



26 May 2023

Notification of Product Feature withdrawal: UNI-V, Battery Backup for nbn™ Ethernet (Fibre)

Notice of Withdrawal

This is a written notice given by **nbn** under clause 11.5 of **nbn**'s Special Access Undertaking (**SAU**), and clause F4.6 in the Head Terms of the Wholesale Broadband Agreement (**WBA**), of its intention to withdraw the User Network Interface-Voice (**UNI-V**) Product Feature and the Battery Backup Service Product Feature for **nbn**™ Ethernet (Fibre) on 31 January 2031. The Continued Ordering Period associated with the withdrawal of UNI-V and Battery Backup will be 12 months from the date of this notice, being until 26 May 2024.

The effect of this withdrawal will be that the UNI-V and Battery Backup Product Features will be withdrawn from supply on 31 January 2031. RSPs must not submit an order under the WBA for these Product Features after expiry of the Continued Ordering Period. For any orders submitted prior to the expiry of the Continued Ordering Period, **nbn** will continue to supply these Product Features in respect of those orders until the withdrawal date of 31 January 2031. Further information on the withdrawal process is provided in the next section of this notice.

The Withdrawal Period provided by **nbn** for these Product Features is 7 Years and 8 months and 5 days, which is substantially longer than the minimum withdrawal timeframes set out in clause 11.5.2 of the SAU and clause F4.6 of the WBA Head Terms. The reasons for this are set out in detail in this notice, however, in summary, **nbn** considers that there are a number of unique factors associated with these Product Features, and as such, a long Withdrawal Period will minimise any potential RSP and consumer impacts by providing sufficient time to transition to alternative products and/or technologies.

nbn has consulted via the Product Development Forum (**PDF**) over a number of years on the proposed withdrawal of UNI-V and Battery Backup. The approach set out in this notice aims to reflect feedback received from PDF members as part of these consultation processes.

The **nbn** FTTP access network was the first network deployed as part of the **nbn** rollout in 2011. Now being over 10 years old, **nbn** must ensure that future product capability and scale can be supported over the FTTP network, especially given the accelerated deployment of FTTP as the preferred upgrade technology across the **nbn** network. This withdrawal process represents another important step in **nbn**'s efforts to simplify its product offerings, and deliver products and services that are sustainable, cost-effective, and consumer oriented.

Timing of notice, withdrawal process and consultation

UNI-V is a Product Feature of **nbn**™ Ethernet (Fibre). Although only a minority of RSPs currently offer UNI-V services, there are over 300,000 active UNI-V services in operation (out of over approximately 1.7 million total FTTP services). Noting the relatively large number of UNI-V services in market, **nbn** is withdrawing this product feature over a longer period of time than required under the WBA or the SAU to allow RSPs to gradually replace customer equipment and transition end users onto alternative technologies. Similarly, in respect of Battery Backup (which is also a Product Feature of **nbn**™ Ethernet (Fibre)), the long withdrawal period will facilitate the transition to an alternative solution for current UNI-V and Battery Backup customers seeking access to voice services during a power outage.



WBA withdrawal process

WBA 4 introduced a new withdrawal process under clause 23 of the **nbn**[™] Ethernet Product Terms that allows a cease sale period to commence after an initial period of supply. The overall period after which the relevant product is withdrawn is referred to as the '**Withdrawal Period**'. The portion of the Withdrawal Period during which RSPs can continue to order the relevant product being withdrawn is referred to as the '**Continued Ordering Period**'. After expiry of the Continued Ordering Period, RSPs must not submit an order under the WBA for the relevant product and **nbn** may reject an order submitted after expiry of the Continued Ordering Period (unless it is a Transition-out Modify Order or a Disconnect Order). For any orders received prior to the expiry of the Continued Ordering Period, **nbn** will continue to supply the relevant product in respect of those orders until expiry of the Withdrawal Period, unless an RSP modifies a customer service to stop supply of the relevant product prior to the expiry of the Withdrawal Period. This model for withdrawing products was supported by RSPs during the development of WBA 4.

