

17 February 2023

Australian Competition and Consumer Commission Level 27, 135 King Street Sydney NSW 2000

By email: <u>ServiceLevelsRKR@accc.gov.au</u>

Dear Sir/Madam,

## RE: ACCC Record Keeping Rule – NBN service performance consultation paper

TPG Telecom welcomes the opportunity to respond to the ACCC's consultation paper, proposing the introduction of a Record Keeping Rule (**RKR**) for NBN Co relating to its service quality and network performance (December 2022).

We support the introduction of the RKR for NBN Co in the interests of improving transparency and reporting arrangements for all stakeholders.

We believe NBN Co is overdue to face greater accountability for the quality of service it delivers to Australians who are funding the NBN in multiple ways, including \$32 billion in taxpayer funding, \$19.5 billion in taxpayer debt funding (which has now turned into \$19+ billion of cheap external debt) and through the costs consumers pay for their NBN service.

We do not believe a 'set and forget' approach should be adopted for the RKR. The RKRs ought to be continuously developed and updated, including to reflect any future changes in NBN Co's service levels.

Our feedback to the specific proposed data requirements is contained in Attachment A.

While we support the proposed frequency of bi-annual reporting and for data to be segmented on a quarterly basis, in some circumstances, it may be beneficial to segment data monthly, e.g. for data relating to total number of end-user faults and rectifications, total number of outages, total number of end-user performance incidents. Such an adjustment could assist the ACCC to better comment on any noticeable trends in service levels.

We note, under its new Terms of Reference, the Telecommunications Industry Ombudsman (**TIO**) now has powers to join more than one member as a relevant party to a complaint. We believe consideration should be given to NBN Co being required to hold and report on data related to TIO complaints, such as the volume of matters joined to, timeframe to resolve these matters, and category of the issue raised in the complaint.

We are hopeful this RKR will lead to greater visibility of those areas where NBN Co's service levels can be improved to ensure they meet consumer expectations.

Concerns about NBN Co's service quality are longstanding and have been raised by RSPs and endusers for many years. Such concerns contributed to the need for the ACCC to undertake the wholesale

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services standards inquiry in 2017. As a result of the inquiry, the ACCC recognised improvements to NBN Co's performance was required.

A contributing factor to these concerns is service levels are not currently embedded in NBN Co's Special Access Undertaking (**SAU**). Although NBN Co is proposing to include the existing service levels in its revised SAU, it is refusing to include any material improvements beyond the commitments made three years ago, under the WBA4 established in 2020.

In comparison to the performance and reporting of NBN Co, we are not aware of any systemic issues related to the service quality of non-NBN services, which would warrant the ACCC imposing similar RKR requirements on SBAS providers.

If the ACCC believes imposing similar RKRs on SBAS providers is necessary, we welcome the ACCC undertaking further direct consultation with SBAS providers regarding the data to be reported and the degree of disaggregation of data required.

Further direct consultation will also ensure due regard is given to the cost and burden to SBAS providers of providing similar data as NBN Co. This is especially relevant when considering the small scale of SBAS services compared to NBN Co's near-ubiquitous coverage, along with the competitive advantages available to NBN Co as the Government-mandated monopoly broadband provider.

In August 2020, the carrier separation rules in the *Telecommunications Act 1997* were amended to better enable SBAS operators to compete with NBN Co at the infrastructure level. The imposition of additional regulation by the ACCC through potentially onerous record keeping rules on non-NBN providers, absent any justification, could lead to additional costs, which in turn would hamper the ability of non-NBN providers to compete against the NBN.

Should you have any further questions, please feel free to contact Stephanie Phan, Industry Strategy Manager TPG Telecom, at <a href="mailto:stephan@tpgtelecom.com.au">stephan@tpgtelecom.com.au</a>.

