



Draft NBN Service Quality and Network Performance Record Keeping Rule

NBN Co response to ACCC consultation paper

February 2024

Public version



Contents

1. Executive Summary	5
Determining the appropriate service performance metrics	5
Scope of services covered by the RKR	5
Application to competing network operators	6
RKR commencement and frequency	6
2. Overview of metrics in Draft RKR	7
Overview of metrics in Draft RKR	7
3. Scope and intent of RKR	10
Scope	10
Equivalent RKR must apply for competing network providers	10
4. RKR commencement and frequency	12
Reporting frequency and preparation period must balance reporting costs and benefits	12
Commencement and implementation	13
Treatment of program related metrics	14
5. Definition and interpretation matters	15
Clause 4 definitions	15
Amendment to 'data algorithms'	15
Clarification of references to timeframes and speed ranges	16
6. Questions for stakeholders	18
7. Connections, service faults and related appointments	20
ACCC proposed reporting	20
Comments on proposed connections and service fault reporting	20
8. Right-First-Time connections and those requiring additional work	22
ACCC proposed reporting	22
Comments on proposed Right-First-Time reporting	22
9. Service Transfers	23
ACCC proposed reporting	23
Comments on proposed Service Transfer reporting	23
10. Performance Incidents	24
ACCC proposed reporting	24
Comments on proposed Performance Incident reporting	24



11. Network Faults	25
ACCC proposed reporting	25
Comments on proposed Network Fault reporting	25
12. Recurring Faults	27
ACCC proposed reporting	27
Comments on proposed Recurring Fault reporting	27
13. Dropouts	28
ACCC proposed reporting	28
Comments on proposed Dropout reporting	28
14. Planned and Emergency Outages	29
ACCC proposed reporting	29
Comments on proposed Planned and Emergency Outage reporting	29
15. Speed performance: Fixed line	32
ACCC proposed reporting	32
Comments on proposed fixed line speed performance reporting	32
16. Speed performance: Fixed Wireless	33
ACCC proposed reporting	33
Comments on proposed Fixed Wireless speed performance reporting	33
17. Network Traffic Delay	38
ACCC proposed reporting	38
Comments on proposed Network Traffic Delay reporting	38
18. Shared Network Resource Utilisation	40
ACCC proposed reporting	40
Comments on proposed Network Utilisation reporting	40
19. Network Activity	42
ACCC proposed reporting	42
Comments on proposed Network Activity reporting	42
20. FTTP upgrades	43
ACCC proposed reporting	43
Comments on proposed FTTP upgrade reporting	43
21. Rebates	44
ACCC proposed reporting	44
Comments on proposed rebate reporting	44



22. Corrective Action	45
ACCC proposed reporting	45
Comments on proposed corrective action reporting	45
23. Network Availability	46
ACCC proposed reporting	46
Comments on proposed network availability reporting	46



1. Executive Summary

NBN Co welcomes the opportunity to respond to the ACCC's *Draft Record Keeping Rule - NBN Service Quality and Network Performance (RKR)* consultation paper issued in December 2023 (the **Consultation Paper**). As outlined in our response to the December 2022 consultation, NBN Co is aligned with the ACCC and retail service providers (**RSPs**) on the importance of transparency regarding the performance of **nbn**® Ethernet services, and the network that supports the delivery of these services.

Tracking network performance at a granular level is already a significant focus of NBN Co's activities. In order to ensure that NBN Co can deliver the best possible experience for users of the network, we invest significantly in understanding performance in key areas, and strive to continually improve our performance not only in relation to active services, but also in the connect and assure experience.

Determining the appropriate service performance metrics

In determining the metrics against which NBN Co and comparable network operators report, it is important that the role of, and value delivered by, each metric is clear - and that metrics do not generate inefficiency through unnecessary and/or costly reporting that does not deliver a material benefit. In this respect, NBN Co considers that 17 of the 22 metrics proposed by the ACCC for inclusion in the RKR are either: (a) reasonable due to the service quality insights that a particular metric can deliver; or (b) are unlikely to incur material additional reporting costs even though the value of insights delivered by a specific metric remains unclear.

For clarity, NBN Co remains of the view that the granularity of reporting goes beyond what is essential to track service performance of the **nbn**® network. For example, the significant increase in granularity required by the RKR (e.g., reporting on connection and assurance activities according to timeframes that go beyond service level commitments) will require NBN Co to incur additional operational cost above its current reporting processes, both in the aggregation and analysis of data – where current reporting against service levels already provides significant insights regarding service performance.

However, in order to work constructively with the ACCC and industry to implement an RKR that delivers enhanced transparency of the **nbn**® network, NBN Co has sought to limit the concerns in this submission to those metrics where it considers the RKR has the potential to drive substantial additional systems and/or operational cost and where the value of the relevant metric is not sufficiently clear to justify the necessary systems or network changes and associated expenditure.

A summary of NBN Co's view of each metric set out in the *Draft record keeping rule for NBN service quality and network performance (Draft RKR)* is set out in section 2 below, with further detail provided in sections 7 to 23.

Scope of services covered by the RKR

Consistent with NBN Co's response to the initial consultation paper, NBN Co has considered the feasibility and value of the metrics in respect of its **nbn**® Ethernet services. The proposed metrics are, appropriately, framed with reference to the service levels applicable to **nbn**® Ethernet services in the WBA Service Levels Schedule. It is important that the final record keeping rule for NBN service quality and network performance (**Final RKR**) is clear that it is applicable specifically to these services and does not unintentionally incorporate other services supplied by NBN Co over its fixed line, fixed wireless or satellite networks. To the extent that the ACCC considers reporting on additional services could offer



specific benefits from a consumer or industry perspective, we recommend that such services be considered in any future update to the proposed RKR.

Application to competing network operators

Related to the scope of the RKR, and the metrics specified, it is critical that competing network operators are subject to the same reporting requirements as those proposed to apply to NBN Co. This is necessary to enable the ACCC and industry to compare service performance between networks – a key purpose highlighted by the ACCC. Without this comparative value, there is a risk that NBN Co is subject to significant ongoing reporting cost that is not achieving a key purpose and driving unnecessary and potentially inefficient cost into its operations.

Further information on the scope of services and application to competing network operators is considered in section 3 below.

RKR commencement and frequency

The Draft RKR includes a broad suite of detailed network performance metrics. While developed with reference to existing WBA service levels applicable to **nbn**® Ethernet services, the volume and granularity of reporting goes beyond the reporting NBN Co has established for WBA purposes. Commencement of the Final RKR must provide an appropriate time for NBN Co to establish reporting – and also establish a reporting cadence that provides valued network insights but does not impose unreasonable cost and process on NBN Co and other network operators, who it is expected would be subject to equivalent reporting requirements.

Section 4 sets out a proposed approach to both implementation and ongoing reporting frequency and timing, recognising the various complexities that must be balanced in providing the range of data and the overlapping reporting commitments that NBN Co must fulfil. To enable sufficient time for NBN Co to implement and meet ongoing reporting requirements, we have proposed that the first report cover the period January to June 2024 and is delivered by the end of September 2024 (covering those metrics that can be reported on manually) with the second report to cover the period July to December 2024 and deliverable by the end of March 2025. The future cadence of reporting should be determined with reference to the experience of these initial reports and an assessment of the frequency for competing network providers to deliver equivalent reporting.

We are committed to working with the ACCC and industry to ensure continuous improvement in the monitoring and transparency of network performance for both the **nbn**® network and competing networks. The Draft RKR for NBN Co is a significant step in this respect, and we understand that the ACCC intends to review the RKR going forward to ensure that the metrics included remain appropriate. This potential to evolve the proposed network performance RKR should be considered in determining which metrics are essential for inclusion in the RKR at this point in time – and those that are appropriately left for future consideration.



2. Overview of metrics in Draft RKR

The table below summarises NBN Co’s view on the proposed metrics in the Draft RKR – identifying those which NBN Co considers are: (1) reasonable or are not expected to incur material additional cost; and (2) those metrics which are of significant concern and should not be reasonably included in the Final RKR. As set out below, the key metrics which NBN Co maintains material concerns with are proposed Metrics 13, 15, 16, 20 and 22.

It is important to note that NBN Co’s concerns with respect to these metrics constitutes a very small proportion of the Draft RKR which contains close to 2,000 datapoints. Additionally, for three of the five metrics NBN Co is not proposing that the entire Metric be removed from the RKR. For Metric 13 Planned and Emergency Outages, for example, NBN Co still proposes to report against a set of 371 data points under this Metric. The concern is that the Metric, as currently drafted, would require reporting on data that NBN Co is not currently capable of delivering (precise time of service interruption from end user perspective vs duration of onsite technician activities). This is similar for Metrics 15 and 22. As with all proposed metrics, NBN Co has sought to identify proposed alternatives that could deliver the same or similar insights to those being considered by the ACCC.

