



Australian Government

Department of Infrastructure, Transport,  
Regional Development, Communications and the Arts

# Shutdown of the 3G mobile network

## SUBMISSION TO THE RURAL AND REGIONAL AFFAIRS AND TRANSPORT REFERENCES COMMITTEE

7 June 2024

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## 1. Introduction

The Department of Infrastructure, Transport, Regional Development, Communications and the Arts (the department) welcomes the opportunity to provide a submission to the Rural and Regional Affairs and Transport References Committee's inquiry into the *Shutdown of the 3G Mobile Network*.

Australia's mobile network operators (MNOs), Telstra, Optus and TPG Telecom, have each formed a judgement that 3G is now a superseded technology, and each has made its own commercial decision to switch off its 3G network. 3G was well-suited for telephone calls, text messages and access to basic online content. By comparison, 4G and 5G technologies are better-suited to the range of data-intensive online applications that Australians now expect to access from their mobile service.

The 3G switch off is the latest in a series of mobile technology upgrades that the sector has managed, with operators having previously successfully decommissioned the original Advanced Mobile Phone System (AMPS), the Code Division Multiple Access (CDMA) and 2G networks. Once the 3G networks are switched off, the spectrum currently used for 3G can be more efficiently deployed to deliver 4G and 5G services.

The MNOs are responsible for managing their network switch off and upgrade processes, including engaging with their customers. The mobile providers are best placed to navigate the technical complexities involved, and to manage their direct relationships with end-users. This is also consistent with the Australian Government's preference for an open and competitive telecommunications market, allowing industry to determine the most effective way to manage and deliver their services.

Telecommunications are critical to economic and social outcomes, including in rural, regional and remote Australia. Access to telecommunications is necessary to support Australians connect with family, access services and engage in the economy. Mobile enabled digital technologies underpin many business operations.

The department has been working closely with industry to monitor the transition. Consistent with past switch offs, successive Governments have maintained a particular interest in whether coverage will be sustained, particularly in the regions where markets are thinner and competition less prevalent. The department also administers legislation and programs that will be affected by the switch offs, including the provision of universal telephone services and Triple Zero, and programs to support mobile coverage.

More recently, the department has been working closely with the industry to increase efforts to inform and engage impacted customers about a specific issue affecting 4G devices that rely on 3G only for emergency calling to Triple Zero, but will otherwise work normally for other voice calls, SMS and data. The department is concerned about this category of devices because end-users may not realise their device is affected post-shutdown until they need Triple Zero. Other categories of affected devices will be unable to make regular calls after the shutdowns, and as a result it will be more obvious to end-users of those devices that they need to upgrade. The department is also concerned that because vulnerable customers that rely on 3G medical alarms do not necessarily have a direct relationship with mobile operators, they may not be aware that the 3G devices they depend upon will lose connectivity when the 3G networks are closed. The department is continuing to engage with the MNOs in relation to these issues.

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## 2. The switch off is the latest in a series of upgrades

3G was introduced to Australia in the early 2000s, with significant upgrades and expansion in the mid-2000s. 3G mobile technology was transformative, both in terms of its impact on the telecommunications market and the way that people throughout the world conduct their lives and business activities. 3G devices allowed for the development of handheld access to the Internet.

The subsequent release of 4G in 2011 saw further significant improvements in the speed and variety of services that could be provided by mobile communications. In 2016, Australia's 2G networks were switched off. By the time 5G was launched in 2018, the use of 3G and the areas of 3G-only coverage were significantly declining. The decision to switch off the 3G network in Australia is consistent with the international trend to use spectrum more efficiently and provide higher quality 4G and 5G services. Currently 3G use is declining globally and the technology for 3G is becoming superseded.

As can be seen from the table below, each generation of mobile technology has introduced increased network speeds and improved services. So, while 3G has a theoretical peak speed of 7.2 Mbit/s download and 2 Mbit/s upload, 4G has a peak download speed of 150 Mbit/s download and 50 Mbit/s upload.

**Table 1: Capability of 2G, 3G, 4G and 5G**

	2G	3G	4G	5G
<b>Year introduced</b>	1993	2001	2009	2018
<b>Core network</b>	Circuit Switched	Packet switched for data / circuit switched for voice	Packet switched	Packet switched
<b>Theoretical maximum download speed</b>	48 kbps	7.2 Mbps	150 Mbps	20 Gbps
<b>Applications</b>	Digital voice calls, short messages	Basic music and video	High speed applications, wearable devices	High-resolution video streaming, Industrial internet

The 4G network technology (and its successive generations, including 5G) which will replace 3G, is also known as Long-Term Evolution (LTE). Voice over Long-Term Evolution (VoLTE) refers to a technology that enables voice calls to be carried over a 4G or 5G network using digital packet switching instead of relying on traditional 2G or 3G (for voice) circuit switched networks. Using the packet switched network, VoLTE improves call quality, enables faster call connection times, and allows users to simultaneously use voice and data services. This means that customers can be on a call while browsing the internet without having a noticeable effect on call quality and data speeds. Not all 4G phones, particularly the earlier versions, can make phone calls over a 4G network. To enable voice calls over 4G, the phone must support and include the VoLTE feature. Without VoLTE, 4G enabled phones default to using the circuit switched 3G network for standard voice services.

