



AUSTRALIAN COMPETITION
& CONSUMER COMMISSION

Record Keeping Rule – NBN service performance

Consultation paper

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Australian Competition and Consumer Commission

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Acronyms

ACCC	Australian Competition and Consumer Commission
CCA	<i>Competition and Consumer Act 2010</i>
NBN	National Broadband Network
RKR	Record Keeping Rule
SAU	Special Access Undertaking
SBAS	Superfast Broadband Access Service
SIO	Services in Operation
WBA	Wholesale Broadband Agreement

Executive Summary

The Australian Competition and Consumer Commission (ACCC) is proposing to develop a Record Keeping Rule (RKR) for NBN Co relating to its service quality and network performance. An RKR will require NBN Co to retain certain information and provide information to the ACCC to assist in its monitoring, analysis, and reporting functions.

The ACCC also proposes to publicly report on NBN Co's service quality and network performance based on the information collected through the RKR.

We consider the development of an RKR for NBN Co is timely. NBN Co has completed the build phase of its network and its focus is now on the efficient operation, maintenance, and development of the network, and meeting the service quality and performance levels expected by access seekers and end-users.

We also consider the development of an RKR and associated public reporting will increase the transparency of service quality and network performance by NBN Co and in the future that of Superfast Broadband Access Service (SBAS) providers. An RKR will assist the ACCC to monitor and undertake its regulatory functions in the broadband services market. It will also enable future benchmarking of service performance across networks and identification of systemic issues regarding service quality. The proposed development of an RKR for NBN Co follows recent ACCC consultation processes in which parties have questioned the adequacy of NBN Co's reporting regarding service quality. The need for greater transparency and better reporting relating to NBN Co's service quality has been identified by stakeholders through these processes.

In this consultation paper we outline several aspects of service quality and network performance, and related service level metrics and data that we propose be collected through an RKR (**Attachment A**) namely:

- connections
- faults including service dropouts and recurring faults
- appointments
- network outages
- network performance including speed capability
- services attracting NBN Co rebates when service levels are not met
- corrective action taken by NBN Co to ensure its performance objectives are met.

We are seeking views from industry participants, stakeholders, and other interested parties on whether the aspects of service quality and network performance, and the proposed metrics and data identified, are appropriate for an RKR to improve transparency and reporting arrangements for these matters. Given the benefits of a monitoring and reporting framework applying across the NBN and other large scale wholesale broadband networks, responses to this consultation paper will inform our development of an RKR for both NBN Co and SBAS providers.

We consider that an RKR for NBN Co and future public reporting will complement operational reporting between NBN Co and retail service providers (retailers) under wholesale access agreements and NBN Co's Special Access Undertaking (SAU). Also, greater public transparency of NBN service quality, along with improved operational reporting between NBN Co and retailers, will improve outcomes for end-users over time and reduce overall costs relating to the management of faults and outages, among other things. We recognise however that factors such as the quality of a retailer's network and its direct

interactions with customers (i.e., end-users) will also impact on service levels and the quality of service experienced by customers.

The ACCC intends to also collect and report on information relating to the service quality and network performance of SBAS providers in the future. While it is envisaged that the arrangements developed for NBN Co through this consultation process will inform our approach for SBAS providers, the ACCC will consult directly with SBAS providers on these matters in 2023. We welcome submissions from SBAS providers and retailers that use SBAS networks in response to this consultation paper if there are any issues they want to raise at this stage. For example, we would value feedback on the extent to which the service aspects, service level metrics and proposed data set for an NBN Co RKR should also apply to SBAS providers.

We are seeking written submissions by **10 February 2023** and will consider these before publishing a draft RKR for NBN Co in 2023 for public consultation.

Several issues for consideration are raised in this consultation paper and specific questions are set out in section four.

1. Introduction

1.1. Background

The ACCC is proposing to establish monitoring and public reporting arrangements for superfast broadband service performance and quality.

The proposed reporting arrangements will initially apply to NBN Co through an RKR. An RKR will allow for better monitoring and reporting of NBN Co's service performance and support increased transparency of service levels. It will also assist the ACCC in performing its regulatory functions.

This consultation paper sets out the aspects of service quality and network performance, and related service level metrics and data, that we propose be collected through an RKR for NBN Co.

The aspects of service quality and network performance that we propose be covered by an RKR relate to connections, faults and dropouts, appointments, network outages and speed performance, rebates due to not meeting service levels, and corrective action taken by NBN Co. The ACCC is seeking views on these proposed aspects of service quality and the related service level metrics and data for an RKR from industry participants, other stakeholders, and members of the public.

As outlined in **Appendix 1**, there have been several recent ACCC consultation processes in which parties have questioned the adequacy of NBN Co's reporting in relation to service quality and performance of its wholesale broadband services. The following is a summary of these processes. We also provide a summary of issues regarding disclosure of network service quality and performance information raised in the ACCC's current SBAS access determination inquiry.¹

1.1.1. Wholesale service standards inquiry

In 2017 the ACCC undertook an inquiry to better understand consumer standards and improve consumer experiences of the NBN. The service aspects considered were faults, connections and missed appointments. The final report was published in November 2020.² The ACCC's report concluded that additional reporting on service level metrics would provide an incentive to NBN Co to improve its performance and in turn, generate benefits for end-users.

1.1.2. NBN Services in Operation RKR consultation

In 2021 the ACCC consulted on proposed changes to the existing NBN Services in Operation (SIO) RKR. One of the proposed changes sought to include NBN Co service performance reporting into the RKR. There was general support to incorporate NBN Co's performance, against its service level commitments set out in its Wholesale Broadband Agreement (WBA), into the NBN SIO RKR.³ The inclusion of NBN Co's service performance in the NBN SIO RKR was paused in late 2021 subject to the outcomes of the SAU variation process.

¹ <https://www.accc.gov.au/regulated-infrastructure/telecommunications-and-internet/non-nbn-fixed-line-services-access-regulation/superfast-broadband-access-service-sbas-final-access-determination-inquiry-2021>.

² <https://www.accc.gov.au/regulated-infrastructure/communications/national-broadband-network-nbn/inquiry-into-nbn-access-pricing/final-report>.

³ <https://www.accc.gov.au/regulated-infrastructure/telecommunications-and-internet/telecommunications-monitoring/telecommunications-reports-record-keeping-rules/nbn-services-in-operation-record-keeping-rules/october-2021-consultation-proposed-changes-to-nbn-sio-rkr-reporting>.

1.1.3. Review of the NBN regulatory framework

In 2021 the ACCC hosted an industry roundtable with NBN Co, industry participants and other stakeholders to consider the regulatory framework for the NBN under a revised SAU. Stakeholders supported additional reporting and transparency requirements for NBN Co supported by an RKR.⁴

1.1.4. NBN Co SAU variation proposal

In March 2022 NBN Co lodged a proposed variation to its SAU which, amongst other things, proposed service standards reporting to the ACCC on a six-monthly basis. This reporting related to recurring faults, outages, and the fixed line network's capacity to achieve certain speeds. NBN Co also committed to maintain certain operational reporting to assist retailers.⁵ The March 2022 variation proposal was withdrawn in July 2022.