Prior to the withdrawal, **nbn** will provide RSPs with details of the changes to be made to the WBA to give effect to the withdrawal (including, if reasonably practicable, a comparison document showing the changes in mark-up).

Previous consultations on the withdrawal of UNI-V and Battery Backup

To assess the viability of withdrawing UNI-V and Battery Backup, **nbn** initiated a consultation process through the Product Development Forum. The first consultation occurred in September 2019, with a follow-up consultation proposing the long withdrawal timeframe occurring in December 2020. Those consultation processes have been used to develop a process for limiting any impacts on RSPs and to inform this notice of withdrawal.

Product Feature Overview

UNI-V

Background

At the outset of the rollout of the **nbn** network, **nbn** was mindful of ensuring that RSPs and consumers could easily transition existing voice services over to their **nbn** service. UNI-V was subsequently introduced as a PSTN equivalent voice service that would enable consumers to directly connect legacy telephony devices such as a standard analogue corded telephone and/or cordless telephone devices. Reflecting this, UNI-V is defined in the SAU as meaning "a port on an NTD that incorporates an analogue telephone adaptor".

UNI-V can only be used by RSPs for the purpose of transmitting voice and data traffic in the voice band. UNI-V was intended to provide consumers with services which they could use to replace their PSTN services with (in most common scenarios), this included plain old telephone services (POTS), fax machines, set-top boxes (with PSTN authentication), Telecommunications Relay Services (TTY), and security/medical alarms.

While UNI-V was integral to **nbn**'s initial product offering, within a few years, it was clear it would be superseded by changes to the **nbn** network, the evolution of RSP product offerings, and changes to home technology. Following a change of government in 2013, a strategic review of **nbn** was carried out by the new government. The review recommended a multi-technology mix (**MTM**) network model be adopted. As a result, **nbn** went on to introduce the copper based FTTN, FTTB, FTTC access technologies, and the HFC access technology.

During the product development process for these access technologies, RSPs indicated a preference for a VoIP-based telephony model in which voice services would be delivered by devices connected to a modem/gateway



rather than the **nbn** NTD. This approach was adopted by **nbn**, meaning that **nbn** would not supply an NTD for FTTP and FTTB access technologies. Instead, RSPs supply a modem or gateway, or end users supply their own device, which can be directly connected to a telephone socket within the home. A consequence of this was that **nbn** would no longer be in a position to supply users of those access technologies with a UNI-V port.

While UNI-V has continued to be used by some RSPs in respect of their FTTP services, most RSPs have evolved their service offerings over time to supply voice services using the UNI-D port on the **nbn** NTD, rather than the UNI-V port.

Features

UNI-V is currently offered as an optional Product Feature for **nbn**TM Ethernet (Fibre). As described above, it facilitates the supply of analogue telephony services to a premises. RSPs can only use UNI-V to transmit voice and data traffic in the voice band.

Battery Backup

Background

In its first **nbn** statement of expectations, Shareholder Ministers asked **nbn** to provide “a back up battery with all network termination equipment deployed in the fibre footprint, ensuring continuation of telephone capability in the event of a power failure for standard, non-powered home telephones.”¹ A battery backup solution was then developed and introduced by **nbn** as a mandatory component of an FTTP connection.

Importantly, mandatory battery backup was only ever intended by the Australian Government to be an interim solution. The same statement of expectations also noted that, “[t]he Government intends to undertake consultation with stakeholders, including emergency services, on the appropriate way of ensuring access to Battery Backup services for those who need them. In the interim, the Government expects NBN Co’s Business Plan to allow for the deployment of all network termination units within the fibre footprint with the capacity to support a back up battery.”

In early 2012, industry discussions commenced on the development of an enclosure for the **nbn** NTD, improving the aesthetics of the in-home set-up, and reducing the environmental impact of the Battery Backup solution. This led to engagement across government departments, RSPs, and the broader communications industry around Battery Backup. It was agreed at the time that the mandatory installation of a battery backup should be optional, allowing an opt-in approach for end-users connecting in the FTTP footprint.

