Proposed Record Keeping Rule – nbn service performance

nbn response to ACCC consultation paper

February 2023

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1 Executive Summary

nbn welcomes the opportunity to respond to the ACCC's proposed Record Keeping Requirements (**RKR**) consultation paper issued in December 2022 (the **Consultation Paper**). As outlined in our supporting submission to the proposed SAU variation lodged in November 2022 (the **Variation**), **nbn** 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. Reporting commitments help ensure that RSPs and end users are protected to the extent that any commercial incentive to reduce maintenance costs or investment in network upgrades exceeds the reputational, market share and revenue impact disincentives of reducing network quality.

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

In determining what network reporting commitments should be included in the proposed RKR, it is essential that the underlying purpose of each commitment is clear. Reporting commitments should reflect the network and operator's capabilities, and seek to provide appropriate RSP and regulator insight into network performance without introducing inefficient cost and processes. Where the network operator would be required to invest significant cost and resourcing to deliver new reporting, the net incremental value of such reporting must be clear.

nbn has considered each of the proposed reporting requirements set out in the Consultation Paper in respect of **nbn®** Ethernet services. While the general areas covered by the proposal (e.g. connections, assurance, appointments, outages, speed performance) are appropriate for providing the ACCC and industry with insight on network performance, the details of a number of proposed metrics raise significant concerns. Specifically, implementation costs for a range of the reporting proposals would be substantial, and the incremental value of such reporting not justified given the potential cost and network constraints. In addition to identifying where specific metrics are not fit-for-purpose, **nbn** has sought to identify practical alternatives where possible.

It is critical that competing networks are subject to equivalent transparency requirements to those that are placed on **nbn**. This will ensure that RSPs and other industry participants have an appropriate view of key indicators in order to compare service quality – which is identified as a key objective of the RKR proposed for **nbn**. **nbn** understands that the ACCC intends to achieve this through establishing an initial RKR for **nbn** and subsequently considering appropriate commitments for SBAS operators in a separate instrument. **nbn** considers that a preferable approach is to determine the record keeping requirements that will apply to **nbn** and competing operators simultaneously – even if determined in separate RKRs. This will ensure that:

(1) industry participants have transparency of the same network performance measures for each network (and are able to compare like-for-like measures); and
(2) the feasibility, value and cost impact of particular reporting measures is considered for all relevant networks simultaneously.

In determining the competing networks to which reporting requirements should apply, it is important that it is not limited to Superfast Broadband Access Service (**SBAS**) providers as is contemplated in the Consultation Paper. The current SBAS service definition does not include mobile and fixed wireless networks and **nbn** considers it is essential that these networks are subject to equivalent reporting requirements, given the significant and increasing competition **nbn** faces from these networks.[1]

In order to assist the ACCC in its consideration of the proposed RKR **nbn's** submission is set out as follows:

- **Section 2** provides an overview of **nbn**'s responses to the questions set out in the ACCC's Consultation Paper;
- **Sections 3 to 17** provide a detailed consideration of each metric in the Consultation Paper, along with proposed alternative reporting that **nbn** considers will deliver appropriate transparency for industry while avoiding unnecessary or inefficient cost in changes to the network or reporting systems.

nbn is committed to continued improvement of service quality – and appreciates the value placed on service performance and network quality by end users, RSPs and other industry participants. We look forward to continued engagement with the ACCC on the proposed RKR in order to deliver on transparency commitments that deliver for all of industry.

[1] **nbn**, nbn Special Access Undertaking Variation 2022 – Supporting submission, pp.25-39

2 Questions for stakeholders

1. **Are the service aspects, service level metrics and proposed data set out in Attachment A appropriate for an RKR for NBN Co?**

   nbn has provided responses to each of the proposed metrics for **nbn**® Ethernet in sections 3 to 17 below, and alternative metrics where appropriate.

2. **To what extent should the service aspects, service level metrics and proposed data set out in Attachment A also apply to SBAS providers?**

   With the exception of those metrics specific to **nbn**'s fibre upgrade program, it is critical that all metrics set out in the proposed RKR for **nbn** are applied to competing network providers. This is not limited to SBAS providers but also includes 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** reporting on these metrics will only be delivered if competing networks are subject to the same reporting requirements. In order to achieve this, **nbn** recommends that reporting commitments for both **nbn** and competing networks are established at the same time – rather than developing an RKR that applies to **nbn** in isolation and a subsequent RKR that provides alternative requirements for competing networks. While there may be important terminology considerations when considering **nbn** 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 and therefore developed simultaneously.

3. **Should there be a threshold regarding SBAS network scale (e.g., number of end-users connected) before the provider is subject to an RKR for service quality and performance metrics?**

   nbn considers that the proposed RKR for service quality and performance metrics should apply not only to SBAS networks but mobile and fixed wireless networks providing superfast broadband services. To the extent that specific networks are excluded from the RKR the benefits of excluding these networks should be clear.

4. **Should more or fewer metrics form part of the RKR? Could the proposed metrics be more clearly expressed or defined? If so, please provide details of any suggested changes and the reasoning supporting the changes proposed?**

   nbn has provided responses to each of the proposed metrics in sections 3 to 17 below, and alternative metrics where appropriate.

5. **For the RKR for NBN Co we are considering using the definitions of key terms such as connections, faults, outages, performance incidents/dropouts etc currently used by NBN Co in its Wholesale Broadband Agreement. Are there any issues in adopting this approach?**

   nbn supports this approach. In order to ensure reporting obligations reflect **nbn**'s existing operations, processes, and contractual commitments, the RKR commitments proposed to apply to **nbn** should adopt this terminology where appropriate.

6. **We are considering collecting data disaggregated by access network type and relevant location / geographic area. In addition, in Attachment A we have proposed the disaggregation of data which is specific to certain data items. We are seeking views on whether the levels of disaggregation proposed allow for appropriate monitoring and transparency of service quality and performance.**

   Disaggregation according to network type and geographic area may provide appropriate insights into network performance for certain metrics, but is not necessary or appropriate for all proposed metrics. **nbn** has outlined in sections 3 to 17 below where it considers network type or geographic area disaggregation is relevant for specific performance measures.

7. **We are considering bi-annual (June and December) reporting with quarterly data to be provided. Is this reporting frequency suitable for reporting under an RKR for NBN Co?**

   nbn supports a bi-annual reporting process which delivers a view of performance for the previous two quarters. A key consideration from a resourcing perspective is that **nbn** is already required to undertake significant reporting processes immediately following the end of financial year and calendar year periods. To allow sufficient time for collation and checking of data, **nbn** proposes that reporting be provided two months after the end of the relevant reporting period. For example, performance for calendar Q1 and Q2 are reported at the end of August and performance for calendar Q3 and Q4 are reported at the end of February. Based on this approach, **nbn** would deliver the first report in February 2024 to capture the quarters ending September and December 2023.

   As detailed in **nbn**'s response to individual metrics, there are significant concerns with **nbn**'s ability to report a number of items proposed by the ACCC. **nbn**'s support of the bi-annual reporting process and initial proposed report in February 2024 assumes that the RKR reflects the reporting metrics **nbn** has proposed in this response.

3 Connections and assurance

3.1 ACCC proposed reporting

Proposed reporting items 1, 2, 3, 4, 5, 7, 8, 9

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 example, the proposal suggests that for Standard Connections **nbn** reports:

Connections not requiring nbn technicians

- total number of connections not requiring technicians;
- number of connections completed in **1 business day**;
- number of connections completed in **2-5 business days**;
- number of connections completed in **6+ business days**; and
- the average time to complete all connections.

Connections requiring nbn technicians

- total number of connections requiring technicians;
- number of connections completed in **<=5 business days**;
- number of connections completed in **6-10 business days**;
- number of connections completed in **11+ business days**; and
- the average time to complete all connections.

While the timeframes for specific connection and assurance categories is different, and disaggregation according to technician attendance is not always applicable, this example reflects the approach proposed for the majority of connection and assurance reporting items.

3.2 Comments on proposed connection and assurance reporting

If reporting connection and assurance timeframes is intended to assist RSPs and end users in comparing **nbn** performance with alternative networks, or to identify areas where **nbn**'s performance may be enhanced, it is important that reporting of these timeframes is provided in the context of applicable service levels. Reporting on connection or assurance timeframes according to specified Business Days, without consideration for the reasonable time that the relevant activity should take, provides a data point that is of limited utility. For example, a view of the total number of 'technician required' connections completed within <=5 Business Days lacks the context of the service level within which those connections should reasonably have been completed (which could be up to 19 Business Days). In this respect, determining the appropriate disaggregation and reporting timeframes is critical for ensuring the report can serve its transparency objectives.