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### 3. MNOs provided advance notice of their commercial decisions

Each of the MNOs<sup>1</sup> announced a planned 3G switch off, providing lead times for their customers to adapt and upgrade devices and equipment if they needed to.

- Beginning in October 2019, Telstra initially announced that the planned closure would occur from 30 June 2024 (on 6 May 2024 Telstra announced that it would voluntarily extend that closure date to 31 August 2024) to allow people more time to upgrade their devices.
- Optus announced in April 2022 that its planned closure would happen from 1 September 2024.
- In September 2022, TPG Telecom announced that it would close its network from 15 December 2023. TPG Telecom finalised its switch off on 30 January 2024.

In the lead up to these closures, the MNOs have been taking actions to upgrade their networks and transition customers from devices that will no longer operate.

The switching off of the 3G networks in Australia is a commercial decision of the three MNOs: Telstra; Optus; and TPG Telecom. This decision reflects the age of 3G, the quality of service improvements from 4G and 5G, the cost of running 3G as well as the efficient use of their spectrum holdings. The Government, regulatory agencies and the department do not take an active role in specifying how the MNOs should build and operate their networks. This allows the MNOs to make decisions that reflect their commercial priorities and avoids regulatory imposts that may lessen competitive tension and raise costs for MNOs, which could result in higher prices for consumers. Further, from an engineering point of view, the MNOs are the best placed to make operational decisions around their networks and have experience in upgrading one generation of mobile technology and deactivating previous generations.

### 4. Will there be a loss of coverage?

While the deployment of mobile telecommunications infrastructure is a commercial decision for the MNOs, the department is very aware of the dependence that the community has on functioning mobile telecommunications networks, and the particular challenges in regional and remote locations where markets are thinner and competition harder to sustain. In this context, the department has been monitoring the 3G network switch offs, particularly in relation to coverage.

Given the general concentration of the Australian population into the coastal and adjacent inland areas of the continent, mobile coverage is only available in around one third of our land mass. Prior to the network closure announcements, there remained many areas, typically in remote parts of Australia, where only 3G-based services were available. At this time, 3G networks ran on higher frequency bands, around 2.1GHz, and lower frequency bands, 800MHz and 900MHz. Since the 3G switch off announcements, the 3G services on the

<sup>1</sup> Consumers can also purchase a mobile service from a mobile virtual network operator (MVNO), such as Belong or Aldi Mobile who resell the services available on the MNOs' wholesale networks, or through a third provider of personal medical devices or other services relating to Internet of Things (IoT) devices. Customers of these entities are also affected by the 3G switch offs.



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higher frequency bands have already been switched off. The lower bands, will continue to operate until the final 3G closures.

The map below illustrates the combined coverage of the Telstra, Optus and TPG Telecom 3G, 4G and 5G networks based on their public hand-held coverage maps, as of January 2023. These maps are based on predictive modelling by the MNOs. On the ground coverage outcomes can vary due to a number of factors such as local terrain, distance from the base station, number of concurrent users and other physical obstacles such as trees and buildings (including their internal structure) that may degrade the quality of signal being received from the nearest mobile base station. It is important to note that these factors can also change over time.