The benefits of this change included that:

- it enabled a more logical and cost efficient FTTP rollout,
- it reduced the environmental impact by minimising e-waste and reducing risk of improper disposal of the batteries,
- it enabled end-users to exercise choice, be better educated about the functionality and limitations of Battery Backup and make an informed decision when choosing to elect a Battery Backup Service and the associated maintenance responsibilities, and

¹ Statement of Expectations - NBN Co, Senator the Hon Penny Wong and Senator the Hon Stephen Conroy. 17 December 2010.



- it further supported the industry to develop alternative end-to-end back-up solutions for end-users requiring this type of service, such as for Priority Assistance end-users or those with Medical Alarms, across all access technologies launched after FTTP.

In the intervening years, battery backup of **nbn** FTTP services has become increasingly redundant as an array of more cost effective and efficient solutions have emerged. Battery Backup was not supplied in relation to FTTN and FTTB services because, as noted above, **nbn** does not supply an NTD for those services, meaning there is no UNI-V service to support during a power outage. In cases where RSPs and end user customers supply their own equipment, it was never within scope for **nbn** to supply a Battery Backup solution to support that equipment. In relation to FTTC and HFC where **nbn** does supply an NCD and NTD respectively, the key reason for not supplying a backup power option for these devices is that they rely on powered network elements. This means a battery backup solution at the end user's premises will not guarantee service continuity during a power outage because the outage may extend to the local **nbn** node.

Features

The **nbn** Battery Backup unit provides battery power to the **nbn**TM Ethernet (Fibre) NTD to allow end users to make phone calls during power outages. Subject to environmental conditions, the battery will last for approximately five hours during a power outage. To make a phone call during a power outage on the **nbn** Fibre Network, an end user must use a corded phone (that does not need to be plugged into a power point), and plug that phone into the UNI-V port of their **nbn**TM Ethernet (Fibre) NTD. **nbn**'s Battery Backup unit does not provide backup power supply to customer equipment such as a wireless router, mains powered telephones, computers or other devices.

As the **nbn** Battery Backup unit only works to support UNI-V services during a power outage, it follows that the withdrawal of the UNI-V Product Feature should also result in the withdrawal of Battery Backup.

Withdrawal criteria and notification

Clause 11.5.2(b) of the SAU establishes the factors to which **nbn** must have regard when considering whether to withdraw a Product Feature. Clause 11.5.2(c) of the SAU sets out notification requirements. This section of the withdrawal notice addresses these criteria.

1. Existing demand for the product

UNI-V

In January 2023, **nbn** had a total of 328,666 active UNI-V services within its FTTP footprint. This represents around 19 percent of the total active FTTP user base of approximately 1,750,000 end users. Most UNI-V services have little to no traffic flow associated with them. Whilst it is difficult to be definitive (as no traffic can simply mean few phone calls have been made when **nbn** checked for data flow), **nbn** estimates that around 10 percent of UNI-V services are actively in use.

Further evidence of the demand for UNI-V services can be drawn from the Fibre Connect program in which 19,123 services have been migrated from FTTN to FTTP. Of these migrated services, only 59 (0.3%) have sought to have UNI-V configured.



Battery Backup

In total, since the **nbn** rollout commenced, 649,045 Battery Backup units have been installed. Of these premises with a Battery Backup unit installed, approximately 555,000 have an active **nbn** service as of February 2023. Within these households with an active service and a Battery Backup unit, approximately 244,000 have a Battery Backup unit “in service” – this is where **nbn** believes the Battery Backup unit is in use and has a working battery. In both active and inactive locations with an **nbn** fibre connection, a Battery Backup unit *has not* been deployed in over 1.3 million premises.

We consider demand for both UNI-V and Battery Backup services is low and reducing over time.

2. The avoidable cost to NBN Co of maintaining and continuing to supply the existing Product

UNI-V

The incremental cost of maintaining UNI-V as a network feature is difficult to estimate because of the difficulty with separating common costs associated software development and maintenance of the **nbn** Fibre Network.