As noted above, the ACCC has proposed that data is disaggregated according to geographic location and service class. While reporting on this disaggregated basis is appropriate, **nbn** considers:

1) **Reporting against applicable service levels provides the appropriate measure for tracking network performance:** The timeframes which **nbn** is proposed to report against should reflect the service level within which **nbn** is expected to connect or assure services. For example, Service Class 1 premises in urban areas have a connection service level of 14 Business Days. Rather than reporting volumes connected within 1, 2 and 5 Business Days (technician not required) and <=5, 6-10 and 11+ Business Days (technician required), it would be more appropriate for **nbn** to report against the 14 Business Day timeframe. Reporting on the volume of services that either met or missed the applicable service level for a particular geographic location and service class provides a definitive measure for tracking **nbn**'s performance across the network. This will enable industry participants to understand **nbn**'s quality of service at a sufficiently granular level; proposed additional reporting on the average time to complete all connections is not necessary given the performance insight provided by this reporting.
2) **Separating reporting according to technician attendance will require additional reporting development with minimal incremental value:** Technician attendance generally has a close correlation to the service class of a premises. For example, connections at Service Class 1 and 2 premises will generally require **nbn** equipment to be installed and technician attendance. Conversely, the volume of Service Class 3 premises requiring technician attendance are comparatively small. As connection service levels are applicable regardless of technician attendance, **nbn**'s existing reporting processes are aligned to the Service Class categories as opposed to technician attendance. Separating reporting out according to technician attendance at these premises would therefore be of questionable value, particularly given the key reference point should be the service level applicable to the connection.
3) **Incorrect measures may lead to potential misinterpretation of network performance:** Ensuring that the network performance reporting is aligned with **nbn**'s operations and service level commitments is essential so that network indicators provide a view of those aspects of performance that may require additional focus. Reporting against timeframes that are unrelated to specific activities or locations could provide a potentially misleading view of network performance, and shift the focus of continued service improvement away from those areas where effective improvements can be delivered.

nbn appreciates the potential value in reporting network performance disaggregated according to geographic location and Service Class. This would provide the ACCC and industry with enhanced transparency regarding how **nbn**'s performance is tracking against individual service level timeframes. However, it is important that such disaggregation does not lead to a misinterpretation of **nbn**'s performance against its Performance Objectives.

Under the WBA, Performance Objectives attach to a range of **nbn**'s service level commitments. For example, the Performance Objectives in section 1.2 of the WBA Service Levels Schedule set out the percentage of services for which **nbn** is expected to meet service levels by connection type – Standard Connections, Accelerated Connections, Service Transfer Orders and Priority Assistance Connections (see screenshot below).

1.2 Performance Objectives

(a) **nbn** will aim to achieve the following Performance Objectives in connection with the Service Levels set out in this section:

Relevant Service Level	Performance Objective
Standard Connections	90% or more
Accelerated Connections	90% or more
Service Transfer Orders	95% or more
Priority Assistance Connections	100%

While **nbn** appreciates the ACCC's and industry's preference for increased granularity in reporting of connection and assurance performance, it is important that such reporting is viewed in the context of the Performance Objective as an aggregate measurement. Enhanced reporting may support **nbn**, RSPs and the ACCC in identifying potential areas for improvement, but if a particular Service Class and/or geographic region is performing below the Performance Objective this should not be interpreted as **nbn** operating inconsistent with its Performance Objectives. As **nbn**'s investment to date and expenditure forecasts are predicated on existing aggregated Performance Objectives, any consideration of Performance Objectives at a disaggregated level could drive significant additional cost that is not currently accounted for and would require revisiting of **nbn**'s pricing commitments as set out in the proposed Variation.

When reporting connection and fault rectification timeframes, measurement and reporting should align with **nbn**'s commitments and reporting under the WBA. For example, connection and fault rectification times would exclude where **nbn** was required to 'stop-the-clock' due to actions required on the part of the RSP or end user, where RSPs have requested a later connection time, or matters otherwise outside the control of **nbn** prevent the **nbn** from completing the activity (e.g. Force Majeure Event).[2]

[2] Part E of the WBA Service Levels Schedule sets out the Interpretation and Exclusion criteria for **nbn**® Ethernet service levels.

3.3 nbn proposed reporting

3.3.1 Time taken to connect premises (Standard Connections)

As outlined above, reporting on Standard Connections should incorporate applicable service levels and the timeframes for reporting volumes completed within 'x' Business Days should be aligned with each service level so that the reporting provides a meaningful view of **nbn**'s performance. An example of proposed Standard Connection reporting is set out below for Service Classes 1, 2 and 3 (FTTP access technology).

Standard Connections: Fibre Network Service Class 1

Service class	Service Level and connection timeframes (according to Location of Premises)								
	Urban Area			Major Rural Area or Minor Rural Area			Remote Area		
	Service Level	<=14 BD	>14 BD	Service Level	<=19 BD	>19 BD	Service Level	<=19 BD	>19 BD
Service Class 1	14	[Insert]	[Insert]	19	[Insert]	[Insert]	19	[Insert]	[Insert]

Standard Connections: Fibre Network Service Class 2

Service class	Service Level and connection timeframes (according to Location of Premises)								
	Urban Area			Major Rural Area or Minor Rural Area			Remote Area		
	Service Level	<=9 BD	>9 BD	Service Level	<=14 BD	>14 BD	Service Level	<=19 BD	>19 BD
Service Class 2	9	[Insert]	[Insert]	14	[Insert]	[Insert]	19	[Insert]	[Insert]

Standard Connections: Fibre Network Service Class 3

Service class	Service Level and connection timeframes (according to Location of Premises)								
	Urban Area			Major Rural Area or Minor Rural Area			Remote Area		
	Service Level	<=1 BD	>1 BD	Service Level	<=1 BD	>1 BD	Service Level	<=1 BD	>1 BD
Service Class 3	1	[Insert]	[Insert]	1	[Insert]	[Insert]	1	[Insert]	[Insert]

3.3.2 Priority Assistance connections

The WBA sets out specific commitments in relation to Priority Assistance connections to enable RSPs to meet Priority Assistance commitments. It is important that any proposed RKR reflects Priority Assistance services as defined in the WBA rather than a potentially broader category of medically vulnerable consumers (as referred to in the Consultation Paper).

As with Standard Connections, reporting of Priority Assistance connections should incorporate applicable Priority Assistance service levels. In addition, the timeframes for reporting volumes completed within 'x' hours should be aligned with the service level so that the reporting provides a more meaningful view of **nbn**'s performance. Where the service level applicable to connections is 48 hours (i.e. Remote Areas) it is this timeframe against which connection volumes should be reported and not the 24-hour service level that applies in Urban and Major Rural or Minor Rural areas. An example of proposed reporting is set out below for Service Class 3 (FTTP), noting that Priority Assistance is only available for Service Classes 3, 13, 24, and 34.

Priority Assistance Connections: Fibre Network

Service class	Service Level and connection timeframes (according to Location of Premises)								
	Urban Area			Major Rural Area or Minor Rural Area			Remote Area		
	Service Level	<=24 hours	> 24 hours	Service Level	<=24 hours	> 24 hours	Service Level	<=48 hours	>48 hours
Service Class 3	24 hr	[Insert]	[Insert]	24 hr	[Insert]	[Insert]	48 hr	[Insert]	[Insert]

3.3.3 Time taken to connect premises for RSPs who request a faster connection (Accelerated Connections)

Reporting on Accelerated Connections should incorporate applicable service levels and the timeframes for reporting volumes completed within 'x' Business Days should be aligned with the service level so that the reporting provides a meaningful view of **nbn**'s performance. An example of proposed reporting is set out below – noting that Accelerated Connections are not available for all Service Classes or geographic areas.

Accelerated Connections: Fibre Network

Service class	Service Level and connection timeframes (according to Location of Premises)								
	Urban Area			Major Rural Area			Minor Rural Area		
	Service Level	<=4 BD	>4 BD	Service Level	<=9 BD	>9 BD	Service Level	<=14 BD	>14 BD
Service Class 1	4	[Insert]	[Insert]	9	[Insert]	[Insert]	14	[Insert]	[Insert]
Service Class 2	4	[Insert]	[Insert]	9	[Insert]	[Insert]	14	[Insert]	[Insert]

3.3.4 Time taken to transfer an NBN service from one retail service provider to another (Service Transfers)

Reporting of Service Transfers should incorporate applicable Service Transfer service levels and the timeframes for reporting volumes completed within 'x' Business Days should be aligned with the service level so that the reporting provides a meaningful view of **nbn**'s performance. Given the high percentage of Service Transfers that are completed within 1 Business Day (currently 99.9%), there is limited utility in establishing reporting for multiple timeframes as proposed in the Consultation Paper.

As Service Transfers only occur on active services, this metric can be broken down according to access technology – though there is no reporting value in disaggregation according to Service Class.

An example of proposed reporting for the FTTP access technology is set out below:

Service Transfers: Fibre Network

Urban Area			Major Rural Area or Minor Rural Area			Remote Area			Limited Access Area		
Service Level	**<=1 BD**	**>1BD**	**Service Level**	**<=1 BD**	**>1BD**	**Service Level**	**<=1 BD**	**>1BD**	**Service Level**	**<=1 BD**	**>1BD**
1	[Insert]	[Insert]	1	[Insert]	[Insert]	1	[Insert]	[Insert]	1	[Insert]	[Insert]

3.3.5 Fault frequency and time taken to repair

Reporting of fault rectification should incorporate applicable service levels, and the timeframes for reporting volumes completed within 'x' Business Days should be aligned with the service level so that the reporting provides a meaningful view of **nbn**'s performance.

The reporting categories proposed in the Consultation Paper include separation of reporting according to faults requiring technician attendance and those not requiring technician attendance. To the extent relevant to service levels, technician attendance is already incorporated in the service levels set out in section 8.1 of the WBA Service Levels Schedule – as illustrated in the example of proposed reporting set out below. A further breakdown of reporting according to 'Faults not requiring technicians' and 'Faults requiring technicians' would add unnecessary complexity particularly given the key reference point for completion timeframes is the applicable service level.