Overview of metrics in Draft RKR

Metric	Name	Inclusion in RKR is reasonable or unlikely to incur material additional cost	Possible for inclusion in first proposed report	Comments
1.	Standard Connections	Y	Y	
2.	Priority Assistance Connections	Y	Y	
3.	Accelerated Connections	Y	Y	
4.	Right-First-Time Connections	Y	Y	
5.	Service Transfers	Y	Y	
6.	Appointment keeping	Y	Y	
7.	Service Faults	Y	Y	
8.	Service Faults for Priority Assistance End Users	Y	Y	
9.	Performance Incidents	Y	Y	
10.	Network Faults	Y	Y	
11.	Recurring Faults	Y	Y	
12.	Dropouts	Y	Y	



13.	Planned and Emergency Outages	N <i>Note: Concern limited to one aspect of metric.</i>	N <i>Note: NBN Co could report on majority of proposed metric in first report assuming data point is planned maintenance change window, not actual interruption experienced by end user. Reporting of volumes occurring in/outside planned maintenance window reliant on IT development.</i>	NBN Co is unable to report on actual duration of outages without material network and systems investment.
14.	Speed Performance - FTTx & HFC	Y	Y	
15.	Speed Performance - FW	N <i>Note: In addition to concern with aspect of proposed metric, NBN Co proposes shift in focus of this metric from 'cell based' to 'end to end' performance.</i>	N <i>Note: In addition to concern with aspect of proposed metric, NBN Co proposes shift in focus of this metric from 'cell based' to 'end to end' performance.</i>	Individual cell based reporting has largely been superseded by "end to end" performance reporting that factors in "cell groups" and which is representative of the actual end user experience. Alternative proposals are offered for most metrics where it makes sense to do so.
16.	Network Traffic Delay Performance	N	N	NBN Co is unable to report on proposed traffic delay metric without material systems investment.
17.	Shared Network Resource Utilisation	Y	Y	
18.	Network Activity	Y	Y	
19.	FTTP Upgrades – FTTN, FTTC & FW	Y	Y	
20.	Rebates payable to RSPs	N	N	NBN Co remains concerned with the value of the proposed rebate metric, particularly given the granular connection, assurance and appointments under Metrics 1 to 9 - and the additional systems



				investment to report in form required.
21.	Corrective Actions	Y	Y	
22.	Network Availability	N <i>Note: Concern limited to inclusion of Planned Outages and Force Majeure Events.</i>	N <i>Note: Concern limited to inclusion of Planned Outages and Force Majeure Events.</i>	Proposal that Network Availability is reported on with reference to Planned Outages and Force Majeure Events requires a fundamental change in how this metric is reported.

A key concern with the 5 metrics highlighted above, in addition to the value of the proposed metric, is the additional cost for NBN Co to implement the required systems changes to report the requested data.

<Commercial-in-Confidence >

This does not account for the ongoing resourcing overhead required to analyse and engage on these metrics for each reporting period. Separately, elements of Metrics 15 and 22 are not feasible due to either network architecture, proposed future reporting that will deliver more relevant performance insights (in relation to the Fixed Wireless reporting under Metric 15) or the logic used for calculating existing metrics (in relation to Network Availability).

Further detail in relation to these Metrics is set out in sections 7 to 23 below.



3. Scope and intent of RKR

Scope

The metrics in the Draft RKR have been developed with reference to the service levels and concepts applicable to NBN Co's **nbn**® Ethernet services supplied under its Wholesale Broadband Agreement (**WBA**). The feedback provided by NBN Co, and proposed alternative reporting commitments, have been based on the supply of these services, the associated service levels and network commitments. Accordingly, it is important that the scope of the RKR is clear that it applies specifically to **nbn**® Ethernet services.

NBN Co has provided recommended amendments to the RKR to ensure the scope of services subject to the RKR is clarified. Specifically, NBN Co suggests including a new clause 3(2) to section 3, Application, to read:

“3. (2) These Rules apply in relation to NBN Co’s supply of nbn® Ethernet Ordered Products only. For clarity, these Rules do not require NBN Co to provide any reporting with respect to any other product or service supplied by NBN Co.”

To the extent that the ACCC considers reporting on additional services could offer specific benefits from a consumer or industry perspective, we recommend that such services be considered in any future update to the proposed RKR.

Equivalent RKR must apply for competing network providers

NBN Co notes the ACCC's intention to develop metrics for large superfast broadband access service (**SBAS**) providers. To truly achieve the intent to ensure industry and consumers can feasibly compare performance across SBAS providers, like-for-like data will be required from SBAS providers. With the exception of metrics at sections 5(15)(f) and 5(19) of the proposed RKR that are specific to NBN Co's current fibre upgrade program and the Fixed Wireless and Satellite Upgrade program that NBN Co announced on 22 March 2022, it is critical that all metrics set out in the proposed RKR for NBN Co are applied to competing network providers. While there may be important terminology considerations when considering NBN Co and other network operators (e.g., ensuring that WBA specific terms can be translated to commitments for other network operators) the substantive obligations should be the same.

Further, NBN Co reiterates its position that comparable performance metrics should be extended to mobile and fixed wireless network operators. The ACCC has identified a key purpose of the RKR is to provide industry participants, stakeholders, and other interested parties with comparable and useful performance information; the comparative value of NBN Co reporting on these metrics will only be delivered if all competing networks are subject to the same reporting requirements. With the increasing market share of mobile and fixed wireless network operators, record keeping rules that are contained to fixed line networks would not deliver the complete picture for consumers or industry in benchmarking the performance of NBN Co or an SBAS provider.

It is important to note that the costs associated with reporting on service quality and network performance can be significant for providers. These costs include the development and maintenance of systems to collect and report data, analysing and interrogating collated data, preparing and submitting reports and responding to queries regarding reported data. In order to ensure a level playing field and prevent any one provider from bearing a disproportionate share of these costs, it is important that all providers be subject to the same reporting requirements. The importance of developing a consistent



reporting regime also reiterates the need to ensure that metrics which would drive significant cost to implement are not determined until the impact of that cost on all competing network operators is fully understood.



4. RKR commencement and frequency

We set out below comments in relation to the operation of the Draft RKR, covering: (1) Reporting frequency and preparation period; (2) Commencement and implementation; and (3) Treatment of program related metrics.

Reporting frequency and preparation period must balance reporting costs and benefits

It is important that the proposed RKR does not impose unreasonable regulatory cost on NBN Co (and subsequently other network operators) through the time and resources required to prepare and engage with each report. In this respect NBN Co has substantive concerns with the proposed quarterly frequency included in the Draft RKR.

Each report will require collation and review of each metric, preparation of any explanatory materials that may be needed to accompany each report, and senior management review to facilitate execution of the Record Keeping Declaration that is also proposed to be provided to the ACCC with each report. There will be significant operational resources required to ensure all preparatory steps are undertaken to deliver each report – and if one or multiple reports require further engagement with the ACCC this too could give rise to substantial resourcing impacts. Multiplying this process to four times per year would add an unnecessary operational burden on NBN Co and result in significant overlap between the delivery, review and potential engagement on successive reports.

We note the ACCC's suggestion that a quarterly report could enable potential issues to be identified at an earlier stage than through a six-monthly report.¹ In addition to the operational challenges highlighted above, we note that RSPs receive significant service level reporting on a monthly basis (now captured in the SAU as the ACCC has noted) which can assist to identify key service level matters on a very frequent basis. While the WBA service level report may not include certain granularity proposed under the Draft RKR (e.g. connection times at breakdowns beyond service levels) it is apparent that RSPs have ongoing visibility of material concerns through this existing monthly reporting.

Additionally, if the RKR is intended to identify more pronounced / continuing trends that NBN Co is not addressing, providing the report on a quarterly, or even six monthly, basis is arguably too short a period for identifying sustained trends. If the performance under a particular metric indicates a potential concern over a 1 to 3 month period this may reflect a short term issue that NBN Co is in the process of rectifying.

In addition to establishing the appropriate reporting frequency, it will be crucial to allow NBN Co sufficient time to fulfil the necessary preparation and governance steps for each report. Notwithstanding the reports can leverage significant existing data, the sheer volume and detail of metrics warrant a substantial period for NBN Co to prepare reports, analyse trends, and provide appropriate accompanying information to the ACCC. These activities will also involve the same operational resources required to manage WBA service level reporting matters and the newly introduced Annual Service Performance Review under which NBN Co is required to undertake an annual assessment of **nbn**® Ethernet service standards, consult with access seekers and deliver an associated report by 30 June.

In our submission of February 2023, NBN Co had indicated that it would be crucial to allow sufficient time for collation and checking of data, and therefore had proposed that reporting be provided two months after the end of the relevant reporting period. As noted in that submission, this was proposed on the basis that the RKR reflected the proposed reporting requirements put forward by NBN Co. While

¹ ACCC, *Draft Record Keeping Rule – NBN service quality and network performance Consultation paper*, December 2023, p14.



NBN Co appreciates the ACCC's engagement to understand our existing reporting capability, we consider that the extensive scope of metrics proposed for the RKR, the proposal to retain significant granularity in the reporting requirements and the multiple reporting requirements impacting on the same operational resources evidences a need for a minimum 3 months for NBN Co to deliver each report.

It is important to note that, in the New Zealand context, Chorus and other operators' service quality information disclosure requirements are met on an annual basis – with service quality disclosures required to be published 5 months after the applicable 12 month disclosure period.² This recognises the potential cost and administrative burden that frequent reporting can entail, as did the transition period that was established to allow network operators to establish the detailed reporting processes. In conjunction with this international comparison, we think it is critical to take into account the impact on, and capability of competing network operators, when determining the appropriate reporting frequency and time allowed for preparing each report.

As set out in our proposed staged implementation proposal below, we think that the reporting frequency for the first two reports should be no more frequent than half-yearly reporting with a 3 month preparation period. The ongoing frequency of the report should be reconsidered once NBN Co and the ACCC have the benefit of experience in preparing and analysing these reports, and once there is a clearer view of the equivalent reporting requirements and frequency for competing network operators.

Commencement and implementation

NBN Co notes the draft RKR has not yet specified a commencement date. Even for those metrics NBN Co has indicated it is able to provide via a tactical solution, significant work is required across multiple teams prior to their inclusion in a first report. Most metrics that are based on service level performance reports we currently provide to RSPs will still require some development work to produce the formats and the additional granularity of information the ACCC has specified under Schedule A. NBN Co does not expect that a tactical solution would be viable for long term compliance with the proposed RKR and would likely require systems development to support the delivery of these metrics on an ongoing basis.