Yours sincerely,

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James Rickards General Manager – External Affairs TPG Telecom Limited



## Attachment A

Performance metrics and data disaggregation	Proposed data requirements	TPG Telecom feedback
1. Time taken to connect premises		
<ul> <li>Standard connections</li> <li>The number of days it takes NBN Co to connect premises.</li> <li>Possible disaggregation <ul> <li>Geographic location: NBN Co's stated Location of Premises:</li> <li>Urban Area</li> <li>Major Rural Area or Minor Rural Area</li> <li>Remote Area</li> <li>Isolated Area (applies to Satellite network only)</li> <li>Limited Access Area (applies to Satellite network only)</li> </ul> </li> <li>Service Class: This incorporates the relevant access network type and the extent of infrastructure already installed. Further information on NBN Co's Service Classes is in Part A of NBN Co's WBA Service Levels Schedule and dictionary</li> </ul>	<ul> <li>Connections not requiring NBN Co technicians <ul> <li>Total number of connections not requiring a technician</li> <li>Number of connections completed in 1 business day</li> <li>Number of connections completed in 2 – 5 business days</li> <li>Number of connections completed in 6+ business days.</li> </ul> </li> <li>Average time to complete all connections</li> <li>Connections requiring NBN Co technicians</li> <li>Total number of connections requiring technicians</li> <li>Number of connections completed in &lt;= 5 business days</li> <li>Number of connections completed in 6 – 10 business days</li> <li>Number of connections completed in 11+ business days</li> <li>Average time to complete all connections</li> </ul>	<ul> <li>NBN Co's Wholesale Broadband Agreement (WBA) service level schedule states in some circumstance it can take up to 19 days (25 days for satellite services) to undertake standard connections.</li> <li>To align with this, it would be useful to include information regarding: <ul> <li>connections completed in 11-19 business days;</li> <li>connections completed in 20-25 business days; and</li> <li>connections completed in 25+ business days.</li> </ul> </li> </ul>
2. Time taken to connect premises for medically vu	Inerable consumers	
<ul> <li>Priority Assistance (PA) connections</li> <li>The number of days it takes NBN Co to connect premises for medically vulnerable consumers.</li> <li>Possible disaggregation <ul> <li>Access network type:</li> <li>Fibre to the Premises (FTTP)</li> <li>Fibre to the Building (FTTB)</li> </ul> </li> </ul>	<ul> <li>Total number of PA connections</li> <li>Number of PA connections completed within 24 hours</li> <li>Number of PA connections completed between 24 and 48 hours</li> <li>Number of PA connections completed in 48+ hours.</li> </ul>	We suggest also obtaining separate data about Remote Areas, as NBN Co has a service level of 48 hours for PA connections in Remote Areas.



<ul> <li>Fibre to the Node (FTTN)</li> </ul>		
• Fibre to the Curb (FTTC)		
<ul> <li>Hybrid Fibre Coaxial (HFC)</li> </ul>		
<ul> <li>Fixed Wireless Satellite.</li> <li>Time taken to connect premises for BSDs who related to the second sec</li></ul>	aquest a factor connection time	
S. Time taken to connect premises for KSFS who r	Total number of Accelerated Connections	NBN Co's WBA service level schedule states for
The number of days it takes NBN Co to connect premises for retail service providers requesting faster connection of services. <b>Possible disaggregation</b> • Access network type.	<ul> <li>Number of Accelerated Connections completed in &lt;= 5 business days</li> <li>Number of Accelerated Connections completed in 6 – 10 business days</li> <li>Number of Accelerated Connections completed in 11+ business days.</li> </ul>	Urban Areas, an Accelerated Connection can take up to 4 Business Days. To reflect this, we suggest including data about the number of accelerated connections completed in less than 4 Business Days and to disaggregate the data based on the location of premises.
4. Effectiveness of equipment installations and co	nnections/activations of premises	
<ul> <li>'Right-first-time' installations and connections</li> <li>The number of network installations and service activations requiring follow up work or experiencing a fault shortly thereafter.</li> <li>Possible disaggregation <ul> <li>Access network type</li> <li>Geographic location.</li> </ul> </li> </ul>	<ul> <li>New installations:</li> <li>Total number of new installations</li> <li>Number of new installations that required follow up work within: <ul> <li>5 business days</li> <li>6-10 business days</li> <li>11-20 business days.</li> </ul> </li> <li>Connections: <ul> <li>Total number of new connections</li> <li>The number of new connections that had a fault within: <ul> <li>5 business days</li> <li>6-10 business days</li> </ul> </li> </ul></li></ul>	We assume consumers would report any issues with new installations/connections quickly. It may therefore be helpful to understand how many new installations require follow up or had a fault within 1-2 business days.
	o 11-20 business days.	
5. Time taken to transfer an NBN service from one	retail service provider to another	
Service transfers	Total number of service transfers	N/A.
The number of days taken by NBN Co to transfer services from one provider to another.	<ul> <li>Number of service transfers completed within 1 business day</li> <li>Number of service transfers completed within 2-3 business</li> </ul>	
Possible disaggregation	<ul><li>days</li><li>Number of service transfers completed in 4+ business</li></ul>	