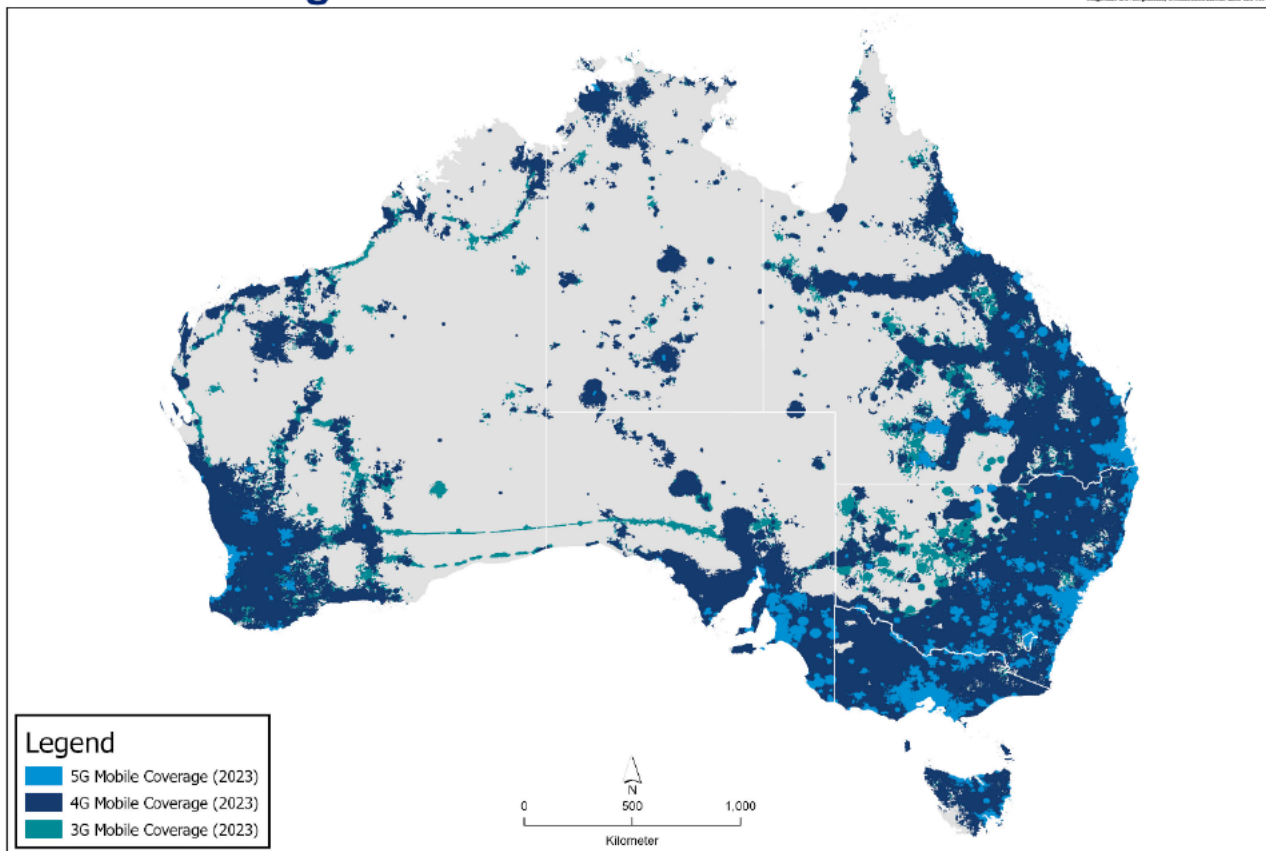
The map below (Figure 1) also shows that as at January 2023 there were still significant areas of Australia with 3G coverage only, and that these areas were generally located in remote Australia, where functioning telecommunications systems are critical for those living there.

Figure 1: Hand held mobile coverage – all MNOs

## Mobile Coverage - All Providers 3G/4G/5G



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Telstra has committed to ensuring 3G-only areas (within its published coverage area) will have equivalent 4G coverage before its 3G network switch off.<sup>2</sup> In its regular reporting to the Government, Telstra has provided details of its progress in rolling out 4G infrastructure to match its 3G coverage, and the measures it is taking to establish signal equivalence. By way of summary, these measures include building new 4G sites, upgrading 3G sites to 4G, optimising antennae configurations, and upgrading software. Telstra has also provided information on its means of validating its 4G coverage, including through independent drive by surveys.

Telstra has not confirmed it will provide equivalent 4G coverage for all customers who are situated outside of Telstra's published coverage area but nonetheless receive a 3G signal that has extended further than expected due to the particulars of the local environment and terrain. Such customers are said to have 'fortuitous coverage'. Telstra has advised that such customers may not receive 4G coverage after the 3G switch off. The Department has been encouraging Telstra customers concerned about their post-switch off coverage to contact Telstra directly.

The Minister for Communications, the Hon Michelle Rowland MP (the Minister) has received correspondence from customers concerned that they have experienced a loss of signal during the time Telstra has been expanding its 4G network. In response to these claims, Telstra has provided details of investigations it has conducted. In some circumstances, reception problems have arisen from Telstra's work on the tower to install 4G equipment that has interfered with the 3G equipment, which was later rectified. In other cases, the signal loss was related to other matters such as faulty backhaul equipment, which was subsequently repaired.

Optus has also indicated to the department that it intends to maintain coverage equivalence following the switch off. Optus has provided the department with a sample of 20 coverage maps that show the existing 3G coverage and the 4G coverage associated with the upgraded sites. These maps show that 4G coverage is expected to be equivalent to or better than existing 3G.

Unlike Telstra and Optus, TPG Telecom did not make commitments about coverage equivalence but it has publicly noted that its 4G coverage will be 'similar in size and reach' to its 3G coverage.<sup>3</sup>

The Government's Regional Connectivity Program is a competitive grants program that provides funding towards place-based telecommunications infrastructure projects to improve digital connectivity across regional, rural and remote Australia. The Government's Mobile Black Spot Program (MBSP) is a competitive grants program that co-invests in telecommunications infrastructure to improve mobile coverage and competition across Australia. Overall, mobile coverage has increased in regional Australia over a number of years through a mix of commercial investment and Government co-investment in less commercial areas.

Under the MBSP to date (Rounds 1 to 7), the Government's commitment has generated a total investment of more than \$1 billion to deliver up to 1,400 new mobile base stations across Australia, with over 1,220 base stations completed so far. These base stations are delivering over 180,000 square kilometres of new handheld mobile phone coverage to almost 130,000 premises.

