

Broadbanding
Australia

Product Description

Beta NBN Co Fibre Access Service



NBN Co Limited

Beta NBN Co Fibre Access Service Product Description

27/09/2011 – This contains changes to section 7 of Version 1.0 plus the addition of Annexure 1

Version: 2.0

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Environment

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1 Beta NBN Co Fibre Access Service

1.1 What is the Beta NBN Co Fibre Access Service?

- (a) The Beta NBN Co Fibre Access Service (the **Beta NFAS**) is an Ethernet-based, Layer 2 virtual connection on the NBN Co Network at First Release Sites supplied on a limited trial basis that carries traffic between:
- (i) a User Network Interface (**UNI**) on the Network Termination Unit (**NTU**) located at a Premises; and
 - (ii) the Network-Network Interface (**NNI**) at the Point of Interconnection (**POI**) associated with the Connectivity Serving Area (**CSA**) in which that Premises is located,
- with the Product Features that are made available by NBN Co and selected by Customer.
- (b) The Beta NFAS comprises of the following four Product Components:
- (i) a **UNI**, being a physical port on the NTU at a Premises;
 - (ii) an **Access Virtual Circuit** or **AVC**, being Ethernet-based, Layer 2 virtual capacity on the NBN Co Network at First Release Sites that carries Customer traffic to a UNI on the NTU at that Premises;
 - (iii) a **Connectivity Virtual Circuit** or **CVC**, being Ethernet-based, Layer 2 virtual capacity for the transport of traffic from multiple access virtual circuits within a CSA on an aggregated basis and presented at the NNI at the POI associated with that CSA; and
 - (iv) a **NNI**, being the physical interface between the NBN Co Network at First Release Sites and the Customer Network at the POI associated with that CSA,
- each with the Product Features made available by NBN Co, and selected by Customer, in respect of that Product Component.
- (c) In order for NBN Co to supply the Beta NFAS to Customer in respect of a Premises, Customer has to acquire all four Product Components of the Beta NFAS in respect of that Premises.
- (d) The Product Features of each Product Component of the Beta NFAS are described in section 2 and are more particularly described in the Beta Product Technical Specifications.
- (e) The Beta NFAS is logically depicted in the diagram set out below:

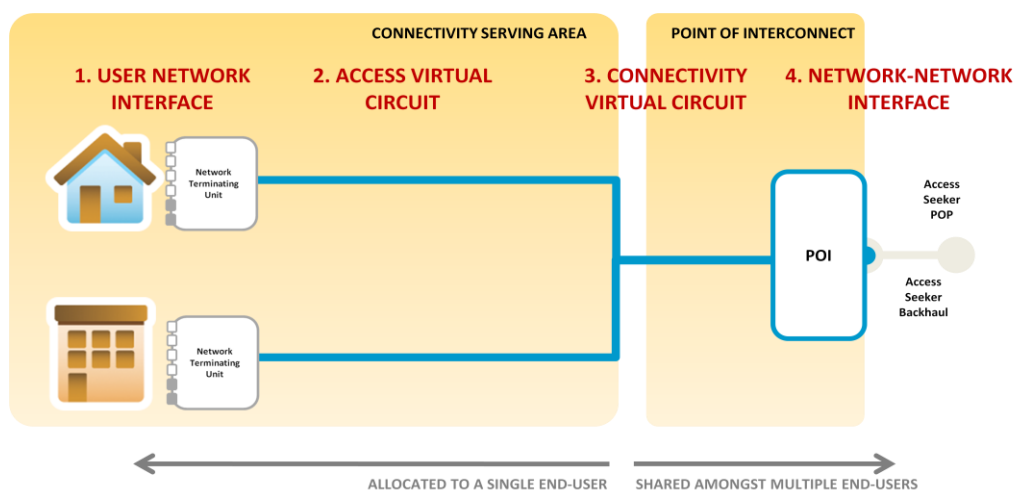


Figure 1: Beta NFAS.

- (f) The boundaries of the Beta NFAS are:
- the End User-side of the UNI on the NTU located at the Premises to which the Beta NFAS is supplied; and
 - the Customer-side of the NNI at the POI associated with the CSA in which that Premises is located.
- (g) The NNI at the POI associated with the CSA in which the relevant Premises is located is the point at which Customer may physically connect its backhaul transmission, cross connects or cabling for the purposes of interconnecting the Customer Network with the NBN Co Network at First Release Sites in respect of that Premises. Customer is required to connect to the NNI at NBN Co's appearance on the optical distribution frame associated with that NNI to establish connectivity to Customer's backhaul or local networking equipment for connection to the Customer Network.
- (h) The Product Components of the Beta NFAS are more particularly described in the Beta Product Technical Specifications.

1.2 Connectivity Serving Areas and Points of Interconnection

- Every Premises in respect of which NBN Co may supply the Beta NFAS is located within a CSA.
- Every CSA is associated with one POI.
- Every POI is associated with one or more CSAs.
- NBN Co will determine:
 - the CSA that is associated with each Premises to which NBN Co is to supply the Beta NFAS;
 - the POI that is associated with that CSA; and

- (iii) the location of each POI.
- (e) NBN Co will make the information referred to in section 1.2(d) available to Customer.

1.3 Battery back-up

- (a) The NTU located at a Premises to which NBN Co supplies the Beta NFAS will include functionality that supports the operation of a battery back-up unit in respect of the UNI-V on that NTU in the event of a mains power failure at that Premises.
- (b) NBN Co will supply, install, activate and maintain the First Battery that will support the operation of battery back-up functionality in respect of the UNI-V on the NTU located at a Premises to which NBN Co supplies the Beta NFAS.
- (c) For clarity, the First Battery supplied and installed by NBN Co pursuant to section 1.3(b) will form part of the NTU into which it is installed.
- (d) NBN Co will not initially levy charges on Customer for the supply, installation, activation and maintenance of a battery back-up unit and the First Battery for the delivery of backup power to the UNI-V on the NTU in the event of a mains power failure, but may do so in circumstances where NBN Co is permitted to charge, or is not restricted from charging, such a levy under any law, policy, regulation or government direction.
- (e) Customer will be responsible for:
 - (i) supplying, installing, activating and maintaining all replacement batteries; and
 - (ii) in respect of the First Battery, returning the First Battery to NBN Co in accordance with NBN Co's directions,
at Customer's own cost and expense.
- (f) Customer has to comply with NBN Co's directions in relation to the supply, installation, activation and maintenance of all replacement batteries, including the technical specifications of the replacement batteries and the processes in accordance with which supply, installation, activation and maintenance of replacement batteries is to be performed.
- (g) NBN Co will notify Customer of the date on which a battery installed in the NTU located at a Premises to which NBN Co supplies the Beta NFAS (including the First Battery and any replacement batteries) needs to be replaced with a replacement battery.