The ACCC held industry forum in August 2022 to discuss the regulatory framework that could apply under a revised SAU variation, and any interim arrangements that might be necessary in the lead up to such a framework coming into effect. The need for regular public reporting on service quality by NBN Co was supported by stakeholders to complement operational reporting proposed by NBN Co in the revised SAU.⁶

1.1.5. SBAS access determination inquiry

Several retailers that ACCC staff met with this year for the SBAS access determination inquiry considered that SBAS providers should also be required to disclose network service quality and performance information. They noted that the quality and performance of SBAS networks that they access was in some cases not apparent until their customers (i.e., end-users) made complaints to them about poor service quality. SBAS providers are non-NBN operators of fixed line superfast broadband networks.

In the October 2022 SBAS access determination draft decision, we added an additional requirement for SBAS providers to provide information to retailers if requested (e.g., when the parties are negotiating an access agreement), and on a quarterly basis, covering key service attributes. Our draft decision also foreshadowed that we would consider standard service level metrics to be kept and reported to retailers in conjunction with a future ACCC review of record keeping and reporting of service levels by SBAS providers and NBN Co.⁷

1.2. Consultation process

The ACCC is conducting public consultation and seeking submissions from interested parties as part of the first stage in developing an RKR for NBN Co.

We are currently seeking written submissions and will consider these before publishing a draft RKR for NBN Co in 2023 for public consultation.

Please email submissions by **10 February 2023** to ServiceLevelsRKR@acc.gov.au.

Several issues for consideration are raised in this consultation paper and specific questions are set out in section four.

⁴ https://www.accc.gov.au/system/files/ACCC%20-%20Summary%20of%20industry%20working%20groups%20report_0.pdf, p.14.

⁵ https://www.accc.gov.au/system/files/NBN%20Co%20supporting%20submission_2.pdf pp. 191-192. NBN Co proposed to provide improved network reporting for: capability, congestion, availability, outages, recurring faults, performance of connecting services and performance of assuring services.

⁶ <https://www.accc.gov.au/system/files/Public%20summary%20of%20ACCC%20Industry%20Forum%20-%209%20September%202022.pdf> p. 6.

⁷ <https://www.accc.gov.au/regulated-infrastructure/telecommunications-and-internet/non-nbn-fixed-line-services-access-regulation/superfast-broadband-access-service-sbas-final-access-determination-inquiry-2021/draft-decision>.

Stakeholders considering the issues raised in this paper may also be considering NBN Co's recent submission of its revised SAU variation proposal to the ACCC. Given the concurrent consultation processes, we have allowed nine weeks for submissions in response to the issues raised in this consultation paper.

Making submissions

The ACCC encourages industry participants, stakeholders, and the general public to make submissions on the issues set out in this consultation paper and the attached draft service level metrics and performance data we propose be the subject of an RKR (Attachment A).

We consider that, for the consultation process to be effective, it is necessary for the consultation process to be as transparent as possible. This is to enable effective participation by all interested parties.

To foster an informed and consultative process, all submissions will be considered as public submissions and posted on the ACCC's website.

We will assess any confidentiality claims on a case-by-case basis and in doing so will consider whether we are required to publish information having regard to our statutory duties and functions in each instance and in accordance with section 155AAA of the *Competition and Consumer Act 2010* (Cth) (CCA).

We will consider whether publication of the information is required to enable effective public consultation and to allow us to perform or exercise our statutory functions and duties in relation to making any RKR. We will assess whether this requirement outweighs any significant commercial harm that may result from publication. We will consider procedural fairness matters for all relevant stakeholders.

Our decisions to publish information will be subject to the process described below.

If interested parties wish to make any claim of confidentiality over material provided to the ACCC during this consultation, they should follow the process below:

1. Please submit two versions of the submission:
 - a) a public submission that can be published on the ACCC's website, in which all confidential material has been removed and replaced with an appropriate symbol. Please ensure that redacted information is not searchable or otherwise able to be viewed
 - b) a confidential version that clearly identifies the information over which confidentiality is claimed by bookending the confidential material with a marking of 'commercial-in-confidence'. Please also highlight for ease of reference the material over which confidentiality is claimed.
2. Information over which a party claims confidentiality must be limited to ensure full consultation on all relevant material.
3. Please provide a supporting submission that specifically substantiates the confidentiality claim for each item of information over which confidentiality is claimed. Confidentiality claims need to detail why the information is competitively sensitive or otherwise confidential, or why disclosure of the information would be likely to cause significant commercial harm to the person to whom the information is confidential. 'Blanket' claims of confidentiality will not be accepted. We will notify parties of any additional information required to assess a confidentiality claim.

4. Where we propose to publish the information, which is the subject of a confidentiality claim, we will provide a right to be heard and to amend or withdraw the information before proceeding to publication with redactions removed.
5. Where we propose to not publish information which is the subject of a confidentiality claim and publish a redacted submission, we may reconsider that claim at a future date if it becomes evident that the redacted information is important to our consultation and needs to be tested with third parties. We will notify the relevant party and engage with them in relation to how this information can be disclosed. The ACCC-AER information policy: the collection, use and disclosure of information (2014) sets out the general policy of the ACCC and the Australian Energy Regulator on the collection, use and disclosure of information. A copy of the guideline is available on the ACCC's website.⁸

The ACCC prefers to receive submissions in electronic form, either in PDF or Microsoft Word format.

1.3. Next steps

The ACCC intends to publish a draft RKR for NBN Co in the first quarter of 2023 and we propose to make the final RKR for NBN Co in mid-2023 after considering submissions on the draft RKR.

It is envisaged that the arrangements developed for NBN Co through this consultation process will inform our approach for SBAS providers in the future. For example, regarding the extent to which the metrics in the RKR for NBN Co should apply to SBAS providers. We will consult directly with SBAS providers on these matters in 2023.

We expect the process for consultation with SBAS providers can be streamlined as the final RKR data requirements for NBN Co are likely to form the basis of an RKR for SBAS providers. We envisage that an RKR for SBAS providers would apply to larger scale SBAS networks in the first instance and we will have regard to the costs and benefits of implementation across other SBAS networks. The RKR for SBAS providers may be a variation of the RKR for NBN Co or a new RKR.

We welcome submissions from SBAS providers in response to this consultation paper if there are any issues they want to raise at this stage.

⁸ See <https://www.accc.gov.au/publications/accc-aer-information-policy>.

2. Record Keeping Rule for NBN service levels

2.1. Rationale and scope

The ACCC considers there is a need for a comprehensive and transparent reporting framework for superfast broadband service performance and quality given the essential nature of broadband telecommunications services.

We consider the development of an RKR for NBN Co's service performance is timely. NBN Co has completed the build phase of its network and its focus is now on the efficient operation, maintenance, and development of the network, and meeting the service quality and performance levels expected by access seekers and end-users.

We also propose to establish a comprehensive transparency framework through appropriate disclosure and reporting of service quality and network performance information collected through the RKR.

We consider that increased transparency and reporting will provide industry participants, stakeholders, and other interested parties with comparable and useful performance information. Greater public transparency will also provide incentives for NBN Co and other network providers to improve their service quality and network performance.