<sup>2</sup> Telstra's *Our 3G closure in 2024: your questions answered* – see <https://www.telstra.com.au/exchange/our-3g-closure-in-2024--your-questions-answered>

<sup>3</sup> TPG 3G Network Closure FAQ – see <https://support.tpg.com.au/3g-network-closure-faq>



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The MBSP is supported by co-contributions from state and local governments, MNOs and Mobile Network Infrastructure Providers (MNIPs). The funding recipients (MNOs and MNIPs) are required to deliver services from the funded base stations for an operational period of 10 years and to upgrade the base stations to maintain the contracted coverage outcomes as technology changes. This includes upgrading any 3G base stations to provide equivalent 4G coverage outcomes.

While mobile coverage is ultimately determined by the commercial decisions of MNOs – Government programs like the MBSP, Regional Communications Program (RCP) and the Peri-Urban Mobile Program (PUMP) have also co-invested in expanding coverage. The RCP provides funding towards place-based telecommunications infrastructure projects to improve digital connectivity across regional, rural and remote Australia. The MBSP co-invests in telecommunications infrastructure to improve mobile coverage and competition across Australia. Overall, mobile coverage has increased in regional Australia over a number of years through a mix of commercial investment and Government co-investment in non-commercial areas.

Under the MBSP to date (Rounds 1 to 7), the Government's commitment has generated a total investment of more than \$1 billion, to deliver up to 1,400 new mobile base stations. This is delivering over 110,000 km<sup>2</sup> of new handheld coverage to almost 100,000 premises. The MBSP is supported by co-contributions from state and local governments, MNOs and mobile network infrastructure providers. The funding recipients are required to upgrade the base stations during the operational period to maintain the contracted coverage outcomes as technology changes. This includes upgrading any 3G base stations to provide equivalent 4G coverage outcomes.

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## 5. What will be the impact on mobile handsets?

### 3G Handsets

The most obvious impact of closing the 3G networks is that devices that rely solely on 3G will lose connectivity. Information provided by MNOs to the department on 3 June 2024 shows that the number of 3G-only handsets that are still active on their networks is 94,604, and that they have reached out to customers using multiple channels.

The long lead times provided by the MNOs have given customers an opportunity to replace their 3G-only devices. There remains a risk that some may be unaware of the consequences of the network closures. This particularly applies to customers for whom English is a second language, those who mistake communications from their mobile service provider as scams and people who rarely check their phones because they may only maintain them as a means of communications in limited circumstances, including emergencies.

### 4G Handsets

Not all of the devices designed to operate on the remaining 4G networks will continue to function normally for voice services. There are three broad categories of 4G mobile devices that will be impacted:

1. **4G 'grey import'/BYOD devices.** Some handsets brought into Australia from overseas (e.g. online purchase or by international travellers, or other means) may not support some or all of the radiofrequency bands used to deliver 4G and 5G services in Australia.
2. **4G devices without VoLTE capability.** Some early-generation 4G handsets have 4G data connectivity, but do not have 4G VoLTE capability. This means that they are hardwired to use the 3G network to make calls and will lose the ability to make or receive phone calls following the network closures, including Triple Zero calls.
3. **4G devices with VoLTE capability, but are unable to make emergency calls.** Some 4G phones support 4G VoLTE, but rely on 3G Circuit Switched for emergency calls. The department understands these devices will continue to make and receive regular calls following the 3G switch offs, but must use a 3G network to make emergency calls.

The third category of 4G devices are of most concern to the department because without access to appropriate information, customers are likely to mistakenly believe that their device is not affected by the switch off until the time when they most need it, when they try to call Triple Zero<sup>4</sup> in an emergency.

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<sup>4</sup> Triple Zero is a service provided by Telstra under the Telstra Universal Service Obligation Performance Agreement contract with the Government. The service is currently a voice only service, with Telstra operators answering all calls to Triple Zero (000 or 112). Telstra, in its defined role as the Emergency Call Person (ECP), has regulatory as well as contractual obligations to provide the Triple Zero Emergency Call Service. Under section 147 of the *Telecommunications (Consumer Protection and Services Standards) Act 1999*, the Australian Communications and Media Authority (ACMA) imposes requirements on telecommunications carriers and carriage service providers and the ECP that are designed to ensure the ongoing effective provision of emergency call services. The requirements imposed upon the ECP and the wider telecommunications industry in delivering Triple Zero are set out in the *Telecommunications (Emergency Call Service) Determination 2019*. The ECP is responsible for transferring calls to the Police, Fire or Ambulance as



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In comparison, the lost functionality of the other above-described devices will be more readily apparent when, for example, the device cannot make calls and receive mobile data (in the case of a 3G-only handset) or fails to make a standard voice call (in the case of devices without 4G VoLTE). In all cases, it will be important for end-users to be aware in advance that without a replacement device they will not be able to make emergency calls once the 3G networks are closed.