An example of proposed reporting is set out below:

End User Fault rectification

Network	Urban Area and other locations where End User Fault does not require external or internal plant work or nbn attendance at Premises			Major Rural Area or Minor Rural Area where End User Fault requires external or internal plant work or nbn attendance at Premises			Remote Area where End User Fault requires external or internal plant work or nbn attendance at Premises			Isolated Area where End User Fault requires external or internal plant work or nbn attendance at Premises		
	Service Level	**<=1 BD**	**>1 BD**	**Service Level**	**<=2 BD**	**>2 BD**	**Service Level**	**<=3 BD**	**>3 BD**	**Service Level**	**<=10 BD**	**>10 BD**
Fibre Network	5pm next BD	[Insert]	[Insert]	5pm second BD	[Insert]	[Insert]	5pm third BD	[Insert]	[Insert]	N/A	N/A	N/A
FTTB	5pm next BD	[Insert]	[Insert]	5pm second BD	[Insert]	[Insert]	5pm third BD	[Insert]	[Insert]	N/A	N/A	N/A
FTTN	5pm next BD	[Insert]	[Insert]	5pm second BD	[Insert]	[Insert]	5pm third BD	[Insert]	[Insert]	N/A	N/A	N/A
FTTC	5pm next BD	[Insert]	[Insert]	5pm second BD	[Insert]	[Insert]	5pm third BD	[Insert]	[Insert]	N/A	N/A	N/A

HFC	5pm next BD	[Insert]	[Insert]	5pm second BD	[Insert]	[Insert]	5pm third BD	[Insert]	[Insert]	N/A	N/A	N/A
Wireless	5pm next BD	[Insert]	[Insert]	5pm second BD	[Insert]	[Insert]	5pm third BD	[Insert]	[Insert]	N/A	N/A	N/A
Satellite	5pm next BD*	[Insert]	[Insert]	5pm third BD	[Insert]	[Insert]	5pm fourth BD	[Insert]	[Insert]	5pm tenth BD	[Insert]	[Insert]
	5pm third BD**	[Insert]	[Insert]									

* Applies to a location (including an Urban Area) where the End User Fault does not require external or internal plant work or **nbn** attendance at Premises.

** Applies to an Urban Area only where the End User Fault requires external or internal plant work or **nbn** attendance at Premises.

3.3.6 Time taken to repair service faults for Priority Assistance consumers

The WBA sets out specific commitments in relation to assurance of Priority Assistance services to enable RSPs to meet Priority Assistance commitments. It is important that any proposed RKR reflects Priority Assistance services as defined in the WBA rather than a potentially broader category of medically vulnerable consumers (as referred to in the Consultation Paper).

Reporting should incorporate applicable fault assurance service levels and the timeframes for reporting volumes repaired within 'x' hours should be aligned with the service level so that the reporting provides a meaningful view of **nbn**'s performance. To the extent relevant to service levels, technician attendance is already incorporated in the service levels set out in section 8.2 of the WBA Service Levels Schedule – as illustrated in the example of proposed reporting set out below. A further breakdown of reporting according to 'Faults not requiring technicians' and 'Faults requiring technicians' would add unnecessary complexity particularly given the key reference point for completion timeframes is the applicable service level.

An example of proposed reporting is set out below:

Priority Assistance fault rectification: Fibre Network

Urban Area, Major Rural Area or Minor Rural Area. Remote Area where Priority Assistance Fault does not require external or internal plant work or nbn attendance at Premises.			Remote Area where Priority Assistance Fault requires external or internal plant work or nbn attendance at Premises		
Service Level	**<=24 hours**	**>24 hours**	**Service Level**	**<=48 hours**	**>48 hours**
24 hours	[Insert]	[Insert]	48 hours	[Insert]	[Insert]

3.3.7 Time taken to repair services with Performance Incidents

The consultation proposes that **nbn** report:

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

As with connection and fault rectification timeframes, **nbn** proposes that the key metrics for tracking **nbn**'s performance in relation to Performance Incidents are the volume of services that were rectified within the applicable service level and those that were not. For example, the volume of services that miss the 7 Business Day timeframe for rectification of Performance Incidents in an Urban Area provides the key insight for **nbn** and industry participants – in order to identify if there is an area of potential improvement. An additional breakdown of services according to the number of days following the applicable service level would require additional cost and systems changes without adding significant insight or incentive regarding **nbn**'s performance.

Similarly, reporting on the volume of recurring Performance Incidents is likely to require additional reporting development and resources without necessarily delivering an appropriate metric in analysing **nbn**'s network performance – particularly given the proposed separate metric for **nbn** to report on recurring faults. Recurring service faults provides a more appropriate measure given the impact on performance experienced by an end user under a service fault. The Performance Incident framework

was introduced with the intention of seeking to further enhance end user experience: providing **nbn** with the opportunity to investigate and monitor those service incidents that may not occur at all times (e.g. reduced speed or dropouts) but where there is a potential impact on service performance that can be addressed. The Performance Incident framework enables **nbn** to monitor service performance over a period of time to identify if the service performance can be enhanced and that any fixes put in place are maintained. While **nbn** is able to support select reporting of Performance Incident volumes, in the assurance context performance reporting should remain primarily focused on service faults.

An example of how **nbn** considers item 4 should be reported is set out below. By providing the volumes of those Performance Incidents that met and exceeded applicable service levels, this reporting approach would also provide the total number of Performance Incidents for the relevant period.

Performance Incident rectification: FTTN Network

Urban Area			Major Rural Area or Minor Rural Area			Remote Area		
Service Level	**<=7BD**	**>7 BD**	**Service Level**	**<=10 BD**	**>10 BD**	**Service Level**	**<= 15 BD**	**>15 BD**
7BD	[Insert]	[Insert]	10BD	[Insert]	[Insert]	15BD	[Insert]	[Insert]

4 Appointment attendance

4.1 ACCC proposed appointment reporting

Proposed reporting items 6, 12

For both connection and fault rectification appointments, the ACCC proposes that **nbn** report on the following volumes disaggregated according to access network type and geographic location:

Appointments with a particular time

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

Appointments with a 4-hour period

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

The consultation paper also proposes that **nbn** provide reporting specific to **Appointments with a 4-5 hour period**.

4.2 Comments on proposed appointment reporting

nbn already provides similar reporting under existing WBA Service Level Performance Reports, and is able to provide connection and fault appointment reporting consistent with the criteria proposed by the ACCC in the consultation paper subject to two clarifications. First, **nbn** proposes that reporting commitments related to the '4-5 hour period' appointment categories should not be included. While this appointment window is referred to in the WBA, this is not currently available for selection by RSPs – meaning all appointment windows are a maximum of 4 hours and there would be no volumes for **nbn** to report under these categories. Second, as the service levels applicable to appointments apply irrespective of the geographic location, the value of disaggregation according to geographic location is less clear than with connection and assurance timeframes (where service levels are informed by the geographic location).

4.3 nbn proposed reporting

Examples of proposed connection and assurance appointment reporting (that excludes the 4-5 hour appointment window category) are set out in 4.3.1 and 4.3.2 below:

4.3.1 Connection appointment punctuality

Connection appointments: Fibre Network

Attend a Premises at a particular time						Attend a Premises within a 4-hour period					
Service Level	**Total appointments**	**Met the appointment time (or 15 minutes thereafter) that was not previously re-scheduled**	**Met the appointment time (or 15 minutes thereafter) that was previously re-scheduled**	**Did not meet the appointment window**	**Re-scheduled the appointment to a future date**	**Service Level**	**Total appointments**	**Met the appointment window (or 15 minutes thereafter) that was not previously re-scheduled**	**Met the appointment window (or 15 minutes thereafter) that was previously re-scheduled**	**Did not meet the appointment window**	**Re-scheduled the appointment to a future date**
Attend Premises at that time or within 15 minutes thereafter	[Insert]	[Insert]	[Insert]	[Insert]	[Insert]	Attend Premises within the period or within 15 minutes thereafter	[Insert]	[Insert]	[Insert]	[Insert]	[Insert]

4.3.2 Fault appointment punctuality

Fault appointments: Fibre Network

Attend a Premises at a particular time						Attend a Premises within a 4-hour period					
Service Level	**Total appointments**	**Met the appointment time (or 15 minutes thereafter) that was not previously re-scheduled**	**Met the appointment time (or 15 minutes thereafter) that was previously re-scheduled**	**Did not meet the appointment window**	**Re-scheduled the appointment to a future date**	**Service Level**	**Total appointments**	**Met the appointment window (or 15 minutes thereafter) that was not previously re-scheduled**	**Met the appointment window (or 15 minutes thereafter) that was previously re-scheduled**	**Did not meet the appointment window**	**Re-scheduled the appointment to a future date**
Attend Premises at that time or within 15 minutes thereafter	[Insert]	[Insert]	[Insert]	[Insert]	[Insert]	Attend Premises within the period or within 15 minutes thereafter	[Insert]	[Insert]	[Insert]	[Insert]	[Insert]

5 Effectiveness of equipment installations and connections/activations of premises

5.1 ACCC proposed reporting

Proposed reporting item 4

The ACCC has proposed that **nbn** report on 'Right first-time' metrics in relation to both installations (where **nbn** undertakes installation of connecting equipment such as a lead-in) and connections (where **nbn** connects and activates the Access Components to enable service at a Premises), and that the reporting is broken down according to the number of installations that require follow up work within a specified number of Business Days (5, 6-10, 11-20) and the number of connections that receive a fault within a specified number of Business Days (5, 6-10, 11-20).