6. Connection appointment punctuality       N/A.         Connection appointment keeping       N/A.         The number of connection appointments that meet       N/A.         Possible disaggregation       • Total number of connection appointments where NBN Co:         • Access network type       • Did not meet the appointment time (or 15 minutes         • Connection appointments where of appointment window       • Re-scheduled         • Did not meet the appointment to a future date.       Connection appointment window         • Of these, the number of appointments where NBN Co:       • Met the appointment to a future date.         Connection appointment window       • Re-scheduled       • Did not meet the appointment window         • Of these, the number of connection appointment window       • Of these, the number of appointment window       • Of these, the number of appointment window         • Of these, the number of appointment window (or 15 minutes       thereafter) that was previously re-scheduled       • Met the appointment window (or 15 minutes         • Did not meet the appointment window       • Met the appointment window       • Total number of connection appointment window         • Total number of connection appointment window       • Total number of appointment window       • Total number of appointment window         • Of these, the number of appointment window       • Total number of appointment window       • Total number of appointment window <th>Access network type.</th> <th>days.</th> <th></th>	Access network type.	days.	
Connection appointment with a particular time       N/A.         Total number of connection appointments with a particular time       N/A.         Possible disaggregation       • Of these, the number of appointments where NBN Co:         • Access network type       • Met the appointment time (or 15 minutes thereafter) that was not previously re-scheduled         • Did not meet the appointment window       • Of these, the number of appointments with a particular time         • Access network type       • Did not meet the appointment window         • Total number of connection appointments with a 'A-four period'       • Of these, the number of appointments with a 'A-four period'         • Total number of connection appointments with a 'A-four period'       • Of these, the number of appointments with a 'A-four appointment window         • Of these, the number of appointments with a 'A-four appointment window       • Of these, the number of appointments with a 'A-four appointment window         • Of these, the number of connection appointments with a 'A-four appointment window       • Of these, the number of appointments with a 'A-four appointment window         • Did not meet the appointment window       • Total number of connection appointments with a 'A-four appointment's window         • Of these, the number of appointments with a 'A-four appointment's window       • Of these, the number of appointments with a 'A-four appointment's window         • Of these, the number of connection appointments with a 'A-four appointment'window       • Of these, the number of	6. Connection appointment punctuality		
timeframes <ul> <li>Total number of connection appointments with a particular time</li> <li>Total number of connection appointments where NBN Co:                 <ul></ul></li></ul>	Connection appointment keeping	Connection appointments with a particular time	N/A.
The number of connection appointments that meet NBN Co's WBA service levels. Possible disaggregation • Access network type • Geographic location. • Met the appointment time (or 15 minutes thereafter) that was not previously re-scheduled • Did not meet the appointment to affuture date. Connection appointments with a <u>4-hour period</u> • Total number of appointment window (or 15 minutes thereafter) that was not previously re-scheduled • Did not meet the appointment to affuture date. Connection appointment window (or 15 minutes thereafter) that was not previously re-scheduled • Did not meet the appointment window • Met the appointment window (or 15 minutes thereafter) that was not previously re-scheduled • Did not meet the appointment window (or 15 minutes thereafter) that was not previously re-scheduled • Did not meet the appointment window • Total number of connection appointment window • Total number of connection appointment window • Total number of connection appointment window • Did not meet the appointment window • Total number of connection appointments with a 4-5 hour period • Total number of connection appointments with a 4-5 hour period • Total number of connection appointments with a 4-5 hour period • Total number of connection appointments with a 4-5 hour period • Total number of appointment window that was not previously re- scheduled • Met the appointment window that was not previously re- scheduled • Met the appointment window that was previously re- scheduled • Did not meet the appointment window	timeframes	<ul> <li>Total number of connection appointments with a particular time.</li> </ul>	
Connection appointments with a $A_{-5}$ hour period (Minor	<ul> <li>The number of connection appointments that meet NBN Co's WBA service levels.</li> <li><b>Possible disaggregation</b></li> <li>Access network type</li> <li>Geographic location.</li> </ul>	<ul> <li>Of these, the number of appointments where NBN Co: <ul> <li>Met the appointment time (or 15 minutes thereafter) that was not previously re-scheduled</li> <li>Met the appointment time (or 15 minutes thereafter) that was previously re-scheduled</li> <li>Did not meet the appointment window</li> <li>Re-scheduled the appointment to a future date.</li> </ul> </li> <li>Connection appointments with a <u>4-hour period</u></li> <li>Total number of connection appointments with a <u>4-hour appointment window</u></li> <li>Of these, the number of appointments where NBN Co: <ul> <li>Met the appointment window (or 15 minutes thereafter) that was not previously re-scheduled</li> <li>Met the appointment window (or 15 minutes thereafter) that was previously re-scheduled</li> <li>Met the appointment window (or 15 minutes thereafter) that was previously re-scheduled</li> <li>Did not meet the appointment window</li> <li>Re-scheduled the appointment to a future date.</li> </ul> </li> <li>Connection appointments with a <u>4-5 hour period</u></li> <li>Did not meet the appointment to a future date.</li> </ul>	
oomeetion appontments with a <u>4-5 nour benou twintor</u>		Connection appointments with a <u>4-5 hour period (Minor</u>	