Moreover, as emergency calls can be connected using a 'camp-on' facility, whereby the call is carried over a network other than that to which the user is subscribed, a user with an impacted device may continue to be able to make emergency calls even if their subscribed carrier shuts down its 3G network, but another 3G signal is available. For example, TPG Telecom subscribers with impacted devices should still be able to make emergency calls even though TPG Telecom has already closed its 3G network, as Telstra and Optus' 3G networks are still available to take 'camp-on' 3G calls from those devices. However, in rural and remote areas serviced only by Telstra, customers with impacted devices will not be able to 'camp-on' and will entirely lose emergency call capability when Telstra shuts down its 3G network, which is planned for 31 August 2024. Similarly, TPG Telecom subscribers who are currently unaware that their device falls into category (3) above will cease to be able to make 'camp-on' Triple Zero calls after this date. We therefore consider that 31 August 2024 is the critical date for affected customers to have acted to upgrade their affected device.

Prior to February 2024, all indications were that this issue affected a very small proportion of devices in operation, including as referenced in a fact sheet from the Australian Mobile Technology Association (AMTA) in late 2023. However, a combined briefing to the department from the MNOs in late February 2024 revealed that at time there were an estimated 740,000 active 4G VoLTE enabled handsets that were either known or suspected to rely on 3G to make emergency calls.

Since then, following action taken by the Minister (detailed below), the MNOs have regularly provided the department with additional detail on the number and type of affected devices, as they have continued to refine their understanding of the scale and scope of the issue, and implement initiatives to bring numbers down. As of 3 June 2024, the estimated total number of 4G handsets with VoLTE capability that may rely on the 3G network for Triple Zero calls had decreased to around 302,697, and the MNOs have been working to refine the number of devices that are known to be affected, and the number of 4G VoLTE-capable devices with an unknown Triple Zero capability. The MNOs have explained to the department that there are a number of factors that make it challenging for them to precisely scope the number of affected devices.

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requested by the caller. Concentrix, the current provider of the National Relay Service, is the nominated ECP for 106, a text based (via teletypewriter) emergency call service for people who are deaf or have a hearing or speech impairment.

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## **Factors impacting identification of impacted handsets**

### **Devices are often purchased from entities other than the MNOs**

If an end-user has purchased an impacted device from an MNO and uses the device on that MNO's network, the MNO will be able to identify whether the device is impacted and inform the customer of the need to upgrade their device. However, devices are often acquired from places other than from the host MNO and brought onto the network. Consumers may have obtained impacted devices from the open market (e.g. another Australian retailer or second hand), the grey market, or as a grey import (e.g. from an online retailer, or brought into Australia from overseas).

### **There are a wide range of mobile devices in use**

The range of mobile handsets creates a persistent risk that some affected devices will not be identified. As of 26 February 2024, the MNOs informed the department that they had identified tens of thousands of 4G VoLTE enabled device models operating in Australia. A particular model handset can be configured differently for different networks and countries; each configuration constitutes a separate model, only some of which could be impacted by the Australian 3G network shutdowns. Some devices that would otherwise be capable of 4G VoLTE calls may have been configured by the manufacturer to use 3G for all emergency calls.

### **Some devices rarely connect to networks**

Some mobile devices are used infrequently. This increases the risk that such devices will evade detection by the MNOs. Such devices, particularly older models, may be stored for the express purpose of communicating in emergencies, and may not be associated with a phone plan. Mobile phones are ordinarily able to make emergency calls without any phone plan or service subscription, including when the SIM card has been removed. If there is no associated phone plan then the MNOs will have no means of contacting the device user.

### **International Travelers**

People entering Australia often arrive in Australia with handsets that they have purchased overseas. These phones may not meet Australian device standards, particularly with respect to how they are configured to access the emergency call service and whether they are able to receive and send signals using the spectrum that is utilised in Australia to deliver 4G and 5G services. So while MNOs are aware that these devices are operating on their networks, they cannot be sure of their capabilities to access services, including the emergency call service.



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## 6. What will be the impact on medical alarms and other non-handset devices?

### Internet of Things devices

There is a subset of 3G-only devices that are not handsets and lack a text and/or voice-based interface with customers. Internet of Things (IoT) connectivity has been offered by MNOs and other service providers since it was enabled by mobile data services. IoT enables monitoring and controlling of devices, machinery and equipment. IoT is becoming an increasingly important part of the MNOs product offering, with Telstra alone having more than five million IoT devices connected to its network.<sup>5</sup> Increased bandwidth and coverage, and improved mobile standards have enhanced the capability of IoT networks, allowing for greater device density, improved efficiency and higher data carrying capacity. However, as with consumer devices, the upgrade of technology and subsequent switch off of the 3G network will have impacts on older 3G IoT devices.