5.2 Comments on proposed reporting

There are two key issues with this proposed reporting:

1) **Installation and connection should not be considered as separate metrics**

The value of 'right first-time' reporting is focused on those connections requiring installation activity and ensuring that installation undertaken by **nbn** was effective to enable connection to the network. Separating reporting according to 'New installations' vs 'New connections' confuses the value of this metric. Without a connection attached to the installation, it is unlikely that a follow up would be required for an installation unless it was identified at the time of installation that a follow up appointment was required to complete required work (in which case the installation requires additional time but is not necessarily wrong 'first-time').

As with **nbn**'s current right first time reporting in its Monthly Progress Report, **nbn** proposes that reporting of 'Right first-time' relates to new customers connecting to the network for the first time for which:

- Installation activity was required by an **nbn** field technician;

- a service incident was raised (for **nbn** to investigate) within 10 Business Days of **nbn** completing installation activity and completing the order in its systems; and
- **nbn** confirms that a fault exists on the service.

2) Reporting on time of subsequent installation activity is not a useful measure

nbn considers that reporting on when follow-up installation activity occurs (e.g. 5, 6-10, 11-20 Business Days) is not an effective reporting measure. The timing of subsequent installation activity will depend on a range of factors including when an end user or RSP raises the service incident, and the availability of end users if required for the installation.

5.3 nbn proposed reporting

An example of proposed 'Right-first-time' reporting is set out below:

Right First Time: Fibre Network

	Urban Area		Major Rural Area or Minor Rural Area		Remote Area		Limited Access Area	
	Right First Time*	**Additional Work Required**	**Right First Time**	**Additional Work Required**	**Right First Time**	**Additional Work Required**	**Right First Time**	**Additional Work Required**
Volume of premises	[Insert]	[Insert]	[Insert]	[Insert]	[Insert]	[Insert]	[Insert]	[Insert]

* Right First Time refers to those new customers connecting to the network for the first time for where: (1) Installation activity was required by an **nbn** field technician; (2) a service incident was raised (for **nbn** to investigate) within 10 Business Days of **nbn** completing installation activity and completing the order in its systems; and (3) **nbn** confirms that a fault exists on the service.

6 Number of recurring service faults

6.1 ACCC proposed reporting

Proposed reporting item 11

The ACCC has proposed that **nbn** report the following volumes in relation to recurring service faults:

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

6.2 nbn proposed reporting

nbn is aligned with this proposed reporting measure which reflects the recurring fault reporting proposal included in **nbn**'s proposed SAU variation lodged in March 2022 (when it was anticipated that the SAU would fulfil the network performance transparency role that the proposed RKR will perform).

7 Time taken to repair network infrastructure faults that affect multiple products

7.1 ACCC proposed reporting

RKR proposed reporting item 10

The ACCC has proposed that **nbn** report the following information in relation to Network Faults (disaggregated by access technology and geographic location):

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

7.2 Comments on proposed reporting

nbn is aligned with the ACCC that there is merit in enhanced transparency regarding the volume of Network Faults, impacted services and rectification timeframes. While supportive of the general approach to Network Fault reporting in the ACCC's proposal, **nbn** considers that the breakdown according to volume of services affected should be aligned with established Network Fault categories and the timeframes for reporting rectification should reflect existing service levels for addressing Network Faults.

In particular, **nbn** considers the reporting should take into consideration the following factors:

1) **Volume of services impacted:** Under **nbn**'s existing processes, and for the purposes of WBA reporting, **nbn** categorises incidents as follows:

- **Priority 1:** >5,001 services impacted
- **Priority 2:** 501 – 5,000 services impacted
- **Priority 3:** 121 – 500 services impacted
- **Priority 4:** 1 – 120 services impacted

The key distinctions between the two approaches are:

- the ACCC proposal includes additional splits between 100 and 500 services; and
- existing **nbn** reporting provides an additional split at the upper end of the range (separating >500 and >5,000 services impacted).

nbn considers that its existing incident priority categorisation provides a more useful breakdown of material volumes. In particular, a view of whether an outage impacted 121-500, 501-5000 or >5,001 services provides greater insight than a more granular breakdown between 100 and 500 services. Reporting according to the service volume breakdown in the Consultation Paper would mean that **nbn** is required to establish and maintain overlapping reporting that would not necessarily provide more useful insight than reporting along **nbn**'s existing incident priority categories.

2) **Network Fault rectification timeframes:** Network Faults are subject to different rectification timeframes according to the priority classification. Specifically, Priority 1 Incidents are aimed to be resolved within 6 hours, Priority 2 within 12 hours, Priority 3 within 20 hours and Priority 4 within 28 hours. It is appropriate that reporting of **nbn**'s performance in rectifying Network Faults is aligned with these timeframes.

3) **Network Faults outside of nbn's control:** It is important that reporting of **nbn**'s performance in restoring Network Faults is specific to those Network Faults which are within **nbn**'s control. Reporting should therefore align with **nbn**'s service level commitments under the WBA. For example, Network Faults that are caused by a third-party power outage should not be captured in **nbn**'s reporting of Network Fault rectification times.

4) **Disaggregation by geographic location:** Unlike End User Faults impacting an individual premises, service levels for Network Faults are determined according to the priority classification and are agnostic as to geographic location. For example, a Network Fault impacting more than 5,001 services would attract a rectification time of 6 hours whether or not the services impacted were located in an Urban, Isolated or other area. As a result, **nbn**'s systems for managing and reporting Network Faults are aligned with the priority classification and not currently focused on geographic location. **nbn** considers that further consideration should be given to the value of disaggregation according to geographic location, and suggests the appropriate data points for tracking **nbn**'s network performance regarding outages are those set out in section 7.3 below.

7.3 nbn proposed reporting

nbn proposes that reporting in relation to Network Faults reflects the key data points proposed by the ACCC, subject to:

- replacing the service volume breakdown with the volume breakdowns that **nbn** currently uses for the categorisation of incidents;
- reporting against the rectification timeframes that **nbn** aims to meet according to the allocated priority; and
- not reporting according to geographic location.

An example of the proposed reporting for the FTTP access technology is set out in the table below:

Priority 1 Incidents: Fibre Network

Services impacted	Volume of network faults (according to fix time)	
	<=6 hours	**>6 hours**
>5,001 services impacted (Priority 1)	[Insert]	[Insert]

Priority 2 Incidents: Fibre Network

Services impacted	Volume of network faults (according to fix time)	
	<=12 hours	**>12 hours**
501 – 5,000 services impacted (Priority 2)	[Insert]	[Insert]

Priority 3 Incidents: Fibre Network

Services impacted	Volume of network faults (according to fix time)	
	<=20 hours	**>20 hours**
121 – 500 services impacted (Priority 3)	[Insert]	[Insert]

Priority 4 Incidents: Fibre Network

Services impacted	Volume of network faults (according to fix time)	
	<=28 hours	**>28 hours**
1 – 120 services impacted (Priority 4)	[Insert]	[Insert]

8 Number of planned and emergency outages

8.1 ACCC proposed reporting

RKR proposed reporting item 14

The Consultation Paper proposes reporting of specific information in relation to intentional outages on the network, disaggregated according to access network type and geographic location. The proposed data includes:

Planned Outages

- Number of planned outages
- For each planned outage:
    - The (estimated) number of services affected
    - Whether the outage started and finished within:
        - 1 day
        - 2 and 3 days
        - Whether the outage started and finished within:
    - Whether the outage started and finished within:
        - 1 day
        - 2 and 3 days
        - 3+ days
    - Whether the majority of the outage took place between:
        - 12.00am – 8.00am
        - 8.00am – 5.00pm
        - 5.00pm – 11.59pm
- The percentage of planned outages where NBN Co provided retail service providers with:
    - < 1 business day's notice
    - 1 < 5 business days' notice

Emergency Outages

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

8.2 Comments on proposed reporting

nbn supports a number of the data points that the ACCC has proposed for reporting in relation to Intentional Outages. However, there are some challenges with the proposed approach as well as some alternatives that could improve the value of this reporting:

1) **Reporting data points for 'each Planned Outage':** The proposed wording in the consultation suggests that **nbn** report specific information according to each Planned Outage. Given the volume of Intentional Outages experienced on the **nbn**™ network in a month, it would be impractical and of little utility for **nbn** to report each of the data points under each outage. Instead, **nbn** proposes that the structure for reporting these data points should be inverted so that the volume of outages that meet each category is reported.
2) **Planned Outages which are the responsibility of a third party:** A number of outages that fall under the definition of a 'Planned Outage' in the WBA are technically the result of a third party or event outside the control of **nbn** (e.g. 3rd party power outage which impacts **nbn**® network). These outages should not be included in the proposed reporting commitments which should be focused on the performance of the **nbn**® network itself.
3) **Reporting on lead time (between notification and Planned Outage) needs to account for different lead time commitments:** For Planned Outages, it is necessary that different lead time commitments are reflected in the reporting. For example, while most Planned Outages are subject to a 10 Business Day

notification time, Planned Outages to support On-Demand Fibre Connections are subject to a shorter notification timeframe of 5 Business Days under the WBA.[3] To the extent that **nbn** and RSPs consider any other category of Planned Outage should have a shorter lead time, this too should be reflected in the reporting.