As we have noted below, for those metrics or components of metrics for which NBN Co does not currently hold data in a format that can be manipulated to deliver the report via a tactical solution, there will be additional and more complex IT and network systems development required. Therefore, it would be beneficial for the ACCC to adopt a staged implementation approach rather than wait for all development to be completed and thereby delay commencement of the RKR.

To assist in moving forward on the RKR, while avoiding unnecessary regulatory burden on NBN Co and competing network operators, NBN Co proposes the following indicative dates and approach for the first, second and subsequent reports.

- 1) Assuming the first reporting period is 1 January to 30 June 2024 (quarterly view) this could be submitted by 30 September 2024:** For those metrics that NBN Co has indicated it is able to report on under a tactical reporting solution (i.e., without detailed systems development), NBN Co would provide the report by the end of September 2024 covering metric performance for both the first and second calendar quarters of 2024.
- 2) Assuming the second reporting period is 1 July to 31 December 2024 (quarterly view) this could be submitted by 30 March 2025 subject to completion of any required systems development:** For all metrics other than those that NBN Co has raised concerns (Metrics 16 and

² ComComm, *Fibre Information Disclosure Determination 2021*, section 2.3.3



22, and specified elements of Metrics 13, 15 and 20), NBN Co would propose to provide the report by the end of March 2025 covering metric performance for both the third and fourth calendar quarters of 2024. This would allow time for any systems development required to report on metrics or metric components that cannot be reasonably delivered via a tactical solution.

- 3) Subsequent reporting frequency and time to prepare report determined by 30 March 2025 (with ability to extend the timing for this decision):** Given that this consultation seeks to establish a comprehensive suite of metrics that have not been reported on previously, it is appropriate that the RKR does not unnecessarily 'lock-in' an inappropriate or costly reporting process before it is tried and tested. Through the delivery of the proposed reports in September 2024 and March 2025, along with industry consultation on other network operator rules, we expect the ACCC, NBN Co and industry will have a better sense of the impost of this reporting and whether it is the correct cadence for NBN Co and competing network operators by the end of March 2025. That would be a more appropriate time to determine the long-term cadence to apply.

Treatment of program related metrics

The Rules under clauses 5(15)(e), (15)(f), (15)(g), 18(c) and 19 and associated metrics 15, 18, 19 under Schedule A relate to specific network build programs that will run for finite periods of time.³ As a result, the input relevant to those programs are unlikely to be relevant through the course of the full 5 years proposed as the RKR term. In these cases, NBN Co suggests there would be merit in the ACCC reviewing the Rules prior to the end of the 5-year term to ensure each metric that is provided remains useful and relevant to the ACCC's purposes. For example, once these upgrade programs have reached the point where NBN Co's stages of build activity have concluded and related RSP-driven connection activity is no longer actioned through these programs.

NBN Co strongly encourages the ACCC to consider amending the RKR obligations once these programs have concluded to ensure reporting reflects in-flight activities agreed with RSPs and that are likely to have an impact on customer experience; and alleviate NBN Co from having to expend effort on outdated metrics.

³ NBN Co, [2023-2026 Statement of Corporate Intent](#), p9.



5. Definition and interpretation matters

Clause 4 definitions

NBN Co notes and agrees with clauses 4(2) and (3) of the Draft RKR that unless specific definitions are outlined in the RKR itself, a definition that is defined in the WBA Dictionary should be applicable, or otherwise the ordinary meaning of a term should apply.

Where definitions under clause 4 relate to specific metrics, we have noted some suggested amendments in our comments on individual metrics below. We also offer the following amendments as they relate to the RKR and its application of NBN Co's products more broadly:

- **Performance Objective:** The definition under clause 4(gg) should be amended by replacing “NBN Co” with “nbn® Ethernet” Service Level Schedule which would more accurately reflect the appropriate WBA document.
- **Service Levels:** The definition under clause 4(uu) should be amended by replacing “...a Service Standards Product...” with “...an Ordered Product...” which would then be consistent with the Ordered Product definition proposed under 4(ee).

Amendment to ‘data algorithms’

The ACCC has specified in clause 6(5) that “for each Reporting period, NBN Co must provide an update to the ACCC on any changes to data algorithms or definitions that are relevant to these Rules.”⁴ NBN Co understands a reasonable desire on the ACCC's part to retain visibility of operational changes over time that may impact the measurement of how NBN Co meets the service quality and performance levels expected by access seekers and end-users. To the extent that definitions or agreed service levels are amended as a result of changes to the WBA and have a flow on impact to relevant metrics included in the RKR, it is reasonable to provide an update to the ACCC where those changes impact the report in a relevant reporting period.

However, NBN Co queries the ACCC's use of the term ‘data algorithm’. We understand from the structure of the RKR and instructions used to clarify the treatment of terms defined under the RKR that the ‘ordinary meaning’ of this term is likely to apply.⁵ As such, this term is open to broad interpretation. Given the breadth and extent of the metrics covered in relation to NBN Co's operational activities, this requirement presents concerns if interpreted to mean any input, process, technology, or implementation methodology that is used in the course of collating, transforming, calculating, filtering, or aggregating the data represented in any of the 22 metrics.

NBN Co should be given the opportunity and flexibility to develop and improve its processes and systems it uses to provide its services to RSPs. An overly broad use of this term imposes an obligation on NBN Co to include in its updates each and every operational activity relevant to that metric regardless of whether that activity would have a material impact on NBN Co's performance. For instance, in its strategic roadmap to achieve operational efficiencies and simplify the way customers interact with us,

⁴ ACCC, *Draft NBN service quality and network performance Record Keeping Rule*, clause 6(5), p12.

⁵ ACCC, *Draft NBN service quality and network performance Record Keeping Rule*, clause 4(3), p6.



NBN Co will update its IT system and network architecture from time to time. These developments may result in changes to data algorithms without impacting the service levels reported but still be relevant to the Rules and metrics required.

NBN Co suggests that clause 6(5) could be amended to:

“If, in preparing a report in respect of a Reporting Period, NBN Co varies the method of defining, recording and reporting information from the method that was used in the report for the previous Reporting Period in a manner that has had, or may have had, a material impact on the data included in the report, NBN Co must update the ACCC with:

(a) a description of the new method of defining, recording and reporting information; and

(b) the reasons for why NBN Co has chosen to change their method of defining, recording and reporting information.

This approach is adopted from the *Internet Activity Record-Keeping and Reporting Rules*⁶ the ACCC has recently made and would allow the ACCC to achieve its objectives without this Rule being overly intrusive and burdensome to fulfil.

Clarification of references to timeframes and speed ranges

The ACCC has specified timeframes and speeds in ranges (or buckets) on a number of metrics under Schedule A. As we have worked through the detail of each metric, including comparing each table specified under each network access type, we have noted some small differences in the way timeframes or ranges are expressed. For example, Metric 1 asks for records broken down into timeframes “0<5 BD”, “5<9 BD”, “9<15 BD”, and “15+ BD” under the Standard Connection Service Level 9 Business Days. NBN Co interprets the time bucket “5<9 BD” for a standard connection which occurs up to and including the 9th business day will be included in either the “0<5 BD” or “5<9 BD” buckets, and a standard connection which occurs after the 9th business day will be included in either the “9<15 BD” or “15+ BD” buckets.

We recommend the ACCC articulates these timeframes in a consistent format throughout the RKR and which more expressly communicates which bucket an individual activity (e.g., the completion of a standard connection) should be placed. NBN Co suggests this will reduce any ambiguity that may unintentionally arise and assist in clarifying how the metrics under Schedule A should be delivered.

Using the Service Level 9 BD example above, we propose “≤ 5 BD”, “> 5 to ≤ 9 BD”, “> 9 to ≤ 15 BD”, and “> 15 BD” are instead used. The less than sign “<” in its ordinary meaning does not include the number to the right of the symbol. For instance, in the ordinary meaning of “5<9”, this numerical range would include 8.99999 but not 9. We therefore suggest that “≤” is more appropriate where the intention is to include the number 9 in this range. If the ordinary meaning were applied so that the category “9<15” included standard connections which occurred within the 9 business days this could mean the category included a volume of standard connections that occurred *within* the applicable service level of 9BD as well as standard connections which occurred outside of the 9 Business Days timeframe. In other words,

⁶ ACCC, *Internet Activity and Record-Keeping and Reporting Rules*, Section 6(5)(a) and (b), p8. Note: NBN Co does not believe 6(5)(c) of the Internet Activity RKR would be appropriate to include given the extent of information requested in this draft RKR.



it would mean “9<15 BD” could include both met and unmet service level connections. The recommendation proposed above resolves this conflict with the ordinary meaning of “x<y”.

NBN Co suggests this approach be used, where relevant, for each description of timeframes and speed ranges to ensure consistency and clarity can be achieved throughout Schedule A. At present the draft RKR appears to present some inconsistencies in some metrics. For example, in Metric 1 (Standard Connections) Service Level 1 BD, “0 < 1 BD”, “2 < 3 BD”, and “3+ BD” is expressed differently from the ranges of other service levels, such as Service Level 9 “0<5 BD”, “5<9 BD”, “9<15 BD”, and “15+ BD”. It is unclear where a standard connection completed between 1 to 2 business days should be recorded in relation to connections under Service Level 1 BD. NBN Co proposes, consistent with our recommendation above, the following ranges are instead used: “≤ 1 BD”, “> 1 to ≤ 3 BD”, and “> 3 BD”.