1.4 Exclusions

- (a) Customer recognises that the Beta NFAS is one element of the overall network supply chain that is required by Customer to provide an end-to-end Carriage Service or Content Service to End Users.
- (b) Customer must provide to itself or acquire from third parties other elements of the overall network supply chain to provide an end-to-end Carriage Service or Content Service to End Users.
- (c) The diagram set out below depicts the Beta NFAS as part of the overall network supply chain that is required by Customer to provide an end-to-end Carriage Service or Content Service to End Users:

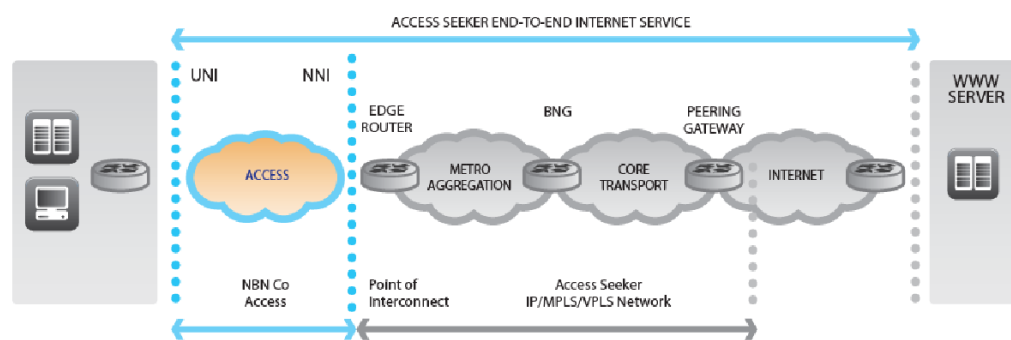


Figure 2: Beta NFAS in the context of a typical end-to-end Internet service that may be offered by Customer to its own End Users.

- (d) Customer recognises that the Beta NFAS does not include:
 - (i) facilities access at the relevant POI;
 - (ii) any backhaul transmission, cross connects or cabling from the Customer-side of NBN Co's appearance on the optical distribution frame at which Customer is required to connect to the NNI at the relevant POI (as described in section 1.1(g)) to the Customer Network;
 - (iii) any cabling that may be installed between a UNI on an outdoor NTU at a Premises and any internal wall plate within that Premises;
 - (iv) any content or applications, including Internet gateway connection, broadband network gateway capability or telephony soft switching infrastructure; or
 - (v) any residential gateways, business routers or any other end user equipment, such as personal computers.

1.5 Trial nature of Beta NFAS

Unless otherwise agreed by NBN Co in writing, the Beta NFAS is only made available to Customer during the term of the First Release Sites (Trial) Agreement between NBN Co and Customer.

2 Product Features

2.1 UNI

- (a) The User Network Interface – Data (**UNI-D**) is an independent data port on the NTU located at a Premises.
- (b) Customer may also optionally acquire access to and use of one port on the NTU at a Premises that incorporates an analogue telephony adaptor (a **User Network Interface – Voice** or **UNI-V**) to support the supply of voice telephony services by Customer to that Premises, subject to:
 - (i) availability of the UNI-V at the time of Customer specifying that it wishes to optionally acquire access to and use of the UNI-V; and
 - (ii) access to the UNI-V being required to support Customer's preferred method of supplying voice telephony services to that Premises; and
 - (iii) any further terms, rules or processes that may be developed and published by NBN Co from time to time in respect of the ordering and provisioning of the UNI-V.
- (c) When ordering UNI attributes, Customer is required to specify whether Customer wishes to optionally acquire access to, and use of, the UNI-V.
- (d) If Customer does not specify that it wishes to optionally acquire access to, and use of, the UNI-V when ordering the UNI attributes, Customer may subsequently specify that Customer wishes to optionally acquire access to an use of the UNI-V subject to and in accordance with the terms, rules and processes set out in the Operations Manual.
- (e) UNI-D and UNI-V that are made accessible as part of the Beta NFAS will have electrical interfaces. No optical UNI will be made available as part of the Beta NFAS.
- (f) Owing to certain technical limitations that exist during the First Release Sites Trial, one UNI-V on each NTU will be available in connection with the supply of the Beta NFAS per Premises.

2.2 AVC

- (a) The AVC is made available in the traffic class 4 bandwidths set out in Table 1 (each an **AVC TC-4 Bandwidth Profile**):

AVC TC-4 Bandwidth Profile number	Traffic class 4 (downstream) Mbps (PIR)	Traffic class 4 (upstream) Mbps (PIR)
1	12	1
2	25	5
3	25	10
4	50	20
5	100	40

Table 1: Supported AVC TC-4 Bandwidth Profiles for Beta NFAS. Note that traffic class 4 bandwidths are quoted on the basis of peak information rate (PIR), being the maximum data throughput that may be delivered by the service.

- (b) In respect of AVC Bandwidth Profiles set out in Table 1, the AVC will be mapped to one UNI-D on the NTU at the relevant Premises.
- (c) Owing to certain technical limitations that exist during the First Release Sites Trial, only one AVC will be mapped to one UNI-D.
- (d) Customer can optionally select to acquire any of the optional traffic class 1 bandwidths set out in Table 2 for the purpose of supplying voice telephony services to an End User, in addition to the traffic class 4 bandwidths set out in Table 1 (each, an **AVC TC-1 Bandwidth Profile**):

AVC TC-1 Bandwidth Profile number	Traffic class 1 (downstream) Kbps (CIR)	Traffic class 1 (upstream) Kbps (CIR)
1	0	0
2	150	150

Table 2: Supported AVC TC-1 Bandwidth Profiles for Beta NFAS. Note that traffic class 1 bandwidths are quoted on the basis of committed information rate (CIR), being (for the purposes of table 2) a level of data throughput for which service frames are delivered according to the performance objectives of the respective traffic class.

