair ticket to nbn.

nbn recently investigated further lowering the dropout thresholds for Service Incident and Performance Incident investigations. However, while RSPs have been provided the daily data which enables them to raise incidents, a relatively low proportion of eligible incidents are raised by RSPs in practice – suggesting that further lowering dropout thresholds would not result in nbn being enabled to materially improve dropout performance.

How nbn proposes to manage outstanding concerns

Unexpected dropouts will continue to require focus and attention by both nbn and RSPs.

APPENDIX A - nbn's current expenditure plan and updated forecasts

In January 2025, nbn announced it will upgrade the remaining FTTN network across Australia, benefitting around 622,000 homes and businesses. It is expected that that more than 95 per cent of these homes and businesses will have the option to upgrade to FTTP, with the remaining five per cent requiring further design work to confirm the appropriate upgrade path.

Prior to that announcement, nbn's forecast capex included $2.2 billion (real June 2024 dollars) for migrating FTTN and FTTC connections to FTTP during FY27 to FY29 (i.e. the next Regulatory Cycle). As set out in Consultation Paper 1, this was the single largest capex program, accounting for 34% of the total forecast capex of $6.5 billion over that period.

With the expansion of nbn's upgrade program to the remaining 622,000 FTTN premises, nbn is now forecasting additional capex of $1.1 billion over the remainder of the period FY24 to FY26 and $2.3 billion over the period FY27 to FY29 – as a result, total forecast capex for the next Regulatory Cycle (FY27 to FY29) increases to $8.8 billion, with the expanded fibre upgrade program accounting for 51% of that total.

The capex forecast covers the capital cost of the upgrade connection, namely the construction of a fibre lead-in from the local fibre network into the premises and the installation of a network termination device (NTD) within the premises, along with a component of the local fibre network construction for the additional footprint announced in January 2025.

The additional 622,000 FTTN premises to be upgraded does not impact the total number of premises that we expect to be ready to connect (RTC) over the period to FY29. However, it changes the relative proportion of 'Fixed Line – up to 1Gbps capable' and 'Fixed Line – other' networks. It is estimated that an additional 450,000 premises will be ready to connect to full fibre from FY26 – FY29.

This is illustrated in the updated figure below – note that as announced in September 2024, nbn will begin offering wholesale download speeds of 2 Gigabits per second (Gbps) from 14 September 2025. The new products will be available to eligible customers connected to the nbn network via FTTP and HFC.

Figure A-1: Premises ready to connect (RTC) by Technology (updated)
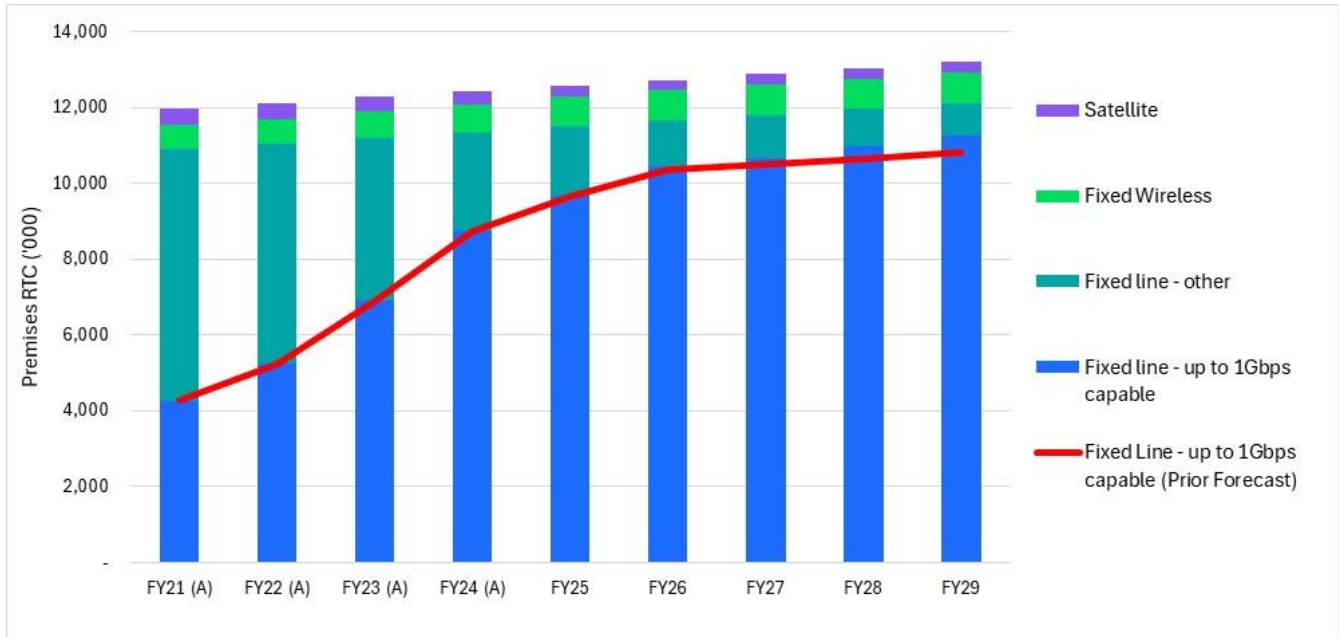
The updated forecast expenditure (capex plus opex) for FY27-FY29 is $16.8 billion (real June 2024 dollars), up 16% from the prior estimate of $14.5 billion (based on IOP25 forecasts). This represents an increase of $2.3 billion over the forecast presented in Consultation Paper 1 and is primarily attributable to the increase in forecast capex from $6.5 billion to $8.8 billion.

Forecast opex is forecast to remain at $8.0 billion over FY27-FY29. The impact of the expanded fibre network upgrade program on forecast opex is minimal over this period due to the need to continue to operate and maintain dual networks over that period. Opex savings in the form of reduced truck rolls, reduced energy consumption and greater resilience to weather events, are expected to be realised in later years as upgraded connections in the 622,000 upgrade footprint progressively account for a higher proportion of total premises connected to the nbn network.

Notwithstanding the increased capex resulting from the recent announcement, the forecast capex for FY27 to FY29 is still expected to fall relative to the current period forecast capex of $10.3 billion, as shown in the following chart.