IoT devices are used for a variety of purposes, including soil monitoring, asset tracking, monitoring of utility services such as electricity usage, supporting transportation systems and so on. The 3G closure lead times provided by the MNOs were designed to allow the owners of IoT devices sufficient time to replace their equipment. Nevertheless, MNOs report that a significant number of IoTs rely on 3G for connectivity remain active on their networks.

3G IoT devices will no longer function following the switch off of the 3G networks. In order to maintain the same level of functionality these devices will need to be replaced before the network ceases to operate. Typically, these devices are operated by businesses that will need to check that their devices will have compatibility. The impact on users of these devices is another area that the department has sought additional information and clarification on from industry.

### Personal Emergency Response Systems

A category of 3G mobile devices of particular concern to the department is Personal Emergency Response Systems (PERS), which encompasses a range of electronic devices that are typically worn as a pendant or wrist band that enable the wearer to seek help in a personal emergency. PERS can be connected either via a wireless connection (such as Wi-Fi) to a fixed-line connection such as the NBN or via a mobile connection.

Owners of PERS are particularly vulnerable if the connection to this equipment is compromised. The MNOs have advised the department that they are aware of non-handset devices operating on their networks but because there is often no direct relationship with PERS end users, it has been difficult to ascertain the number of impacted devices.

The department has been particularly focussed on encouraging MNOs to work on identifying PERS devices operating on their networks, and has sought advice from MNOs on how they are managing the impact on owners, noting the impact this could have on vulnerable Australians, including older Australian and people

<sup>5</sup> See [www.telstra.com.au/business-enterprise/news-research/articles/iot-devices-and-closure-of-the-3g-network-in-australia](http://www.telstra.com.au/business-enterprise/news-research/articles/iot-devices-and-closure-of-the-3g-network-in-australia)



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with a disability. MNOs advise that while they may be able to see that a device is utilising their 3G network, they cannot always determine the functionality of the device (i.e. whether it is used for voice, text and/or data). Therefore, MNOs find it difficult to disaggregate the data on non-handset devices, including to be able to identify the number of customers with personal medical alarms.

The department has encouraged MNOs to clearly communicate the urgency to upgrade equipment to the PERS providers that have direct customer relationships. The MNOs have advised they have been contacting the major PERS providers to alert them to the potential impacts of the 3G closures, and provide general advice on their websites about the need to upgrade these devices. Many PERS providers have been reaching out to their customers advising them of the need to upgrade devices.

The department has reached out to CareAlert, Tunstall Healthcare and the Australian Personal Emergency Response Services Limited (PERSL), which represents manufacturers and service providers of medical alarms. They indicated that while the industry is generally well aware of the 3G shutdown, it can be challenging to get this vulnerable cohort to act. Affordability to upgrade to a new device is a key barrier for some.

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## 7. Government actions

### Monitoring of 3G network closures

Since 2021, the department has regularly engaged with the MNOs about the 3G switch offs, including in relation to coverage and service equivalence in regional areas, and the implications of the switch offs for the departmental responsibilities, including administering the MBSP, RCP and PUMP programs, policy oversight of the Emergency Call Person arrangements and Universal Service Obligation (USO) delivery. On 11 April 2021, the former Minister for Communications requested that Telstra provide information about how it intends to match its 3G coverage with 4G, which Telstra provided in May 2021, and with quarterly reporting being provided thereafter. The Minister similarly requested quarterly reports from Optus on its 3G switch off on 1 May 2023, which commenced in July 2023. In light of TPG Telecom's public indications that its 3G network was carrying less than one percent of its mobile data traffic, and the number of remaining services in operation was very small, regular reporting was not put in place for TPG Telecom.

In the second half of 2023, material provided to the department by the industry indicated that some 4G VoLTE capable devices may be unable to make calls to Triple Zero once the 3G network was switched off. Industry messaging had indicated the issue was being managed, and that it affected a very small proportion of devices. Briefing requested from industry by the Department, which was provided on 26 February 2024, made the potential scope, scale and implications of the issue clearer, with estimates indicating that approximately 740,000 devices might be affected.

On 14 March 2024, within days of becoming aware of the magnitude of the issue, the Minister wrote to carriers requesting that industry establish a Working Group to support the 3G switch offs. The Working Group has stepped up cooperation between MNOs to better identify impacted customers, improve the accessibility of public-facing information and contact points, and amplify messages to ensure the community is aware of the network closures. The three MNOs – Telstra, Optus and TPG Telecom – and the peak industry body, the AMTA, are members of the Working Group. While the department has observer status, it has been active in identifying where additional actions could be taken to improve consumer awareness of the issue, in line with the Government's expectations and the Minister's requests outlined in her 14 March 2024 letter to the MNOs.