As a first step we propose to make an RKR requiring NBN Co to keep records and provide information to the ACCC periodically. The proposed RKR will focus on NBN Co's service quality and network performance in the context of its interactions with retailers as the dominant wholesale broadband service provider. This is intended to complement operational reporting between NBN Co and retailers through access agreements and NBN Co's SAU.

In developing these monitoring and reporting arrangements we are also cognisant that other factors such as the quality of a retailer's network and its direct interactions with customers (i.e., end-users) impact on service levels and the quality of service ultimately experienced by customers.

In developing an RKR for NBN Co we are considering requiring NBN Co to provide the ACCC with information as set out in Attachment A. This covers the following aspects of service quality and network performance:

- the connection of NBN services, how long these connections take to complete and the extent to which NBN Co meets its connection appointment timeframes
- the extent of end-user and network faults, the timeframes for the rectification of faults and the extent to which NBN Co meets its fault rectification appointment timeframes
- the number of services experiencing recurring faults
- the number of services experiencing multiple dropouts/temporary loss of service
- network outages, including both planned and emergency outages
- the NBN's speed capability, traffic performance and network utilisation
- the number of services for which rebates are paid/payable by NBN Co to retailers when service levels are not met
- corrective action taken by NBN Co when it fails to meet its own performance objectives for certain activities.

We consider the RKR for NBN Co will need to evolve over time with changes in the wholesale broadband services market and consumer preferences. For example, in the future the ACCC may see merit in collecting periodic financial information from NBN Co under an RKR, regarding its operational and capital expenditure relative to budget forecasts, among other things.

2.2. Regulatory framework

Pursuant to subsection 151BU(1) of the CCA, the ACCC may, by written instrument, make rules for and in relation to requiring one or more specified carriers or carriage service providers to keep and retain records (i.e., an RKR). An RKR may require the preparation of reports consisting of information contained in those records and the provision of those reports to the ACCC.

Without limiting the ACCC's power under subsection 151BU(1)⁹ an RKR may:

- specify the manner and form in which the records are to be kept¹⁰
- specify the manner and form in which reports are to be prepared¹¹
- provide for the preparation of reports as and when required by the ACCC; or the preparation of periodic reports relating to such regular intervals as are specified in the RKR.¹²

The ACCC must not make an RKR so as to require the keeping or retention of records unless the records contain, or will contain, information relevant to the operation of certain parts of the CCA or certain other telecommunications-related legislation, including the operation of Parts XIB and XIC of the CCA.

Under Part XIB of the CCA, the ACCC is responsible for enforcing the telecommunications specific anti-competitive conduct provisions as well as providing the Minister with annual reports including a report on competitive safeguards within the telecommunications industry.

We are proposing to make an RKR requiring NBN Co, a carrier, to keep records and provide reports of information to the ACCC periodically, which is relevant to our functions under Part XIB of the CCA.

Similarly, the information and data collected under the proposed RKR would also be relevant to the operation of the ACCC's regulatory processes under Part XIC of the CCA. The object of Part XIC of the CCA is to promote the long-term interests of end-users which, amongst other things, includes promoting competition and encouraging the economically efficient use of, and investment in, infrastructure supplying telecommunications services.

The ACCC has several statutory functions under Part XIC of the CCA, including conducting inquiries for access determinations (containing price and non-price terms of access) for declared services (Section 152BC of the CCA).

Disclosure of reports given to the ACCC

If the ACCC is satisfied that disclosure of a report or series of periodic reports given to it in accordance with an RKR, or particular aspects of a report(s), would be likely to:

- promote competition in markets for listed carriage services or

⁹ Subsection 151BU(2D) of the CCA.

¹⁰ Subsection 151BU(2) of the CCA.

¹¹ Subsection 151BU(2A) of the CCA.

¹² Subsection 151BU(2B) of the CCA.

- facilitate the operation of certain parts of the CCA or certain other telecommunications-related legislation, including the operation of Parts XIB and XIC of the CCA.

the ACCC may give written notice to the relevant carrier or carriage service provider that it intends to make copies of the report(s) or extracts available to the public; or direct that the carrier or carriage service provider make those copies available to the public.¹³

In deciding whether to give a disclosure notice or direction, the ACCC must have regard to:

- the legitimate commercial interests of the carrier or carriage service provider concerned and
- such other matters as the ACCC considers relevant.

The ACCC must not give a disclosure notice or direction unless it has: first provided the relevant carrier or carriage service provider with a draft of the notice or direction (as relevant); and then invited and considered any submissions received.

¹³ Sections 151BUA, 151BUB and 151BUC of the CCA.

3. Matters for consultation

To assist with the development of the proposed RKR for NBN Co, the ACCC is seeking views from industry participants, stakeholders, and other interested parties on the following matters.

3.1. Record Keeping Rule content

Attachment A sets out the aspects of service quality and network performance, the related service level metrics, and proposed data to be collected through an RKR for NBN Co. In identifying these aspects of service quality and network performance we have had regard to the ACCC inquiry and consultation processes discussed previously and in Appendix 1.

We consider that an RKR developed on this basis will assist us to monitor NBN Co's performance in two main areas:

- NBN Co's responsiveness in meeting connection and fault rectification requests from retailers. These interactions also relate to NBN Co's notification timeframes for retailers regarding planned network outages
- The quality of NBN Co's network with a focus on identifying systemic issues that impact on retailers and end-users.

In considering the aspects of NBN Co's operational and network performance which should be the subject of an RKR, we have also had regard to:

- the service aspects and activities of NBN Co where its performance is most likely to impact on a retailers' ability to meet end-user needs and expectations. These aspects are also likely to assist the ACCC in identifying issues of consumer detriment
- NBN Co's agreed service levels under its WBA
- data collection to enable transparency at a sufficiently disaggregated level.

We are seeking views on whether the aspects of service quality and network performance, and the related service level metrics and proposed data set out in Attachment A, should form the basis of an RKR for NBN Co.

Interested parties are invited to comment on this and any other issues they think we should consider in relation to the RKR for NBN Co.

The following provides further explanation on the service aspects, performance metrics and proposed data outlined in Attachment A.

3.1.1. Connections, transfers, and associated appointment keeping

The wholesale connection and transfer processes are vital to ensuring end-users can use broadband services in a timely fashion. An RKR covering the aspects proposed in Attachment A will allow for reporting and increased transparency of NBN Co's performance regarding wholesale service connections, how long these connections take to complete and the extent to which NBN Co is meeting its scheduled connection appointment keeping timeframes.

Retailers have previously raised issues relating to new installations and service activations which experience faults shortly after installation/activation. Connections which experience faults shortly after installation/activation lead to poor service quality or loss of service by end-users. As such, we consider that increased reporting and transparency relating to these 'first time right' connections are needed.

We also see benefits in monitoring connection data by location and access technology type. This level of detail will enable us, for example, to identify whether potential drivers of consumer issues relating to connections are geographically based or related to issues specific to certain types of access technology.

Items 1–6 in Attachment A provide further information on the service level metrics and information proposed to be collected relating to connections, transfers, and connection appointments.