- (e) In respect of the optional traffic class 1 bandwidths that Customer can optionally select to acquire set out in Table 2:
 - (i) where Customer prefers to provide voice telephony services using the UNI-D:
 - (A) the 150Kbps TC- 1 (CIR) data transfer rate will be provided through the same AVC as the corresponding TC-4 data transfer rate is provided;
 - (B) the 150Kbps TC-1 (CIR) data transfer rate will be included within the overall corresponding TC-4 data transfer rate; and

- (C) the AVC will be mapped to the UNI-D on the NTU at the relevant Premises; but
- (ii) where Customer prefers to provide voice telephony services using the UNI-V:
 - (A) the 150Kbps TC-1 (CIR) data transfer rate will be provided through an additional AVC that is separate to the AVC through which the corresponding TC-4 data transfer rate is provided; and
 - (B) the 150Kbps TC-1 (CIR) data transfer rate will be additional to the corresponding TC-4 data transfer rate;
 - (C) the AVC through which the TC-4 data transfer rate is provided will be mapped to the UNI-D on the NTU at the relevant Premises; and
 - (D) the additional AVC through which the TC-1 data transfer rate is provided will be mapped to the UNI-V on the NTU at the relevant Premises.
- (f) The AVC component of the Beta NFAS is not supplied in traffic class 2 or traffic class 3.
- (g) For further information regarding AVC TC-1 Bandwidth Profiles or AVC TC-4 Bandwidth Profiles, please refer to the Beta Product Technical Specifications.

2.3 CVC

- (a) The CVC is made available in:
 - (i) the traffic class 1 bandwidths set out in Table 3;
 - (ii) the traffic class 4 bandwidths set out in Table 4; and
 - (iii) any combination of traffic class 1 and 4 bandwidths set out in Tables 3 and 4,

(each, a **CVC Bandwidth Profile**):

Traffic class 1 (downstream / upstream) Mbps (CIR)
0
5

Table 3: CVC Bandwidth Profiles for Beta NFAS in traffic class 1. Note that bandwidths in table 3 are quoted on the basis of Committed Information Rate (CIR), being (for the purposes of table 3) the information transfer rate which the NBN Co Network at First Release Sites is committed to transfer for a particular link under normal conditions.

Traffic class 4 (downstream / upstream) Mbps (CIR)
0
100
150
200
250
300

Table 4: CVC Bandwidth Profiles for Beta NFAS in traffic class 4. Note that bandwidths in table 4 are quoted on the basis of Committed Information Rate (CIR), being (for the purposes of table 4) the information transfer rate which the NBN Co Network at First Release Sites is committed to transfer for a particular link under normal conditions.

- (b) For clarity, the CVC component of the Beta NFAS is not supplied in traffic class 2 or traffic class 3.
- (c) For further information regarding CVC Bandwidth Profiles, please refer to the Beta Product Technical Specifications.
- (d) Customer acknowledges that a CVC aggregates multiple AVCs that are located within the CSA for that CVC.
- (e) Customer is responsible for dimensioning the CVC to meet its own capacity requirements and to support Customer's supply of its own Carriage Services and Content Services to its own End Users.

2.4 NNI

- (a) The NNI is supplied in the permissible combinations of interface capacity and range set out in Table 5 (each, a **NNI Profile**):

NNI Profiles	Interface capacity (Gbps)	Range (Km)
1000BaseLX	1	10
10GBaseLR	10	10

Table 5: NNI Profiles for Beta NFAS.

- (b) For clarity, the NNI component of the Beta NFAS is not supplied in interface variants other than as specified in Table 5.
- (c) For further information regarding NNI Profiles, please refer to the Beta Product Technical Specifications.
- (d) Customer acknowledges that a NNI aggregates one or more CVCs that are associated with that NNI in a given POI.
- (e) Customer is responsible for dimensioning the NNI to meet its own capacity requirements and to support Customer's supply of its own Carriage Services and Content Services to its own End Users.

- (f) Customer acknowledges that the NNI operates as a single, unprotected interface.
- (g) NBN Co is not responsible for the impact that the operation of the NNI as a single, unprotected interface may have on the supply by Customer of Carriage Services or Content Services to End Users.

3 Ordering, varying and cancelling supply

Customer must comply with the terms, rules and processes that apply to the ordering, variation and cancellation of the supply of the Product Components and Product Features of the Beta NFAS that are set out in:

- (a) the Modules of the First Release Sites (Trial) Agreement between NBN Co and Customer; and
- (b) the Operations Manual.

4 Introduction to the Business Rules

4.1 Application of these Business Rules

- (a) The rules set out or referred to in section 5 (the **Business Rules**) regulate the manner in which Customer may order, vary and cancel the supply of the Product Components and Product Features of the Beta NFAS.
- (b) Customer has to comply with the Business Rules when ordering, varying and cancelling the supply of the Product Components and Product Features of the Beta NFAS.

4.2 Modules and Operations Manual are subject to Business Rules

- (a) The terms and conditions set out in the Modules of the First Release Sites (Trial) Agreement between NBN Co and Customer and the Operations Manual that are referred to in section 3 are subject to the Business Rules.
- (b) If there is any inconsistency between these Business Rules and the terms and conditions set out in the Modules of the First Release Sites (Trial) Agreement between NBN Co and Customer or the Operations Manual that are referred to in section 3, then the Business Rules will prevail to the extent necessary to resolve that inconsistency.

5 Business Rules

5.1 Status

Before placing an order for any Product Component of the Beta NFAS in respect of a Premises, and before NBN Co is required to supply any Product Component of the Beta NFAS in respect of a Premises, Customer must be either:

- (a) a Carrier;
- (b) a Carriage Service Provider;
- (c) a Content Service Provider; or
- (d) an Exempt Body engaging in a related Exempt Activity.