In addition to requesting the establishment of the Working Group, the Minister also requested action plans on how each of the MNOs is dealing with the specific issue affecting 4G devices that rely on the 3G network for calling Triple Zero. The Minister expressed an expectation that the action plans would include steps the MNOs are taking and will take in relation to device identification, customer engagement, customer support, engagement with Mobile Virtual Network Operators (MVNOs) and device manufacturers, and non-handset devices. The Minister requested that MNOs and MVNOs should step up their communications campaigns to engage and incentivise customers to check their device, with particular efforts to engage customers that may be less technologically literate or do not have English as a first language, and to generate broader public awareness about this issue to protect against the wariness of scams. The Minister requested MNOs provide fortnightly updates on the numbers of impacted and migrated customers (including their MVNOs' data) broken down by several categories.

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MNOs continue to provide fortnightly updates on the number of affected devices.

### **Identifying affected devices and affected Customers**

The Minister has requested that MNOs take steps to detect affected devices operating on their networks, collect information on relevant customer demographics for the purposes of raising awareness and establish a portal or tool for customers to check their device, which are seen as key outcomes.

All MNOs have indicated that they are working with device manufacturers, including the major manufacturers and those that they have an established relationship with, to assist in identifying impacted devices. MNOs have advised there are limitations to their ability to work with manufacturers to understand a particular device's capability, including where the manufacturer no longer operates in the Australian market.

Since the establishment of the Working Group, Telstra and Optus have established SMS tools that enable customers to check whether their devices will be impacted, and TPG Telecom has informed the Working Group that it continues to work on establishing its own SMS tool. AMTA has also worked to establish an online portal to enable a customer to identify and submit the International Mobile Equipment Identity (IMEI) number associated with their device in order to identify whether it will be impacted by the planned 3G closures. The SMS and IMEI tool are important as they provide a means for customers to check whether their device is impacted, supplementing the direct communications that MNOs and MVNOs are doing to inform their customers via SMS, email and postal mail.

### **Customer engagement**

The Government is seeking assurance from MNOs that affected customers have had every reasonable opportunity to be informed and upgrade their devices in time for the planned network closures. In this context, MNOs were asked to share communications strategies that have been effective for reaching affected customers. The department considers that communications from the MNOs needs to reach and be relevant to diverse groups, including vulnerable groups, such as, culturally and linguistically diverse people, the elderly, and those living in regional areas, particularly those living in remote First Nations communities.

The shared industry website, [www.3gclosure.com.au](http://www.3gclosure.com.au) (hosted by the AMTA) provides comprehensive information about the 3G switch off and complements the information available on the MNOs webpages. The website also contains a list of the MVNOs and their associated network, along with appropriate contacts for consumers.

### **Customer support**

Some consumers will need additional support in order to be ready for the 3G switch off, in particular many Australians may find the cost of purchasing a new device a barrier. MNOs have advised that they are providing customers that are elderly, vulnerable and/or experiencing financial hardship with options to upgrade to affordable 4G and 5G compatible devices. Telstra 'Blue Tick' phones which are certified to give superior coverage in regional and rural areas, will be available at affordable prices (from \$59). Optus is also offering customers basic 4G compatible handsets (also starting from \$59) and a 5G compatible smartphone for \$1.00/month if the customer remains on an eligible SIM plan for 36 months. Optus has advised that it refers impacted customers to its financial hardship assistance service. Telstra and TPG Telecom also offer similar assistance. Optus has also advised that it has a specialist unit equipped to assist vulnerable customers with the aim of ensuring their access to services is maintained.

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MNOs have also advised they are considering the personal circumstances of customers that cannot afford to upgrade their devices. Telstra and Optus has advised that free devices may be made available on a case-by-case basis to impacted customers who are experiencing hardship or are unable to afford an upgraded device. TPG Telecom has advised that its MVNO, Lebara, is offering free handsets to certain customers. TPG Telecom is also considering further discounts and free handset programs for customers that are experiencing financial hardship and other vulnerabilities. Further, Telstra has been engaging with relevant regional and remote stakeholders to improve its messaging and processes for managing the migration from 3G.

The department is aware that cost is an issue for vulnerable communities and that these populations may potentially be overrepresented in the number of users with older mobile handsets and may not be aware that their device is reliant on 3G. The department considers that it is important that the MNOs provide clear and targeted communications to support vulnerable customers. In particular, the department has indicated to the MNOs that consideration needs to be given to the elderly, First Nations and those to whom English may not be a first language.

### **MVNOs**

As part of their reporting to the Minister, MNOs are requested to report on the impacted devices of their respective MVNOs. The department has also sought follow up information from the MNOs on the customer identification and engagement methods of their respective MVNOs. Broadly, according to the information provided by MNOs, MVNO customers should be receiving direct communications relating to the 3G switch off if their device is impacted, and MVNOs should also be providing information on the 3G network switch offs on their websites.

