

Telco Authority



Committee Secretary
Senate Standing Committees on Rural and Regional Affairs and Transport

Online submission

Dear Secretary

NSW Government submission to the Shutdown of the 3G mobile network inquiry

I am pleased to provide comment on behalf of the NSW Government to the Senate Standing Committees on Rural and Regional Affairs and Transport's Shutdown of the 3G mobile network inquiry.

NSW Telco Authority (NSWTA) is a statutory authority established under the *Government Telecommunications Act 2018* (NSW). NSWTA's statutory functions include the operation and maintenance of operational communications networks to support Emergency Services Organisations (ESOs) and others with roles in emergency and disaster management to prevent, prepare for, respond to and recover from emergencies, public safety incidents and disaster events. NSWTA also has the function of Telecommunications Services Functional Area Coordinator (TELCOFAC) under the *State Emergency Rescue Management Act 1989* (NSW), to coordinate support between ESOs and telecommunications carriers during emergencies to protect and ensure safe access to telecommunications infrastructure, and to deploy network augmentation where required to help keep communities safe and connected.

NSWTA is a digital connectivity leader for the NSW Government, coordinating and aligning whole-of-government priorities and programs to uplift digital connectivity for communities, business, government and ESOs.

The NSW Government's submission acknowledges the efforts of the commercial Mobile Network Operators and the Australian Government in the collective messaging to the community and business while preparing for the final decommissioning of 3G networks. It notes that further, focussed efforts for direct communication with current 3G users would be of great benefit as the impending network closures draw nearer.

This submission's primary focus is on the public safety risks associated with any delay in achieving equivalent 4G/5G coverage footprints to replace former 3G coverage, noting the Commonwealth's ability to intervene should that be necessary. The submission also notes that the Committee's final report is due by 30 November 2024, three months after the final 3G network is planned to shut down, meaning there may be value in interim considerations should MNO's network changeovers otherwise result in potential coverage gaps. NSWTA is conscious of the work the Minister for Communications, and the Department of Infrastructure, Transport, Regional Development, Communications and the Arts, are currently undertaking collaboratively with the MNOs to avoid or mitigate such risks.

Should you wish to discuss this submission, please contact Georgia Gold, a/Director Whole-of-Government Connectivity Leadership, NSWTA at

Yours sincerely

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Managing Director, NSW Telco Authority
May 2024

NSW Government submission

Senate Standing Committees on Rural and Regional Affairs and Transport – Shutdown of the 3G mobile network inquiry

May 2024

Introduction

The NSW Government thanks the Rural and Regional Affairs and Transport References Committee ('the Committee') for the opportunity to provide a submission to its inquiry into the Shutdown of the 3G mobile network ('the Inquiry').

The Inquiry will enable a full examination of the consequences of the shutdown of the commercial 3G networks operated by mobile network operators (MNOs), and presents an opportunity for the Committee to recommend any actions or regulatory intervention by the Australian Government that may be required to ensure substantial risks are avoided or mitigated both prior, and subsequently, to the shutdown.

Due to interdependencies between several of the 10 topics of reference to be considered by the Committee, this submission presents information in the format of key risks and concerns, supported by relevant information that may be considered across multiple topics.

Context

The NSW Government appreciates that MNOs must continually evolve their technology to keep up with progressing and increasingly demanding user expectations, and that retiring older technologies allows them to do this by refarming existing radiofrequency spectrum for use in more modern and advanced service offerings. Modernising telecommunications offers significant long term social, educational, economic and public safety benefits.

The NSW Government recognises that access to digital services is essential for driving a productive digital economy and enabling equitable engagement in an increasingly digital society for work, education, leisure and public safety purposes. While there are various alternative communications networks that may enable access to digital services (such as 4G/5G mobile broadband, fixed broadband, LEO and GEO satellite), access to options is restricted by geographic and topographic limitations in some locations with 3G currently the only available, reliable, technically feasible or economically viable option to meet some customers' needs.

It is of primary importance to the NSW Government that its communities, services and industries, particularly those that currently rely exclusively on 3G networks, are not subjected to avoidable detrimental outcomes. Instead, they should be assured that they have a reasonable opportunity to adapt to, and benefit from, the generational advancement of long-term evolution (LTE) technologies without undue distress. This issue is of particular importance in those rural, regional and remote areas where 3G is the only mobile network currently available.