5.2 Testing

- (a) Before placing an order for any Product Component of the Beta NFAS in respect of a Premises, and before NBN Co is required to supply any Product Component of the Beta NFAS in respect of a Premises, Customer must have successfully completed all of the tests comprising the Beta Product Testing Module for the Beta NFAS in accordance with Module B (**Testing**) of the First Release Sites (Trial) Agreement between NBN Co and Customer.
- (b) This Business Rule does not apply to the extent that NBN Co has waived the requirement for Customer to perform or participate in any of the tests comprising the Beta Product Testing Module for the Beta NFAS in accordance with clause B1.3 of the First Release Sites (Trial) Agreement between NBN Co and Customer.

5.3 Consents, approvals and rights of access

- (a) When placing an order for any Product Component of the Beta NFAS in respect of a Premises, Customer:
 - (i) warrants that it has given or obtained all consents, approvals and rights of access referred to in clause C6 of the First Release Sites (Trial) Agreement between NBN Co and Customer in respect of that Product Component of the Beta NFAS; and
 - (ii) must, if requested by NBN Co, provide to NBN Co documentary evidence of Customer having obtained all of those consents, approvals and rights of access.
- (b) Customer agrees that those consents, approvals and rights of access to be provided or obtained may include consents, approvals and rights of access given by third parties, including:

- (i) the End User to whom Customer will be supplying Carriage Services and/or Content Services that rely on the Beta NFAS as an input; and
 - (ii) the owner of the Premises;
- and may also include:
- (iii) the lessee of the Premises; and
 - (iv) the building manager of the Premises.
- (c) Customer agrees that the works to be performed by NBN Co and any Personnel of NBN Co in respect of which those consents, approvals and rights of access need to be provided or obtained may include (without limitation):
- (i) the deployment of the drop fibre;
 - (ii) the installation and activation of the NTU (including the First Battery); and
 - (iii) the installation of associated wiring.
- (d) The parties agree that this section 5.3 does not limit clause C6 of the First Release Sites (Trial) Agreement between NBN Co and Customer or any other provision of the First Release Sites (Trial) Agreement between NBN Co and Customer.

5.4 Facilities access

- (a) Before NBN Co is required to supply any Product Component of the Beta NFAS in respect of a Premises, Customer must:
- (i) acquire facilities access to enable interconnection between the NBN Co Network at First Release Sites and the Customer Network at the relevant POI either:
 - (A) directly from NBN Co's nominated facilities access provider for that POI (as notified by NBN Co to Customer); or
 - (B) directly through NBN Co; and
 - (ii) successfully establish a physical and logical interconnection between the NBN Co Network at First Release Sites and the Customer Network at that POI.
- (b) Customer acknowledges that:
- (i) there may be significant lead times between the ordering of facilities access from NBN Co's nominated facilities access provider or NBN Co (as the case may be) and commencement of supply of facilities

access from NBN Co’s nominated facilities access provider or NBN Co (as the case may be); and

- (ii) Customer is responsible for planning the ordering of facilities access with regard to these lead times.

5.5 Availability

- (a) Customer agrees that the supply of the Beta NFAS by NBN Co to Customer is subject to, among other things, the availability of the various Product Components of the Beta NFAS at the time at which Customer places an order for those Product Components of the Beta NFAS.
- (b) Please refer to the Operations Manual and the Beta Product Technical Specifications for more information regarding availability.

5.6 Further Business Rules are set out in the Operations Manual

Customer acknowledges that further Business Rules are set out in the Operations Manual, including rules regarding (among other things):

- (a) the products or services that have to be ordered or acquired before any Product Components of the Beta NFAS can be ordered;
- (b) the order in which Product Components of the Beta NFAS can be ordered, varied and cancelled; and
- (c) the availability of Product Components of the Beta NFAS, including UNIs.

6 Customer’s rights and obligations

6.1 Usage

- (a) Customer may only use the Product Components of the Beta NFAS for the purposes of providing Carriage Services or Content Services to End Users on a limited trial basis.
- (b) Customer must not use the Beta NFAS as an input to the supply of Customer Beta Products that are Priority Services or standard telephone services that are subject to customer service guarantees for the purposes of the *Telecommunications (Consumer Protection and Service Standards) Act 1999* (Cth).
- (c) Customer must comply with NBN Co’s Fair Use Policy in connection with Customer’s use of the Beta NFAS and each of the Product Components of the Beta NFAS.

6.2 Must use obligations

- (a) Within a reasonable period of the commencement of supply of all four of the Product Components of the Beta NFAS in respect of a Premises (and in any event, within 3 months after the commencement of that supply), Customer must start providing Carriage Services or Content Services to an End User that rely on those Product Components of the Beta NFAS.
- (b) Without limiting section 6.6, if:
- Customer has optionally selected to access and use the UNI-V on a NTU to support the supply of voice telephony services to a Premises; and
 - within a reasonable period of the commencement of supply of all four of the Product Components of the Beta NFAS in respect of that Premises (and in any event, within 3 months after the commencement of that supply), Customer does not start providing voice telephony services that rely on that UNI-V,

then, without limiting any other rights that NBN Co may have, NBN Co may, by giving written notice to Customer, withdraw Customer's right to access and use that UNI-V (and the associated 150 kbps AVC) and offer other NBN Co Customers the option to access and use that UNI-V.

6.3 Connections to the UNI

Customer acknowledges that:

- (a) Customer is responsible for all connections made on the End User-side of any UNI on an NTU; and
- (b) NBN Co is not responsible for any physical connections on the End User-side of any UNI on an NTU or the supply, connection, operation or maintenance of any customer premises equipment to or in connection with the NTU.

6.4 VLAN tagging

Customer must comply with the Virtual Local Area Network (**VLAN**) tagging scheme set out in the Beta Product Technical Specifications.

6.5 NBN End User Information

- (a) From time to time, NBN Co may provide information to Customer that is relevant to an End User's access to, and use of, certain parts the NBN Co Network at First Release Sites used to supply the Beta NFAS in respect of that End User, including:
- (i) the NTU;

- (ii) the battery back-up power supply; and
- (iii) the meaning of, and End User response required to, any alarms that may be generated by the NTU,

(NBN End User Information).

- (b) Unless agreed otherwise by NBN Co in writing, Customer has to:
 - (i) provide NBN End User Information to each of Customer's End Users without delay after receiving NBN End User Information from NBN Co; and
 - (ii) use reasonable endeavours to ensure that each of Customer's End Users complies with any requirements set out in any NBN End User Information.
- (c) Customer may provide NBN End User Information to each of Customer's End Users in any manner or form that Customer thinks fit.