	<ul> <li>rural areas. Remote areas. Isolated areas. or Limited Access Areas)</li> <li>Total number of connection appointments with a 4- 5 hour appointment window</li> <li>Of these, the number of appointments where NBN Co: <ul> <li>Met the appointment window (or 45 minutes thereafter) that was not previously re-scheduled</li> <li>Met the appointment window (or 45 minutes</li> </ul> </li> </ul>	
	thereafter) that was previously re-scheduled	
	<ul> <li>Re-scheduled the appointment to a future date.</li> </ul>	
7. Faults frequency and time taken to repair		
<ul> <li>End-user faults and rectifications</li> <li>The number of end-user faults and how long it takes NBN Co to fix these.</li> <li>Possible disaggregation <ul> <li>Access network type</li> <li>Geographic location.</li> </ul> </li> </ul>	<ul> <li>Faults not requiring technicians</li> <li>Total number of faults not requiring a technician</li> <li>Of these, the number of faults rectified: <ul> <li>within 1 business day</li> <li>between 1 and 3 business days</li> <li>in 3+ business days.</li> </ul> </li> <li>Faults requiring technicians <ul> <li>Total number of faults requiring technicians</li> </ul> </li> <li>Of these, the number of faults rectified: <ul> <li>within 2 business days</li> <li>within 2 and 3 business days</li> <li>in 3+ business days</li> </ul> </li> </ul>	We suggest including 'right-first-time' data for faults and rectifications, along with data about the number of outstanding faults as at the end of each quarter and the age of those faults.
8. Time taken to repair service faults for medically	vulnerable consumers	
Priority Assistance (PA) faults The number service faults for medically vulnerable consumers and how long it takes NBN Co to fix these.	<ul> <li>PA faults not requiring technicians</li> <li>Total number of PA faults not requiring a technician</li> <li>Of these, the number of faults rectified: <ul> <li>within 24 hours</li> <li>between 24 and 48 hours</li> </ul> </li> </ul>	N/A.
<ul> <li>Access network type.</li> </ul>	<ul> <li>in 48+ hours.</li> <li>PA faults requiring technicians</li> <li>Total number of PA faults requiring technicians</li> <li>Of these, the number of faults rectified:</li> </ul>	