3.1.2. End-user/network faults, dropouts, and associated appointment keeping

The number of faults and the time taken to rectify these faults within NBN Co's network directly impacts end-users. It is expected that a wholesale broadband network will experience some level of faults, however increased levels of faults and delays in fixing faults (both individual line and NBN Co network faults) leads to detrimental consumer outcomes and higher costs for retailers.

We consider that information to enable reporting, and increased transparency of NBN Co's fault rectification performance is needed, along with the number of services experiencing recurring faults. The identification of services experiencing recurring faults will identify any persistent end-user detriment and possible failures to remediate systemic issues causing recurring faults.

While NBN Co does not categorise services with multiple dropouts as 'faults', these can cause significant consumer detriment depending on their frequency and duration. We intend to collect information on the number of services experiencing such performance incidents and the time taken by NBN Co take to fix these faults.

We propose also to collect data on the extent to which NBN Co is meeting its fault rectification appointment keeping timeframes.

Items 7–13 in Attachment A provides further information on the service level metrics and information proposed to be collected relating to end-user and network faults, dropouts, and fault appointments.

3.1.3. Network outages

We recognise that a wholesale broadband network will experience outages and that outages can be planned (for maintenance and upgrade purposes) or unplanned (emergency outages or outages due to adverse weather events). However, localised or widespread outages, whether planned or unplanned, can be detrimental to retailers and end-users.

We see benefits in monitoring the volume and impact of outages as this directly relates to the performance of the network and detrimentally impacts end-users. In addition, we consider such information would be important for monitoring the duration of outages and when (i.e., time of day) they occur. Generally, planned outages occurring during work or evening hours have a greater impact on consumers than those occurring overnight.

Item 14 in Attachment A provides further information on the service level metrics and information proposed to be collected relating to outages.

3.1.4. Network speeds, traffic delays, and utilisation

In addition to monitoring NBN Co's service performance, we are also proposing to collect information relating to NBN Co's network performance in terms of network speeds, traffic delays and utilisation.

It is important that the NBN can support certain assured speeds paid for by access seekers (i.e., retailers) and end-users. This is particularly so for NBN Co's fixed line copper connections where the quality of copper lines and network congestion levels impact on the speeds experienced by end-users.

We are considering collecting information on the speed capability of NBN Co's fixed line network. Given the need for acceptable and reliable levels of speed to conduct online activities, we also see benefit in increasing transparency relating to speed capacities and congestion on NBN Co's fixed wireless networks.

Another service quality measure is traffic performance across the NBN. Traffic performance within the NBN can negatively impact on end-user experience through slow or delayed internet access.

We are considering the inclusion of traffic performance measures in the RKR for NBN Co. The RKR could include, for example, the number of exceedances beyond a certain threshold for NBN frame delay and frame delay variation.¹⁴

Also, we consider it important that information be provided on network utilisation. Transparency of network utilisation helps to identify network congestion and the need and timing for corrective action. While utilisation thresholds should not result in inefficient investment in the network, we are considering whether NBN Co should report when it exceeds a utilisation threshold and the threshold(s) for such reporting.

Items 15 – 18 in Attachment A provides further information on the service level metrics and information proposed to be collected relating to network speeds, traffic delays and utilisation.

3.1.5. Fibre to the premises upgrades

The Government has provided NBN Co with additional funding to upgrade certain premises currently using copper connections to NBN Fibre to the Premises (FTTP) connections. NBN Co will determine where and when these upgrades occur.

As part of the RKR for NBN Co, we are proposing to collect information on the progress of NBN Co's FTTP upgrade program.¹⁵

Item 19 in Attachment A provides further information on the information proposed to be collected.

3.1.6. Rebates

Current arrangements enable retailers to be paid rebates where NBN Co does not meet its agreed service levels for certain activities. Rebates apply in cases relating to missed and failed connections, unrectified faults, missed connection/fault rectification appointments, and where certain services are unable to achieve assured speeds.

Information on the number of services for which a rebate is payable will provide greater transparency of NBN Co's service performance and disaggregating this information by rebate type will identify aspects of service quality potentially of a systemic nature.

We note that some rebates are capped. For instance, the daily missed connection rebate is capped at 30 rebate days and the daily service fault rebate is capped at 60 rebate days. Instances where the full rebate was paid, and capped thereafter, may indicate unresolved service issues which are detrimental to consumers. NBN Co does not incur a further

¹⁴ We note that the NZ Commerce Commission in its 2021 Fibre Information Disclosure Determination has used thresholds of 5ms for frame delay and 3ms for frame delay variation. Providers subject to the Determination are required to report when these thresholds are exceeded as part of their sampling of traffic performance.

¹⁵ <https://www.nbnco.com.au/residential/upgrades/fttp-upgrade-with-higher-speed-tiers>.

financial penalty when service issues subject to capped rebates are not resolved. To improve reporting and transparency regarding this matter we are considering seeking information on the number of services for which fully capped rebates were paid/payable.

Item 20 in Attachment A provides further information on the service level metrics and information proposed to be collected relating to rebates.

3.1.7. Corrective action

Under its current WBA, NBN Co is required to take corrective action when it does not achieve its performance objectives for certain activities.

Corrective action includes providing retailers with information on the reasons for not achieving performance objectives, providing a corrective action plan, and notifying providers once those actions have been completed.

We are proposing to collect information relating to NBN Co's corrective action and subsequent outcomes when it does not achieve its performance objectives. This will provide transparency related to actions and outcomes when NBN Co does not meet its own performance objectives.

Item 21 in Attachment A provides further information on the service level metrics and information proposed to be collected relating to NBN Co's corrective action.

3.2. Reporting frequency

We are considering requiring NBN Co to keep and retain the information under an RKR and report to the ACCC bi-annually (June and December), with data to be segmented on a quarterly basis.

Consistent with the ACCC's statutory disclosure and reporting obligations, we also propose to release a public summary report every six months.

We are interested in the views of stakeholders on the frequency of reporting of NBN Co's service quality and performance under these arrangements.

4. Questions for stakeholders

In addition to the issues raised in this consultation paper we are seeking feedback from stakeholders in response to the questions set out below. Where relevant, we ask that you provide reasons in support of your view.

1. Are the service aspects, service level metrics and proposed data set out in Attachment A appropriate for an RKR for NBN Co?
2. To what extent should the service aspects, service level metrics and proposed data set out in Attachment A also apply to SBAS providers?
3. Should there be a threshold regarding SBAS network scale (e.g., number of end-users connected) before the provider is subject to an RKR for service quality and performance metrics?
4. Should more or fewer metrics form part of the RKR? Could the proposed metrics be more clearly expressed or defined? If so, please provide details of any suggested changes and the reasoning supporting the changes proposed?
5. For the RKR for NBN Co we are considering using the definitions of key terms such as connections, faults, outages, performance incidents/dropouts etc currently used by NBN Co in its Wholesale Broadband Agreement. Are there any issues in adopting this approach?
6. We are considering collecting data disaggregated by access network type and relevant location / geographic area. In addition, in Attachment A we have proposed the disaggregation of data which is specific to certain data items. We are seeking views on whether the levels of disaggregation proposed allow for appropriate monitoring and transparency of service quality and performance.
7. We are considering bi-annual (June and December) reporting with quarterly data to be provided. Is this reporting frequency suitable for reporting under an RKR for NBN Co?