6.6 Failure to comply

If Customer fails to comply with any of the requirements of this section 6, then NBN Co may suspend and/or cancel the supply of the relevant Beta NFAS or any of the Product Components of the relevant Beta NFAS.

7 Price List

7.1 Charges

The Charges set out in this section 7 apply in respect of the supply of the Beta NFAS on and from 1 October 2011.

7.2 References to download and upload speeds

References to download and upload speeds in this section 7 are to the maximum peak speeds that the NBN Co Network is designed to make available to Customer. The speeds actually experienced by retail and wholesale downstream customers and End Users will depend upon a number of factors including the contention ratios that are determined by Customer; the equipment that is used by Customer, downstream customers and End Users; the nature and quality of the relevant products or services acquired by wholesale and retail downstream customers and End Users; the number of simultaneous End Users using the relevant products or services acquired by wholesale and retail downstream customers and End Users; and the nature and quality of the connection at the relevant Premises.

7.3 Billing Periods

For the purposes of this section 7, **Billing Period** means each period of one calendar month starting at 00:00:00 on the 4th day of each calendar month and ending at 23:59:59pm on the 3rd calendar day of the next calendar month.

7.4 AVC TC-4 (including UNI-D) Recurring Charges

AVC TC-4 downstream Mbps (PIR)*	AVC TC-4 upstream Mbps (PIR)*	AVC TC-4 (including UNI-D) Recurring Charge	Validity Period
12	1	\$24.00	1/10/2011 to 30/6/2017
25	5	\$27.00	1/10/2011 to 31/12/2013
25	10	\$30.00	1/10/2011 to 31/12/2013
50	20	\$34.00	1/10/2011 to 31/12/2013
100	40	\$38.00	1/10/2011 to 31/12/2013

**To be read subject to section 7.2.*

- (a) The AVC TC-4 (including UNI-D) Recurring Charges are recurring charges that are incurred by Customer in respect of each Billing Period (or part thereof) in which a UNI-D and AVC TC-4 is made available by NBN Co to Customer.
- (b) The AVC TC-4 (including UNI-D) Recurring Charges are inclusive of:
- (i) access to and use of one UNI-D for use in conjunction with the AVC;
 - (ii) optional access to and use of one UNI-V on the NTD in respect of which the AVC is made available (where available on that NTD);
 - (iii) optional acquisition of a 150kbps TC-1 (CIR) for the purposes of supplying telephony services that will be mapped to either:
 - (A) the UNI-D where Customer does not acquire the optional UNI-V, in which case:
 - the 150Kbps TC- 1 (CIR) Data Transfer Rate will be provided through the same AVC as the corresponding TC-4 Data Transfer Rate is provided;
 - the 150Kbps TC-1 (CIR) Data Transfer Rate will be included within the overall corresponding TC-4 Data Transfer Rate; and

- the AVC will be mapped to the UNI-D on the NTD at the relevant Premises; or
- (B) the UNI-V where Customer acquires the optional UNI-V, in which case:
- the 150Kbps TC-1 (CIR) Data Transfer Rate will be provided through an additional AVC that is separate to the AVC through which the corresponding TC-4 Data Transfer Rate is provided;
 - the 150Kbps TC-1 (CIR) Data Transfer Rate will be additional to the corresponding TC-4 Data Transfer Rate;
 - the AVC through which the TC-4 Data Transfer Rate is provided will be mapped to the UNI-D on the NTD at the relevant Premises; and
 - the additional AVC through which the TC-1 Data Transfer Rate is provided will be mapped to the UNI-V on the NTD at the relevant Premises.

7.5 CVC TC-1 Recurring Charges

CVC TC-1 symmetrical Mbps (CIR)*	CVC TC-1 Recurring Charge	Validity Period
5	\$100	1/10/2011 to 31/12/2013

**To be read subject to section 7.2.*

The CVC TC-1 Recurring Charges are charges that are incurred by Customer in respect of each Billing Period (or part thereof) in which a CVC TC-1 is made available by NBN Co to Customer.

7.6 CVC TC-4 Recurring Charges

CVC TC-4 symmetrical Mbps (CIR)*	CVC TC-4 Recurring Charge	Validity Period
100	\$2000	1/10/2011 to 30/7/2017
150	\$3000	1/10/2011 to 30/7/2017
200	\$4000	1/10/2011 to 30/7/2017
250	\$5000	1/10/2011 to 30/7/2017
300	\$6000	1/10/2011 to 30/7/2017

**To be read subject to section 7.2.*

- (a) The CVC TC-4 Recurring Charges are charges that are incurred by Customer in respect of each Billing Period (or part thereof) in which a CVC TC-4 is provided by NBN Co to Customer.
- (b) Subject to section 7.6(c), in respect of every Primary UNI-D & Associated AVC within a CSA that is provided by NBN Co to Customer as at the start of each Billing Period, NBN Co will credit to Customer an amount per Billing Period in respect of each of those Primary UNI-D & Associated AVC within that CSA (in this section 7.6, the **credit amount**). The credit amount is equal to the charge that would otherwise apply to the supply of a 50kbps CVC based on then-current CVC pricing per Mbps. (For example, if CVC pricing per Mbps at the relevant time is \$20.00, then the credit amount will be \$1.00.) In respect of every Primary UNI-D & Associated AVC within a CSA, NBN Co will ensure that the credit amount is deducted from the total amount payable by Customer to NBN Co in respect of all of the CVCs for that CSA which are provided by NBN Co to Customer as at the start of that Billing Period (and that the relevant invoice is adjusted accordingly).
- (c) In respect of the credit amount that applies to all of the CVCs for a CSA which are provided by NBN Co to Customer pursuant to section 7.6(b), the credit amount will be capped at, and will not exceed, the total recurring charges that apply in respect of all of the CVCs for that CSA which are provided by NBN Co to Customer.
- (d) For the purposes of this section 7.6, **Primary UNI-D & Associated AVC** means the primary UNI-D and associated AVC that is made available by NBN Co to Customer in respect of an NTD. In respect of each NTD, there is, and can only be, one Primary UNI-D & Associated AVC per Customer, but there can be multiple Primary UNI-D & Associated AVC in respect of an NTD where multiple customers are accessing that NTD.