A similar inconsistency arises in Metric 2 and Metric 8 which cover the same timeframes. Metric 2 includes the timeframe buckets “0<24 hours”, “25<48 hours”, and “48+ hours”, whereas Metric 8 contains written descriptions of each timeframe bucket “No. PA services rectified within 24 Hrs”, “No. PA services rectified between 24<48 Hrs”, and “No. PA services rectified in 48+ Hrs”. Consistent with our recommendation, “≤ 24 hours”, “> 24 to ≤ 48 hours”, and “> 48 hours” could be used for both metrics.

NBN Co also notes some inconsistency in the use of “<” and “>”. For example, within Metric 10 “>” is used interchangeably with “<” in the buckets “1 > 120”, “121 > 500”, “501 < 5001”.



6. Questions for stakeholders

1. Are the aspects on service quality and network performance, the service level metrics and proposed data, including levels of disaggregation, set out in the draft RKR appropriate for an RKR for NBN Co?

NBN Co has advised that it is able to provide the timeframes and most of the levels of disaggregation the ACCC has requested – though appropriate time would be required to report on even those metrics that NBN Co has indicated it could deliver via a tactical solution. While NBN Co maintains that the level of granularity for several metrics goes beyond what is necessary to provide transparency of key network performance indicators, we are keen to work constructively with the ACCC and industry to move forward with the RKR. It will be important for the ACCC's stated intent of enabling performance data to be compared across wholesale network providers that the same metrics and levels of disaggregation are applied to those other wholesale network providers.

2. Should metrics for network activity and network availability be included in the RKR?

NBN Co confirms it is able to report on the Network Activity metric the ACCC has requested. It is also able to include a network availability metric where the definition and reporting requirement aligns with the Network Availability performance objective in the WBA. It is not currently possible to provide a metric that includes planned outage and force majeure events without significant additional network development costs.

3. Should any other metrics be included and if so what aspects of service quality and network performance should they cover?

Subject to the concerns highlighted with specific Metrics, NBN Co considers the RKR to be sufficiently broad in scope and granular in detail to provide extensive transparency and visibility to the ACCC regarding network performance and service quality. The RKR should not be considered in isolation, noting NBN Co's additional extensive reporting commitments (e.g. WBA service level performance reporting and recently introduced Annual Service Performance Review commitments). We consider the primary measurements that could be used to indicate service quality and network performance trends over time for **nbn**® Ethernet services have been included in the RKR.

It will be important to ensure the same metrics, both in scope and granularity, are used in the anticipated development of RKR for competing network operators.

4. In the RKR we are generally using the definitions of key terms used by NBN Co in current Wholesale Broadband Agreements and/or NBN Co's Special Access Undertaking. Are there any issues in adopting this approach?

NBN Co supports the approach to align definitions with key terms in the current WBA. In order to ensure reporting obligations reflect NBN Co's existing operations, processes, and contractual commitments under the WBA, the RKR commitments proposed should adopt the same terminology where appropriate.

nbn's reading of the RKR is that it does not refer out to SAU definitions – which is also supported. While NBN Co's Special Access Undertaking may adopt a number of WBA definitions for the purpose of its Benchmark Service Standards or other purposes, NBN Co considers that reference to SAU definitions will potentially complicate the intended scope or concepts of the RKR and that the incorporation of relevant WBA definitions is sufficient / appropriate to define the relevant metrics.

5. Is quarterly reporting appropriate?



NBN Co considers the provision of reports to the ACCC on a quarterly basis to significantly increase the operational and administrative burden of producing, verifying and approving each report. Our proposal on appropriate reporting cadence is set out in section 4 above. Regardless of reporting frequency determined in the Final RKR, sufficient time must still be allowed for these administrative tasks to be completed.

6. We are proposing that the RKR expire 5 years after commencement and that at or before that time the RKR may be reviewed by the ACCC. Is an expiration date of 5 years appropriate?

NBN Co suggests those metrics that provide data on finite network upgrade programs that are scheduled to be completed prior to an expiry period of 5 years be reviewed upon completion of these programs. We support the ability for the ACCC to review the RKR prior to its expiry to ensure that the metrics included, and the reporting frequency, remain fit for purpose.



7. Connections, service faults and related appointments

ACCC proposed reporting

Proposed metrics 1, 2, 3, 6, 7, 8

The proposed reporting commitments include granular breakdowns of key connection and fault types completed within specified timeframes – disaggregated by geographic location and service class.

For both connection and fault rectification appointments, the ACCC proposes that NBN Co report on the appointment attendance disaggregated according to geographic location.

Comments on proposed connections and service fault reporting

NBN Co confirms it will be able to supply the metrics as proposed under clauses 5(1), (2), (3), (6), (7) and (8) and Schedule A, Metrics 1, 2, 3, 6, 7 and 8 on the basis that the proposed metrics are aligned with what has been negotiated and agreed with RSPs under the terms of the WBA, including the relevant definitions.

To this end, NBN Co notes the ACCC has suggested a definition of ‘Service Fault’ (which is incorporated into the definition of Fault) that differs from the definition used for the same term in the WBA Dictionary. In some cases where the RKR refers to a Service Fault or Fault, it appears to be referring to a Service Fault (as defined in the WBA by reference to objective factors) in respect of which a Service Fault Trouble Ticket has been accepted. However, in other cases, a reference to Service Fault or Fault in the RKR appears to be referring to an accepted Service Fault Trouble Ticket itself.

We propose clarifications to the drafting to reflect this substantive distinction (including to delete the “Service Fault” definition proposed under section 4 so that the WBA definition flows through to the RKR through the operation of the interpretive rule in section 4(2) of the draft RKR). We suggest the Fault definition be amended to “*means a Service Fault in respect of which a Service Fault Trouble Ticket has been accepted by NBN Co*”. This will ensure alignment with existing reports supplied to RSPs. As a result, our proposed amendments will help avoid any unintended consequences of having to create an entirely new reporting line simply due to nuances between the drafting of the different definitions.

Alignment on service fault and Priority Assistance service fault reporting

NBN Co notes there is a small but material discrepancy between the rules outlined under sections 5(7) and (8) and Metrics 7 and 8 under Schedule A. The Rules under section 5 specific to these metrics refer to “the number of service faults for end users”. The tables in Metrics 7 and 8, however, specify the “total number of services with a fault”. The metric tables should be amended to specify the “total number of faults” for each geographic location and access network, consistent with the requirement in sections 5(7) and 5(8).

In NBN Co’s interpretation of the ACCC’s current drafting, to report on the number services with a fault would mean that one count per service would be captured even if more than one fault had been reported, investigated and rectified by NBN Co for that service within the reporting period. By measuring



the “total number of Faults”, these metrics would capture all relevant fault rectifications in the reporting period. This suggested approach is consistent with what is currently measured under the terms of the WBA and will ensure the RKR metrics are aligned with what is provided to RSPs.

Records that provide insight on the number of services experiencing recurring faults would still be addressed under Metric 11.



8. Right-First-Time connections and those requiring additional work

ACCC proposed reporting

Proposed metric 4

The ACCC proposes that NBN Co report on the number of Right-First-Time connections and New Service Never Worked physical connections; and the time take to rectify and confirm active connection.

The ACCC has proposed a definition of New Services Never Worked to clarify one element of this metric as “a fault where a connection has been considered successful by NBN Co but the RSP subsequently identifies that the service is not working.”⁷

Comments on proposed Right-First-Time reporting

NBN Co confirms it will be able to supply the metric as proposed under Schedule A, Metric 4.

NBN Co suggests the proposed definition New Services Never Worked be amended to mean:

“an Ordered Product that was considered to have been successfully connected by NBN Co in respect of which:

(a) a Service Fault Trouble Ticket was raised within 20 Business Days of the Ordered Product being connected; and

(b) upon investigation of the Service Fault, NBN Co subsequently identified that the Ordered Product had never worked.”

This amendment will better reflect what occurs in practice to these fault types and also provides clarity to the data proposed to be provided in Metric 4 Right-First-Time Connections.

⁷ ACCC, *Draft NBN service quality and network performance Record Keeping Rule*, clause 4(1)(dd), p4.



9. Service Transfers

ACCC proposed reporting

Proposed metric 5

The ACCC proposes that NBN Co report on service transfers disaggregated according to service transfer type, access network type and geographic location.

Comments on proposed Service Transfer reporting

NBN Co confirms it will be able to supply the metric as proposed under Schedule A, Metric 5.

It should be noted that reversals and connect outstanding transfers will be dependent on RSP activity, including whether these order types are flagged instead of a service transfer. NBN Co has limited visibility of why an RSP chooses to use one transfer process over another though there are provisions under the *C647:2023 NBN Access Transfer Code*⁸ that guide RSPs on the relevant processes to use in certain circumstances.

We note the ACCC intends to use this data to highlight the extent of incorrect or inadvertent transfers due to systemic technical or process issues. Care will need to be taken in using these metrics to determine if a systemic issue is present. There will be a portion of transfers that are 'invalid' (i.e., as the ACCC has described, "are unauthorised, placed in error as a result of technical irregularity"⁹) that aren't necessarily corrected by using the Reversal transfer order type. For example, NBN Co is aware of instances where a losing RSP will simply issue a new transfer order to take the service back rather than the Reversal order type being utilised. There may also be instances in which the reversal period as nominated by the Code has passed and therefore a Reversal Transfer cannot be requested.

⁸ [Communications Alliance - C647:2023 NBN Access Transfer \(commsalliance.com.au\)](https://commsalliance.com.au)

⁹ ACCC, *Draft Record Keeping Rule – NBN service quality and network performance Consultation paper*, December 2023, p10.