Figure A-2: Capex by Category (updated)
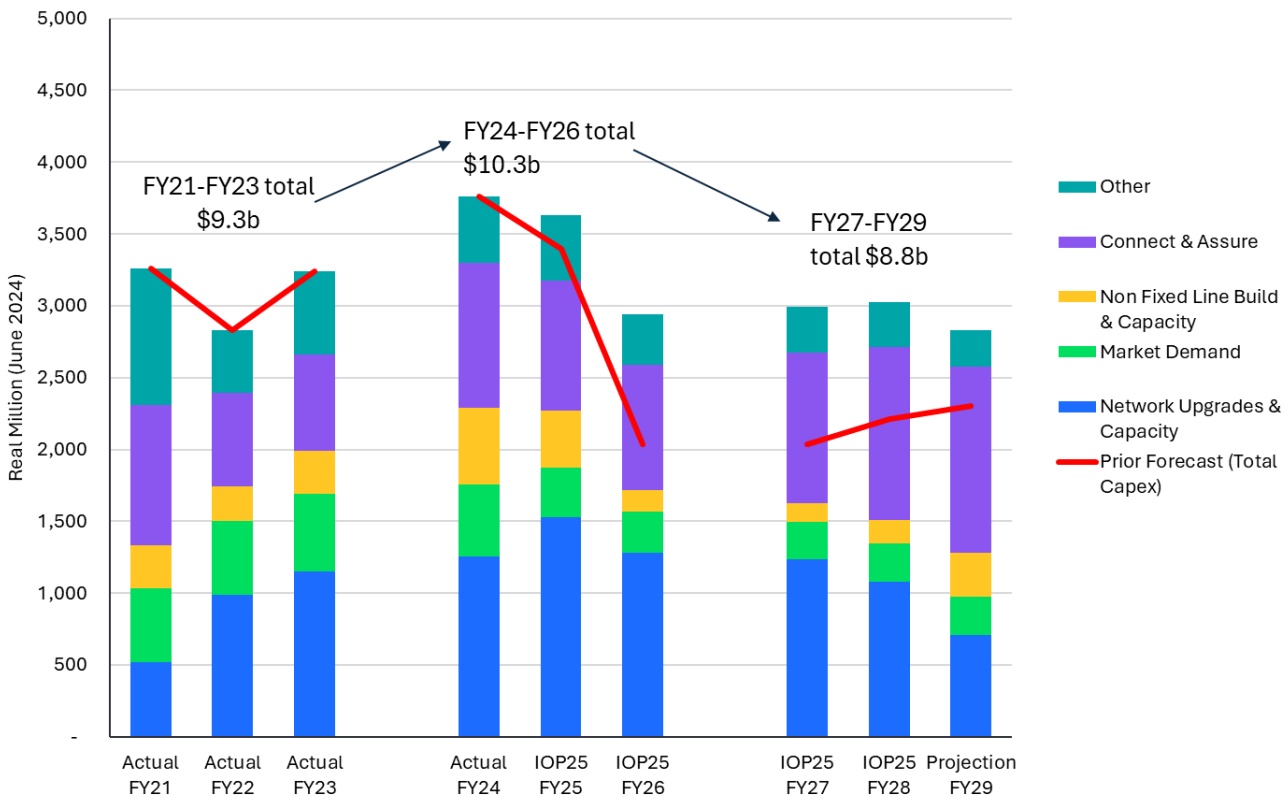
Note: capex is presented on an 'as-incurred' basis rather than being split into 'as-commissioned' and 'construction in progress' for use in the calculation of the build block costs.

Network Upgrades & Capacity capex accounts for 89% of the increase in forecast capex for FY27 – FY29, with the balance (11%) being an increase in the forecast Connect & Assure capex. There is no impact from the recent announcement on the IOP25 forecasts for the Market Demand, Non-Fixed Line and Other capex categories.

For Network Upgrades & Capacity capex, the increase is in the FTTN to P Upgrades category, which was previously expected to finish in December 2025. This is now forecast to be $2.0 billion in FY27 – FY29. There is also an increase of $45 million for the Transit Network and a saving of $21 million for underperforming copper lines (UPLs). The updated forecast for network Upgrades & Capacity capex is summarised in the following chart.

Figure A-3: Network Upgrade & Capacity capex (updated)
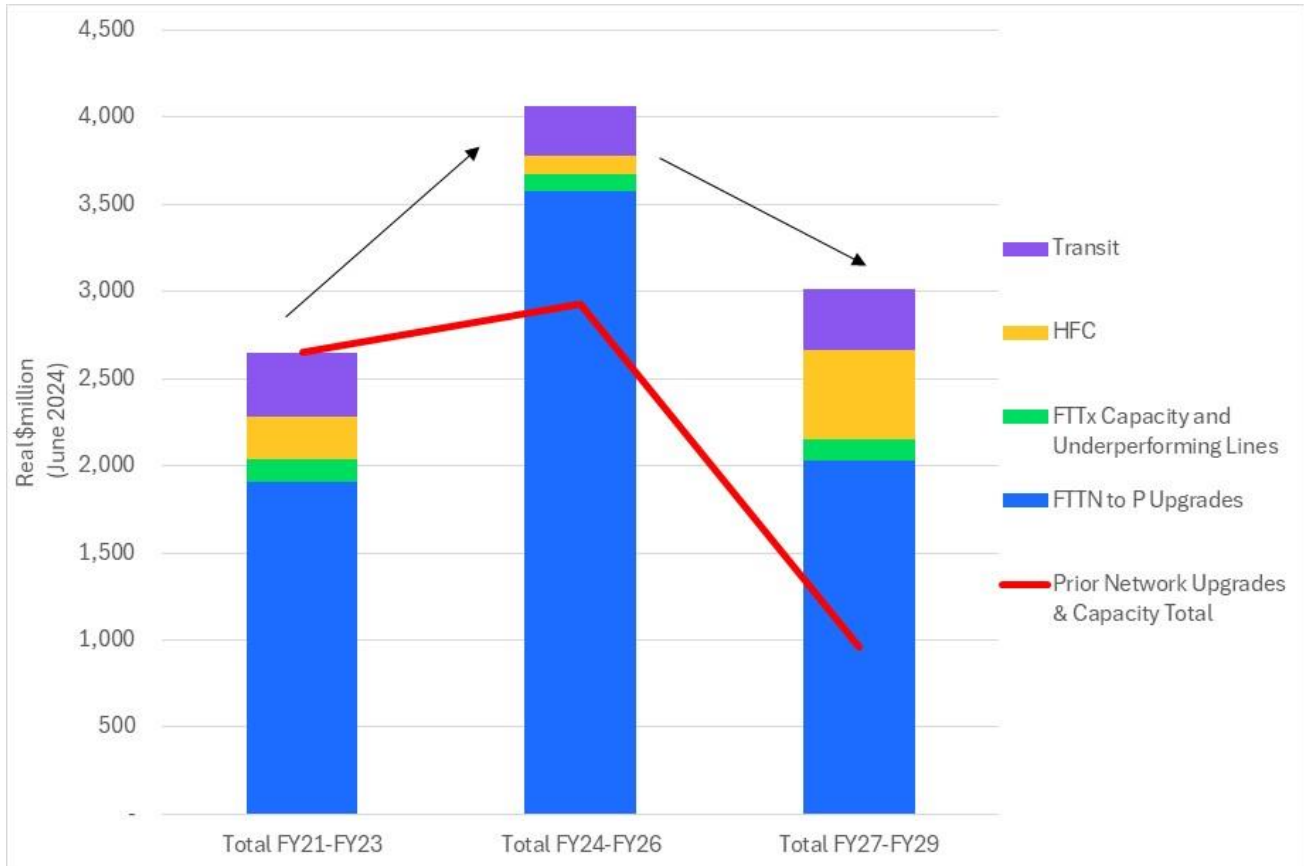
Note: capex is presented on an 'as-incurred' basis rather than being split into 'as-commissioned' and 'construction in progress' for use in the calculation of the build block costs.

For Connect & Assure capex, the increase is wholly in the Upgrade Connections category, which is now forecast to be $2.5 billion, up $245 million from the IOP25 estimate of $2.2 billion. There is no impact on the forecast capex for Customer Connections and Customer Service & Assurance & Other categories. The updated forecast for the Connect & Assure capex is shown in the following chart.