7.7 NNI Bearer Recurring Charges

NNI Bearer Profiles*	Interface capacity (Gbps)*	Range (Km)	NNI Bearer Recurring Charge	Validity Period
1000BaseLX	1	10	\$200	1/10/2011 to 30/7/2017
10GBaseLR	10	10	\$400	1/10/2011 to 30/7/2017

**To be read subject to section 7.2.*

- (a) The NNI Bearer Recurring Charges are charges that are incurred by Customer in respect of each Billing Period (or part thereof) in which an NNI is made available by NBN Co to Customer.
- (b) The parties agree that:

- (i) the NNI Bearer is a physical interface that may be configured as a member of a logical interface, the NNI Group, using IEEE802.1ad Link Aggregation;
- (ii) only one NNI Bearer is currently permitted per NNI Group; and
- (iii) NNI Bearers are made available in combinations of interface capacity and range.

7.8 Ancillary charges for installations and activations

Activity	Chargeable unit	Charge	Validity Period
Initial Standard Installation	Per installation	\$0	1/10/2011 to expiry of Term
Initial Non Standard Installation	Time and materials	Hourly Labour Rate plus cost of materials (subject to section 7.8(a) below)	1/10/2011 to 31/12/2012
Subsequent Installation	Time and materials	\$270 plus Hourly Labour Rate plus cost of materials (subject to section 7.8(b) below)	1/10/2011 to 31/12/2012
Access Component Reactivation	Per reactivation	\$0	1/10/2011 to expiry of Term
CVC Setup / Activation	Per activation	\$0	1/10/2011 to expiry of Term
NNI 1000BaseLX (1Gbps/10Km) Setup	Per activation	\$1,000	1/10/2011 to 31/12/2012
NNI 10GBaseLR (10Gbps/10Km) Setup	Per activation	\$5,000	1/10/2011 to 31/12/2012
Service Qualification Enquiry	Per enquiry	\$0	1/10/2011 to expiry of Term

- (a) For the purposes of the Charges for Initial Non Standard Installations:
 - (i) the Charges will only be incurred if Customer has consented to the details of a quote provided by NBN Co in respect of that Initial Non Standard Installation;
 - (ii) the Charges will only be incurred by Customer in respect of the labour and materials that NBN Co considers is additional to the labour and materials that would have been required if the

installation were considered to be an Standard Initial Installation;
and

- (iii) the Charge incurred by Customer will be rounded up to the nearest full hour of labour required to perform the installation.
- (b) For the purposes of the Charges for Subsequent Installations:
- (i) the Charges will only be incurred if Customer has consented to the details of a quote provided by NBN Co in respect of that Subsequent Installation;
 - (ii) the Charges will only be incurred by Customer in respect of the labour and materials that NBN Co considers is additional to the labour and materials that would have been required if the installation were considered to be an Standard Initial Installation;
 - (iii) the Charge incurred by Customer will be rounded up to the nearest full hour of labour required to perform the installation; and
 - (iv) the minimum amount of the Charge incurred by Customer is \$270.
- (c) For the purposes of the table set out above:

Access Component means, in respect of the Beta NFAS, the UNI and the AVC.

Access Component Reactivation means the activation of the Access Components of the Beta NFAS to be made available by NBN Co to Customer in respect of a NTD at a Premises where:

- (i) NBN Co has previously made available Access Components in respect of that NTD at that Premises; and
- (ii) NBN Co (or an Installer) is not required to attend that Premises to activate those Access Components.

Connecting Equipment has the meaning given to that term in Annexure 1 to this Product Description.

CVC Setup / Activation means the setup and activation of a CVC to be made available by NBN Co to Customer.

Hourly Labour Rate means \$75 per hour.

Initial Non Standard Installation means a Non Standard Installation that is the first Installation performed by NBN Co (or an Installer) in respect of a Premises.

Initial Standard Installation means a Standard Installation that is the first Installation performed by NBN Co (or an Installer) in respect of a Premises.

Installation means:

- (i) the installation and make ready for service of Connecting Equipment by NBN Co (or an Installer) at a Premises; or
- (ii) the installation, make ready for service and activation of the Connecting Equipment by NBN Co (or an Installer) at a Premises.

Installer has the meaning given to that term in Annexure 1 to this Product Description.

NNI 10GBaseLR (10Gbps/10Km) Setup means the setup and activation of a NNI 10GBaseLR (10Gbps/10Km) to be made available by NBN Co to Customer.

NNI 1000BaseLX (1Gbps/10Km) Setup means the setup and activation of a NNI 1000BaseLX (1Gbps/10Km) to be made available by NBN Co to Customer.

Non Standard Installation means an Installation where:

- (i) the conditions set out in section 1 of Annexure 1 to this Product Description are not satisfied; or
- (ii) the installation is otherwise considered to be a “non standard installation” in accordance with section 2 of Annexure 1 to this Product Description.

Service Qualification Enquiry has the meaning given to that term in the Dictionary to the Wholesale Broadband Agreement.

Standard Installation means an Installation where:

- (i) the conditions set out in section 1 of Annexure 1 to this Product Description are satisfied; and
- (ii) the installation is not otherwise considered to be a “non standard installation” in accordance with section 2 of Annexure 1 to this Product Description.

Subsequent Installation means any:

- (i) Standard Installation performed by NBN Co (or an Installer) in respect of a Premise that is not an Initial Standard Installation; or
- (ii) Non Standard Installation performed by NBN Co (or an Installer) in respect of a Premise that is not an Initial Non Standard Installation.

7.9 Ancillary charges for service modifications

Activity	Chargeable unit	Charge	Validity Period
AVC Modification	Per modification	\$0	1/10/2011 to expiry of Term
CVC Modification	Per event	\$0	1/10/2011 to expiry of Term
NNI Modification	Per event	\$0	1/10/2011 to expiry of Term
Rearrangement / Modification	Time and materials	Hourly Labour Rate plus cost of materials	1/10/2011 to 31/12/2012
Equipment Removal	Time and materials	Hourly Labour Rate plus cost of materials	1/10/2011 to 31/12/2012
Equipment Repair	Time and materials	Hourly Labour Rate plus cost of materials	1/10/2011 to 31/12/2012

(a) For the purposes of the table set out above:

AVC Modification means the modification of the bandwidth or traffic class of an AVC made available by NBN Co to Customer in respect of a Premise where Customer has validly requested that modification be performed in accordance with the [Operations Manual](#).