Recent ACCC consultation processes which have considered the adequacy of NBN Co's performance reporting

NBN wholesale service standards inquiry

In November 2017, the ACCC commenced a public inquiry into whether NBN Co's wholesale service standard levels were appropriate and to consider whether regulation was necessary to improve consumer experiences. This process involved the release of a discussion paper in December 2017. In September 2018 the ACCC accepted a court enforceable undertaking from NBN Co to make changes to its wholesale service level commitments to support positive consumer experiences on the NBN.

In December 2018, the ACCC released a second discussion paper that sought input on matters raised by stakeholders in the inquiry that were not fully addressed by NBN Co's enforceable undertaking. NBN Co's undertaking set out reporting on operational outcomes and committed to expand its reporting of service levels, including for its fixed wireless network. These improvements aimed to address industry concerns about the need for improved reporting on operational processes. We considered that more detailed service level reporting was important to allow retailers to better understand NBN Co's performance and to increase certainty of operational outcomes. We also considered that a baseline level of reporting for key service levels should be specified within the WBA to ensure that this information is available to retailers.¹⁶

In October 2019, the ACCC released its draft decision as part of the inquiry seeking views on the appropriateness of enhanced service level reporting, availability of service information and changes to measurement and exclusions. The decision also noted that NBN Co's undertaking included a range of reporting and information commitments. The decision also proposed that NBN Co report on each of its service level activities with appropriate disaggregation. The decision also recommended the continued reporting on fixed wireless congestion and remediation.¹⁷

In April 2020, the ACCC released a position paper and suspended its inquiry due to the COVID-19 pandemic. We welcomed improvements to operational information provided through automated IT systems to support good consumer outcomes. While we considered public reporting of service level outcomes to be outside of the scope of this inquiry, we noted that record keeping and transparency rules for network providers was planned to be developed as part of the Consumer Safeguards Review Part B final report recommendations.¹⁸

In August 2020, the ACCC recommenced the NBN wholesale service standards inquiry and consulted on NBN Co's proposed commitments that it planned to incorporate into the next version of its WBA.

In November 2020, the ACCC published its final report which set out its findings in relation to our public inquiries into both NBN entry level pricing and NBN wholesale service standards. We considered that proposed reporting improvements would assist retailers to better manage end-user expectations and end-users would be the beneficiaries of improved

¹⁶ <https://www.accc.gov.au/system/files/Second%20Discussion%20Paper%20-%20ACCC%20inquiry%20into%20NBN%20wholesale%20service%20standards.pdf> p. 20.

¹⁷ <https://www.accc.gov.au/system/files/REDACTED%20Final%20-%20NBN%20Wholesale%20Service%20Standards%20Inquiry%20-%20Draft%20Decision%20-%20October%202019.PDF> p. 55.

¹⁸ <https://www.accc.gov.au/system/files/NBN%20Wholesale%20Service%20Standards%20Inquiry%20-%20Position%20paper%20-%20April%202020.pdf> pp. 27-28.

information flows between the wholesale and retail telecommunication industry sectors.¹⁹ We considered that better reporting on service level metrics would provide an incentive for NBN Co to improve its performance and result in better end-user outcomes.²⁰

NBN Services in Operation RKR consultation

In October 2021 the ACCC commenced public consultation on proposed changes to the NBN SIO RKR and NBN Wholesale Market Indicators Report. The consultation sought stakeholder submissions on the ACCC's proposals to, amongst other things, include service standard performance reporting into the NBN SIO RKR.²¹

We suggested that the following metrics could be included in the NBN SIO RKR: NBN Co's performance against service levels or performance objectives for the delivery of connections, faults and appointment attendance, which could be measured for all retail service providers, or broken down by location, service class and technology type; network availability; number of customers impacted by planned/unplanned outages and the length of time that services were unavailable; number of delayed connections and failed connections on each network; number of different types of faults on each network; speed information for services on the fixed line, fixed wireless and satellite networks; wholesale rebates incurred by NBN Co under WBA4 for missed appointments, late and failed connections, unrectified faults and speed assurance; and number of priority assistance customers.²²

The inclusion of NBN Co's service performance in the NBN SIO RKR was paused in late 2021 subject to the outcomes of the SAU variation process.

Review of the NBN regulatory framework

In June 2021, the ACCC hosted an industry roundtable with NBN Co, industry participants and other stakeholders to commence a process to consider the future regulatory framework for the NBN and discuss the regulatory arrangements that could be established through a varied SAU.

Following the industry roundtable, the ACCC convened a series of working groups with interested parties. The ACCC published a summary of matters discussed at these working groups in December 2021.²³

One of the topics discussed was the need for additional reporting and transparency requirements on NBN Co. There was a need for clear and robust quality of service measures including appropriate reporting and transparency measures.

Participants agreed that the ACCC should consider the need for reporting of NBN Co's service standards performance outside of the SAU and through an RKR. It was also suggested that, should the ACCC make an RKR, it should not duplicate any reporting obligations required as part of the SAU.

NBN Co's March 2022 SAU variation proposal

In March 2022, NBN Co lodged with the ACCC a proposal to vary its SAU. NBN Co proposed to vary the SAU to, amongst other things, provide additional reporting to the ACCC and retailers.

¹⁹ <https://www.accc.gov.au/system/files/Inquiries%20into%20NBN%20access%20pricing%20and%20wholesale%20service%20standards%20-%20Final%20report.pdf> p. 41.

²⁰ <https://www.accc.gov.au/system/files/Inquiries%20into%20NBN%20access%20pricing%20and%20wholesale%20service%20standards%20-%20Final%20report.pdf> p. 44.

²¹ <https://www.accc.gov.au/system/files/ACCC%20Consultation%20Paper%20-%20Proposed%20changes%20to%20the%20NBN%20SIO%20RKR%20-%20October%202021.pdf> p. 12.

²² <https://www.accc.gov.au/system/files/ACCC%20Consultation%20Paper%20-%20Proposed%20changes%20to%20the%20NBN%20SIO%20RKR%20-%20October%202021.pdf> pp. 12-13.

²³ <https://www.accc.gov.au/regulated-infrastructure/telecommunications-and-internet/national-broadband-network-nbn-access-regulation/review-of-nbn-regulatory-framework/public-summary-of-working-group-meetings>.

The proposed additional reporting to the ACCC focused on NBN Co's performance in the service standard areas relating to recurring faults, outages, and network speed capability for fixed line services. NBN Co's proposal to increase reporting in these three areas had regard for industry concerns raised in the 2021 working groups.²⁴ NBN Co also committed to maintain certain operational reporting and its public monthly reports.²⁵

In response to NBN Co's March 2022 variation proposal, the ACCC published a consultation paper in May 2022. Part of the ACCC's response included exploring the potential benefits of providing a comprehensive reporting framework for the ACCC to obtain and disclose information regarding network performance by NBN Co in an RKR. Submissions were supportive for the inclusion of NBN Co's performance reporting through an RKR.