	<ul> <li>within 24 hours</li> <li>between 24 and 48 hours</li> <li>in 48+ hours.</li> </ul>	
9. Time taken to repair services with performance i	ncidents	
End-user performance incidents The number of services meetings NBN Co's performance incidents thresholds and how long it takes to fix these in accordance with NBN Co's WBA service levels. Services subject to NBN Co's performance incidents service level arrangements apply to those on the FTTN and HFC networks. Possible disaggregation • Access network type • Geographic location.	<ul> <li>Total number of services that exceeded the performance incidents thresholds</li> <li>Total number of these services that had previous performance incidents requiring rectification in the previous 12 months (services with recurring performance incidents)</li> <li>Total number of services experiencing performance incidents)</li> <li>Total number of services experiencing performance incidents that were rectified by the applicable service level timeframes</li> <li>Total number of services experiencing performance incidents that were rectified and did not meet the rectification timeframes where rectification exceeded the timeframe by:         <ul> <li>&lt; 5 business days <li>5 &lt; 10 business days <li>&gt; = 10 business days         </li> </li></li></ul> </li> </ul>	<ul> <li>We suggest further disaggregation of data to include the total number of services experiencing performance incidents that were rectified and did not meet the rectification timeframes, where rectification exceeded the timeframe by:</li> <li>10 &lt; 15 business days</li> <li>15 &lt; 20 business days</li> <li>&gt;= 20 business days</li> <li>This will provide a better understanding of the tail end of end-user performance incidents, where the problems would be most significant.</li> </ul>
10. Time taken to repair network infrastructure faul	ts that affect multiple products	
Network faults	Total number of network faults     Total number of network faults	N/A.
The number of network faults and how long it takes NBN Co to fix these.	<ul> <li>Total number of network faults estimated to affect:</li> <li>&lt;100 services</li> <li>100 &lt; 200 services</li> </ul>	
<ul> <li>Possible disaggregation</li> <li>Access network type</li> <li>Geographic location.</li> </ul>	<ul> <li>200 &lt; 400 services</li> <li>400 &lt;500 services</li> <li>&gt;= 500 services</li> <li>Total number of network faults rectified in:</li> <li>&lt;3 hours</li> <li>3&lt;9 hours</li> <li>&gt;=9 hours</li> </ul>	
11. Number of recurring service faults		
Recurring service faults	<ul> <li>The total number of services experiencing 3+ faults in any 60-day period (where the 3rd or any subsequent</li> </ul>	N/A.



The number of services experiencing	fault occurs during the reporting period)				
recurring faults in a certain period	<ul> <li>The total number of services experiencing 4+ faults in</li> </ul>				
recurring ladits in a certain period.	any 12-month period (where the 4th or any				
Possible disaggregation	subsequent fault occurs during the reporting period).				
Access network type					
Geographic location					
12. Fault appointment punctuality					
Fault rectification appointment keeping	Fault rectification appointments with a particular time N/A.				
timeframes	<ul> <li>Total number of fault rectification appointments with a</li> </ul>				
	particular time				
The number of fault rectification appointments	• Of these, the number of appointments where NBN Co:				
that meet NBN Co's WBA service levels.	• Met the appointment time (or 15 minutes				
	thereafter) and that was <b>not</b> previously re-				
Possible disaggregation	scheduled				
<ul> <li>Access network type</li> </ul>	<ul> <li>Met the appointment time (or 15 minutes</li> </ul>				
Geographic location.	thereafter) and that was previously re-				
	scheduled				
	<ul> <li>Did not meet the appointment window</li> </ul>				
	<ul> <li>Re-scheduled the appointment to a future date.</li> </ul>				
	Fault rectification appointments with a 4 hour period				
	<ul> <li>Total number of fault rectification appointments with</li> </ul>				
	a 4-hour appointment window				
	<ul> <li>Of these, the number of appointments where NBN Co:</li> </ul>				
	<ul> <li>Met the appointment window (or 15 minutes</li> </ul>				
	thereafter) and that was <b>not</b> previously re-				
	scheduled				
	<ul> <li>Met the appointment window (or 15 minutes</li> </ul>				
	thereafter) and that was previously re-scheduled				
	<ul> <li>Did not meet the appointment window</li> </ul>				
	<ul> <li>Re-scheduled the appointment to a future date.</li> </ul>				
	Fault rectification appointments with a <u>4-5 hour period</u>				
	<ul> <li>Total number of fault rectification appointments with a</li> </ul>				
	4-5 hour appointment window				
	<ul> <li>Of these, the number of appointments where NBN Co:</li> </ul>				
	<ul> <li>Met the appointment window and that was <b>not</b></li> </ul>				