One area in which cost savings can be identified however is in respect of replacement NTD units. **nbn**'s procurement team has identified that it can procure an NTD with four UNI-D ports for \$10 less per unit than the current cost of the **nbn** FTTP NTD which has four UNI-D ports *and* a UNI-V port. Withdrawing UNI-V will allow for a material saving as **nbn** has to replace its NTD fleet once they reach end of life.

Battery Backup

nbn has estimated that it has sufficient stock on hand to fulfil new connection orders that include a Battery Backup unit, and replacement requirements until Battery Backup is withdrawn if the withdrawal occurs as set out in this notice. Additional costs associated with maintaining Battery Backup cannot easily be quantified, but include training delivered to technicians to safely install the unit, and additional time spent by technicians at premises for installation.

Although not a matter strictly relevant to this withdrawal criteria, a relevant cost consideration from a consumer's perspective is that the battery within the battery backup unit has a lifespan of 3-5 years, at which point the battery must be replaced. In the event a customer is unable to replace the battery themselves, a professional (technician or similar) would be required to visit the customer's premises, which **nbn** is aware can cost in excess of \$150.

3. The functionality offered by an alternative Product compared to the relevant Product to be withdrawn

Voice services supplied over UNI-D are the primary alternative to UNI-V. From a consumer perspective, the difference between voice over UNI-V and UNI-D are likely to be minimal (if noticeable at all). **nbn** is aiming to ensure that the effect of the withdrawal, including the cease sale process, is completely neutral from a functionality and cost standpoint, so that RSPs that supply UNI-V services are in no way advantaged over those that are not.

There are, however, a number of differences in the features between UNI-V and UNI-D. Although RSPs commonly order TC-1 150 Kbps services over each, one key difference is that a UNI-D TC-1 service can scale from 150 Kbps



up to 5Mbps whereas UNI-V is capped at 150 Kbps. Over UNI-D, RSPs also have the option of not ordering TC-1 (150 Kbps) for voice, and may instead opt to carry voice over TC-4.

If an RSP elects to carry voice over TC-1, then the first 150 Kbps of TC-1 bandwidth (UNI-D or UNI-V) is free with a TC-4 data service. RSPs must, however, provision TC-1 within a CVC in order to supply this, and this is not free.

In relation to business customers, **nbn** has found that RSPs typically order 300 Kbps TC-1 service in order to support multiline voice, fax and/or EFTPOS devices. This can only be provisioned via UNI-D.

There is some complexity associated with an RSP managing the provision of UNI-V services, including the need for a dedicated CVC, creation and maintenance of an Auto Configuration Server and managing how devices operate using TR-69 and TR-104 message protocols. In effect, this means that UNI-V is more costly for RSPs to operate and maintain. UNI-D TC-1 allows the RSP to use their existing VoIP interchange services which at the entry level can be free.

Battery Backup

nbn does not, and is not proposing to supply any alternatives to the Battery Backup unit. The market already caters to consumers wanting telephone services that work during a mains power outage, including, but not limited to:

- uninterruptible power supply (**UPS**) systems, which help power devices during a power outage and are readily available through technology retailers,
- mobile phones, the proliferation of which means most Australians have this option to make emergency phone calls during a power outage, and
- 4G/5G modem failover systems with a UPS.

nbn does recognise that it has a role to play in helping end users, especially vulnerable ones, onto alternative battery backup solutions. For example, as part of its Monitored and Unmonitored Medical Alarm Scheme, **nbn** provides free registration to its Medical Alarm Register to assist identify and support end users when migrating off the legacy copper network and, if desired by customers, move to an **nbn** service. As part of this program, approximately 90,000 monitored and 7,000 unmonitored Medical Alarms have been migrated from fixed line dependent alarms to in-built mobile connection-based alarms through the **nbn**-funded initiative.

Additionally, **nbn** is working closely with government and industry to manage the migration of Battery Backup services to mobile 3G/4G/5G backup for fire alarms, lift phones, security alarms, and EFTPOS services.

Priority Assistance end user solutions include RSP-provided gateway/modems with 4G SIM fail-over and backup power supply via the UNI-D port, and RSP-driven real-time monitoring and management of services requiring a backup power supply.