10. Performance Incidents

ACCC proposed reporting

Proposed metric 9

The ACCC proposes that NBN Co report on the number of services with Performance Incidents and the time taken to rectify these by timeframe, geographic location and access network type; and the number of relevant services that are designated for Network Activity.

Comments on proposed Performance Incident reporting

NBN Co confirms it will be able to supply the metric as proposed under clause 5(9) and Schedule A, Metric 9 on the basis that the proposed metric is aligned with what has been negotiated and agreed with RSPs under the terms of the WBA, including the relevant definition.

NBN Co notes the ACCC has suggested a definition of 'Performance Incident' that differs from the definition used for the same term in the WBA Dictionary. Our current reporting and confirmation that we will be able to supply the ACCC's proposed Metric 9 is based on the way we measure Performance Incidents in existing reports supplied to RSPs. These have been developed in accordance with the 'Performance Incident' definition under the WBA Dictionary. Therefore in order for reports provided to the ACCC to fulfil the RKR to be consistent with our operational practice, NBN Co recommends the "Performance Incident" definition proposed under section 4(ff) be amended to better align with the WBA. That is, amend to "*Performance Incident* means a "*Performance Incident*", as that term is defined in the WBA Dictionary, in respect of which a Trouble Ticket that has been accepted by NBN Co." This would alleviate any unintended consequences of having to create an entirely new reporting line simply due to differences between the two definitions.

Clarification of access networks

We note that Metric 9 under Schedule A requires data to be provided for FTTN, FTTC and HFC access networks only. For consistency between the two sections of the RKR, it would be useful for clause 5(9) to also identify those network access types to which the metric applies.

Alignment on performance incidents reporting

In similar fashion to the commentary provided above on Metrics 7 and 8 for service faults, NBN Co recommends Metric 9 and clause 5(9) be amended to refer to the "total number of Performance Incidents" instead of the "total number of services with a Performance Incident". This amended approach will enable the RKR to be more consistent with the reporting currently provided to RSPs to advise them of our Performance Incident activity.



11. Network Faults

ACCC proposed reporting

Proposed metric 10

The ACCC proposes that NBN Co report on the number of Network Faults and the time taken to rectify according to state and territory, number of services impacted and rectification timeframes.

The ACCC has also proposed “a network fault be defined as a Service Fault or Enterprise Ethernet Fault affecting multiple Ordered Products.”¹⁰

Comments on proposed Network Fault reporting

Subject to a necessary definitional change, NBN Co confirms it will be able to supply the metric as proposed under clause 5(10) and Schedule A, Metric 10.

The definition proposed for Network Faults includes reference to Enterprise Ethernet which is inconsistent with the intended scope of the RKR (that is, **nbn**® Ethernet services). NBN Co appreciates that the inclusion of Enterprise Ethernet in this instance is a consequence of the definition replicating the WBA Dictionary term. However, consistent with our comments about the scope of this RKR, NBN Co recommends this reference to Enterprise Ethernet be removed.

NBN Co notes there will be a small portion of Network Faults that are not location specific but are still classified as Network Faults due to their impact either on non-location specific components of the **nbn**® network; or which impact a number of end users, including across one or more state boundaries. A relevant example could be a software fault. To cater for these types of network faults, NBN Co suggests it would be prudent to include an additional line for each relevant table with the sub-title “Non-location specific network faults” and enable appropriate clarification for the full total of faults.

We appreciate that the ACCC has proposed to align the reporting with the existing Priority levels that nbn utilises for reporting / actioning Network Faults and which are associated with the volume categories set out next to each Priority. In our further review of the detailed Draft RKR and considering implementation, it is apparent there may be some instances where the Priority level applied to a Network Fault (and therefore the rectification service level) may be as a result of factors other than just the number of services impacted. There may be a small number of cases, then, where a Network Fault with a designated Priority applies to a number of services other than the volume generally associated with that Priority Level. For example, there may be an occasion where a Network Fault impacting 600 services is treated as a Priority 1 due to the severity of the fault impact.

Given the potential volume of such instances is immaterial, we do not propose changes to the substance of the reporting but it would be beneficial for the RKR to include an appropriate caveat. For example, the references to services impacted such as ‘>5,000 services impacted (Priority 1)’ could be reversed to read ‘Priority 1 (>5,000 services impacted)’ and a qualifying note included for these labels to the effect of

¹⁰ ACCC, *Draft NBN service quality and network performance Record Keeping Rule*, clause 4(3), p4.



'There may be a small number of Network Faults under a designated priority level which impact a different volume of services different to the standard volume associated with that priority level.'



12. Recurring Faults

ACCC proposed reporting

Proposed metric 11

The ACCC proposes NBN Co report on the number of services experiencing more than 3 faults in any 60-day reporting period or experiences 4+ service faults in any 12-month period, by geographic location and access network type.

Comments on proposed Recurring Fault reporting

NBN Co confirms it will be able to supply the metric as proposed under clause 5(11) and Schedule A, Metric 11.

NBN Co wishes to reiterate that an interpretation of NBN performance by this metric will be limited because the capture of recurring fault activity is heavily dependent on RSP behaviour. For example:

1. Fault symptoms and the way they are reported to NBN Co are dependent on an individual end-user and the RSP agent treating each individual fault incident consistently. While more than 3 or 4 service faults may be captured within the time periods specified under metric 11, they may be subject to variation on the symptom types captured. This metric should not be interpreted solely as a failure on NBN Co's part to rectify a particular service fault.
2. An RSP has the opportunity to review rectification activity of a service fault within 2 business days to confirm a fault ticket can be closed. If this action is not taken within that timeframe or a response provided correctly, that fault ticket is closed by NBN Co. Then, if the fault symptoms are still present, the RSP will need to submit a subsequent fault ticket which would follow the normal investigation and rectification process. In this instance, two separate faults will be registered in accordance with the rules of this metric. If the RSP does indicate that the rectification activity has not satisfactorily resolved the fault, the original fault ticket would keep being actioned, resulting in a longer rectification timeframe recorded but will not necessarily be determined as a recurring fault.



13. Dropouts

ACCC proposed reporting

Proposed metric 12

The ACCC has proposed NBN Co report on the number of services experiencing dropouts by access network type (excluding Fixed Wireless and Satellite), geographic location and volume of dropouts.

Comments on proposed Dropout reporting

NBN Co confirms it will be able to supply the metric as proposed under clause 5(11) and Schedule A, Metric 11.

We thank the ACCC for its recognition that data on the number of services experiencing dropouts supplied under this Metric should not imply that the dropouts experienced relate solely to the performance of the **nbn**® network.¹¹ This metric will include data derived from dropouts recorded as a result of end-user activity such as disconnecting the modem within their premises, in-home wiring issues, power outages, a planned outage occurring within the premises' area, RSP activity including firmware updates that trigger a resync to the service, or other 3rd party activities.

NBN Co recommends any publication of the data included in this metric should always be accompanied by this clarification so that the data and the nature of dropouts more generally is accurately represented, and the limitation on drawing insights from the data is well understood.

¹¹ ACCC, *Draft Record Keeping Rule – NBN service quality and network performance Consultation paper*, December 2023, p11.



14. Planned and Emergency Outages

ACCC proposed reporting

Proposed metric 13

The ACCC has proposed NBN Co report on planned outages by:

- a) “the volume of Planned Outages by timeframe, duration, and network access type.
- b) the percentage of Planned Outage notifications by timeframe prior to the outage, and access type.
- c) the percentage of Planned Outages which occurred within the proposed scheduled window as contained in the Planned Outage notice by network access type.
- d) the volume of Emergency Outages by timeframe, duration, and network access type”.¹²

The proposed definition of ‘Planned Outage’ means “in relation to a Product, an outage notified by NBN Co to RSP.”

The proposed definition of Emergency Outage is noted as “an Outage which NBN Co reasonably determines to be necessary to respond to the occurrence of:

- a) An Emergency, a Service Fault, a Performance Incident or an Enterprise Ethernet Fault; or
- b) An emergency, a service fault, a performance incident of an enterprise ethernet fault under an Other Wholesale Broadband Agreement; or
- c) Any circumstance that is likely to give rise to an event set out in paragraphs (a) or (b). “

Comments on proposed Planned and Emergency Outage reporting

While NBN Co is able to provide reporting that largely aligns with the proposed Planned and Emergency Outage reporting, there are some changes required to the proposed metric to ensure that it reflects the actual data that NBN Co is capable of reporting against. Specifically:

1. Definitions:

- a. The definition proposed for Emergency Outage under clause 4(i) includes reference to Enterprise Ethernet. NBN Co notes that the proposed definition drafted seems to have been drawn from the WBA Dictionary terms. However, consistent with our comments about the scope of this RKR, NBN Co recommends this definition be amended to “*Emergency Outage*” means an Outage in relation to one or more nbn Ethernet Ordered Products which NBN Co reasonably determines to be necessary to respond to the occurrence of...”. We also suggest clarifying reference to Performance Incident under 4(i)(a) to be consistent with our proposed amendments to the Performance Incident definition under clause 4(ff). Clause 4(i)(a) would read “*An Emergency, a Service Fault, a Performance Incident (as that term is defined in the WBA Dictionary) or an Enterprise Ethernet Fault; or*”

¹² ACCC, *Draft Record Keeping Rule – NBN service quality and network performance Consultation paper*, December 2023, p9.



- b. The definition of Planned Outage is broadly drafted and may be interpreted to include Emergency Outages as well as those planned outages NBN Co has arranged further in advance in accordance with its arrangements with RSPs under the WBA. NBN Co suggests that clarification be provided in the RKR definition of Planned Outage so that the metrics for both Planned and Emergency Outages can be reported on separately as suggested in the tables of Schedule A, Metric 13. To this end, NBN Co suggests clause 4(hh) be amended to:

“Planned Outage’ means an Outage in relation to one or more nbn® Ethernet Ordered Products that is notified by NBN Co to RSP and is not an Emergency Outage.”