Figure A-4: Connect & Assure capex (updated)
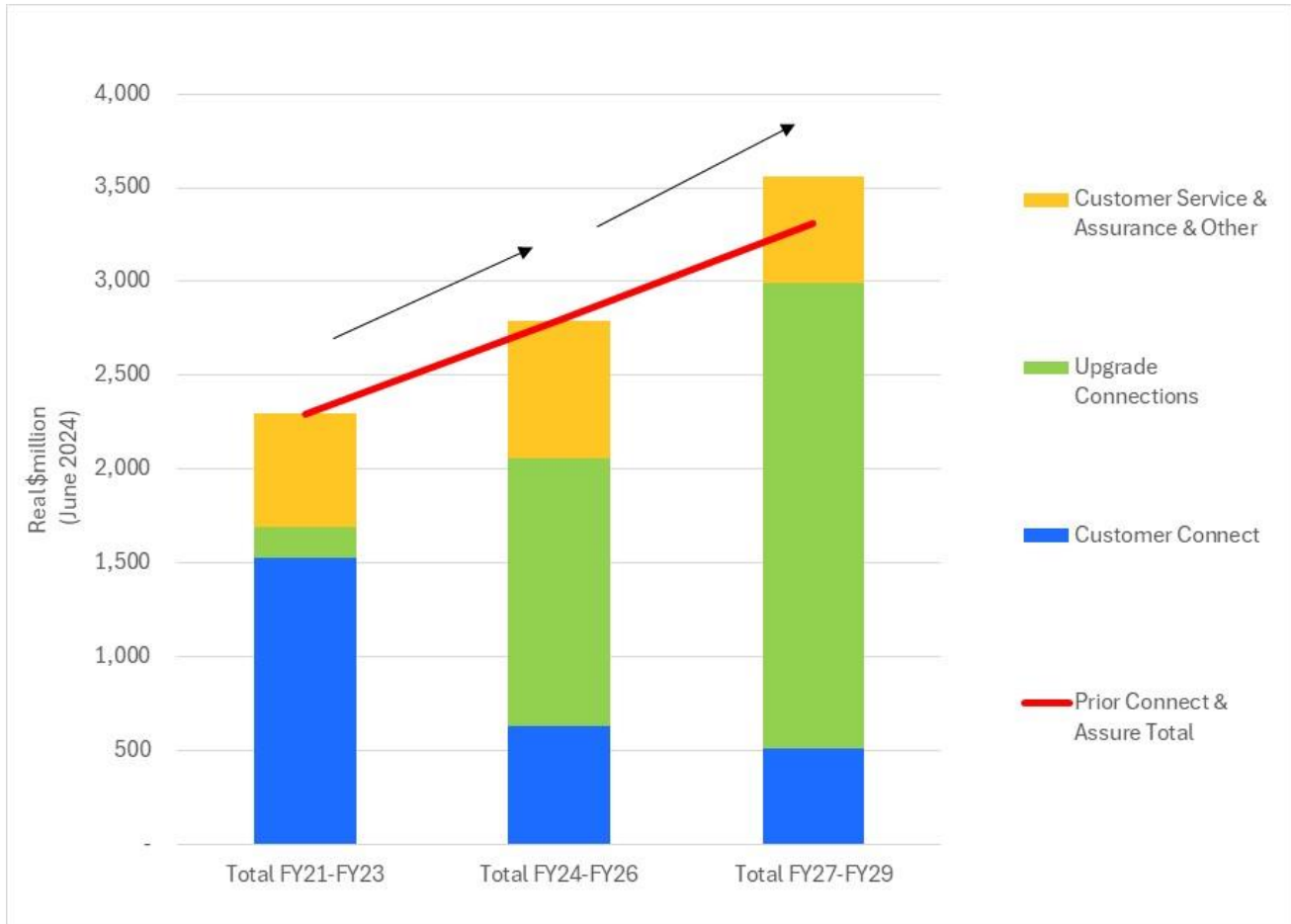
The Upgrade Connections category is capex dedicated to the installation of fibre lead-ins and associated customers connections activities for the FTTN/C to FTTP upgrade programs. It has increased from $2.2 billion to $2.5 billion for FY27 – FY29 based on forecast upgrade connections resulting from the recent announcement.

Appendix B - November update re Service Standards not progressing

This section lists the potential changes that were considered in the co-design workshops with RSPs that were communicated in December 2024 as not being further considered at this stage. These include potential changes to existing Service Standards and proposed new Service Standards raised by either nbn or RSPs. Reasons for not proceeding with these new or amended standards are set out below.

B.1 Activations & Modifications

#	Service Standard	Description	Reason for not pursuing change
1	CVC Activations (Current WBA Service Standard)	This Service Standard defines the time commitment to activate a new CVC connection order.	Based on the RSP feedback it was determined that changes to this Service Standard are not a priority, with the current Service Standards being sufficient and historic performance having met industry expectations.
2	NNI Group / NNI Link / V-NNI Activations (Current WBA Service Standard)	These Service Standards define the time commitment to activate a new NNI Group, NNI link or V-NNI order. These activities are most often programs of work with variability in volume and scope requiring physical activity and close collaboration with RSPs.	Based on the RSP feedback it was determined that changes to these Service Standards are not a priority with the current Service Standards being sufficient.
3	NNI Modifications (New proposed Service Standard)	nbn was considering introducing a new Service Standard for NNI Modifications.	There was a lack of RSP support for this proposed potential new Service Standard in the co-design workshops.
4	Completion Advices (Current WBA Service Standard)	These Service Standards support the notification to RSPs of nbn completing connection service order transactions and service transfer orders transactions.	The *Completion Advices – End User Connection* Service Standard was redefined as part of WBA5 to improve the Service Standard and Performance Objective.

			Based on RSP feedback it was determined that further additional changes to this Service Standard are not a priority, with some RSPs sharing that they are no longer operationally reliant on Completion Advices in the fulfilment processes.
5	Faulty Connections (New proposed Service Standard)	The new proposed potential Service Standard would support the quality and reliability of connections. The measurement would account for the percentage of completed connection orders which have a trouble ticket raised for the service within 20 Business Days.	This proposed potential new Service Standard has been incorporated in the new potential Connection Reliability Service Standard for connect orders. The Failed Connection Rebate in the existing WBA will continue to apply in relation to faulty connections.
6	Call on Approach for Appointment (New RSP proposed Service Standard)	RSPs asked for a commitment from nbn technicians to call the appointment contact 30-60 minutes ahead of the appointment to advise when they would be arriving.	This is more appropriate and beneficial to be introduced as an operational initiative or system capability (e.g. Track my technician capability). A Service Standard would be less beneficial and would bring complexities of capturing and validating the data. nbn is assessing the feasibility of such a solution.
7	Planned Remediation Date (PRD) – Connections Orders (New RSP proposed Service Standard)	RSPs asked for a commitment from nbn to keep to the first communicated PRD date. RSPs shared the challenge of managing customer expectations is exacerbated by lack of contextual information to inform customers on what is happening and what needs to be done to resolve the issue. Having more detail would enable RSPs to have more informed discussions and build customer trust.	Operational improvements and new capabilities are being considered for next FY to address RSP pain points (e.g. provide a higher level of contextual information to RSPs on held orders / remediation orders) which will make a more meaningful improvement to customer expectation management than diverting resources to invest in a new Service Standard.