In July 2022, NBN Co withdrew its March 2022 SAU variation proposal. In August 2022, NBN Co released a SAU discussion paper for a revised SAU variation proposal.²⁶ NBN Co acknowledged suggestions from the ACCC and certain stakeholders about the need for more comprehensive reporting commitments, however considered that any proposed RKR should not lead to duplicative and inefficient reporting.

To assist NBN Co in developing its revised SAU variation proposal, the ACCC held an industry forum in August 2022 which was attended by key industry, consumer body and government stakeholders. A key topic relating to service performance was whether there should be regular public reporting on service quality. There was strong support for public transparency over service quality so improvements on known quality issues could be tracked and emerging issues more quickly identified. There was also broad support for public reporting arrangements to be established through an RKR to complement the operational reporting contained in the SAU.²⁷

²⁴ <https://www.accc.gov.au/regulated-infrastructure/telecommunications-and-internet/national-broadband-network-nbn-access-regulation/review-of-nbn-regulatory-framework/public-summary-of-working-group-meetings>.

²⁵ https://www.accc.gov.au/system/files/NBN%20Co%20supporting%20submission_2.pdf pp. 191-192. NBN Co proposed to provide improved network reporting for: capability, congestion, availability, outages, recurring faults, performance of connecting services and performance of assuring services.

²⁶ <https://www.nbnco.com.au/corporate-information/media-centre/media-statements/nbn-co-releases-revised-sau-variation-discussion-paper>.

²⁷ <https://www.accc.gov.au/system/files/Public%20summary%20of%20ACCC%20Industry%20Forum%20-%209%20September%202022.pdf> p. 6.

Proposed service aspects, performance metrics and data requirements for Record Keeping Rule for NBN Co

Key references

- NBN Co’s Wholesale Broadband Agreement (WBA) Service level schedule – refer to NBN Co’s ‘WBA Ethernet Product Module’ list of documents within its WBA documentation [here](#).
- NBN Co’s Wholesale Broadband Agreement (WBA) Dictionary – refer to NBN Co’s WBA Dictionary found in the list of WBA documentation [here](#).

1. Time taken to connect premises

Performance metrics and data disaggregation

Standard connections

The number of days it takes NBN Co to connect premises.

Possible disaggregation

- Geographic location: NBN Co’s stated Location of Premises:
 - Urban Area
 - Major Rural Area or Minor Rural Area
 - Remote Area
 - Isolated Area (applies to Satellite network only)
 - Limited Access Area (applies to Satellite network only)
- Service Class: This incorporates the relevant access network type and the extent of infrastructure already installed. Further information on NBN Co’s Service Classes is in Part A of NBN Co’s WBA Service Levels Schedule and dictionary.

Proposed data requirements

Connections not requiring NBN Co technicians

- Total number of connections not requiring a technician
- Number of connections completed in 1 business day
- Number of connections completed in 2 – 5 business days
- Number of connections completed in 6+ business days.
- Average time to complete all connections

Connections requiring NBN Co technicians

- Total number of connections requiring technicians
- Number of connections completed in <= 5 business days
- Number of connections completed in 6 – 10 business days
- Number of connections completed in 11+ business days
- Average time to complete all connections

2. Time taken to connect premises for medically vulnerable consumers

Performance metrics and data disaggregation

Priority Assistance (PA) connections

The number of days it takes NBN Co to connect premises for medically vulnerable consumers.

Possible disaggregation

- Access network type:
 - Fibre to the Premises (FTTP)

Proposed data requirements

- Total number of PA connections
- Number of PA connections completed within 24 hours
- Number of PA connections completed between 24 and 48 hours
- Number of PA connections completed in 48+ hours.

- Fibre to the Building (FTTB)
- Fibre to the Node (FTTN)
- Fibre to the Curb (FTTC)
- Hybrid Fibre Coaxial (HFC)
- Fixed Wireless
- Satellite.

3. Time taken to connect premises for RSPs who request a faster connection time

Performance metrics and data disaggregation

Accelerated Connections

The number of days it takes NBN Co to connect premises for retail service providers requesting faster connection of services.

Possible disaggregation

- Access network type.

Proposed data requirements

- Total number of Accelerated Connections
- Number of Accelerated Connections completed in <= 5 business days
- Number of Accelerated Connections completed in 6 – 10 business days
- Number of Accelerated Connections completed in 11+ business days.

4. Effectiveness of equipment installations and connections/activations of premises

Performance metrics and data disaggregation

'Right-first-time' installations and connections

The number of network installations and service activations requiring follow up work or experiencing a fault shortly thereafter.

Possible disaggregation

- Access network type
- Geographic location.

Proposed data requirements

New installations:

- Total number of new installations
- Number of new installations that required follow up work within:
 - 5 business days
 - 6-10 business days
 - 11-20 business days.

Connections:

- Total number of new connections
- The number of new connections that had a fault within:
 - 5 business days
 - 6-10 business days
 - 11-20 business days.

5. Time taken to transfer an NBN service from one retail service provider to another

Performance metrics and data disaggregation

Service transfers

The number of days taken by NBN Co to transfer services from one provider to another.

Possible disaggregation

- Access network type.

Proposed data requirements

- Total number of service transfers
- Number of service transfers completed within 1 business day
- Number of service transfers completed within 2-3 business days
- Number of service transfers completed in 4+ business days.

6. Connection appointment punctuality

Performance metrics and data disaggregation

Connection appointment keeping timeframes

The number of connection appointments that meet NBN Co's WBA service levels.

Possible disaggregation

- Access network type
- Geographic location.

Proposed data requirements

Connection appointments with a particular time

- Total number of connection appointments with a particular time
- Of these, the number of appointments where NBN Co:
 - Met the appointment time (or 15 minutes thereafter) that was **not** previously re-scheduled
 - Met the appointment time (or 15 minutes thereafter) that was previously re-scheduled
 - Did not meet the appointment window
 - Re-scheduled the appointment to a future date.

Connection appointments with a 4-hour period

- Total number of connection appointments with a 4-hour appointment window
- Of these, the number of appointments where NBN Co:
 - Met the appointment window (or 15 minutes thereafter) that was **not** previously re-scheduled
 - Met the appointment window (or 15 minutes thereafter) that was previously re-scheduled
 - Did not meet the appointment window
 - Re-scheduled the appointment to a future date.

Connection appointments with a 4-5 hour period

- Total number of connection appointments with a 4-5 hour appointment window
- Of these, the number of appointments where NBN Co:
 - Met the appointment window that was **not** previously re-scheduled
 - Met the appointment window that was previously re-scheduled
 - Did **not** meet the appointment window
 - Re-scheduled the appointment to a future date.

Connection appointments with a 4-5 hour period (Minor rural areas, Remote areas, Isolated areas, or Limited Access Areas)

- Total number of connection appointments with a 4-5 hour appointment window
- Of these, the number of appointments where NBN Co:
 - Met the appointment window (or 45 minutes thereafter) that was **not** previously re-scheduled
 - Met the appointment window (or 45 minutes thereafter) that was previously re-scheduled
 - Did not meet the appointment window
 - Re-scheduled the appointment to a future date.