The risks associated with the 3G shutdown have been widely reported in the media and are significant, mostly notably including public safety and emergency management considerations. These and other factors will be addressed by this submission.

The NSW Government is conscious that the Committee's final report is due by 30 November 2024. This is three months after Telstra's planned shutdown and two months after Optus's planned shutdown, being the remaining two 3G networks. While this will enable the Committee to form post-event reviews of the actual impacts of

these shutdowns in its final report, the Committee could consider making earlier recommendations for any regulatory or interventional activities that may be identified as appropriate for implementation prior to the complete retirement of 3G services.

Publicity and awareness

The three MNOs (Optus, Telstra and TPG Telecom), including through the Australian Mobile Telecommunications Association (AMTA), have publicly forecasted the impending closure of their respective 3G networks for several years. An increased focus on releasing informative materials commenced in late 2023, prior to the shutdown of the TPG Telecom 3G network in January 2024.

As the two remaining MNOs work towards the closure of their respective 3G networks, which will result in the full, formal retirement of all publicly subscribable 3G services in Australia by September 2024, the telecommunications industry has been providing relevant information on its websites to support 3G customers' preparations for the shutdown.

This information has been reported in the media, focusing on informing the community and business that those currently reliant on 3G need to take individual action.

The concerns of 3G network subscribers and device owners have naturally increased as the impending closures draw nearer.

Key concerns and risks

There are two main issues of concern for those currently reliant on 3G networks. The first relates to the coverage footprints of 4G and 5G networks compared to those of existing 3G networks at the time when the latter are switched off. Control of this issue rests with MNOs and will be managed through their 3G decommissioning and 4G/5G roll-out plans.

The second issue relates to existing devices and equipment that currently operate on 3G networks but will not function, or fully function, on 4G and 5G networks. Control of this issue rests with the customers, including businesses and government, who currently operate 3G devices and equipment and who will need to manage their individual transition through acquiring upgraded devices and equipment, should they choose to do so.

Of primary concern to the NSW Government are the risks to the safety of its community and its first responders during emergency and disaster events if either or both main issues are not adequately addressed.

Further concerns are the risks to digital inclusion that could be caused by the community's inability to access mobile services for employment, business, educational and social purposes, or to access digital government services.

3G coverage footprints

The MNOs have stated that their 4G coverage footprints will be similar or equivalent to those of existing (or former) 3G networks, and that, because of the advancements

of LTE technology, service is likely to be improved, such as through increased data speeds and reduced latency.

Telstra, which previously planned to switch off its 3G network on 30 June 2024, but has extended the date until 31 August 2024, says it has ‘been rapidly rolling out and adjusting [its] 4G and 5G networks over the past few years to ensure [it has] equivalent coverage ahead of the 3G closure’.¹

Optus says it will be ‘switching off its 3G network and repurposing it to boost the capacity, speed and reliability of [its] 4G network and rollout of 5G to even more Australians’.²

TPG, whose 3G network was shut down in January 2024, said that its 4G coverage is ‘similar in size and reach to [its] 3G coverage and [its] 5G coverage is growing everyday’.³

However, this equivalent or similar coverage is not guaranteed and will only truly be tested once the 3G networks have ceased service and actual replacement 4G/5G coverage can be confirmed by network customers.

Of significance to both current 3G and replacement 4G/5G networks in this context is the common criticism from customers of a lack of, or inconsistent, mobile reception in some areas where MNO coverage maps state there is network coverage available.

The experience of TPG customers since January 2024 in current TPG 4G/5G network areas that previously only had 3G coverage (3G-only customers) might serve as an indicator of 4G/5G coverage expectations for Telstra and Optus customers for when their respective 3G networks are decommissioned. Such information from both TPG and its customers would be valuable to the Committee in informing its considerations as the remaining two 3G networks rapidly approach their dissolution.

Emergencies and disaster events

Coverage equivalence is considered critical by the NSW Government for several reasons, most significantly in relation to public safety and emergency management.

In recent years various Commonwealth and State inquiries, inquests and reviews have identified the fundamental, critical requirement for mobile communications during emergencies and disaster events. The 2019-2020 ‘Black Summer’ bushfire season and the 2022 flooding events demonstrated how communities are reliant on access to networks to communicate with emergency services, family, friends and neighbours when confronted with life-threatening situations.