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| 8 | Fibre in a day for FTTP upgrades (FIAD) (New RSP proposed Service Standard) | One RSP asked for a Service Standard for nbn to commit to completing Fibre installations, including for upgrades and change of technology, on the day. This would back-up the operational initiative already underway. | The Service Standards for Fibre Connect are proposed to be incorporated into the WBA (instead of the separate Fibre Connect Letter Agreement). Potentially introducing Connection Reliability Service Standards as discussed above will also help to drive to aligned objectives as FIAD. |

B.2 Service Faults & Assurance

#	Service Standard	Description	Reason for not pursuing change
1	End User Fault Rectification (Current WBA Service Standard)	These Service Standards are designed to enable RSPs to predictably advise customers as to when a service would be restored. RSP feedback was that the current Service Standards are adequate in urban areas, however regional support could be improved. Some of these concerns are driven by the sentiment that nbn's current regional definitions and classification are outdated and misaligned with population changes.	nbn intends to maintain the current Service Standards and will conduct a review of the geographical definitions and classifications.
2	Priority Assist for Fault Rectification (Current WBA Service Standard)	These Service Standards support the supply of retail Priority Assistance services that use nbn Ethernet as an input.	Based on RSP feedback, nbn determined that the current Service Standards are sufficient.
3	Network Activity (Current WBA Service Standard)	nbn discussed potentially changing the current Service Standards to target the completion of Network Activity	Most services that qualify for Network Activity should have a fibre upgrade path available to them moving forward.[15] For the

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[15] As detailed in nbn's Annual Service Improvement Plan for FY25, the FTTN/C to FTTP upgrade program is a multi-year initiative announced on 23 September 2020 and subsequently expanded in October 2022. It is designed to expand nbn's FTTP footprint to an additional 3.5 million originally

		Tickets within 50 Business Days, and the tracking of those that exceed that.	small remaining volume of services where this is not the case, RSPs were not confident in the feasibility of such a Service Standard given the practicalities and complexities of these cases. nbn is assessing options for services related to Network Activity Tickets that are not in the fibre footprint.
4	Enhanced Fault Rectification (Current WBA Service Standard)	These Service Standards support the nbn Enhanced Fault Rectification Service product feature offering.	The majority of RSP feedback was that changes to these Service Standards are not a priority, e.g. because the current Service Standards are sufficient. In addition, Enhanced Fault Rectification Service Standards apply to a relatively small number of services, reinforcing that this is not a priority Service Standard for change.
5	Performance Incident rectification (Current WBA Service Standard)	These Service Standards are set around supporting the timely and effective rectification of Performance Incidents.	Based on the RSP feedback it was determined that the current Performance Objective of 90% (recently raised from 80% in WBA4 to 90% in WBA5) is sufficient.
6	Performance Incident Failed Monitoring (New proposed Service Standard)	Service Standard to minimise the percentage of Performance Incidents that fail monitoring	There were mixed responses from RSPs on this topic. nbn considers the proposed Fault Rectification Reliability Service Standards will be of greater benefit to customers.
7	Committed call on Approach for Appointment (New RSP proposed service standard)	RSPs asked for a commitment from nbn technicians to call the appointment contact 30-60 minutes ahead of the appointment to advise when they would be arriving.	This is more appropriate and beneficial as an operational initiative or system capability (e.g. Track my technician capability). A Service Standard would be less beneficial and

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FTTN premises by the end of 2025 and 1.5 million originally FTTC premises. With approximately 1.2 million FTTP Brownfield premises and 1.5 million FTTP greenfield premises, this would increase nbn's FTTP-accessible footprint to over 7.7 million premises. Together with upgrades to up to 2.5 million HFC premises, nbn® is on target to enable close to 10.2 million premises, or up to 90% of Australian premises within the fixed-line network to access the nbn Home Ultrafast wholesale speed tier, which is capable of achieving wholesale download speeds of 500 Mbps to close to 1Gbps.

			would bring complexities of capturing and validating the data. nbn may consider the feasibility of such a change in future.
8	Planned Remediation Date (PRD) – Connections Orders (New RSP proposed service standard)	RSPs asked for a commitment from nbn to keep to the first communicated PRD date. RSPs shared the challenge of managing customer expectations is exacerbated by lack of contextual information to inform customers on what is happening and what needs to be done to resolve the issue. Having more detail would enable RSPs to have more informed discussions and build customer trust.	Operational improvements and new capabilities are being considered for next FY to address RSP pain points (e.g. provide a higher level of contextual information to RSPs on held orders / remediation orders). Such improvements are best considered as an operational initiative, rather than be considered as a potential change to the Service Standards.
9	Ticket escalation Service Standard (RSP proposed Service Standard)	Two RSPs provided feedback on how nbn managed escalations, one asked for shorter committed response timeframes and the other asked for nbn to put proactive steps in to avoid issues becoming escalations.	nbn is open to considering improvements to this process and response timeframes but considers any change should not form part of nbn's Service Standards, as this goes to operational process rather than the more fundamental activities / service parameters that the Service Standards are intended to cover.
10	% of faults raised per active services (RSP proposed Service Standard)	One RSP suggested it may be useful to measure the percentage of service faults raised against the base of active services.	Whilst nbn appreciates the value of such a Service Standard, relative to the other items considered this has been considered a lower priority at this stage. For example, nbn considers Fault Rectification Reliability Service Standards will have greater potential impact than a "% of faults raised" metric. Additionally, the Network Performance Record Keeping Rule that nbn will be reporting on a quarterly basis will provide industry with granular information on fault

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			volumes across the network in addition to many other areas of network performance.
11	% of services that meet the criteria that they would be able to raise a fault to drive proactive assurance (RSP proposed Service Standard)	One RSP suggested it may be useful to measure the percentage of services that meet the criteria that they would be able to raise a fault to drive proactive assurance.	RSPs can use Service Health Reporting to identify which services may qualify for a Service Fault or Performance Incident (based on unexpected dropouts or speed performance for certain access technologies). It is important that faults are only investigated once an RSP submits a fault given the RSP has the interaction with the customer and will be best placed to identify when a potential service fault is in fact impacting a service. Without this step, it is likely that the volume of assurance activity and associated cost would rise exponentially. nbn remains dedicated to assuring services where RSPs and customers have raised a ticket and considers that investigation of this metric is a lower order priority at this stage.
12	<5% of tickets resolved NFF reclassified as FF (RSP proposed Service Standard)	Two RSPs suggested targeting service fault tickets that have been resolved by nbn as No Fault Found (NFF) to then be reinvestigated and reclassified as Fault Found (FF)	This has been considered in the context of what a new Service Standard measuring the quality of resolving faults could look like. The proposed new Fault Rectification Reliability Service Standard is looking at this quality aspect.

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B.3 Network Performance

#	Service Standard	Description	Reason for not pursuing change
1	Network Availability (Current WBA Service Standard)	This Service Standard sets a threshold for the availability of the nbn network.	Discussions with RSPs during co-design workshops demonstrated different levels of RSP support for changing this Service Standard. Most RSPs advised the Service Standard was fit for purpose, with some requests to investigate improving the Performance Objectives. The impact assessment of potential changes to Network Availability demonstrate that material change to this standard would have substantial impacts on both operational processes and require material investment. nbn continues to seek service quality improvements for customers where these deliver tangible benefits while being commercially feasible. The incremental benefits that customers and RSPs may experience from an enhanced Network Availability standard do not outweigh the impact that such investment would have, however, particularly when nbn remains in a cost recovery phase.
2	Utilisation Management (Current WBA Service Standard)	This Service Standard sets a threshold at which, if exceeded, nbn must undertake Network Augmentation.	nbn increased the Utilisation Threshold from 70% in WBA4 to 90% in WBA5 together with a range of related changes to the threshold for augmenting network capacity. This change was introduced to strike an appropriate balance between ensuring nbn provides appropriate capacity in the network to mitigate against the chance of congestion, while enabling nbn to upgrade the network at the optimal time – consistent with the expectations of an efficient network operator. nbn considers that this threshold, along with associated reporting requirements, is achieving the desired outcomes of the Utilisation Management Service Standard and on that basis, nbn does not propose a change at this time.