2. Reference to ‘Outages Timeframes’

When a planned outage occurs, NBN Co records the start and end time of the technician’s onsite activity. However, this does not necessarily reflect the actual outage time experienced by end users (which will generally be shorter than the time a technician is undertaking work). We are concerned that the ACCC’s reference of ‘Outage Timeframes’ and ‘Outage Duration (average)’ has not factored this in and requires a real time outage duration to be recorded.

To ensure the proposed metric reflects NBN Co’s current procedures, NBN Co proposes in the tables titled ‘Planned Outages by volume and timeframe’ and ‘Emergency Outages by volume and timeframe’ that the sub-heading ‘Outages Timeframes’ is amended to ‘Change Windows’. This is the term NBN Co uses with RSPs to define the start and end timeframes of the technician’s onsite activity.

If the ACCC is aligned with NBN Co’s proposal (or can confirm it is comfortable for NBN Co to maintain its existing procedures and reflect this in the report), NBN Co would be able to provide this information in its RKR Report. If NBN Co were required to measure and report the actual outage duration for all services, this would have significant impact from a network telemetry perspective. In order for NBN Co to measure actual downtime for even a sample set of impacted services, additional IT and network development work would be required.

<Commercial-in-confidence>

3. Outage Duration (average)

As mentioned above, NBN Co does not record the actual outage duration time (i.e., service downtime) for each outage. When reporting ‘Outage Duration (average)’ NBN Co is currently able to provide an estimated average based on the estimated time of interruption (ETI) that we communicate with RSPs to share with their customers. NBN Co recommends the RKR clarify this by amending this field in each relevant table to ‘Estimated Outage Duration (average)’.

4. Time majority of outage took place

We understand the intention is to measure whether >50% of the outage took place either between 6am – 10.59pm or 11pm – 6am (i.e., the maintenance window). Reporting against this component of the metric (as NBN Co is interpreting the data point) will be dependent on systems build, as current reporting systems would not enable this metric to be reported easily. Under existing reporting systems, and without strategic systems build, NBN Co is unable to report on the ‘Time majority of outage took place’ component of this metric – i.e., cannot be delivered via a tactical solution.



It is therefore proposed that Metric 13 is implemented in 2 phases. Assuming that the ACCC adopts NBN Co's recommendations in relation to Metric 13 above into the final RKR, NBN Co confirms it could report on the data in Metric 13 with the exception of the table titled 'Time majority of outage took place' which would be required to be included once required systems development occurred.

NBN Co appreciates further discussion may be required regarding the implementation timeframes for this metric – as part of a broader discussion on the proposed staged implementation.



15. Speed performance: Fixed line

ACCC proposed reporting

Proposed metric 14

The ACCC has proposed NBN Co reporting speed performance for FTTP, FTTN, FTTC and HFC access networks by providing the estimated number of services capable of achieving maximum Data Transfer Peak Information Rates and the number of active services achieving maximum PIR for both downlink and uplink.

Comments on proposed fixed line speed performance reporting

NBN Co confirms it will be able to supply the metric as proposed under clause 5(14) and Schedule A, Metric 14.

While a minor point, it may assist consistency between section 5(14) and metric 14 in Schedule A to amend the sub-headings used in the metric tables to refer to the "...number of fixed line services..." rather than "premises". We understand it is the ACCC's intention for NBN Co to measure data on a per service basis, particularly as there may be more than one service active at a premises (e.g. in the FTTN access network) with different speed characteristics.



16. Speed performance: Fixed Wireless

ACCC proposed reporting

Proposed metric 15

The ACCC has proposed NBN Co reporting speed performance for its Fixed Wireless access network by providing:

- a) “The monthly Percentage of Fixed Wireless cells and Fixed Wireless Services in Operation with an average monthly busy hour downlink and uplink performance in specified speed tiers.
- b) The monthly average number of hours a day cells spent in specified downlink speed tiers.
- c) The monthly percentage of Fixed Wireless cells on a backhaul link with a 28 day busy hour link packet loss of less than 0.25% (to 2 decimal places).
- d) The monthly average busy hour downlink and uplink performance of services on the Fixed Wireless Home Fast and Fixed Wireless Superfast plans.
- e) The monthly total Fixed Wireless cells, congested cells, backhaul links, congested backhaul links, LOC IDs of Fixed Wireless congested cells, LOC IDs of congested Fixed Wireless backhaul links, and list of Priority Forecast Upgrade cells.
- f) The number of Fixed Wireless premises upgraded during the reporting period and the number of premises migrated from NBN Satellite to the NBN Fixed Wireless network by State and Territory.
- g) The number of Fixed Wireless premises on a version 1, version 2, version 3 or version 4 W-NTD.”¹³

Comments on proposed Fixed Wireless speed performance reporting

NBN Co confirms it will be able to supply the metrics as proposed under clauses 5(15) (f), (g) and relevant metrics outlined for these Rules under Schedule A, Metric 15.

NBN Co would like to propose alternative reporting, however, to the reporting requirements described in in clauses 5(15) (a), (b), (c), (d) and (e). We consider that the proposed reporting requirements in these sections are no longer suitable for reflecting end-to-end speed performance under the current and future Fixed Wireless network configuration. Over the course of the Fixed Wireless transformation program, NBN Co has evolved the internal reporting it considers best monitors the performance experienced by users of the network. NBN Co appreciates the focus of engagement with the ACCC to date has been around our existing reporting / capability and how that may be updated for the RKR. While NBN Co's recommended alternative is a significant shift in the approach to Fixed Wireless reporting, we consider this is a beneficial change from a consumer, RSP, ACCC and NBN Co perspective. Further detail on the proposed alternative reporting is set out below.

Rule 5(15)(a) proposes reporting on the performance of individual Fixed Wireless cells and time spent in specified “speed tiers”. While this approach has made sense in relation to the Fixed Wireless network of years past, the transformation of the Fixed Wireless network through the introduction of carrier

¹³ ACCC, *Draft NBN service quality and network performance Record Keeping Rule*, clause 5(15), pp9-10.



aggregation in recent years means that the rule as proposed would not give the ACCC a genuinely meaningful view of the performance of the Fixed Wireless Network, either on the downlink or uplink.

Under the Fixed Wireless network transformation, services are now supplied via multiple 4G, and now also 5G, cells grouped together as shared wireless segments (or groups) through several key radio network features including Dual Connectivity (for WNTD version 4 devices), Carrier Aggregation (for WNTD versions 3 and 4) and Inter-Frequency Load Balancing (for all WNTDs). This enables the aggregation of capacity across multiple network cells and, rather than connecting to a single network cell, users connect to a “cell group”. In this context, single cell performance reporting is largely redundant, and may even give an entirely inaccurate impression of the actual consumer experience.

To accommodate and measure the impact of carrier aggregation within our own network, NBN Co has developed internal reporting which moves away from reliance of cell-based metrics towards a test method that is more aligned to representing the consumer experience. This method measures the potential downlink and uplink wholesale speeds achievable by end users active on the Fixed Wireless network using “TR143 speed tests”. TR143 speed testing was developed as part of the Government-NBN Co co-funded Fixed Wireless and Satellite Upgrade Program; and provides an accurate user-centric view of speed performance. Furthermore, TR143 speed tests are not limited by the wholesale speed tier provisioned at each end user premises, thus enabling NBN Co to determine the speed an end user *could* achieve (subject to their W-NTD version), rather than actual speed which may be limited by the wholesale speed tier.

NBN Co therefore proposes that clause 5(15) (a) be modified to report Network Performance based on cell groups, rather than individual cells. NBN Co proposes to collect data from TR143 speed tests conducted on services in each cell group during the busy period, between 7pm -11pm on both the Downlink and Uplink, calculating the average Downlink and Uplink speed for each cell group over the previous 30 days. NBN Co would provide a monthly percentage of the Fixed Wireless Network and Fixed Wireless Services in Operation within specified speed tiers. NBN Co proposes the following, revised speed tiers:

- Downlink: <25Mbps, 25-50Mbps, 50Mbps-75Mbps, 75Mbps – 100Mbps, 100-150Mbps, 150-200Mbps, 200-400Mbps, 400-600Mbps, 600Mbps+; and
- Uplink: <5Mbps, 5-8Mbps, 8-20Mbps, 20Mbps+.

An example of what this proposal would look like under Schedule A, Metric 15 is:

For Downlink

Fixed Wireless average busy period performance categories - Downlink			
Month	Network Busy Period performance category – Downlink	% of Fixed Wireless Network in category	% of Fixed Wireless Services in Operation (SIO) in category
[Insert]	≤ 25Mbps	[Insert]	[Insert]
	> 25Mbps to ≤ 50Mbps	[Insert]	[Insert]
	> 50Mbps to ≤ 75Mbps	[Insert]	[Insert]
	> 75Mbps to ≤ 100Mbps	[Insert]	[Insert]



	> 100Mbps to ≤ 150Mbps	[Insert]	[Insert]
	> 150Mbps to ≤ 200Mbps	[Insert]	[Insert]
	> 200Mbps to ≤ 400Mbps	[Insert]	[Insert]
	> 400Mbps to ≤ 600Mbps	[Insert]	[Insert]
	> 600Mbps	[Insert]	[Insert]

For Uplink:

Fixed Wireless average busy period performance categories - Uplink			
Month	Network Busy Period performance category – Uplink	% of Fixed Wireless Network in category	% of Fixed Wireless Services in Operation (SIO) in category
[Insert]	> 5Mbps	[Insert]	[Insert]
	> 5Mbps to ≤ 8Mbps	[Insert]	[Insert]
	> 8Mbps to ≤ 20Mbps	[Insert]	[Insert]
	>20Mbps	[Insert]	[Insert]

In relation to the metric proposed under clause 15(b), NBN Co reiterates that individual cell performance is not indicative of end user experience, and therefore requests that this metric be removed. In place of this particular rule, NBN Co proposes a new measure, set out below in relation to clause 15(e), which would achieve a similar purpose to the proposed clause 15(b).