	<ul> <li>previously re-scheduled</li> <li>Met the appointment window and that was previously re- scheduled</li> <li>Did not meet the appointment window</li> <li>Re-scheduled the appointment to a future date.</li> <li>Fault rectification appointments with a <u>4-5 hour</u> period (Minor rural areas. Remote areas. Isolated areas. or Limited Access Areas)</li> <li>Total number of fault rectification appointments with a 4-5 hour appointment window</li> <li>Of these, the number of appointments where NBN Co:</li> <li>Met the appointment window (or 45 minutes thereafter) window and that was not previously re-scheduled</li> <li>Met the appointment window (or 45 minutes thereafter) window and that was previously re-scheduled</li> <li>Did not meet the appointment window</li> <li>Re-scheduled the appointment to a future date.</li> </ul>	
13. Service stability/dropouts		
<ul> <li>Dropouts</li> <li>The number of services experiencing a minimum number of dropouts, the duration of dropouts and how long NBN Co takes to fix these.</li> <li>Possible disaggregation <ul> <li>Access network type</li> <li>Geographic location.</li> </ul> </li> </ul>	<ul> <li>Total number of services experiencing the following number of dropouts (lasting 30 seconds or more): <ul> <li></li> &lt;</ul></li></ul>	We suggest also including information about the number of services experiencing 2 to 5 dropouts within a 24-hour period. This could provide a more fulsome picture of issues with dropouts, beyond NBN Co's own service level commitments.
14. Number of planned and emergency outages		
Outages	Planned outages	N/A.
The number of intentional outages (planned	<ul><li>The number of planned outages</li><li>For each planned outage:</li></ul>	



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

Possible disaggregation

- Access network type
- Geographic location.

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

## Emergency outages

- The number of emergency outages
- For each emergency outage:
  - The (estimated) number of services affected
  - o Whether the outage was rectified within:
    - o 1 day
    - $\circ$   $\,$  2 and 3 days  $\,$
    - o **3+ days**
- Whether the majority of the outage took place between:
  - o 12.00am 8.00am
  - $\circ \quad 8.00am-5.00pm$
  - o 5.00pm 11.59pm
- The percentage of emergency outages where NBN Co