Additionally, we anticipate that the new Service Standards being proposed for Speed may supersede the need for a utilisation management Service Standard in future. |

3	Planned Outage - Timing of Outage (New potential Service Standard)	nbn had considered introducing a Performance Objective targeting Planned Outages that occur outside of the Planned Outage Window.	Whilst RSPs emphasised the importance of nbn using the overnight Planned Outage Window to reduce impacts on Customers as much as possible, they also acknowledged exceptions could be permitted, for example for OH&S reasons, third party outages, or specific outage types that have been agreed and documented. RSPs were interested to understand the governance around approvals for exceptions, which nbn advised are managed through a robust executive approval process. With this in mind, it was determined that a Performance Objective would provide little additional value and not be appropriate in this instance. *Update since December: Section 6.5 sets out activity and industry engagement that nbn is planning in response to Planned Outages more broadly.*
4	Outage Duration (New potential Service Standard)	nbn had considered introducing a Service Standard that would limit the overall Planned Outage duration.	Whilst there was some support for reducing overall outage duration, some RSPs shared concerns around the potential unintended negative consequences of this which could result in either lower quality work being completed or the need to do more outages. RSPs prompted nbn to consider frequency of Planned Outages over outage duration. *Update since December: Section 6.5 sets out activity and industry engagement that nbn is planning in response to Planned Outages more broadly.*
5	Repeat Network Faults (RSP proposed Service Standard)	One RSP suggested a Service Standard to target minimising Repeat Network Faults over 60 and 90 days, including providing a breakdown by technology and location.	nbn appreciates the value of such a Service Standard, however relative to the other items evaluated this Service Standard is considered as a lower priority.

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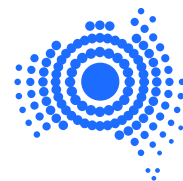| 6	Capped duration for Planned Network Outages (RSP proposed Service Standard)	One RSP suggested a Service Standard of maximum 8hrs of planned outage time per month per CVC per user.	Similar to the feedback above on outage duration, this may not deliver the optimum outcome for customers as it may give rise to unintentional adverse impacts, e.g. completion of lower quality work due to limited outage time.
7	% of Cancelled Planned Outages (RSP proposed Service Standard)	One RSP suggested a Service Standard to minimise the % of cancelled Planned Outages	A large driver of cancelled Planned Outages is due to a current system limitation which means Planned Outages can't be rescheduled, they have to be cancelled and re-raised. nbn is investigating capability enhancements to address this and plans to consult with RSPs on different improvement ideas. **Update since December:** nbn *will be consulting with RSPs on capability enhancements which would see the introduction of a rescheduling capability for outages. nbn expects this new capability would address the issue of cancellations, and on that basis, a new Service Standard is not required.*
8	% of failed Planned Outages (RSP proposed Service Standard)	One RSP suggested a Service Standard to minimise the % of failed Planned Outages	nbn appreciates the value of such a Service Standard, however relative to the other items evaluated this Service Standard is considered as a lower priority.
9	% of actual outage duration as in the full outage window (RSP proposed Service Standard)	A couple of RSPs raised the challenge of the overall Planned Outage window often being much wider than the expected interruption time and suggested a Service Standard to minimise the delta between the two.	It is more appropriate to investigate this proposal as an operational improvement initiative rather than a Service Standard.
10	% of Planned Outages that exceed the outage window (RSP proposed Service Standard)	A couple of RSPs suggested nbn consider a Service Standard to ensure that Planned Outages do not exceed the outage window that has been stated.	Planned Outages that may exceed the outage window would be communicated to RSPs through a Network Incident ticket, and not managed by extending the Planned Outage change window. Additionally, the volume of these tickets is very low. As such, nbn does not believe this metric is suitable or required.

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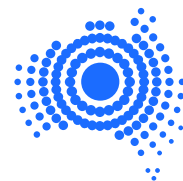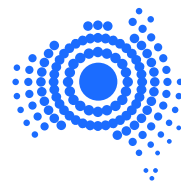| 11	Accuracy of the Estimated Interruption Time (ETI) for a planned outage. (RSP proposed Service Standard)	One RSP suggested a Service Standard targeting the accuracy of the Estimated Interruption Time for a planned outage.	nbn is investigating capability enhancements to allow the estimated time of interruption to be updated which will improve estimated time of interruption accuracy. nbn plans to consult with RSPs on this and different improvement ideas during the 2025 calendar year.
12	Potential Network Fault Investigation (PNFI) response time (RSP proposed Service Standard)	One RSP suggested nbn should have a committed timeframe to respond to a PNFI ticket raised by a RSP and provide some high-level information.	nbn appreciates the value of such a Service Standard, however relative to the other items evaluated it is considered as a lower priority.
13	<0.5% packet loss a day (RSP proposed Service Standard)	One RSP suggested nbn could consider a Service Standard to minimise packet loss as this can impact the customer experience.	nbn appreciates the value of such a Service Standard, however relative to the other items evaluated it is considered as a lower priority
14	Performance Objective on maximum 2 outages per user per month (RSP proposed Service Standard)	One RSP suggested nbn should cap the frequency of outages at a Service Standard and apply a different threshold for overnight/daytime outages. n	nbn is assessing a service standard relating to the frequency of Planned Outages. **Update since December:** *Section 6.5 sets out activity and industry engagement that nbn is planning in response to Planned Outages more broadly.*
15	Planned Outage Frequency + Duration model (RSP proposed Service Standard)	RSP recommended a review of how other utilities manage their network using the CAIDI and CAIFI approach to capture both planned outage duration and frequency for a broader customer centric view of the impact of planned outages.	RSP feedback from the workshop was that frequency was more important than duration, and in fact duration could increase if that reduced frequency. As above, nbn will be conducting workshops with RSPs assessing options for a potential Service Standard relating to the frequency of Planned Outages.

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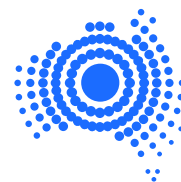
Appendix C - Rebate overview

|	nbn Ethernet Rebate	Description	Amount	Annual review	Comments
1.	**Connection Rebate**	Rebate payable if nbn fails to meet connection Service Standard.	• **$7.50 per Rebate Day** for any end user connection other than a Priority Assistance connection; and • **$10 per Rebate Day** for any Priority Assistance connection *Rebate capped at a maximum of 30 Rebate Days*.	Y	Cumulatively, nbn may pay up to $225 or $350 in respect of an individual connection. Combined with the fact that nbn will not be receiving revenue until an order is completed, this rebate remains a strong incentive on nbn to complete activities in a timely manner. Consistent with ACCC views in the Wholesale Service Standards Inquiry, it is important that this incentive provides appropriate balance between providing incentive on nbn to complete activities in a timely manner without being disproportionate or unnecessarily onerous – which it continues to do.
2.	**Failed Connection Rebate**	Rebate payable if service fault trouble ticket accepted within 20BD of connection and service was incapable of being used to receive or transmit data until service fault trouble ticket was accepted/resolved.	• Equal to the **recurring charges payable** for product calculated on daily pro-rated basis.	Y	The Failed Connection Rebate remains a pragmatic and appropriate solution for those instances where a connection is unsuccessful, particularly when viewed in conjunction with nbn's proposed new Connection Reliability Service Standard (see **Section 6.2.2**). Taken together, these commitments will create strong and proportionate incentives on nbn to identify and address, in a timely manner, issues that are affecting the quality and reliability of connections, at both an individual service and network level.
3.	**FTTB/N/C Connection Performance Rebate**	Rebate payable for connection if Measured Connection Rate is lower than specified thresholds (dependant on availability of Connection Assured	• **$20** per applicable connection.	Y	nbn provides RSPs with substantive information via service qualification regarding the actual layer 2 speeds attained at a premises or, where that is not available, estimated layer 2 speeds – to help inform ordering process and speed tier selection. Noting that there are limitations on confirming the actual layer 2 speed of an inactive service, subject to the