NBN Co notes that while it can provide the information requested under clause 15(c), the TR143 testing described above gives an end-to-end view of network performance (encompassing the radio access network and backhaul links). While backhaul link health continues to contribute to the end user experience and NBN Co will continue to monitor and address backhaul performance in isolation, we do not think it is necessary to report of this segment explicitly since it is already factored into the TR143 performance data that would underpin the metrics provided under clause 15(a).

NBN Co proposes for metric 15(d) to collect all download and upload speed tests conducted over the previous 30 days during the busy period between 7pm -11pm. Using these speed tests, NBN Co will then calculate the average speed for:

- Fixed Wireless Plus by selecting conforming users and their speed tests, capping all downlink speed tests at 150Mbps and uplink speed tests at 30Mbps which are the maximum speeds achievable when the 50% overprovisioning boost applied (e.g. a speed test result of 200Mbps would be reduced to 150Mbps), then calculating the average downlink and uplink speed for this speed tier.
- Fixed Wireless Home Fast - by selecting conforming users and their speed tests, capping all downlink speed tests at 375Mbps and uplink speed tests at 30Mbps which are the maximum speeds achievable when the 50% overprovisioning boost applied, then calculating the average downlink and uplink speed for this speed tier.



- Fixed Wireless Superfast – by selecting conforming users and their speed tests, capping all downlink speed tests at 600Mbps and uplink speed tests at 60Mbps which are the maximum speeds achievable when the 50% overprovisioning boost applied, then calculating the average downlink and uplink speed for this speed tier.

NBN Co is proposing a number of changes to clause 15(e), which align with the above comments around the redundancy of reporting on individual congested cells. In place of these, NBN Co proposes to provide a more holistic representation of network performance reflecting the cell group performance across the entire day, i.e. during the Busy Period and “Rest of Day” (i.e. the hours outside the busy period).

In the example table set out below, NBN Co would collect the speed test data (from TR143) for each cell group during the Busy Period and Rest of Day period, over the previous 30 days and provide a percentage of the cell groups in the intersecting categories. The speed tier categories would include <25Mbps, 25-50Mbps, 50Mbps-75Mbps, 75Mbps – 100Mbps, 100-150Mbps, 150-200Mbps, 200-400Mbps, 400-600Mbps. The benefit of this approach is that it would give the ACCC a more accurate indication of the typical performance of cell groups and the variation of performance across a day. Importantly, it will also provide visibility over the percentage of cell groups that are performing at a suboptimal level. For example, we would expect that the cell groups that feature in the <25 Mbps category on both axes, would be subject to internal scrutiny around performance and targeted for measures that would improve performance.

		Busy Period (7-11pm)									Total
		<25 Mbps	25~50 Mbps	50~75 Mbps	75~100 Mbps	100~150 Mbps	150~200 Mbps	200~400 Mbps	400~600 Mbps	600+ Mbps	
Rest of Day (11pm-7pm)	<25 Mbps	%	%	%	%	%	%	%	%	%	%
	25~50 Mbps	%	%	%	%	%	%	%	%	%	%
	50~75 Mbps	%	%	%	%	%	%	%	%	%	%
	75~100 Mbps	%	%	%	%	%	%	%	%	%	%
	100~150 Mbps	%	%	%	%	%	%	%	%	%	%
	150~200 Mbps	%	%	%	%	%	%	%	%	%	%
	200~400 Mbps	%	%	%	%	%	%	%	%	%	%
	400~600 Mbps	%	%	%	%	%	%	%	%	%	%
	600+ Mbps	%	%	%	%	%	%	%	%	%	%
	Total	%	%	%	%	%	%	%	%	%	100%



NBN Co also proposes to remove the requirement to provide a List of Priority Forecast Upgrade cells which is currently required by the proposed rules in clause 15(e). Whilst we note that NBN Co currently provides a report setting out Priority Forecast Upgrade Cells to the ACCC on an informal basis, this is a legacy report which relies on an individual cell-based metric that has, again, been largely superseded by improved reporting reflecting the performance of cell groups. NBN Co does consider that it could provide some form of reporting on the location of cells that are, for example using the above table, located in the intersecting <25 Mbps categories.

Before the RKR is finalised, NBN Co would like to further discuss the above proposed reporting with the ACCC to ensure that the parameters of any such reporting requirement are appropriate and achieve the ACCC's desired purpose. Recognising that this is a significant change in approach to the reporting that has been discussed to date and existing public reporting on the Fixed Wireless network, we propose Metric 15 not be required for inclusion in the first report under the proposed staged implementation approach. Consistent with the need to ensure equivalent reporting applies to competing network operators, reporting on these measures under Metric 15 will be an integral part of the future RKR's applicable to competing fixed wireless network operators.



17. Network Traffic Delay

ACCC proposed reporting

Proposed metric 16

The ACCC has requested records for the number of exceedances of traffic frame delay equal to or above 5ms for Fibre, FTTB and FTTC networks, and 10ms for FTTN and HFC networks.

Comments on proposed Network Traffic Delay reporting

NBN Co maintains significant concerns with the proposed traffic delay metric. We understand the ACCC wishes to use this metric to measure congestion. Ongoing latency measurements are of limited use in understanding network congestion because they are hard to measure accurately, and either report low delay most of the time or degrade quickly as resources approach congestion. While seeking to understand a 'baseline' delay and delay variation of a technology may be useful, and while delay is an important consideration for certain services (for example, real-time communications, gaming, etc.), latency or delay on its own is a poor indicator of network congestion.

The investment required for NBN Co to report latency on every AVC, both in terms of establishing systems capable of supporting this level of reporting and amending the capacity of our management and reporting systems (to enable reporting of >8 million tests to be run every second), would be inefficient and would not necessarily deliver valuable insights on service performance.

For previous latency reporting NBN Co reported on a sample of between 100,000 and 200,000 services. We subsequently decommissioned this testing as the volume of data was beginning to impact core systems capabilities, specifically the measurement of utilisation for billing purposes.

The previous latency reporting capability (using ITU-T Y.1731) also discovered a significant variability in delay measurements due to the way the Network Termination Device (NTD) handles Operations, Administration, and Management (OAM) traffic. For HFC, OAM messages may be suppressed or delayed avoiding unnecessary upstream communication. For FTTP, OAM messages are not prioritised in current generation Optical Line Termination (OLT) devices. This results in higher reported latency that is not representative of network utilisation.

Applying this testing to all services would require significant system changes to enhance data storage & processing power in the order of 40,000 times the data storage.

Several alternative approaches have also been considered, including:

1. A significantly reduced sample using deployed (in service) NTDs. While this approach may be cost effective, the results will continue to be influenced by NTD implementation of OAM message processing, and the service (not the network) congestion.
2. Measuring the latency between the aggregate node and the access node only. While this option would likely yield a stable result, NBN Co believes this does not meet the requirements to measure end to end delay due to network congestion (for example, this option does not measure the contended resources of the HFC RF segment or optical PON in the access).
3. A dedicated service and NTD deployed for HFC and FTTP in NBN Co's facilities, where there is no additional service traffic. This may mitigate the variability of delay measurements due to service load. However the variability introduced due to NTD OAM processing would remain. This option is



also problematic for HFC where the NTD must be connected to an optical node, typically deployed in the field (outside plant).

4. Use the Shared Network Resource Utilisation metric report (as defined in this RKR response) to provide visibility of network congestion (**preferred**).

<Commercial-in-Confidence>

NBN Co is amenable to continuing discussions with the ACCC on possible future alternatives. However, NBN Co suggests that for the purposes of making this initial RKR, this metric not be included. The Shared Network Resource Utilisation reporting required under proposed Metric 17, which is also supplemented by additional reporting requirements in the SAU and WBA, has been established to provide visibility of potential congestion in the network and the inclusion of an additional traffic delay metric at this point in time could give rise to potentially inefficient and costly reporting while not delivering commensurate value from a network monitoring perspective.



18. Shared Network Resource Utilisation

ACCC proposed reporting

Proposed metric 17

The ACCC has proposed NBN Co provide records that indicate the number of times a shared network resource exceeded 90% utilisation for a continuous period of 30 minutes or more on at least 3 separate days within any rolling 30-day period, by aggregated access network types.

Comments on proposed Network Utilisation reporting

NBN Co suggests that the metric is amended to be defined consistently with the WBA service standards. The alignment will ensure the RKR metric remains meaningful and consistent with the WBA. The WBA Service Levels Schedule section 14.4(c) provides that NBN Co will take certain activity if nbn determines that:

- “(i) more than 90% of a Shared Network Resource has been utilised for a continuous period of 30 minutes or more on at least 3 separate days within any rolling 30-day period (**Utilisation Threshold**); and*
- (ii) the excess utilisation is not due to one-off network events (such as fail-over to a reduced capacity secondary link) or breach of the nbn® Ethernet Fair Use Policy.”*

Further, NBN Co suggests the definition of “Shared Network Resource” be amended to be consistent with the definition in the WBA. Section 14.4(a) of the WBA Service Levels Schedule states:

*“(a) **Shared Network Resource** means NBN Co’s transit backhaul network between the POI and the following point, by network:*

- (i) the OLT for the Fibre Network and FTTC Network;*
- (ii) the access aggregation switch for the FTTB Network and FTTN Network;*
- (iii) the cable modem termination system for the HFC Network; and*
- (iv) the combined packet gateway for the Wireless Network.”¹⁴*

NBN Co confirms it will be able to supply the metric as proposed under clause 5(17) and Schedule A, Metric 17, as amended by our suggestion above.