	was able to provide notice to providers prior to the outage	
15. Speed performance: copper and HFC networks	outago.	
Network speed capability Information on attainable download and upload speeds of NBN Co's services provided over	<ul> <li>Fixed line speed capabilities (FTTB/C/N)</li> <li>The estimated number of fixed line premises capable of achieving a maximum data transfer rate of:</li> </ul>	N/A.
copper and HFC networks. <b>Estimated</b> – The estimated number of premises at which NBN Co has made available its Fixed Line Network capable of achieving the maximum data transfer rate.	<ul> <li>&lt; 25 Mbps Peak Information Rate (PIR) downlink</li> <li>25 &lt; 50 Mbps PIR downlink</li> <li>50 &lt; 75 Mbps PIR downlink</li> <li>75 &lt; 100 Mbps PIR downlink</li> <li>100 Mbps &lt; 1 Gbps downlink</li> <li>&gt;= 1 Gbps PIR downlink</li> </ul>	
<ul> <li>transfer rate.</li> <li>Actual – The number of premises at which NBN Co supplied an Ordered Product over its Fixed Line Network capable of achieving the maximum data transfer rate.</li> <li>Possible disaggregation <ul> <li>Applicable access network type (FTTB, FTTC, FTTN and HFC)</li> <li>Geographic location</li> </ul> </li> </ul>	<ul> <li>&gt;= 1 Gbps PIR downlink.</li> <li>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:</li> <li>&lt;25 Mbps PIR downlink</li> <li>25 &lt; 50 Mbps PIR downlink</li> <li>50 &lt; 75 Mbps PIR downlink</li> <li>75 &lt; 100 Mbps PIR downlink</li> <li>100 Mbps &lt; 1 Gbps downlink</li> <li>&gt;= 1 Gbps PIR downlink.</li> <li>The actual number of fixed line premises capable of achieving a maximum data transfer rate of:</li> <li>&lt;25 Mbps PIR downlink</li> <li>50 &lt; 75 Mbps PIR downlink</li> <li>51 Gbps PIR downlink</li> <li>25 &lt; 50 Mbps PIR downlink</li> <li>&gt;= 1 Gbps PIR downlink</li> <li>25 &lt; 50 Mbps PIR downlink</li> <li>25 &lt; 100 Mbps PIR downlink</li> <li>50 &lt; 75 Mbps PIR downlink</li> </ul>	
	<ul> <li>The actual number of fixed line premises capable of achieving a maximum data transfer rate of:</li> <li>&lt; 5 Mbps PIR uplink</li> <li>&lt; 5 &lt; 10 Mbps PIR uplink</li> <li>&lt; 10 &lt; 20 Mbps PIR uplink</li> </ul>	



	$\circ >= 20$ Mbps PIR uplink				
Fixed line speed capabilities (HFC)					
	<ul> <li>The actual number of HFC services that cannot reliably</li> </ul>				
	attain the full ordered bandwidth data transfer rate of:				
	<ul> <li>25 Mbps downlink</li> </ul>				
	<ul> <li>50 Mbps downlink</li> </ul>				
	<ul> <li>100 Mbps downlink</li> </ul>				
	<ul> <li>250 Mbps downlink</li> </ul>				
	<ul> <li>500 Mbps downlink</li> </ul>				
	o 1 Gbps downlink.				
	The actual number of HFC services that cannot reliably				
	attain the full ordered bandwidth data transfer rate of:				
	<ul> <li>5 Mbps uplink</li> </ul>				
	o 10 Mbps uplink				
	<ul> <li>20 Mbps uplink</li> </ul>				
	o 40 Mbps uplink				
	$\circ$ > 40 Mbps uplink.				
16. Speed performance: fixed wireless network					
Network speed capability on NBN Co's fixed	The percentage of fixed wireless cells with an average N/A.				
wireless network	monthly busy hour cell performance in the following				
	specified <b>downlink</b> performance categories:				
Information on the attainable download and upload	• <3 Mbns				
speeds and traffic performance during average busy	<ul> <li>3 to &lt; 6 Mbps</li> </ul>				
hour relating to NBN Co's	6  to  < 12  Mbps				
Fixed Wireless cell network.	• 0 to <12 Mbps				
	• >= 50 Mbps.				
	The average number of hours a day cells spent in each				
	of the following <b>downlink</b> performance categories:				
	• < 3 Mbps				
	• 3 to < 6 Mbps				
	• 6 to <12 Mbps				
	• 12 to <25 Mbps				
	• 25 to <50 Mbps				
	• >= 50 Mbps				