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		Rate at time of service qualification).			annual rebate adjustment process the FTTB/N/C Connection Performance Rebate remains a pragmatic solution for those instances where a connection does not achieve specified thresholds.
4.	**Missed Connection Appointment Rebate**	Rebate payable where nbn does not attend connection or professional wiring service appointment within applicable Service Standard	• **$50** for each first missed connection appointment; and • **$75** for each subsequent missed connection appointment. *Amount of rebate reduced by 50% where nbn attends on same day and customer agrees to attendance.*	Y	These rebates remain appropriate, acknowledging the inconvenience that customers may experience when nbn does not attend an appointment in time. The potential to reduce the rebate amount remains an appropriate incentive for nbn to attend on the same day of a missed appointment where agreed to by the customer.
5.	**Co-ordinated Appointment**	Rebate payable where nbn does not attend co-ordinated appointment within applicable Service Standard	• **Equal to the Charge** for the relevant co-ordinated appointment.	Y	This rebate remains appropriate, acknowledging the inconvenience that customers may experience when nbn does not attend an appointment in time.
6.	**Missed Trouble Ticket Appointment Rebate**	Rebate payable where nbn misses a scheduled trouble ticket appointment within applicable Service Standard.	• **$50** for each first missed trouble ticket appointment; and • **$75** for each subsequent missed trouble ticket appointment. *Amount of rebate reduced by 50% where nbn attends on same day and Customer agrees to attendance.*	Y	These rebates remain appropriate, acknowledging the inconvenience that customers may experience when nbn does not attend an appointment in time. The potential to reduce the rebate amount remains an appropriate incentive for nbn to attend on the same day of a missed appointment where agreed to by the customer.
7.	**PIR Objective Rebate**	Rebate payable when a service does not meet the minimum downlink speed requirements on NBN's FTTN/B/C networks.	• **$10** for each of the first three consecutive months; • **$15** for each of the fourth, fifth and sixth consecutive months; • **$20** for each subsequent consecutive month.	Y	The PIR Objective Rebate remains appropriate compensation for customers with a service that is not meeting designated peak speed thresholds. It is important to note that this rebate is increasing in value and uncapped, placing additional incentive on nbn to remediate services not meeting their threshold. The variability and degradation of speed on copper networks is one of the key drivers for nbn's fibre upgrade program, which will see a reduction in the volume of these rebates as

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					the fibre footprint is expanded and customers are able to migrate to the fibre access technology. While the rebate continues to play a role in compensating customers experiencing lower peak speeds, it is important that the rebate does not drive incorrect incentives to invest in upgrading the copper network that is being overbuilt by fibre.
8.	**Service Fault Rebate**	Rebate payable when nbn fails to rectify an end user fault within applicable Service Standard.	• **$15 per Rebate Day** for any end user fault other than a Priority Assistance fault; • **$20 per Rebate Day** for any Priority Assistance fault. *Rebate capped at a maximum of 60 Rebate Days*	Y	Cumulatively, nbn may pay up to $900 or $1200 in respect of an individual service impacted by an unresolved fault. The rebate continues to provide an appropriately strong incentive on nbn to complete activities in a timely manner.
9.	**Enhanced Fault Rectification Rebate**	Rebate payable when nbn fails to rectify a service fault within applicable Service Standard.	• Commercially set rebates up to **$150**.	Y	Unresolved service fault rebates provide an appropriate balance between providing incentive on nbn to complete activities in a timely manner without being disproportionate or unnecessarily onerous.
10.	**Wireless Speed Performance Rebate**	Rebate payable in respect of services that are served by a FW cell that is determined to be 'persistently congested' during a month. The rebate is payable for services on a FW cell that is not meeting an average throughput of at least 6 Mbps during the busy hours or where a specific level of packet loss is experienced on backhaul links.	• **$20** per applicable service per month.	Y	This monthly rebate was introduced in response to concerns with performance of the FW network at the time of the Wholesale Service Standards Inquiry – specifically congestion being experienced on wireless network cells and transmission backhaul links. Since this time the FW network has experienced substantial upgrades with the cell congestion concerns that led to the introduction of the rebate no longer apparent. While there are some instances where the Fixed Wireless Performance Rebate has continued to be paid, this is primarily due to customer's services being placed on temporary cells during the Fixed Wireless upgrade program. It is expected that the volume of services triggering the rebate should be effectively zero with the finalisation of Fixed Wireless upgrades – however, maintaining the rebate would provide an effective floor to ensure that Customers are

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					compensated if congestion issues recur until a sufficient period has past to confirm it is no longer relevant. Fixed Wireless is also being considered under the potential speed service standard detailed in **Section 6.2.7** which, if introduced, would place further incentive on nbn to ensure that services are delivering to anticipated speeds.

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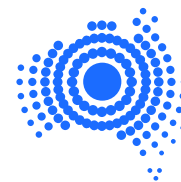
Appendix D - RSP co-design feedback

The below summary provides an overview of the key priorities and concerns raised by RSPs through the co-design working groups held following ASPR-24.

D.1.1 Activations and Modifications

Key themes from RSP feedback in relation to Activations and Modifications include:

- **Simplification:** Incorporating fibre upgrade Service Standards with Standard Connections in the WBA, simplification and standardisation of connection Service Standards.

- **Improved connection timeframes:** Setting improved Service Standard timeframes with higher targets for physical and logical connections.

- **Prioritising connection reliability over shorter Service Standards:** RSP support for introduction of a new 'Right First Time' Service Standard focused on driving connection quality by reducing multiple connection appointments.

- **Prioritising customers with no service:** Improved connection timeframes are a higher priority for those customers with no existing connection than for customers upgrading from an existing connection.

- **Appointment management:** RSP advocacy for improving the management and communication of appointments, including the reduction of connection appointment windows and associated Performance Objectives. Related to this, RSPs have also proposed the introduction of a 'call on approach' Service Standard.

- **Pre-order issues:** Recommend committed timeframes for resolving addressing issues that are required before a connection order can be placed.

- **Geographic region definition:** Proposed review and possible redefinition of the regional segmentation that determines applicable connection and assurance timeframes.

D.1.2 Assurance

Key themes from RSP feedback in relation to Assurance include:

- **Enhancement for Major Rural Area repair timeframes:** While current fault repair Service Standards are generally adequate in Urban Areas, Major Rural Areas could be improved by aligning to Urban Areas.

- **Improvements to Assurance Performance Objectives:** Recommended lift to fault rectification Performance Objectives across all regions.

- **Fault rectification reliability:** RSP emphasis on quality of repairs, particularly for Minor Rural and Remote areas, in order to reduce recurring faults and multiple appointments.