4) **Reporting timeframes should reflect the Planned Outage Window:** Where practicable **nbn** schedules Planned Outages for the Planned Outage Window (11.00pm to 6.00am) in order minimise the impact of interruptions for those services that experience an outage. It is not possible to conduct all Planned Outages in this window; in addition to the overall volume of outages there are considerations such as HSE requirements and noise impacts that **nbn** must take into consideration when determining the timing for outages. Given these are the two windows according to which **nbn** structures its outage planning, and these windows provide a useful view of the likely impact on end users, **nbn** recommends that the Planned Outage Window (11.00pm to 6.00am) and the remaining hours of the day (6.01am-10.59pm) provide the two key windows against which reporting should be provided.
5) **Reporting on premises that experienced Planned Outages in the previous 12 months not effective measure: nbn** considers that reporting on the volume of premises which experienced more than one outage in a 12-month period would be an ineffective measurement for reporting purposes. There are a range of reasons that outages can occur (e.g. power outage caused by third party, Intentional Outage triggered by **nbn** to address reported fault, Intentional Outage to perform maintenance on network without fault reported). Reporting simply the volume of premises that experience more than 1 Planned Outage without context for each Planned Outage would provide a metric with little meaning or utility. And to analyse and report on the context for multiple Planned Outages impacting premises would require substantial resources and operational cost. **nbn** considers that the other Planned Outage reporting information that the ACCC has proposed, and to which **nbn** has proposed amendments, will provide appropriate insight into the impact of Planned Outages on the network. If there is a particular issue requiring further investigation related to multiple Planned Outages impacting premises, **nbn** is eager to assist the ACCC in better understanding this and identifying what potential ad-hoc information may be extracted to understand and address any identified concerns.
5) **Disaggregation by geographic location:** As with reporting on Network Faults, **nbn**'s current reporting of Intentional Outages is focused on the volume of services impacted and/or duration of outages rather than the geographic location. **nbn** considers that further consideration should be given to the value of disaggregation of outages performance according to geographic location, and suggests the appropriate data points for tracking **nbn**'s network performance regarding outages are those set out in section 7.3 below.

[3] Section 5.5.5 of the WBA provides that **nbn** will provide RSPs with 5 business days' notice in relation to On-Demand Fibre Connection Outages as opposed to the 10 Business Day notification timeframe for most other Planned Outages.

8.3 nbn proposed reporting

Set out below is an example of the reporting that **nbn** proposes would capture key Intentional Outage information for the purposes of tracking **nbn**'s overall performance in this area:

Planned Outages: Fibre Network

	Volume of Planned Outages* (according to number of services impacted)			
	Outages impacting 1-120 services	**Outages impacting 121-500 services**	**Outages impacting 501-5000 services**	**Outages impacting >5000 services**
Outages timeframe				
Outages started and finished within 1BD	[Insert]	[Insert]	[Insert]	[Insert]
Outages started and finished within 2-3BD	[Insert]	[Insert]	[Insert]	[Insert]
Outages started and finished within >3BD	[Insert]	[Insert]	[Insert]	[Insert]
Time majority of outage took place				
6.01am – 10.59pm	[Insert]	[Insert]	[Insert]	[Insert]
11.00pm – 6.00am	[Insert]	[Insert]	[Insert]	[Insert]

**Does not include outages driven by 3rd parties (e.g. planned power outages) or Planned Outages to support On Demand Fibre Connections.*

Notification timeframes for Planned Outages subject to 10 Business Day notification: Fibre Network

Notification timeframe	Percentage of Planned Outages subject to 10 Business Day notification*
< 1 Business Day's notice	[Insert]
1 < 5 Business Days' notice	[Insert]
5 < 10 Business Days' notice	[Insert]
>= 10 Business Days' notice	[Insert]

**Does not include outages caused by 3rd parties (e.g. planned power outages).*

Notification timeframes for Planned Outages subject to 5 Business Day notification: Fibre Network

Notification timeframe	Percentage of Planned Outages subject to 5 Business Day notification*
< 1 Business Days' notice	[Insert]
1 < 5 Business Days' notice	[Insert]
>=5 Business Days' notice	[Insert]

**Does not include outages caused by 3rd parties (e.g. planned power outages).*

Planned Outages occurring within the scheduled maintenance window: Fibre Network

Percentage of Planned Outages which occurred entirely within the proposed scheduled window as contained in the Planned Outage notice
[Insert]

Emergency Outages: Fibre Network

	Volume of Emergency Outages (according to number of services impacted)			
	Outages impacting 1-120 services	**Outages impacting 121-500 services**	**Outages impacting 501-5000 services**	**Outages impacting >5000 services**
Outages timeframe				
Outages started and finished within 1BD	[Insert]	[Insert]	[Insert]	[Insert]
Outages started and finished within 2-3BD	[Insert]	[Insert]	[Insert]	[Insert]
Outages started and finished within >3BD	[Insert]	[Insert]	[Insert]	[Insert]
Time majority of outage took place				
6.01am – 10.59pm	[Insert]	[Insert]	[Insert]	[Insert]
11.00pm – 6.00am	[Insert]	[Insert]	[Insert]	[Insert]

Percentage of Emergency Outages where nbn provided retail service providers with notice
[Insert]

9 Service stability / dropouts

9.1 ACCC proposed reporting

Proposed reporting item 13

The proposed reporting commitments include the following dropout data disaggregated by access network type and geographic location:

Number of dropouts experienced

Total number of services experiencing the following number of dropouts (lasting 30 seconds or more):

- < 5 dropouts within a 24-hour period;
- 5 to < 7 dropouts within a 24-hour period day; and
- >7 dropouts within a 24-hour period.

Dropout duration

Total number of services experiencing >= 5 dropouts where the longest dropout was:

- 2 < 4 minutes;
- 4 < 8 minutes;
- 8 < 10 minutes; and
- >= 10 minutes.

9.2 Comments on proposed reporting

Capability of existing network and systems

There are key elements of the **nbn**® network that constrain **nbn**'s ability to report the dropout data specified in the proposed RKR:

1) **No existing capability to monitor and report dropout duration: nbn** does not have the capability to report duration per dropout (e.g. whether a dropout lasted 2<4 minutes etc). Today, the method for identifying potential dropouts on a service is dependent on the access technology:

- *FTTN/B/C:* For copper-based access technologies, in order to identify potential dropouts **nbn** monitors spontaneous resyncs (i.e. reconnection of the end user modem to the network which generally last a minimum of 30 seconds). This method does not monitor or record the potential duration of a dropout and, as outlined further below, the issue causing a spontaneous resync may be outside the **nbn**™ Network.
- *HFC:* Similar to FTTN/B/C, to identify the number of potential dropouts on the HFC network **nbn** counts the number of 'modem flaps' experienced on a service – i.e. each instance the HFC modem is reset. As with copper-based services, this method of measuring dropouts does not monitor or record the duration of a dropout.
- *FTTP:* For FTTP services, **nbn** maintains an uptime measure, measured in 15-minute increments. If **nbn** registers no connectivity between the NTD and OLT in a 15-minute window this constitutes a dropout. This lack of connectivity could last as little as 1 second.

While the measurements of potential dropouts on a service are imperfect, and do not enable **nbn** to report on the duration of individual dropouts, these are the best available methods for identifying potential dropouts on the network today given the existing network architecture and systems capability.

2) **Potential dropouts may be attributable to issues outside the nbn® Network or not specific to individual services:** For both copper and HFC networks spontaneous resyncs or modem flaps can be caused by factors outside the **nbn®** Network. For example, a resync on the FTTN network or modem flap on the HFC network may be a consequence of an end user disconnecting their modem, RSPs issuing firmware updates which force resyncs of the line, in-home wiring issues, power outages and other factors outside of **nbn**'s control. Alternatively, a spontaneous resync or modem flap may be a consequence of network activity that does not reflect the performance of an individual service (e.g. Intentional Outages).
   On the HFC network, it is generally possible to identify whether the cause of the modem flap was outside the **nbn®** network and should therefore be excluded from performance incident measurement. It is important that any proposed dropout reporting commitment excludes those dropouts caused by issues outside the **nbn** HFC network or Intentional Outages so that this metric will only reflect unexpected dropouts where the root cause is within **nbn**'s responsibility.
   The mechanism for capturing dropouts on the FTTN network does not enable **nbn** to necessarily distinguish between those dropouts caused by the **nbn®** network and those triggered by issues outside the network. Any reporting commitment, and analysis of dropout performance on the network, will therefore need to recognise this.

In order to report on dropout duration **nbn** would be required to establish and maintain live by-the-second telemetry capture across the network. **nbn** is concerned with the substantial investment that would be required in monitoring/logging and reporting systems in order to deliver this capability on the network – solely for the purposes of reporting. Even with this investment, there would be a number of potential accuracy issues. For example, on the HFC network information would need to be ascertained from different sources (some from CMTS, some from the modem) and there are limitations with the number of historical messages that a modem can store. Even with significant investment and resource dedicated to delivering the proposed reporting, the data output is likely to be an approximation.

nbn does not consider this would constitute an efficient investment in the network: not only is the additional value of reporting on dropout duration unclear, but an RKR requirement to establish this capability could divert capex away from **nbn**'s core network investment strategy of expanding the FTTP footprint or require **nbn** to revisit the pricing commitments proposed under the SAU.