¹ <https://www.telstra.com.au/support/mobiles-devices/3g-closure#:~:text=If%20you%20have%20a%20device,network%20after%2030%20June%202024.>

² <https://www.optus.com.au/support/mobiles-tablets-wearables/important-changes-3g#faqs>

³ <https://www.vodafone.com.au/support/network/3g-closure?accordion-id=does-the-3g-network-closure-only-affect-phones%3F>

This reliance includes the ability to make triple zero calls and receive emergency alert broadcasts, as well as contact others in affected areas to check on their welfare or to seek or offer assistance. Without coverage, they become isolated communities.

Furthermore, the 8 November 2023 Optus network outage demonstrated the impact of mobile network unavailability when some members of the community were unable to make triple zero calls, in addition to the broader general effects of a communications outage of those dimensions. This effect would be similar in potential circumstances where no network is available due to the transition from 3G to 4G/5G services.

Following recommendations from several inquiries and a feasibility study by the Australian Competition and Consumer Commission (ACCC), the Commonwealth is currently working with MNOs on the development of a temporary roaming capability for emergencies, noting that the Australian Government recently also accepted the recommendations of the Bean Review into the Optus outage, including the expansion of the scope of this work to include other major outage events.⁴

In situations where there is no mobile coverage available, a common theme is the fear, uncertainty and feeling of powerlessness that the loss of mobile communications creates, in addition to the critical physical risk to lives and property during emergencies and disaster events. Therefore, the shutdown of the 3G networks should be carefully managed to ensure the loss of mobile communications capabilities does not occur in any area.

3G-only coverage areas

Digital inclusion remains a major issue of disparity for regional, rural and remote areas. 3G is currently the only existing mobile coverage in some regions and communities, and along parts of transport routes. The future, and even temporary, absence of 4G and 5G in these locations would limit or prevent equitable participation in digital society for economic, employment, educational, social and public safety purposes.

It is also noted that the planned regional Multi-Operator Core Network (MOCN) sharing agreement between TPG Telecom and Optus would enable TPG customers to access the Optus radio access network for 4G and 5G services in regional locations. While expanding the number of communications towers available to TPG's customers through active network sharing, this may also affect the aggregated geographical coverage footprint in regional areas as TPG will also decommission its existing regional network.

Risk mitigation

The potential absence of mobile network coverage resulting from the 3G shutdown, regardless of the size of the area that might be affected, is a significant risk to the community and emergency services organisations. This potential mobile network absence could similarly increase the risk of further digital exclusion for current 3G-

⁴ <https://www.infrastructure.gov.au/department/media/publications/australian-government-response-bean-review-final-report-review-optus-outage-8-november-2023-april>

only communities. Therefore, all reasonable steps to ensure these risks are avoided should be taken.

It is understood that some 3G sites could remain temporarily operational beyond the formal network shutdown timetables to ensure there are no critical coverage gaps until 4G/5G coverage is achieved. However, this is currently reliant upon MNOs' operational and network deployment plans.

In consideration of the critical public safety risks and those affecting the equity of digital services that are reliant on mobile network coverage, it would be reasonable for the Commonwealth to engage with MNOs to seek assurance, or to intervene, if such potential coverage gaps, and therefore risks, are not otherwise addressed.

3G dependent devices and equipment

The second key area of concern is the effect on customers whose existing 3G-dependent devices and equipment will no longer operate in the absence of 3G network coverage. Additionally, there are various 4G devices that do not have VoLTE (voice over LTE) and VoLTE Emergency Call capabilities.

The greatest risk in both of these circumstances resulting from the 3G network shutdown is that device users would not have the ability to call triple zero in the case of an emergency.

Further to public safety concerns, there are various other economic, social, health and other considerations associated with a lack of mobile network connectivity.

With the impending discontinuation of 3G services, the risk avoidance solution is the replacement of the (soon to be) obsolete 3G equipment with fully 4G/5G compatible substitutes. This requires investment by the equipment owner. The question is then whether the customer has had sufficient time to plan and prepare to acquire new 4G/5G compatible equipment. A related digital inclusion question is about whether individuals have the means to do so.