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## 8. Universal Service Obligation Services

There are a small number of USO services that Telstra currently provide using 3G Next Generation Wireless Loop (NGWL) to supply fixed voice services to individual premises. Telstra has been engaging with this customer group for some time to support migration of these services to USO compliant alternatives that are available. Telstra has ongoing requirements to continue to provide USO services to relevant premises on request. However, existing NGWL consumers that want to continue a USO service once the 3G network is closed also need to speak to Telstra to arrange for existing equipment to be swapped over, including to schedule a technician visit if necessary. This is in contrast to broader 3G migration, where typically consumers with older mobile handsets can source replacement 4G and/or 5G mobile handsets from a range of phone and device retailers. Equipment to deliver these USO services are provided free of charge and there is no change to ongoing service costs for consumers following the change unless a customer elects to add an additional service, such as a broadband service at the same time.

## 9. Regulatory intervention

There are no specific powers available to the Minister to intervene in network transitions, nor is there a legislative requirement for the Minister to approve these decisions, which are commercial decisions by the network operators. The Minister does, however, have broad powers for regulating the communications market in Australia. This includes the ability to impose conditions on carrier licences. Compliance with licence conditions is mandatory and enforced by the Australian Communications and Media Authority (ACMA). Carriers in breach of a carrier licence condition and persons otherwise involved in a breach of a carrier licence condition are subject to penalties detailed in Part 31 of the *Telecommunications Act 1997*, which can be up to \$10 million per offence. The ACMA may issue formal warnings regarding the breach of a licence condition or remedial directions requiring action to ensure further breaches do not occur. Carriers must not contravene a direction issued by the ACMA.

Carrier licence conditions have been imposed relating to network switch offs in the past. In advance of the closure of the AMPS network, the then Minister imposed carrier licence conditions requiring Telstra to transfer customers from AMPS to the digital network on the basis that customers would receive reasonably equivalent services in terms of coverage, functions, charges or any other matter considered relevant by the Minister.

Carrier licence conditions imposed in 2007 required Telstra to maintain its CDMA network until the then Minister for Communications was satisfied that the replacement network provided coverage and retail services that were equivalent to that already provided before it was permitted to shut down the network.



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The *Carrier Licence Conditions (Telstra Corporation Limited) Declaration 1997 (Amendment No. 1 of 2007)* required that:

1. the licensee must continue to maintain the operation of its entire CDMA network until the Minister for Communications notifies the licensee that they are satisfied that:
  - a. the Alternative Network provides coverage equivalent to or better than the coverage provided by the licensee's CDMA network that was in place as at 1 June 2007; and
  - b. the Alternative Network provides retail services equivalent to or better than those provided on or in connection with the licensee's CDMA network as at 1 June 2007<sup>6</sup>

The shutdown of CDMA was delayed when the then Minister, on advice from the ACMA, was not satisfied that Telstra had met its requirements. When the then-Minister was satisfied that these conditions were met, Telstra was given approval to close the CDMA network after 28 April 2008.

At the time of closure of the 2G network, the then Minister did not impose carrier licence conditions on Telstra because the mobile market in Australia was considered mature and commercial imperatives were viewed as providing sufficient incentive for the company to deliver reasonable equivalence of service.

## 10. Impacts in disasters?

The issues discussed above relating to impacted handsets are of concern to the department in the context of potentially reducing effective access to emergency call services, which particularly risks the safety of people during disasters. This is a key driver of the department's engagement with MNOs, which seeks to ensure customers are made aware of the need to upgrade their devices.

The Government has also funded resilience programs to strengthen communications during natural disasters, such as the Mobile Network Hardening Program, the Telecommunications Disaster Resilience Innovation program, and the Strengthening Telecommunications Against Natural Disasters program. Details of a range of grants and programs are available through the department's website.

Moreover, on 23 October 2023, Minister Rowland and Senator the Hon Minister Watt, Minister for Emergency Management jointly tasked the department and National Emergency Management Agency with scoping a temporary disaster roaming capability in consultation with industry, following the release of the Australian Competition and Consumer Commission's Regional Mobile Infrastructure Inquiry 2022-23 report. The temporary disaster roaming scoping report was provided to Ministers Rowland and Watt on 26 March 2024. In April 2024, Minister Rowland announced that the department will continue working with the MNOs to bring about temporary disaster roaming as an industry-led solution.

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<sup>6</sup> *Carrier Licence Conditions (Telstra Corporation Limited) Declaration 1997 (Amendment No. 1 of 2007)* – see [www.legislation.gov.au/F2007L03728/asmade/text](http://www.legislation.gov.au/F2007L03728/asmade/text)



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## 11. Conclusion

Transitions from old to new mobile technologies can deliver significant benefits to the Australian people, communities and businesses through increased speed, data capacity and opportunities for more advanced technologies, applications and equipment. However, they need to be managed in a manner that provides the most seamless transition for users of telecommunications services. The department remains concerned about those who may be negatively affected by the 3G switch offs, particularly those with 4G VoLTE-capable mobile handsets that rely on 3G for Triple Zero, and owners of medical alert devices.

The MNOs are best placed to manage their network closure processes, including making their customers aware of the capabilities of the devices they use. Due to the potential risks to public safety, the department will continue to engage with the Australian telecommunications industry to ensure the MNOs are communicating effectively and are taking account of the needs of all of their customers.

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