	The percentage of fixed wireless cells with an average	
	monthly busy hour cell performance in the following	
	specified uplink performance categories:	
	• <2 Mbps	
	<ul> <li>2 to &lt;5 Mbps</li> </ul>	
	• 5 Mbps to < 10 Mbps	
	• 10 to <20 Mbps	
	• >= 20 Mbps.	
	The percentage of NBN Co Wireless Network cells connected	
	to backhaul transmission links with an average busy hour link	
	packet loss of less than 0.25%.	
	The following data:	
	Total Fixed Wireless cells	
	<ul> <li>Total Fixed Wireless congested cells.</li> </ul>	
	<ul> <li>Total LOC IDs of Fixed Wireless congested cells</li> </ul>	
	Total Fixed Wireless backhaul links	
	Total Fixed Wireless congested backhaul links	
	Total LOC IDs of congested Fixed Wireless FW backbaul	
	links	
	I ist of Priority Forecast Lingrade cells	
17 Network traffic delay performance		
NBN Co traffic delay	Data delay performance	N/A
NDN OU frame delay	<ul> <li>The number of exceedances of traffic frame delay equal</li> </ul>	N/A.
NBN Co's network performance regarding data	to or above 5 milliseconds on the fixed line network	
delays.	during the busy hour period (7 00pm – 11 00pm)	
,	Number of exceedances of traffic frame delay variation	
	equal to or above 3 milliseconds on the fixed line	
	network during the busy bour period (7 00pm –	
	11 00pm)	
18. Shared network resource utilisation		
Shared network resource utilisation	The number of times a shared network resource	N/A
	exceeded a utilisation threshold of 70%.	
The number of times NBN Co's shared network		
resource exceeds a certain threshold and the	The number of times a shared network resource	
duration of the exceedance.	exceeded a utilisation threshold of 90%.	



The number of times a shared network resource exceeded a utilisation threshold of 95%. For each instance where the utilisation threshold is exceeded (as applicable in the Wholesale Broadband Agreement or Special Access Undertaking), the average time taken (in business days) to return the utilisation of the relevant shared network resource below the utilisation threshold.	
The number of premises in the following stages of the	We suggest including data about the
<ul> <li>FTTP upgrade program:</li> <li>design</li> <li>construction</li> <li>passed</li> <li>connected</li> <li>active.</li> </ul>	numbers of services which are subject to a Downgrade Event. This will provide a more accurate understanding of the progress and the take-up of NBN Co's FTTP upgrade program.
ble to retail service providers	
<ul> <li>Number of services for which a rebate was payable by NBN Co for the following rebate categories:         <ul> <li>Missed connections</li> <li>failed connections</li> <li>first missed connection appointments</li> <li>subsequent missed connection appointments</li> </ul> </li> </ul>	N/A.
<ul> <li>service fault</li> </ul>	
<ul> <li>enhanced fault rectification</li> <li>first missed fault rectification appointments</li> <li>subsequent missed fault rectification appointments</li> <li>FTTB/N/C PIR Objective</li> <li>FTTB/N/C connection performance</li> <li>wireless speed.</li> <li>Number of services for which a rebate was capped (as applicable) by the above categories.</li> </ul>	
	The number of times a shared network resource exceeded a utilisation threshold of 95%. For each instance where the utilisation threshold is exceeded (as applicable in the Wholesale Broadband Agreement or Special Access Undertaking), the average time taken (in business days) to return the utilisation of the relevant shared network resource below the utilisation threshold. The number of premises in the following stages of the FTTP upgrade program: • design • construction • passed • connected • active. <b>ble to retail service providers</b> • 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 • subsequent missed fault rectification appointments • subsequent missed fault rectification appointments • FTTB/N/C PIR Objective • FTTB/N/C connection performance • wireless speed. • Number of services for which a rebate was capped (as applicable) by the above categories.



Corrective action for the non-achievement of •	Co	orrective action by each activity including:	N/A.	
NBN Co's activities and performance to fulfil its corrective action objectives.	0	achievement of performance objectives The number of corrective action plans provided to retail service providers		
Possible disaggregation	0 0	The broad types of corrective action proposed The average time taken to undertake the		
By service activity – connections, transfers, faults, and performance incidents.		corrective action.		