7. Faults frequency and time taken to repair

Performance metrics and data disaggregation

End-user faults and rectifications

The number of end-user faults and how long it takes NBN Co to fix these.

Possible disaggregation

- Access network type
- Geographic location.

Proposed data requirements

Faults not requiring technicians

- Total number of faults not requiring a technician
- Of these, the number of faults rectified:
 - within 1 business day
 - between 1 and 3 business days
 - in 3+ business days.

Faults requiring technicians

- Total number of faults requiring technicians
- Of these, the number of faults rectified:
 - within 2 business days
 - within 2 and 3 business days
 - in 3+ business days.

8. Time taken to repair service faults for medically vulnerable consumers

Performance metrics and data disaggregation

Priority Assistance (PA) faults

The number service faults for medically vulnerable consumers and how long it takes NBN Co to fix these.

Possible disaggregation

- Access network type.

Proposed data requirements

PA faults not requiring technicians

- Total number of PA faults not requiring a technician
- Of these, the number of faults rectified:
 - within 24 hours
 - between 24 and 48 hours
 - in 48+ hours.

PA faults requiring technicians

- Total number of PA faults requiring technicians
- Of these, the number of faults rectified:
 - within 24 hours
 - between 24 and 48 hours
 - in 48+ hours.

9. Time taken to repair services with performance incidents

Performance metrics and data disaggregation

End-user performance incidents

The number of services meeting NBN Co's performance incidents thresholds and how long it takes to fix these in accordance with NBN Co's WBA service levels.

Services subject to NBN Co's performance incidents service level arrangements apply to those on the FTTN and HFC networks.

Possible disaggregation

- Access network type
- Geographic location.

Proposed data requirements

- Total number of services that exceeded the performance incidents thresholds
- Total number of these services that had previous performance incidents requiring rectification in the previous 12 months (services with recurring performance incidents)
- Total number of services experiencing performance incidents that were rectified by the applicable service level timeframes
- Total number of services experiencing performance incidents that were rectified and **did not meet** the rectification timeframes where rectification exceeded the timeframe by:
 - < 5 business days
 - 5 < 10 business days
 - >= 10 business days.

10. Time taken to repair network infrastructure faults that affect multiple products

Performance metrics and data disaggregation

Network faults

The number of network faults and how long it takes NBN Co to fix these.

Possible disaggregation

- Access network type
- Geographic location.

Proposed data requirements

- Total number of network faults
- Total number of network faults estimated to affect:
 - <100 services
 - 100 < 200 services
 - 200 < 400 services
 - 400 <500 services
 - >= 500 services
- Total number of network faults rectified in:
 - <3 hours
 - 3<9 hours
 - >=9 hours

11. Number of recurring service faults

Performance metrics and data disaggregation

Recurring service faults

The number of services experiencing recurring faults in a certain period.

Possible disaggregation

- Access network type
- Geographic location.

Proposed data requirements

- The total number of services experiencing 3+ faults in any 60-day period (where the 3rd or any subsequent fault occurs during the reporting period)
- The total number of services experiencing 4+ faults in any 12-month period (where the 4th or any subsequent fault occurs during the reporting period).

12. Fault appointment punctuality

Performance metrics and data disaggregation

Fault rectification appointment keeping timeframes

The number of fault rectification appointments that meet NBN Co's WBA service levels.

Possible disaggregation

- Access network type
- Geographic location.

Proposed data requirements

Fault rectification appointments with a particular time

- Total number of fault rectification appointments with a particular time
- Of these, the number of appointments where NBN Co:
 - Met the appointment time (or 15 minutes thereafter) and that was **not** previously re-scheduled
 - Met the appointment time (or 15 minutes thereafter) and that was previously re-scheduled
 - Did not meet the appointment window
 - Re-scheduled the appointment to a future date.

Fault rectification appointments with a 4 hour period

- Total number of fault rectification appointments with a 4-hour appointment window
- Of these, the number of appointments where NBN Co:
 - Met the appointment window (or 15 minutes thereafter) and that was **not** previously re-scheduled
 - Met the appointment window (or 15 minutes thereafter) and that was previously re-scheduled
 - Did not meet the appointment window
 - Re-scheduled the appointment to a future date.

Fault rectification appointments with a 4-5 hour period

- Total number of fault rectification appointments with a 4-5 hour appointment window
- Of these, the number of appointments where NBN Co:
 - Met the appointment window and that was **not** previously re-scheduled
 - Met the appointment window and that was previously re-scheduled
 - Did not meet the appointment window
 - Re-scheduled the appointment to a future date.

Fault rectification appointments with a 4-5 hour period (Minor rural areas, Remote areas, Isolated areas, or Limited Access Areas)

- Total number of fault rectification appointments with a 4-5 hour appointment window
- Of these, the number of appointments where NBN Co:
 - Met the appointment window (or 45 minutes thereafter) window and that was **not** previously re-scheduled
 - Met the appointment window (or 45 minutes thereafter) window and that was previously re-scheduled
 - Did not meet the appointment window
 - Re-scheduled the appointment to a future date.

13. Service stability/dropouts

Performance metrics and data disaggregation

Dropouts

The number of services experiencing a minimum number of dropouts, the duration of dropouts and how long NBN Co takes to fix these.

Possible disaggregation

- Access network type
- Geographic location.

Proposed data requirements

- Total number of services experiencing the following number of dropouts (lasting 30 seconds or more):
 - < 5 dropouts within a 24 hour period
 - 5 to < 7 dropouts within a 24 hour period day
 - >7 dropouts within a 24 hour period
- Total number of services experiencing ≥ 5 dropouts where the longest dropout was:
 - 2 < 4 minutes
 - 4 < 8 minutes
 - 8 < 10 minutes
 - ≥ 10 minutes.

14. Number of planned and emergency outages

Performance metrics and data disaggregation

Outages

The number of intentional outages (planned + emergency), the duration of outages, the approximate number of services impacted by outages and notification timeframes for providers.

Possible disaggregation

- Access network type
- Geographic location.

Proposed data requirements

Planned outages

- The number of planned outages
- For each planned outage:
 - The (estimated) number of services affected
 - Whether the outage started and finished within:
 - 1 day
 - 2 and 3 days
 - 3+ days
 - Whether the majority of the outage took place between:
 - 12.00am – 8.00am
 - 8.00am – 5.00pm
 - 5.00pm – 11.59pm
- The percentage of planned outages where NBN Co provided retail service providers with:
 - < 1 business day's notice
 - 1 < 5 business day's notice
 - 5 < 10 business day's notice
 - ≥ 10 business day's notice.
- The percentage of planned outages which occurred entirely within the proposed scheduled window as contained in the planned outage notice
- The number of services affected by a planned outage which experienced a previous outage in the last 12 months (services experiencing recurring outages)

Emergency outages

- The number of emergency outages
- For each emergency outage:
 - The (estimated) number of services affected
 - Whether the outage was rectified within:
 - 1 day
 - 2 and 3 days
 - 3+ days
- Whether the majority of the outage took place between:
 - 12.00am – 8.00am
 - 8.00am – 5.00pm
 - 5.00pm – 11.59pm
- The percentage of emergency outages where NBN Co was able to provide notice to providers prior to the outage.