CVC Modification means the modification of the bandwidth or traffic class of a CVC made available by NBN Co to Customer in respect of a CSA where Customer has validly requested that modification be performed in accordance with the [Operations Manual](#).

Hourly Labour Rate means \$75 per hour.

NNI Modification means the modification of the configuration of an NNI which NBN Co supplies an NNI to Customer in respect of a POI where Customer has validly requested that modification be performed in accordance with the [Operations Manual](#).

Rearrangement / Modification means the rearrangement or modification of any NBN Co Equipment that is installed or located at a Premises where Customer has validly requested that NBN Co rearrange or modify that NBN Co Equipment in accordance with the [Operations Manual](#).

Equipment Removal means the removal of any NBN Co Equipment that is installed or located at a Premises where Customer has validly requested that NBN Co remove that NBN Co Equipment in accordance with the [Operations Manual](#).

Equipment Repair means the repair of any NBN Co Equipment that is installed or located at a Premises where Customer has validly requested that NBN Co repair that NBN Co Equipment, except for repairs of any NBN Co Equipment where NBN Co reasonably considers that an act or omission of Customer (or any downstream customer or End User) has caused the loss, theft or damage to that NBN Co Equipment which has given rise for the need to perform those repairs.

- (b) For the purposes of the Charges for:
- (i) Rearrangement / Modification;
 - (ii) Equipment Removal; and
 - (iii) Equipment Repair,

the Charges incurred by Customer will be rounded up to the nearest full hour of labour required to perform the Rearrangement / Modification, Equipment Removal or Equipment Repair (as the case may be).

7.10 Ancillary charges for service management

Activity	Chargeable unit	Charge	Validity Period
On Site Maintenance Call Out	Per event	\$0	1/10/2011 to expiry of Term
No Fault Found (No Truck Roll Required)	Per event	\$50	1/10/2011 to 31/12/2012
No Fault Found (Truck Roll Required)	Per event	\$150 for the first two hours plus the Hourly Labour Rate for each hour thereafter (subject to section 7.10(a) below)	1/10/2011 to 31/12/2012
Late Cancellation (Site Visit Required)	Per event	\$0	1/10/2011 to expiry of Term
Missed Appointment	Per event	\$0	1/10/2011 to expiry of Term

- (a) For the purposes of the Charges for No Fault Found (Truck Roll Required):
- (i) the Charges incurred by Customer will be rounded up to the nearest full hour of labour required to investigate a fault that is reported by Customer to NBN Co which NBN Co determines, acting reasonably, is not an NBN Fault (as that term is defined in the [Operations Manual](#)); and

- (ii) the minimum amount of the Charge incurred by Customer is \$150.
- (b) For the purposes of the table set out above:

Hourly Labour Rate means \$75 per hour.

On Site Maintenance Call Out means the performance of works by NBN Co Personnel to rectify a Reported NBN Fault that requires NBN Co Personnel to attend the location of the cause of that Reported NBN Fault for the purposes of rectifying that Reported NBN Fault.

No Fault Found (No Truck Roll Required) means the investigation of a fault that is reported by Customer to NBN Co which NBN Co determines, acting reasonably, is not an NBN Fault where NBN Co Personnel have not attended the suspected location of the suspected cause of that alleged NBN Fault for the purposes of investigating and/or rectifying that alleged NBN Fault.

No Fault Found (Truck Roll Required) means the investigation of a fault that is reported by Customer to NBN Co which NBN Co determines, acting reasonably, is not an NBN Fault where NBN Co Personnel have attended the suspected location of the suspected cause of that alleged NBN Fault for the purposes of investigating and/or rectifying that alleged NBN Fault.

Late Cancellation (Site Visit Required) means the cancellation of a request by Customer for the performance of an activity that requires NBN Co to attend the Premises where that cancellation occurs after NBN Co has dispatched NBN Co Personnel for the purposes of fulfilling that request.

Missed Appointment means that when a technician has visited a premises and the end user was not present for the work to occur such as installation, on site survey or maintenance call out.

8 Service levels

No service levels or service level rebates apply to the supply of the Beta NFAS.

9 Beta Product Technical Specifications

9.1 Compliance

NBN Co and Customer agree to comply with the Beta Product Technical Specifications, including any further terms and conditions that may be set out in the Beta Product Technical Specifications.

9.2 Inconsistency

- (a) The Beta NFAS, including its Product Components and Product Features, is more particularly described in the Beta Product Technical Specifications.

- (b) If there is any inconsistency between this Product Description and the Beta Product Technical Specifications, then the Beta Product Technical Specifications will prevail to the extent necessary to resolve that inconsistency.

10 Defined terms and interpretation

- (a) A capitalised term that is used in this Product Description and is defined in:
 - (i) the Dictionary for the First Release Sites (Trial) Agreement between NBN Co and Customer, has the meaning given to that term in the Dictionary for that agreement; or
 - (ii) in this section 10, has the meaning given to that term in this section 10.

- (b) In this Product Description:

Access Virtual Circuit or **AVC** has the meaning given to that term in section 1.1(b)(ii).

AVC TC-1 Bandwidth Profile has the meaning given to that term in section 2.2(a).

AVC TC-4 Bandwidth Profile has the meaning given to that term in section 2.2(d).

Beta NFAS has the meaning given to that term in section 1.1(a).

Business Rules has the meaning given to that term in section 4.1(a).

Connectivity Virtual Circuit or **CVC** has the meaning given to that term in section 1.1(b)(iii).

CSA means Connectivity Serving Area, being a geographical region that is addressable using a single CVC.

CVC Bandwidth Profile has the meaning given to that term in section 2.3(a).

Fair Use Policy means the latest version of the NBN Co Fair Use Policy that applies in respect of the Beta NFAS that is notified by NBN Co to Customer from time to time.

First Battery means the first battery that is or was installed by or on behalf of NBN Co in respect of the NTU at a Premises on or about the time of the installation of that NTU at that Premises.