Dropout frequency categories

While **nbn** could potentially report against the categories proposed by the ACCC (<5, 5-7, >7) **nbn** considers that it would be a more useful metric if these categories were aligned with the End User Fault and Performance Incident dropout thresholds for FTTN and HFC under the WBA. The key thresholds in that respect are <4, 4-7 (updated Performance Incident dropout threshold proposed under the Variation) and >7 (updated Service Fault dropout threshold proposed under the Variation).

9.3 nbn proposed reporting

Based on existing network capability, and the objectives of the RKR, **nbn** proposes that an appropriate alternative is for **nbn** to report on the volume of dropouts within a 24-hour period according to the key dropout thresholds proposed under the Benchmark Service Standards in the Variation (and anticipated to be delivered under WBA5) – without reporting according to duration. This would mean reporting the volume of services that experienced <4, 4 to 7 and >7 dropouts within a 24-hour period. Such reporting would still achieve two key purposes of the RKR – being to enable end users to compare the performance of the **nbn** network with alternative superfast broadband networks (on the basis other network operators should be subject to equivalent reporting) and incentivise **nbn** to improve service quality. While the duration and impact of certain dropouts may be more pronounced than others, the frequency of dropouts is a sufficiently valuable point of data from a service performance perspective – in terms of understanding the end user experience.

Where possible from a technology perspective, reporting of dropouts should only include those instances where the cause of dropouts was confirmed to be within the **nbn**® Network and not a result of Intentional Outages.

Set out below is an example of the reporting that **nbn** proposes would capture key stability information for the purposes of tracking **nbn**'s overall performance in this area:

Dropout frequency: FTTN Network

Volume of dropouts in 24-hour period	Number of services impacted (according to Location of Premises)		
	Urban Area	Major Rural Area or Minor Rural Area	Remote Area
<4 dropouts	[Insert]	[Insert]	[Insert]
4-7 dropouts	[Insert]	[Insert]	[Insert]
>7 dropouts	[Insert]	[Insert]	[Insert]

Dropout frequency: HFC Network

Volume of dropouts in 24-hour period	Number of services impacted (according to Location of Premises)
	Urban Area
<4 dropouts	[Insert]
4-7 dropouts	[Insert]
>7 dropouts	[Insert]

Dropout frequency: FTTP Network

Volume of dropouts in 24-hour period	Number of services impacted (according to Location of Premises)		
	Urban Area	Major Rural Area or Minor Rural Area	Remote Area
<4 dropouts	[Insert]	[Insert]	[Insert]
4-7 dropouts	[Insert]	[Insert]	[Insert]
>7 dropouts	[Insert]	[Insert]	[Insert]

10 Speed performance: copper

10.1 ACCC proposed reporting

Proposed reporting item 15

The Consultation Paper proposes that **nbn** report the following data in relation to network speed capability of FTTN/B/C networks:

Estimated number of premises

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

Actual number of premises

- The actual number of fixed line premises capable of achieving a maximum data transfer rate of:
  - < 25 Mbps PIR downlink;

- 25 < 50 Mbps PIR downlink;
- 50 < 75 Mbps PIR downlink;
- 75 < 100 Mbps PIR downlink;
- 100 Mbps < 1 Gbps downlink; and
- >= 1 Gbps PIR downlink.

- The actual number of fixed line premises capable of achieving a maximum data transfer rate of:
  - < 5 Mbps PIR uplink;
  - 5 < 10 Mbps PIR uplink;
  - 10 < 20 Mbps PIR uplink; and
  - >= 20 Mbps PIR uplink.

10.2 Comments on proposed reporting

Estimated number of premises

nbn is able to support reporting commitments in relation to the estimated number of premises capable of achieving specified speeds on the FTTN/B/C networks – though notes two key comments:

1) **Recommend reporting speeds of <50Mbps, 50-99Mbps, 100-249Mbps, 250-1Gbps:** In the ACCC working groups held in late 2021, it was the 50Mbps, 100Mbps and 1Gbps speed tiers that were considered to be the critical speed tiers for understanding speed capability at a network level. The proposed ACCC reporting categories provide further splits that go beyond these key indicators. In order to track the ongoing performance of the network, **nbn** considers that a more focused selection of speed tiers will provide the relevant insight of network capability. In addition to 50Mbps, 100Mbps and 1Gbps, **nbn** considers that reporting against the proportion of the network capable of 250Mbps provides a useful demarcation. As **nbn** does not offer **nbn**® Ethernet services of greater than 1Gbps, it is proposed that reporting on the proportion of the network that delivers >= 1Gpbs is not a useful metric.
2) **Reporting should provide view of entire fixed line network capability:** The proposed reporting commitments in the RKR are specific to the FTTN/B/C and HFC networks (the latter also discussed in section 11 below) and is proposed to be disaggregated on the basis of access technology and geographic location. However, it is important that the speed capability of the network is considered holistically and includes the FTTP network (whether a premises is currently connected to FTTP or is able to connect to FTTP through the fibre upgrade program). Without this holistic view, reporting would provide an incomplete and skewed view of the speeds available to premises on the network. **nbn** considers that reporting of speed capability should not be disaggregated according to geographic location which would add unnecessary complexity and cost given the purpose is to provide an overall view of network capability – to support **nbn**'s ongoing investment in the network and ensure that the capability of the network is maintained or improved.

Actual number of premises

nbn understands this proposed reporting commitment is intended to reflect a reporting proposal that **nbn** included in the SAU variation lodged in March 2022. Under that proposal, **nbn** intended to report on the volume of premises with an active service that was capable of receiving the specified speeds (50Mbps, 100Mbps, 1Gbps). Notwithstanding this earlier proposal, there are two key challenges / considerations in relation to the proposed reporting on the 'actual number of fixed line premises' capable of achieving maximum data transfer rates:

1) **Reporting of premises with active services should reflect where FTTP upgrade is available:** If a reporting commitment is included in relation to active services, it is important that those premises where an end user can order an upgrade to FTTP reflects the speed available on the FTTP network. Otherwise the reporting would be misleading for these premises – for example, an end user may have an active FTTN service that is capable of 50Mbps but is able to order an FTTP upgrade that is capable of much higher speeds.
2) **Reporting of uplink speeds:** When considering performance of the network at an aggregate level, downlink provides a sufficient basis for tracking the capability of the network. This is reflected in the performance indicators proposed in the ACCC's Regulatory Framework working group which was focused on the proportion of the network obtaining download speeds of 50Mbps, 100Mbps and 1Gbps.

While **nbn** previously proposed reporting on active services, given the issue identified in (1) above, the value of reporting on active services should be further considered before being included in the RKR.

10.3 nbn proposed reporting

nbn considers that the following reporting would provide appropriate insights into the capability of the fixed line network:

Estimated number of services capable of specified speed tiers

Peak Information Rate (PIR) downlink	Estimated number of services on fixed line network* capable of speed	Percentage of fixed line network
<50 Mbps	FTTP: [Insert] FTTN: [Insert] FTTB: [Insert] FTTC: [Insert] HFC: [Insert]	[Insert]
50-99 Mbps	FTTP: [Insert] FTTN: [Insert] FTTB: [Insert] FTTC: [Insert] HFC: [Insert]	[Insert]
100-249 Mbps	FTTP: [Insert] FTTN: [Insert] FTTB: [Insert] FTTC: [Insert] HFC: [Insert]	[Insert]
250Mbps-1 Gbps**	FTTP: [Insert] FTTN: [Insert] FTTB: [Insert] FTTC: [Insert] HFC: [Insert]	[Insert]

* This includes all premises in the fixed line footprint (FTTP, FTTN, FTTC and HFC networks). Where a premises is currently connected to the FTTN or FTTC network and is able to upgrade to FTTP, the FTTP network is used to determine the estimated speed available at that premises.

** Inherent limitations of **nbn**® Ethernet in relation to service frame overhead means the effective Layer 2 Peak Information Rate will be limited to, depending on the Frame Size, up to a maximum of 970Mbps (at 2,000 Byte Frame Size).

Active services capable of specified speed tiers

Peak Information Rate (PIR) downlink	Number of active services on fixed line network* capable of speed	Percentage of fixed line network
<50 Mbps	FTTP: [Insert] FTTN: [Insert] FTTB: [Insert] FTTC: [Insert] HFC: [Insert]	[Insert]
50-99 Mbps	FTTP: [Insert] FTTN: [Insert] FTTB: [Insert] FTTC: [Insert] HFC: [Insert]	[Insert]
100-249 Mbps	FTTP: [Insert] FTTN: [Insert] FTTB: [Insert] FTTC: [Insert] HFC: [Insert]	[Insert]
250Mbps-1 Gbps**	FTTP: [Insert] FTTN: [Insert] FTTB: [Insert] FTTC: [Insert] HFC: [Insert]	[Insert]

* This includes all premises in the fixed line footprint (FTTP, FTTN, FTTC and HFC networks). Where a premises is currently connected to the FTTN or FTTC network and is able to upgrade to FTTP, the FTTP network is used to determine the speed available at that premises.

** Inherent limitations of **nbn**® Ethernet in relation to service frame overhead means the effective Layer 2 Peak Information Rate will be limited to, depending on the Frame Size, up to a maximum of 970Mbps (at 2,000 Byte Frame Size).