4. The technical feasibility of an alternative Product

UNI-V

As set out above, there are no feasibility issues with respect to alternative products. Alternative voice products already exist in abundance. Within the **nbn** product suite, voice services over UNI-D are the natural alternative. However, there are other substitutable products that **nbn** does not provide, such as mobile services.



Battery backup

nbn is not proposing an alternative to the Battery Backup service, however, as noted above, there are numerous options that consumers and RSPs can make available to themselves should they wish to have a phone service during a power outage.

5. The commercial viability of an alternative Product

As **nbn** is not offering any new alternative product to replace UNI-V or Battery Backup, the commercial viability of any alternative is effectively a question of the viability of voice services over UNI-D. RSPs have the option of ordering a TC-1 UNI-D service at bandwidths of 0.15, 0.3, 0.5, 1, 2 and 5 Mbps.

In respect of voice services, a significant number of end users now use over-the-top applications such as WhatsApp, Facebook Messenger, FaceTime, Discord and any number of other applications, over their AVC TC-4 connection to place voice calls. Notably, over-the-top applications are highly competitive, and already arguably reduce RSP costs because they no longer have to provision a separate handset or gateway with a phone handset.

6. The Price of an alternative Product

nbn makes no distinction between UNI-V and UNI-D pricing for TC-1 delivery. UNI-D pricing is set out in the WBA and subject to pricing terms and conditions established under the SAU.

7. The transitional arrangements that NBN Co may put in place to migrate Access Seekers from the relevant Product to an alternative Product

The purpose of the long withdrawal notice period is to allow RSPs to effectively manage the transition process, including in a cost-effective manner. To elaborate on this further, the long withdrawal is intended to minimise friction associated with any transition to new products and/or services for both RSPs and end users. This is because it allows for “natural” churn away from the affected products over time, which would occur through, for example:

- *An end user moving house.* In this scenario, the end user would be unable to transfer their existing UNI-V or Battery Backup service to their new home. If the end user wished to retain a voice service, we anticipate that their RSP will be able to provide them with a voice service via UNI-D, and port their number accordingly. An end user that moves into a premises where the previous end user had a UNI-V or Battery Backup service will be unable to order these Product Features after expiry of the Continued Ordering Period.
- *A change of RSP.* **nbn** intends that should an RSP or end user disconnect a UNI-V or Battery Backup service after expiry of the Continued Ordering Period (as would happen when an end user changes RSP), that they would no longer be able to order these Product Features. The end user could however order the equivalent voice service via the UNI-D port, but may require different CPE to, for example, place voice calls.
- *Replacement of old or faulty RSP equipment.* Some RSPs have supplied their customers with gateways that deliver voice services via the UNI-V port. These devices will eventually reach end of life and need to be replaced or upgraded with a new device. It is expected that this notice, as well as previous PDF consultations on the withdrawal process for UNI-V, will mean that RSPs are prepared or preparing for this scenario. The long withdrawal will enable RSPs to get maximum value from their CPE and ensure investments in CPE are not sunk.



The cease sale period encourages RSPs that offer UNI-V or Battery Backup services to migrate customers to alternative products, but also recognises that there is a cost associated with such processes, and is intended to minimise those costs.

nbn will aim to ensure all end users have been migrated from UNI-V and Battery Backup to alternative products by the withdrawal date. Closer to the withdrawal date, **nbn** will issue reporting to RSPs to identify any end users with UNI-V or battery Backup services and encourage them to be migrated off the service. The migration process is intended to be managed between **nbn** and RSPs, however, **nbn** will work with relevant government agencies and consumer groups should additional support be required.

Other information in relation to alternative products is provided in the preceding sections of this notice.

Further information

If you have any further queries, please contact your **nbn** Account Team or contractmanager@nbnco.com.au.

Yours sincerely,

A handwritten signature in black ink that reads 'J. Witter'. The signature is written in a cursive, flowing style.

Jane Witter

General Manager Wholesale Supply

This communication constitutes a notice under clause H1.1 of the WBA Head Terms.