NBN Co suggests the fixed network access types that have been aggregated together as outlined in Metric 17 (e.g. FTTN and FTTB) also be described in the Rule under clause 5(17) to ensure consistency across the two sections of the RKR. As such, **NBN** Co recommends amending clause 5(17) to:

- (17) For each Reporting Period, NBN Co must establish and maintain an electronic record containing the number of times where:*
 - (a) the Shared Network Resource exceeded 90% utilisation for a continuous period of 30 minutes or more on at least 3 separate days within any rolling 30 day period, by aggregated access networks, i.e.:*
 - i. FTTP and FTTC Networks:*
 - ii. FTTB and FTTN Networks:*

¹⁴ NBN Co, WBA Service Level Schedule – nbn® Ethernet Product Module, p32.



- iii. HFC Network; and*
- iv. Fixed Wireless Network; and*
- (b) the excess utilisation is not due to a one-off network event (such as fail-over to a reduced capacity secondary link) or breach of the nbn® Ethernet Fair Use Policy.*



19. Network Activity

ACCC proposed reporting

Proposed metric 18

The ACCC has proposed NBN Co report on the number of services designated for Network Activity according to the following categories:

- a) Completed during the Reporting Period, by various timeframes from the date of designation,
- b) As at the end of the Reporting Period, by various timeframes from the date of designation,
- c) Transferred to the FTTP Upgrade program during the reporting period, by various timeframes from the date of designation.¹⁵

Comments on proposed Network Activity reporting

NBN Co confirms it will be able to supply the metric as proposed under clause 5(18) and Schedule A, Metric 18.

As mentioned above, a component of Metric 18 seeks data on those services designated for Network Activity to be addressed via the current Fibre Upgrade program. This component of the metric will not be required once the Fibre Upgrade program has been completed. NBN Co suggests this component of the metric be reviewed at that point (and potentially removed) to ensure the metric can reflect up to date activity.

¹⁵ ACCC, *Draft NBN service quality and network performance Record Keeping Rule*, clause 5(18), p10.



20. FTTP upgrades

ACCC proposed reporting

Proposed metric 19

The ACCC has proposed NBN Co reporting the number of premises upgraded to FTTP from FTTN, FTTC and Fixed Wireless Networks by Design, Construction, Ready to Order and Connected status in the reporting period.

Comments on proposed FTTP upgrade reporting

NBN Co confirms it will be able to supply the metric as proposed under clause 5(19) and Schedule A, Metric 19.

As mentioned above, the Design, Construction and Ready to Order steps of the Fibre Premises Upgrade program are estimated to be completed by the end of 2025 and, as a result, likely to conclude prior to the end of the proposed RKR 5-year term. As NBN Co's activities under the current Fibre Upgrade programs are progressively completed, NBN Co suggests the ACCC consider removing this metric from the RKR once the program has concluded to the point where nominated premises have been made Ready to Order.



21. Rebates

ACCC proposed reporting

Proposed metric 20

The ACCC has requested records outlining:

- a) The number of services for which a Rebate was payable by NBN Co by rebate category and access type.
- b) The number of services for which a Rebate was capped by rebate category and access type.
- c) The percentage of Rebates paid in the Reporting Period which was longer than two billing cycles since confirmation of the Rebate.

Comments on proposed rebate reporting

NBN Co wishes to reiterate the inclusion of this metric does not provide additional insight regarding service quality or network performance. The metrics 1-9 provide detailed insight into the connection, assurance and appointment activity where failure to meet a service level may trigger a rebate. NBN Co believes those metrics above adequately provide the ACCC with an indication of any systemic issues arising.

NBN Co provides individual RSPs with separate and detailed reports of orders or tickets to which a rebate may be applicable in addition to the invoices that denote the sum total of the rebate amounts that apply to them. To fulfil Metric 20 in its aggregated fashion across network access types and rebate category, including the number of rebates that have been capped, will entail additional and separate system development for the purposes of this RKR.

NBN Co is not convinced this additional development and cost is justifiable given the other metrics included in the proposed RKR would provide the ACCC with the same insights it is seeking from Metric 20.

<Commercial-in-confidence>



22. Corrective Action

ACCC proposed reporting

Proposed metric 21

The ACCC has proposed NBN Co provide records containing Corrective Action information taken by NBN Co in circumstances where meeting Performance Objectives are not met.

Comments on proposed corrective action reporting

NBN Co confirms it will be able to supply the metric as proposed under clause 5(21) and Schedule A, Metric 21. However, NBN Co suggests there is limited value in reporting on a corrective action plan for each instance, especially where an identified underperformance for a performance objective is rectified quickly and we meet the performance objective the following month. In these instances the underperformance could be due to immaterial or non-systemic issues unrelated to actual service performance (e.g., system issues that impact reporting) or due to short duration events, e.g. adverse weather events, and therefore no further correction action is required.

NBN Co would therefore propose including in the RKR a summary of that corrective action which relates to Performance Objectives where **nbn** has failed to meet the performance objective for 3 consecutive months. We think this would help balance reporting so that the RKR reflects corrective action that seeks to address material and systemic service performance concerns.

Below is an example of NBN Co’s proposed amended report:

Activity	Performance Objective	Month	% Achieve Service Level	Reasons for not meeting Performance Objective	Corrective Action proposed to meet the Performance Objective
Standard Connections	90% or more	Month 1	88%		
		Month 2	87%		
		Month 3	88%		



23. Network Availability

ACCC proposed reporting

Proposed metric 22

The proposed metric would require NBN Co to report on Network Availability in two forms:

- (1) Network Availability excluding Planned Outages and Force Majeure events; and
- (2) Network Availability including Planned Outages and Force Majeure events.

Comments on proposed network availability reporting

NBN Co has two concerns with Metric 22 as proposed in the draft RKR:

1. Counter to purpose of Network Availability measurement

Network Availability (as currently reported under WBA and transparency metrics on the **nbn**® website) is designed to demonstrate the reliability of the nbn network – hence the exclusion of those events outside NBN Co’s control or where the network is unavailable due to planned works (e.g. to perform network upgrades). This is supported by the high-performance objective for Network Availability under the WBA (99.9%). Adding in the excluded events to create a secondary Network Availability metric runs counter to what the measure is intended to demonstrate and would result in a measure that is consistently inconsistent / difficult to draw insights from.

A significant proportion of NBN Co’s planned outages are related to network upgrades, particularly for the HFC access technology. Incorporating planned outages into a Network Availability metric, even if done through a bifurcated metric, risks giving rise to incorrect incentives from a network upgrade perspective. That is, if Network Availability is analysed with reference to planned outages, NBN Co may be incentivised to delay network upgrades in order to ensure Network Availability remains at a particular level.

2. Including Planned Outages and Force Majeure events in Network Availability calculation is not possible under existing methodology and reporting systems

Network Availability under the WBA **nbn**® Ethernet Service Levels Schedule (14.2 (c)) is calculated as follows:

$$\frac{(\text{Measurement Period} - \text{Unavailable Time})}{\text{Measurement Period}} \times 100^{16}$$

NBN Co determines the *Unavailable Time* based on the time NBN Co is restoring services following a valid trouble ticket being raised and accepted by NBN Co. The calculation of NBN Co’s current Network Availability reporting does not require NBN Co to ‘extract’ the time allocated to force

¹⁶ NBN Co, WBA Service Level Schedule – nbn® Ethernet Product Module, p30..



majeure events or planned outages, rather these are not part of the calculation. In other words, it is not simply a case of adding these amounts back in to the calculation in order to deliver the second part of the ACCC's metric.

As noted above in NBN Co's commentary on Metric 13, our current processes are designed to measure estimated planned outage duration times and do not use the same calculations as network faults. Including planned outages as an additional component of the table asking for network availability would not provide an accurate percentage. In keeping with the IT and network development work highlighted under Metric 13, inclusion of these events would require a fundamental change to how the network availability metric is calculated and incur significant additional cost.

Accordingly, Metric 22 should be amended to reflect the existing metric set out in section 14.2 of the **nbn**® Ethernet Service Levels Schedule and against which NBN Co reports to RSPs on a monthly basis, and the table that includes planned outages and force majeure events removed.

Finally, NBN Co suggests that clause 5 (22) be amended to better clarify that the relevant metric for the Satellite network will be provided in a separate table rather than an inclusion in the metric outlining availability across all other networks. This will aid consistency across the two sections of the RKR relevant to this metric. For example, "*For each Reporting Period, NBN Co must establish and maintain an electronic record showing Network Availability as*

- (a) a percentage across the NBN Co Network excluding Planned Outages, Force Majeure events and the Satellite Network; and*
- (b) a percentage across the NBN Co Satellite network, excluding Planned Outages and Force Majeure events."*



Disclaimer

This document is provided for information purposes only. This document is subject to the information classification set out on this page. If no information classification has been included, this document must be treated as 'nbn-Confidential: Commercial' and must not be disclosed other than with the consent of NBN Co. The recipient (including third parties) must make and rely on their own inquiries as to the currency, accuracy and completeness of the information contained herein and must not use this document other than with the consent of nbn co.

Copyright © 2024 nbn co limited. All rights reserved.