11 Speed performance: HFC

11.1 ACCC proposed reporting

Proposed reporting item 15

In addition to the proposed reporting for FTTN/B/C networks, the consultation proposes that **nbn** report the following in relation to the HFC network:

Actual number of premises

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

11.2 Comments on proposed reporting

As outlined in section 10 above, **nbn** considers that reporting of fixed line speed capability should be provided on a holistic basis. **nbn** has therefore proposed reporting of fixed line speed capability in section 10.3 that incorporates all fixed line access technologies including HFC. The purpose of network speed capability reporting in the RKR should be to ensure transparency of an overall view of network capability – to support **nbn**'s ongoing investment in the network and ensure that the capability of

the network is maintained or improved. **nbn** considers that the reporting proposed by **nbn** will fulfil this objective and the additional breakdown of HFC services that 'cannot reliably attain the full ordered bandwidth' is not necessary to meet this objective.

11.3 nbn proposed reporting

nbn proposes that HFC network speed capability reporting is included as part of the proposed reporting in section 10.3 .

12 Speed performance: fixed wireless network

12.1 ACCC proposed reporting

Proposed reporting item 16

The Consultation Paper proposes that **nbn** report the following data in relation to the performance of the Fixed Wireless network:

- The percentage of fixed wireless cells with an average monthly busy hour cell performance in the following specified downlink performance categories:
  - <3 Mbps;
  - 3 to < 6 Mbps;
  - 6 to <12 Mbps;
  - 12 to <25 Mbps;
  - 25 to <50 Mbps; and
  - >= 50 Mbps.
- The average number of hours a day cells spent in each of the following downlink performance categories:
  - < 3 Mbps;
  - 3 to < 6 Mbps;
  - 6 to <12 Mbps;
  - 12 to <25 Mbps;
  - 25 to <50 Mbps; and
  - >= 50 Mbps.
- The percentage of fixed wireless cells with an average monthly busy hour cell performance in the following specified uplink performance categories:
  - <2 Mbps;
  - 2 to <5 Mbps;
  - 5 Mbps to < 10 Mbps;
  - 10 to <20 Mbps; and
  - >= 20 Mbps.

- The percentage of NBN Co Wireless Network cells connected to backhaul transmission links with an average busy hour link packet loss of less than 0.25%.
- The following data:
  - Total Fixed Wireless cells;
  - Total Fixed Wireless congested cells;
  - Total LOC IDs of Fixed Wireless congested cells;
  - Total Fixed Wireless backhaul links;
  - Total Fixed Wireless congested backhaul links;
  - Total LOC IDs of congested Fixed Wireless FW backhaul links; and
  - List of Priority Forecast Upgrade cells.

12.2 Comments on proposed reporting

Proposed downlink Fixed Wireless cell performance

Under its Monthly Progress Report **nbn** already provides a significant level of reporting to RSPs and industry regarding the performance of the Fixed Wireless Network.[4] This includes:

- The percentage of fixed wireless cells with an average monthly busy hour cell performance in the following specified performance categories:
  - <3 Mbps;
  - 3 to < 6 Mbps;
  - 6 to <12 Mbps;
  - 12 to <25 Mbps; and
  - >=25 Mbps.
- The average number of hours a day cells spent in each of the following performance categories:
  - < 3 Mbps; and
  - 3 to < 6 Mbps.
- The percentage of cells on a backhaul link with a 28-day busy hour packet loss of less than 0.25%.

[4] https://www.nbnco.com.au/content/dam/nbn/documents/how-we-are-tracking/nbn-december-2022-monthly-progress-report.pdf

To avoid duplication of reporting processes, and given the investment and resource **nbn** has dedicated to ensuring it provides appropriate performance insights through the Monthly Progress Report, **nbn** considers that the proposed RKR align with **nbn**'s existing Fixed Wireless reporting and the value of any additional data is clear before being included in the proposed RKR. A key purpose of the existing reporting is to identify where the performance on existing cells requires attention. Hence, reporting on 'the average number of hours a day cells spent in specified categories' is focused on speeds of < 3Mbps and 3 to <6 Mbps. The value of expanding this reporting to additional speed tiers should be considered further before it is included in the proposed RKR.

Proposed uplink and additional reporting requirements

The proposed downlink reporting that **nbn** already provides through its Monthly Progress Report ensures that RSPs and industry participants have significant insights into performance for Fixed Wireless services and that concerns with the performance of specified cells can be identified and addressed.

nbn does not consider the proposed reporting in relation to:

- uplink performance; or
- additional data regarding the volume of congested cells, congested backhaul links, Loc IDs attached to these cells or backhaul links, or Priority Upgrade cells,

is necessary or that the insights delivered from this reporting would justify establishing this additional reporting.

12.3 nbn proposed reporting

Set out below are the proposed reporting commitments **nbn** considers are appropriate for the Fixed Wireless network:

Fixed Wireless Busy Hour Cell Performance Categories

The percentage of cells performing within specified monthly busy hour cell performance categories between <3 Mbps and >=50 Mbps.

*The percentage of cells in each category is calculated using the number of cells in the relevant category divided by the total number of active cells on the **nbn** Fixed Wireless network at the end of the relevant month.*

Month	Monthly busy hour cell performance category	% of Fixed Wireless Cells in category
[Insert]	<3 Mbps	[Insert]
	3 to <6 Mbps	[Insert]
	6 to <12 Mbps	[Insert]
	12 to <25 Mbps	[Insert]
	>= 25Mbps	[Insert]

Fixed Wireless Cell Performance by Hours Spent in Categories

A "specified cell" means those cells that have a monthly busy hour cell performance of either < 3 Mbps, or 3 to <6 Mbps.

This table shows the average number of hours a day "specified cells" spent in each of the following performance categories (averaged over 30 days):

(1) <3 Mbps
(2) 3 to <6 Mbps

This is expressed as a percentage of all Fixed Wireless cells, which is calculated by dividing the number of cells that fall into each hourly category by the total number of active cells on the nbn Fixed Wireless network at the end of the relevant month.

Performance category for [insert] period	Average number of hours per day spent in performance category*				
	0 to <1 hours	1 to <2 hours	2 to <3 hours	3 to <4 hours	>= 4 hours
<3 Mbps	[Insert]	[Insert]	[Insert]	[Insert]	[Insert]
3 to <6 Mbps	[Insert]	[Insert]	[Insert]	[Insert]	[Insert]

**Note a cell with a monthly busy hour cell performance of under 6Mbps may fall within both of these performance categories, and as such the rows may not add up to the proportion of cells with a monthly busy hour cell performance of under 6Mbps*

Busy Hour Packet Loss

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

13 Traffic delay

13.1 ACCC proposed reporting

Proposed reporting item 17

The consultation paper includes the following proposed reporting commitments regarding traffic delay:

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

13.2 Comments on proposed reporting

There are several concerns with the proposed traffic delay reporting requirement:

1) **Measurement unrealistically low:** It is unlikely that latency of 3 or 5ms would be noticed by a typical end user. Implementing reporting for latency at these thresholds will likely be inefficient investment given the limited utility of such reporting. This is supported by the ACCC's comments in the Measuring Broadband Australia report where average latency values for selected RSPs measured between 8.5 ms and 27.1 ms. While this report measures latency on the RSPs' end-to-end network, the values are significantly higher than the proposed 3 and 5 ms that have been proposed for measurement on the wholesale network and considered to not likely impact typical end users, '*even when using more latency-sensitive applications (such as videoconferencing services or online gaming).*'[5]
2) **Thresholds not technically feasible on parts of the network:** In addition to the fact that typical end users would not be impacted by latency in the order of 3 or 5ms, some access technologies such as FTTC and HFC are unlikely to be able to achieve average latency below 3 or 5ms. Technical constraints with technologies, and whether traffic delay is being measured on a one way or two way basis, must be taken into account when considering reporting on traffic delay, and any reporting commitment should reflect benchmarking of the current performance of all access technologies (not only FTTP).
3) **Distinguishing from Chorus network traffic delay:** There are substantive differences between the Chorus and **nbn** networks that must be accounted for, and which demonstrate that Chorus' reporting requirements are not necessarily appropriate when applied to the **nbn** network. This includes the access technologies

[5] ACCC Measuring Broadband Report August 2022, December 2022.

that form the **nbn**® network, distances between the NTD and NNI within Australia compared to New Zealand, and the fact that Chorus has dedicated AVCs to measure traffic delay. For **nbn** to implement a similar capability for FTTP only, dedicated test end points would need to be deployed at a selection of the several thousand (as of 2023) OLTs and **nbn** would need to provision dedicated AVCs to each end point. **nbn** would also need to scale the Network Management System platform to accommodate the increase in performance reporting. No technical solution currently exists for FTTN as the residential gateway is provided by either the RSP or purchased by the end user (**nbn** does not specify performance management requirements for residential gateways).