- **Enhanced Network Activity commitments:** RSPs had a varied range of views on required changes related to Network Activity tickets, from setting clear timeframes for resolving Network Activity
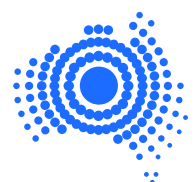
tickets to being more accurate on the timing of resolving aged tickets ensuring a percentage of open Network Activity tickets are not older than a specified timeframe.

- **Automated transactions:** Similar to connections and modifications, there was a strong alignment between RSPs that timeframes to complete automated transactions should be reduced as low as possible.

D.1.3 Network Performance and Availability

Key themes from RSP feedback in relation to Network Performance and Availability relate to Planned Outages and dropouts, and include:

- **Planned Outage frequency:** Frequency of planned outages remains a core concern of RSPs who consider that the volume of outages remains high.

- **Planned Outage notice periods:** RSPs concerned with notification periods, particularly in relation to 'emergency' outages.

- **Planned Outage windows / duration:** Duration is an important factor in customer experience, but reducing duration a lower priority than reducing frequency of outages. Longer overall outage durations preferred if it resulted in reduced frequency of outages.

- **Dropouts:** RSPs supportive of a service standard that would focus on improving the experience for customers by managing the health of the network to minimise unexpected dropouts. Differing views expressed by RSPs on how such a metric could be set up.

- **Remediation activities:** Concerns were raised that the process for Network Performance Advice / Network Activity Tickets on the HFC network requires optimisation.

D.1.4 Speed Performance

The introduction of an enhanced speed performance Service Standard has been identified as a priority by several RSPs. Key themes of RSP feedback include:

- **Form of objective:** The method of measurement, thresholds that should apply, and application across technologies and speed tiers are critical considerations.

- **Clarity of commitment:** Importance of providing clear information to customers regarding actual speed expectations, as they expect to consistently receive the speeds they have paid for, regardless of the speed tier or technology.

- **Supporting retail commitments:** A service standard for speed will help RSPs to manage customer expectations by making appropriate speed claims.

- **Complexity of designing commitment:** In developing a new Service Standard for speed RSPs acknowledged there are many complexities and challenges related to end-to-end network

dimensioning which will impact on not only what the standard should be but also how one might even be measured and relied upon.

- **Assurance:** nbn's speed proposals should also be underpinned by an appropriate assurance framework and supported with robust tools, capabilities and diagnostics information.

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Glossary

nbn is committed to minimising the use of technical terms during this engagement. The table below provides some terms nbn uses and their definitions. Given the inclusion of specific Benchmark Service Standard proposals in Part C, some technical definitions are included in this consultation paper – for these definitions the WBA reference is provided in the table below.

Term	Definition
Accelerated Connection	Has the meaning set out on page 5 of the WBA Dictionary. At a high level, an Accelerated Connection allows for faster provisioning and activation of a new nbn connection in certain circumstances.
Access Virtual Circuit or AVC	Has the meaning set out on page 6 of the WBA Dictionary. At a high level, the Access Virtual Circuit (AVC) provides the data path from a premises to the POI.
API	Means 'application programming interface'. APIs enable RSPs to interact directly with nbn systems to access certain end user and network information and reporting.
Annual Service Improvement Plan or ASIP	Report published at the start of FY24, FY25 and FY26 setting out key nbn initiatives for enhancing the RSP/ end user experience for which nbn has forecast material capital or operating expenditure in its operating plan for the relevant Financial Year.
Annual Service Performance Review or ASPR	Report published at the start of FY25 and FY26 in relation to nbn's performance against nbn® Ethernet Service Standards for the previous calendar year, and potential Service Standard changes.
Annual Service Standards Review or ASSR	Proposed annual review process as set out in **Section 6.7**.
Benchmark Service Standards	A set of regulated Service Levels and Performance Objectives for nbn's key layer 2 wholesale broadband service, and any rebates payable by nbn and/or corrective action required by nbn where it does not meet those Service Levels and Performance Objectives. The SAU requires nbn to include in its standard form wholesale supply contract with RSPs (known as its Standard Form of Access Agreement) Service Standards that are no less favourable to RSPs than the applicable Benchmark Service Standards.

Completion Advice	Means a completed notification in respect of an end user connect order.
Consumer advocacy group or consumer advocates	Organisations or entities who advocate for Australian customers of telecommunication products and services.
Corrective Action	Steps that nbn is required to take when a Performance Objective is missed in a given month.
Customers / End users	People in Australian homes and businesses using services on the nbn® network.
Connectivity Virtual Circuit or CVC	Has the meaning set out on page 20 of the WBA Dictionary. At a high level, this refers to ethernet-based Layer 2 virtual capacity on the nbn® Network used to carry RSP traffic between multiple AVCs and a POI.
Core regulated services	Under the SAU, the Core Regulated Services includes all products and services supplied by nbn other than the Competitive Services, which currently comprise NBN Co Enterprise Ethernet, NBN Co Satellite Mobility for Large Commercial Passenger Aircrafts and NBN Co Business Satellite Service.
Enterprise Ethernet	nbn product with dedicated fibre from the business premises to nbn's fibre access node.
Entry level Offer	The speed tier on each of nbn's fixed-line and fixed wireless networks that is subject to a stricter individual price control under the SAU. Under this price control, prices may only increase each year by up to CPI. As part of its RMA, nbn must propose the speed tier which will be the 'Entry Level Offer' for the next Regulatory Cycle. Among other requirements, it must be a speed tier that nbn reasonably considers to be its 'entry level service' and have a download speed that is lower than nbn's most popular speed tier.
Fibre Connect Letter Agreement	Means the Fibre Connect Letter Agreement between nbn and RSPs.
Fibre Migration	Connections to nbn's FTTP network from within the footprint originally designated for FTTN and FTTC connections.
Financial Year or FY	12-month period from July 1 to June 30 of the following year

Fixed Wireless	An nbn Fixed Wireless connection uses data transmitted over radio signals to connect a premises to the nbn® network.
	For more information see https://www.nbnco.com.au/learn/network-technology/fixed-wireless-explained
FTTB	A Fibre to the Building (FTTB) connection is generally used when we are connecting an apartment block or similar types of buildings to the nbn® network. In this scenario we run a fibre optic line to the fibre node in the building's communications room, and then we use the existing technology in the building to connect to each apartment.
	For more information see https://www.nbnco.com.au/learn/network-technology/fibre-to-the-building-explained-fttb
FTTC	Fibre to the Curb (FTTC) uses a fibre connection to a Distribution Point Unit (DPU) near a customer's premises. From here, the existing copper network is connected to the fibre network to connect the customer's premises to the nbn® network.
	For more information see https://www.nbnco.com.au/learn/network-technology/fibre-to-the-curb-explained-fttc
FTTN	Fibre to the Node (FTTN) uses a fibre optic line to connect the nbn® network to a node (street cabinet) nearby a customer's premises. The node then uses the existing copper network to make the final part of the network connection to the customer's premises.
	For more information see https://www.nbnco.com.au/learn/network-technology/fibre-to-the-node-explained-fttn
FTTP	For more information see https://www.nbnco.com.au/learn/network-technology/fibre-to-the-premises-explained-fttp
HFC	nbn Hybrid Fibre Coaxial (HFC) connection uses a combination of optical fibre and coaxial cables to reach a customer's premises. The HFC line will be run from the nearest available fibre node to the customer's premises.