15. Speed performance: copper and HFC networks

Performance metrics and data disaggregation

Network speed capability

Information on attainable download and upload speeds of NBN Co's services provided over copper and HFC networks.

Estimated – The estimated number of premises at which NBN Co has made available its Fixed Line Network capable of achieving the maximum data transfer rate.

Actual – The number of premises at which NBN Co supplied an Ordered Product over its Fixed Line Network capable of achieving the maximum data transfer rate.

Possible disaggregation

- Applicable access network type (FTTB, FTTC, FTTN and HFC)
- Geographic location

Proposed data requirements

Fixed line speed capabilities (FTTB/C/N)

- The estimated number of fixed line premises capable of achieving a maximum data transfer rate of:
 - < 25 Mbps Peak Information Rate (PIR) downlink
 - 25 < 50 Mbps PIR downlink
 - 50 < 75 Mbps PIR downlink
 - 75 < 100 Mbps PIR downlink
 - 100 Mbps < 1 Gbps downlink
 - >= 1 Gbps PIR downlink.
- The estimated number of fixed line premises, as a proportion of the total fixed line network premises, capable of achieving a maximum data transfer rate of:
 - < 25 Mbps PIR downlink
 - 25 < 50 Mbps PIR downlink
 - 50 < 75 Mbps PIR downlink
 - 75 < 100 Mbps PIR downlink
 - 100 Mbps < 1 Gbps downlink
 - >= 1 Gbps PIR downlink.
- The actual number of fixed line premises capable of achieving a maximum data transfer rate of:
 - < 25 Mbps PIR downlink
 - 25 < 50 Mbps PIR downlink
 - 50 < 75 Mbps PIR downlink
 - 75 < 100 Mbps PIR downlink
 - 100 Mbps < 1 Gbps downlink
 - >= 1 Gbps PIR downlink.
- The actual number of fixed line premises capable of achieving a maximum data transfer rate of:
 - < 5 Mbps PIR uplink

- 5 < 10 Mbps PIR uplink
- 10 < 20 Mbps PIR uplink
- >= 20 Mbps PIR uplink

Fixed line speed capabilities (HFC)

- The actual number of HFC services that cannot reliably attain the full ordered bandwidth data transfer rate of:
 - 25 Mbps downlink
 - 50 Mbps downlink
 - 100 Mbps downlink
 - 250 Mbps downlink
 - 500 Mbps downlink
 - 1 Gbps downlink.
- The actual number of HFC services that cannot reliably attain the full ordered bandwidth data transfer rate of:
 - 5 Mbps uplink
 - 10 Mbps uplink
 - 20 Mbps uplink
 - 40 Mbps uplink
 - > 40 Mbps uplink.

16. Speed performance: fixed wireless network

Performance metrics and data disaggregation

Proposed data requirements

Network speed capability on NBN Co's fixed wireless network

Information on the attainable download and upload speeds and traffic performance during average busy hour relating to NBN Co's Fixed Wireless cell network.

The percentage of fixed wireless cells with an average monthly busy hour cell performance in the following specified **downlink** performance categories:

- <3 Mbps
- 3 to < 6 Mbps
- 6 to <12 Mbps
- 12 to <25 Mbps
- 25 to <50 Mbps
- >= 50 Mbps.

The average number of hours a day cells spent in each of the following **downlink** performance categories:

- < 3 Mbps
- 3 to < 6 Mbps
- 6 to <12 Mbps
- 12 to <25 Mbps
- 25 to <50 Mbps
- >= 50 Mbps

The percentage of fixed wireless cells with an average monthly busy hour cell performance in the following specified **uplink** performance categories:

- <2 Mbps
- 2 to <5 Mbps
- 5 Mbps to < 10 Mbps

- 10 to <20 Mbps
- >= 20 Mbps.

The percentage of NBN Co Wireless Network cells connected to backhaul transmission links with an average busy hour link packet loss of less than 0.25%.

The following data:

- Total Fixed Wireless cells
- Total Fixed Wireless congested cells.
- Total LOC IDs of Fixed Wireless congested cells
- Total Fixed Wireless backhaul links
- Total Fixed Wireless congested backhaul links
- Total LOC IDs of congested Fixed Wireless FW backhaul links
- List of Priority Forecast Upgrade cells.

17. Network traffic delay performance

Performance metrics and data disaggregation

Proposed data requirements

NBN Co traffic delay

NBN Co's network performance regarding data delays.

Data delay performance

- The number of exceedances of traffic frame delay equal to or above 5 milliseconds on the fixed line network during the busy hour period (7.00pm – 11.00pm).
- Number of exceedances of traffic frame delay variation equal to or above 3 milliseconds on the fixed line network during the busy hour period (7.00pm – 11.00pm).

18. Shared network resource utilisation

Performance metrics and data disaggregation

Shared network resource utilisation

The number of times NBN Co's shared network resource exceeds a certain threshold and the duration of the exceedance.

Possible disaggregation

- Access network type
- Geographic location

Proposed data requirements

The number of times a shared network resource exceeded a utilisation threshold of 70%.

The number of times a shared network resource exceeded a utilisation threshold of 90%.

The number of times a shared network resource exceeded a utilisation threshold of 95%.

For each instance where the utilisation threshold is exceeded (as applicable in the Wholesale Broadband Agreement or Special Access Undertaking), the average time taken (in business days) to return the utilisation of the relevant shared network resource below the utilisation threshold.

19. Fibre to the Premises upgrades

Performance metrics and data disaggregation

Fibre to the premises (FTTP) upgrade

Progress of NBN Co's FTTP upgrade program.

Proposed data requirements

The number of premises in the following stages of the FTTP upgrade program:

- design
- construction
- passed
- connected
- active.

20. Number of services where rebates are payable to retail service providers

Performance metrics and data disaggregation

The number of services where rebates were payable to retail service providers

Number of services for which an NBN Co rebate was payable under its WBA.

Proposed data requirements

- Number of services for which a rebate was payable by NBN Co for the following rebate categories:
 - Missed connections
 - failed connections
 - first missed connection appointments
 - subsequent missed connection appointments
 - service fault

Possible disaggregation

- Access network type

- enhanced fault rectification
- first missed fault rectification appointments
- subsequent missed fault rectification appointments
- FTTB/N/C PIR Objective
- FTTB/N/C connection performance
- wireless speed.
- Number of services for which a rebate was capped (as applicable) by the above categories.

21. Corrective action

Performance metrics and data disaggregation**Corrective action for the non-achievement of performance objectives**

NBN Co's activities and performance to fulfil its corrective action objectives.

Possible disaggregation

By service activity – connections, transfers, faults, and performance incidents.

Proposed data requirements

- Corrective action by each activity including:
 - Summary of reasons for the non-achievement of performance objectives
 - The number of corrective action plans provided to retail service providers
 - The broad types of corrective action proposed
 - The average time taken to undertake the corrective action.