4) **Unrealistic to report on every service:** The investment required for **nbn** 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 require **nbn** to revisit forecast expenditure and price requirements – which is counter to key objectives of the current SAU variation (i.e.. ensuring ongoing efficient investment in the **nbn**® Network and pricing stability for RSPs*).* For previous latency reporting **nbn** reported on a sample of between 100,000 and 200,000 services. **nbn** decommissioned this testing as it was beginning to impact core systems capabilities, specifically the measurement of utilisation for billing purposes. Applying this testing to all services would at least require:
    a. **Systems changes: nbn** would be required to enhance data storage & processing power in the order of 40,000 times the data storage and processing power used for the previous testing - noting the strain that previous testing placed on existing data lakes and core systems. It is anticipated that new cores would be required at each POI to support the testing (likely 2 at each POI for redundancy purposes).
    b. **Deployment of FTTN/B modems by nbn:** For the more than 3 million FTTN/B premises, **nbn** would need to deploy modems with Y1731 capability. Currently FTTN/B modems are supplied by the RSP and **nbn**'s ability to monitor traffic delay is contained to the DSLAM – which does not provide a complete picture of the traffic delay experienced by an end user.

13.3 nbn proposed reporting

Given the significant development and cost implications of any traffic delay reporting solution, it is important that the requirements and potential costs of a reporting commitment are understood before being included in any proposed RKR. As outlined above, there are a range of technical and cost factors that need to be taken into consideration in developing such a reporting commitment.

nbn is keen to engage with the ACCC further on the objective of this proposed reporting commitment, and is committed to working on the development of appropriate reporting related to traffic delay.

14 Shared Network utilisation

14.1 ACCC proposed reporting

Proposed reporting item 18

The Consultation Paper proposes that **nbn** report on the following utilisation metrics, disaggregated by access network type and geographic location:

- The number of times a shared network resource exceeded a utilisation threshold of 70%;
- The number of times a shared network resource exceeded a utilisation threshold of 90%;
- The number of times a shared network resource exceeded a utilisation threshold of 95%; and
- For each instance where the utilisation threshold is exceeded (as applicable in the Wholesale Broadband Agreement or Special Access Undertaking), the average time taken (in Business Days) to return the utilisation of the relevant shared network resource below the utilisation threshold.

14.2 Comments on proposed reporting

nbn considers that the proposed reporting goes beyond what is necessary to provide the ACCC and RSPs with transparency of performance on the **nbn**™ network with respect to shared network resource utilisation. There are a number of reasons for this:

1) **Additional reporting systems build cost incurred before nbn has experienced breach of utilisation threshold: nbn** has already allocated significant cost and resource to the proposed utilisation reporting proposed under the Variation. This reporting would enable RSPs to identify not only the frequency of any utilisation issues but the volume of RSP services potentially impacted by such issues. This transparency commitment to RSPs will ensure that, to the extent there is cause for concern regarding utilisation on Shared Network Resources, RSPs have clear visibility of this. The additional utilisation reporting requirements proposed in the Consultation Paper would require **nbn** to incur additional reporting systems cost when the value of such reporting is not yet confirmed. For example, until **nbn** has reported under the SAU that a number of Shared Network Resources have exceeded the Utilisation Threshold, any additional reporting commitments would not be of value to the industry and result in potentially inefficient systems spend by **nbn**.
2) **Limited utility of reporting at 70% threshold:** At this level of utilisation, there should be no concern for an RSP or end user with respect to congestion on Shared Network Resources. Additional reporting would incur unnecessary/inefficient cost. In its explanation of reporting at a 70% threshold, ComCom noted that this

'shows the extent that the fibre network is operating in a normal network condition'.[6] However, consistent with the proposed commitment in the SAU, **nbn** considers that operating below 70% should not be considered as the 'network operating in a normal network condition'. Rather, the network should be considered to be operating at an appropriate level of utilisation below 90% and utilisation reporting should be aligned with this.

3) **Limited utility of reporting on 95%:** If a shared network resource exceeds 90% **nbn** already has an obligation to address this under the proposed SAU Utilisation Threshold commitment. Additional reporting would incur unnecessary/inefficient cost given that **nbn** will need to increase capacity of the Shared Network Resource at the 90% threshold.
4) **Aspects of reporting go beyond even Chorus requirements:** The reporting requirements currently applicable to Chorus are less onerous in requiring reporting on percentages vs number of times each shared network resource exceeded a threshold.

14.3 nbn proposed reporting

As noted in section 13 , **nbn** is keen to work with the ACCC to identify if there is an effective solution for measuring frame delay across the network. If so, this could provide a more effective measure for tracking network performance than the proposed additional utilisation reporting, and prevent **nbn** from potentially inefficient investment required to deliver on the proposed utilisation reporting under the RKR.

[6] Commerce Commission New Zealand, Fibre Information Disclosure Final Decisions: Reasons Paper, 30 November 2021, p.222

15 Fibre to the Premises upgrades

15.1 ACCC proposed reporting

Proposed reporting item 19

The Consultation Paper proposes that **nbn** report the following data in relation to FTTP upgrades:

- The number of premises in the following stages of the FTTP upgrade program:
  - design;
  - construction;
  - passed;
  - connected; and
  - active.

15.2 Comments on proposed reporting

nbn appreciates the purpose of FTTP upgrade reporting is to demonstrate that **nbn**'s investment in the fibre upgrade program is delivering the anticipated expansion of the fibre network in a timely and efficient manner. This would be effectively demonstrated through the first three reporting categories proposed by the ACCC, specifically the count of FTTP upgrade premises: (1) in design; (2) in construction; and (3) 'passed'. In the FTTP upgrade context, this third category of premises are known as 'Ready To Order.'

nbn is concerned that reporting on the connected or active volumes as part of this metric does not add significant utility in terms of demonstrating the performance and capability of the **nbn**® network. Design, construction and Ready To Order are the core measurements of **nbn**'s delivery of FTTP upgrades – and the service quality available at the relevant premises. Additional reporting on the volume of premises 'connected' and 'active' within the FTTP upgrade footprint does not reflect the delivery or capability of the **nbn**® network. The value of these two metrics as a measure of network performance is further complicated by the fact that, for example, active services is a point-in-time measurement and the proposed RKR seeks to capture a view of network performance over a 6-month period.

15.3 nbn proposed reporting

For the reasons outlined in 15.2 above, **nbn** proposes that reporting on the FTTP upgrade program should reflect the volume of premises: (1) In Design; (2) In Construction; and (3) Ready To Order.

Fibre Network upgrade program

Stage of Fibre Network upgrade	Number of premises
Design	[Insert]
Construction	[Insert]
Ready To Order	[Insert]

16 Number of services where rebates are payable to retail service providers

16.1 ACCC proposed reporting

Proposed reporting item 20

The Consultation Paper proposes that **nbn** report the following data in relation to rebates payable:

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

16.2 Comments on proposed reporting

The proposed reporting on rebates does not necessarily provide additional insight regarding network performance that would justify the additional cost required to establish and maintain this reporting. The RKR already proposes, and **nbn** has proposed in response, detailed reporting in relation to connections, service faults and appointments (see sections 3 and 4). Under **nbn**'s proposed reporting the RKR would provide a clear view of the volume of services that meet and miss applicable service levels. Similar information is already available to RSPs under the WBA Service Level Performance Report and Supplementary Report.

If the RKR already captures critical information regarding **nbn**'s performance against connection, service faults and appointments, it is unclear what further value reporting specific to rebates payable would provide. Rebates are a consequence of the actual performance of **nbn** – which performance is best tracked through transparency of the volume of services that meet or miss applicable service levels.

16.3 nbn proposed reporting

nbn considers that reporting specific to rebates would incur additional cost and process without advancing the objectives of the proposed RKR - to ensure that **nbn** maintains or improves service performance and provide industry participants with a view of the network so as to compare against other network operators. This commitment should not be included in the proposed RKR.

17 Corrective action

17.1 ACCC proposed reporting

Proposed reporting item 21

The Consultation Paper proposes that **nbn** report the following data in relation to Corrective Action:

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

17.2 Comments on proposed reporting

The proposed reporting on Corrective Action does not necessarily provide additional insight regarding overall network performance that furthers the objectives of the RKR - that industry participants have useful information to compare the performance of the network with other operators and provide incentive for **nbn** to enhance network performance. In addition to connections, service faults and appointments, the RKR proposes (and **nbn** has proposed in response) detailed reporting in relation to a range of network performance measures (e.g. service stability, traffic delay, speed performance, utilisation). These extensive reporting requirements within the RKR should provide more than sufficient insights as to whether **nbn** is addressing performance issues at a network level appropriately.

Further, **nbn** already has detailed reporting obligations in relation to Corrective Action under the WBA. Subject to certain exceptions, if **nbn** does not achieve a Performance Objective, **nbn** is required to: (i) inform RSPs of the reasons for that non-achievement; (ii) provide RSPs with a corrective action plan that sets out the relevant Corrective Action that **nbn** will undertake to address the non–achievement; (iii) undertake the relevant Corrective Action; and (iv) notify RSP as soon as reasonably practicable after Corrective Action is taken by **nbn**.[7] To the extent that an issue is raised with a particular area of performance, and the ACCC considered

[7] See section 19.1 of the **nbn**® Ethernet Service Levels Schedule.

further information was required, **nbn** could then provide the ACCC with the requested information on a case-by-case basis. This would avoid duplicative reporting in relation to Corrective Action – and ensure that the RKR reporting is focused on those areas that provide the most effective indicators of overall performance.

17.3 nbn proposed reporting

nbn considers that additional RKR reporting specific to Corrective Action plans would incur additional cost and process without advancing the objectives of the proposed RKR - to ensure that **nbn** maintains or improves service performance and provide industry participants with a view of the network so as to compare against other network operators. This commitment should not be included in the proposed RKR.