Fixed Wireless

	For more information see https://www.nbnco.com.au/learn/network-technology/hybrid-fibre-coaxial-explained-hfc-3
Interference Mitigation	Has the meaning set out on page 43 of the WBA Dictionary. At a high level, interference mitigation refers to actions taken by nbn to reduce or eliminate interference that can affect the performance and reliability of the nbn network.
Multi Dwelling Unit (MDU)	Typically refers to blocks of flats, apartments etc.
nbn® Ethernet	Is the layer 2 ethernet product supplied by nbn to RSPs via the FTTP, HFC, FW, FTTB, FTTC and Satellite networks.
Network Activity	Has the meaning set out on page 53 of the WBA Dictionary. At a high level, Network Activity refers to actions undertaken by nbn to remediate elements of the nbn network if services are experiencing a degraded level of performance.
Network Fault	Has the meaning set out on page 53 of the WBA Dictionary. At a high level, a network fault refers to certain faults within the nbn network that results in the relevant product failing to perform in accordance with the requirements set in the WBA.
Network Performance Advice	Ability for nbn to notify RSPs where work is being performed on the network to resolve performance related issues (only applicable to HFC currently).
NNI or Network-Network Interface	Has the meaning set out on page 53 of the WBA Dictionary. At a high level, a Network-Network Interface or NNI is the interface at a POI where RSP traffic is handed over to the nbn network.
NNI Group	Has the meaning set out on page 54 of the WBA Dictionary.
NNI Link	Has the meaning set out on page 54 of the WBA Dictionary.
Performance Incident	Has the meaning set out on page 60 of the WBA Dictionary. At a high level, a performance incident is an incident adversely affecting the performance of a product, subject to exclusions and conditions.
Performance Objective	A type of Service Standard, generally an aggregated measure (on a monthly basis) of nbn's performance across the network. Often

	measuring how frequently nbn meets designated Service Standards.
Planned Outage	Has the meaning set out on page 62 of the WBA Dictionary. At a high level, this is a planned outage notified by nbn to RSPs where there is a change that may impact the services provided by nbn.
Point of Interconnection or POI	A point of interconnection between the nbn® network and the RSP network to exchange traffic.
Priority Assistance	Means priority assistance supplied to a customer who suffers, or has a member of their household who suffers, from a diagnosed life threatening medical condition and is eligible for priority assistance in accordance with Industry Code ACIF *C609:2007 (Priority Assistance for Life Threatening Medical Conditions)* or any carrier licence condition.
Product Development Forum or PDF	The mechanism through which nbn engages with, and seeks feedback from, RSPs on new nbn products and changes or improvements to existing nbn products.
Rebates	Are generally payable in relation to certain missed Service Levels (e.g. Missed appointment rebate).
Regulatory Cycle	Regulatory cycle of between three to five years, as determined in accordance with nbn's SAU.
Replacement Module Application or RMA	The proposal that nbn will submit to the Australian Competition and Customer Commission by 2 July 2025 setting out nbn's proposals for the Regulatory Cycle commencing 1 July 2026, including in respect of expenditure, service standards, the entry level offer and length of the Regulatory Cycle.
Retail Service Provider or RSP	Retail Service Providers acquire wholesale broadband services from nbn and supply broadband service solutions to customers using services on the nbn® network.

In this document, references to Retail Service Providers also include access seekers – a service provider who makes, or proposes to make, a request to take supply of a regulated telecommunication service supplied by nbn, including so the provider can be a wholesaler or retailer of nbn services. |
| **Service Class** | As set out on pages 73-78 of the WBA Dictionary. |

	At a high level, Service Class refers to a classification system used to describe the readiness and type of nbn infrastructure available at a specific premises.
Service Fault	Has the meaning set out on page 78 of the [WBA Dictionary](#). At a high level, a service fault refers to certain faults affecting a service that results in the service failing to perform in accordance with the requirements set in the WBA.
Service Level	Generally, refers to a time in which nbn is expected to complete an individual service. Standards vary dependent on the type of technology, the activity being conducted and the geographic location of the service.
Service Request	Has the meaning set out on page 80 of the [WBA Dictionary](#). At a high level, a service request is an enquiry or request from an RSP that is not related to a Service Fault or Performance Incident.
Service Standard	A standard relating to the service quality or service performance of nbn® Ethernet services that specifies Service Levels or Performance Objectives and any: rebates payable by nbn in respect of any failure by nbn to meet such Service Levels or Performance Objectives; and Corrective Action required by nbn to remedy any such failure.
Sky Muster® Satellite	The Sky Muster Satellite service delivers the nbn® network to homes and businesses in regional and remote Australia, via two geosynchronous satellites. Satellites communicate between the customer's premises and ground stations, with beams set to cover all of the Australian mainland and surrounding islands.
Special Access Undertaking or SAU	The Special Access Undertaking given by nbn to the Australian Competition and Consumer Commission, as varied and approved by the ACCC on 17 October 2023. The Special Access Undertaking is a key part of the regulatory framework that governs the prices and certain non-price terms on which nbn – as the operator of a wholesale, open access telecommunications network – supplies services to Retail Service Providers.
Stakeholder	Individuals, a group of individuals, organisations or a political entity with a specific stake in the outcome of a decision to the impact of a policy, project or proposition.

Standard Connection	Has the meaning set out on page 83 of the WBA Dictionary. At a high level, refers to connection of customer services other than an Accelerated Connection or Priority Assistance connection.
Standard Form of Access Agreement or SFAA	Means a standard form of access agreement published on nbn's website for the purposes of section 152CJA of the *Competition and Consumer Act*.
Transit Network	Refers to the connection between Points of Interconnect (PoIs) in the Aggregation Nodes where the retail service providers connect to nbn and the Fibre Access Nodes.
Trouble Ticket	Means a notification and record of a fault (or other matter requiring attention) that is raised by RSP with nbn or raised by nbn and notified to RSP (as the context requires).
Utilisation Management	Has the meaning set out on page 91 of the WBA Dictionary.
V-NNI	Has the meaning set out on page 91 of the WBA Dictionary..
Wholesale Broadband Agreement or WBA.	The WBA is the contractual vehicle nbn uses to supply products and services to RSPs.
Weighted Average Price Control or WAPC	Is a mechanism that limits the average price increase across a basket of services offered by nbn, and is set out in nbn's SAU.

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Disclaimer

nbn is required to submit to the Australian Competition and Consumer Commission (ACCC) by 2 July 2025 a Replacement Module Application for the Regulatory Cycle commencing 1 July 2026, pursuant to nbn's Special Access Undertaking. The information in this document is provided solely for the purpose of consulting on nbn's upcoming Replacement Module Application and should not be relied upon for any other purpose. The forecasts and indicative estimates in this document are based on assumptions, are inherently uncertain and are subject to a range of risks such that actual performance may differ materially from those

forecasts or indicative estimates. Any financial values relating to the period from FY29 onwards are indicative estimates / Management 'projections' only – they do not reflect an operational forecast and do not include the full potential capex requirements (or account for specific operational timing) to meet future customer demand and network lifecycle requirements over time.

nbn is a wholesaler. References to speeds or bandwidth profiles in this document are not to end customer speeds; they are wholesale layer 2 peak information rate (PIR) bandwidth provided to retail providers unless stated otherwise. An end customer's experience, including the speeds actually achieved over the nbn® network, depends on the nbn® 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 the end customer's equipment quality, software, chosen broadband plan, signal reception, or how their provider designs its network). Refer to nbn's website and the Wholesale Broadband Agreement for further information.

Environment

nbn asks that you consider the environment before printing this document