FRS Trial means NBN Co's first release sites trial of the NBN Co Network at First Release Sites.

Layer 2 means the ‘data link’ layer of the open system interconnection (OSI) model.

NBN End User Information has the meaning given to that term in section 6.5(a).

NNI has the meaning given to that term in section 1.1(b)(iv).

NNI Profile has the meaning given to that term in section 2.4(a).

NTU means Network Termination Unit.

POI means Point of Interconnection.

UNI has the meaning given to that term in section 1.1(b)(i).

User Network Interface – Data or **UNI-D** has the meaning given to that term in section 2.1(a).

User Network Interface – Voice or **UNI-V** has the meaning given to that term in section 2.1(b).

- (c) The rules of interpretation set out in clause D13 of the First Release Sites (Trial) Agreement between NBN Co and Customer apply to this Product Description.

Annexure 1 – Standard Installation

1 Standard Installation

An installation will be considered to be a **Standard Installation** in respect of a Premises where each of the following conditions is satisfied:

- (a) all Connecting Equipment in respect of that Premises is able to be installed during an Appointment in Standard Hours and activated during Standard Hours;
- (b) the installation requires no more than one Drop Fibre, NTD, Connecting Fibre and PCD to be installed for the Premises;
- (c) NBN Co (or the Installer):
 - (i) has been provided with necessary rights of access to the Premises, as required under the Wholesale Broadband Agreement;
 - (ii) is given access to the Common Property, if required by NBN Co; and
 - (iii) is given access to the Premises, if required,at the time during the Appointment to perform and complete the installation of the Connecting Equipment at that Premises (including any necessary inspection or related works);
- (d) in respect of the Connecting Equipment:
 - (i) a PCD:
 - (A) is not required;
 - (B) is already installed and able to service the Premises; or
 - (C) is able to be installed on the exterior of the Building at which the Premises is located;
 - (ii) the Drop Fibre:
 - (A) is not required;
 - (B) is already installed and able to service the Premises; or
 - (C) is:
 - (I) only required from the NAP to the PCD which serves the Premises;
 - (II) able to be installed at the Premises;

- a. through an existing lead-in conduit;
 - b. through a new lead-in conduit; or
 - c. aerially; and
- (III) no more than 60 metres in length, measured by reference to the cable run distance between:
 - a. the property boundary point that is nearest to the location of both the PCD and NAP; and
 - b. the location of that PCD,or such longer length as may be reasonably determined by NBN Co in the circumstances;
- (iii) the NTD and any associated battery backup unit are able to be attached on the interior side of a wall of the Premises, at a location agreed between the end user and NBN Co (or the Installer), and:
 - (A) that location has a 240 volt power source available for the supply of electricity to the NTD; and
 - (B) that power source is located within approximately 3 metres of the location of the NTD; and
- (iv) the Connecting Fibre is no more than 40 metres in length, measured by reference to the cable run distance between the PCD and the location of the NTD, or such longer length as may be reasonably determined by NBN Co in the circumstances.

2 Non Standard Installation

Notwithstanding anything in section 1 of this Annexure 1, an installation will be considered to be a **Non Standard Installation** in respect of a Premises if NBN Co (or the Installer) determines, acting reasonably, that the installation of Connecting Equipment at the Premises does not properly constitute a “standard installation”, having regard to the following:

- (a) generally accepted industry practices and any applicable industry guidelines, policies, laws, regulations or directions;
- (b) the level of complexity and difficulty associated with the installation;
- (c) the uniqueness of the circumstances associated with the installation; and
- (d) the presence of obstacles, dangers or other safety concerns during the time of installation.

3 Acknowledgements

3.1 Safety standards and procedures

The parties acknowledge that NBN Co will conduct all installations in accordance with safety standards or procedures that apply from time to time.

3.2 Requirement for Connecting Equipment

NBN Co will determine when a separate Drop Fibre or PCD is not required or already installed and able to service the Premises.

4 Definitions

For the purposes of this Annexure 1:

Appointment means the appointment period requested by Customer, and agreed to by NBN Co, in which NBN Co (or the Installer) will perform the installation and activation of Connecting Equipment at a Premises in connection with the supply of a NBN Co carriage product, including:

- (a) any initial appointment for the installation of the Connecting Equipment at the Premises; and
- (b) any subsequent appointment required to perform or complete the installation of the Connecting Equipment at the Premises.

Building means a permanent structure, equipment or a building in respect of which an NTD is able to be installed.

Common Property means any real property or part thereof which is owned or managed by a third party strata body, managing corporation or other similar entity, or which is otherwise common to, accessible by, or shared between, two or more separately owned or occupied Premises to which NBN Co may require access to perform an installation and/or activation of Connecting Equipment at a Premises in connection with the supply of a NBN Co Carriage Product.

Connecting Equipment means any or all (as the context requires) of:

- (a) a Drop Fibre;
- (b) a PCD;
- (c) a Connecting Fibre;
- (d) an NTD (and any installation and provision of an associated battery backup unit and first battery); and

- (e) any ancillary equipment, facilities, lines or network owned or controlled by, or operated by or on behalf of NBN Co between, and including, the NAP and the NTD.

Connecting Fibre means the fibre optic Line which connects from a PCD to an NTD.

Drop Fibre means the fibre optic Line which connects from a NAP to a PCD.

Line means:

- (a) a wire, cable, optical fibre, tube, conduit, waveguide or other physical medium used, or for use, as a continuous artificial guide for or in connection with carrying communications by means of guided electromagnetic energy;
- (b) a “line” as defined in the Telecommunications Act if that definition differs from paragraph (a); or
- (c) any other media of a similar nature to any one or more of the media under paragraphs (a) or (b).

Installer means a person authorised by, or on behalf of, NBN Co to install and make the Connecting Equipment at a Premises ready for service.

NAP, in respect of a Premises, means the network access point for the Premises for the purposes of the NBN Co Fibre Network.

PCD means the Premises connection device which is owned or controlled by, or operated by or on behalf of, NBN Co for the purposes of the NBN Co Fibre Network.

Standard Hours means a period between 9:00 am and 5:00 pm, Monday to Friday, excluding public holidays in the state or territory in which the Premises is located.