Information to support affected customers

It is acknowledged that MNOs have made significant efforts to communicate the changes to their customers, including supporting the identification of equipment that will become obsolete and highlighting the risk to users of devices that will be unable to make triple zero calls. This includes an SMS device checker tool, which will quickly confirm for users whether their devices are compatible with 4G/5G networks.

The Minister for Communications established an industry working group to support collective collaboration in identifying and informing affected customers, as well as requesting action plans and regular updates from MNOs. The Minister's responses to questions in Parliament and related media releases have further exposed the issues to the public's attention.

Both the Australian Communications and Media Authority (ACMA) and the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA) have also provided relevant information to support the 3G closure on their websites.

The NSW Government is also working to communicate these changes to the public by including reference to the 3G shutdown on NSW Telco Authority website and on its social media accounts. A reference to the shutdown and supporting material is planned for inclusion in an upcoming Service NSW customer mailout, reaching approximately 5 million customers and businesses across NSW.

Planning for change

Most off-the-shelf mobile devices sold over the past several years are LTE compatible, meaning that most individual mobile network users are already incidentally prepared for the 3G shutdown. However, MNOs have reported significant numbers of 3G-only devices are still operating on their networks.

This incidental readiness may not be the case for specialised or commercial 3G equipment which has been in operation for several years, although it is anticipated that equipment suppliers will have been proactive in promoting upgrades to their customers.

The planning window is increasingly short for people who have not yet prepared for the 3G shutdown, and the opportunity remains in the hands of those 3G customers.

The ability for individuals to upgrade personal devices is largely a question of cost and budget. Therefore, the earlier they become aware of the shutdown, the more opportunity they will have to prepare and make decisions to act.

The cost implications will generally be greater on businesses operating 3G-reliant systems, rather than on private individuals or businesses operating personal devices. However, there may be the opportunity to amortise such business expenditure where this is appropriate.

Transport for NSW (TfNSW) provides a good example of planning to meet the effect of the 3G shutdown on NSW Government service delivery. TfNSW commenced an upgrade program in 2020 to transition from all services that rely on 3G networks. It is investing around \$20 million to upgrade approximately 15,000 services across public transport and road operations. This includes equipment and assets such as traffic signage, operational systems and buses. As at 24 April 2024, approximately 13,200 services (88 per cent) have been transitioned, with the remaining approximately 1,800 services (12 per cent) on track for completion by 30 June 2024.

TfNSW was conscious of the evolution of telecommunications technology and that communications network generations are eventually replaced. Similarly, it will continue to monitor advancements and proactively engage with industry when planning for the eventual expected shutdown of the 4G network in the years ahead.

The previous shutdown of 2G networks, completed in 2018, would be considered by many as being not as complex as the 3G shutdown, due to the comparatively limited applications of 2G with its focus on voice communications, SMS, MMS and limited IoT applications. However, it introduced similar concerns as the current 3G shutdowns, particularly around public safety.

The technological leap forward to 3G that enabled mobile internet access and high-speed mobile data transfer, significantly increasing the usability of mobile networks

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for a myriad of purposes, has brought an expectation that access to reliable networks should always be available. As future telecommunications will continue to evolve and outdated networks will eventually be replaced, all users of these mobile networks should remain conscious of, and plan for, these impacts as well as the advantages of the technological enhancements they bring.

Risk mitigation

The risk of customers being ‘caught out’ with obsolete 3G equipment has been considerably reduced through the natural device upgrading cycle and the communication that has already occurred, however it cannot be fully mitigated.

With the impending shutdowns of the Telstra and Optus networks, these MNOs should continue their existing general communications while seeking to ensure that their individual, affected customers are reached to ensure they are aware and provided with the opportunity to act. Direct communication with these customers would represent best efforts.

To support this, in relation to the effect on the various businesses and industries that operate 3G equipment, the Commonwealth could consider further direct communication with key stakeholder and peak industry groups through its relevant departments and agencies.

Conclusion

The significant public safety risks associated with the shutdown of the remaining 3G networks remain of greatest concern to the NSW Government.

The availability of mobile networks is critical both during and when recovering from emergencies and disaster events, as confirmed by the findings and recommendations of recent Commonwealth and state-based disaster inquiries, inquests, reviews and Royal Commissions. Communities have a reasonable expectation that they will be able to make triple zero calls, receive emergency alert messages, and contact family and friends to seek or offer support during such life-threatening incidents. Emergency services organisations must be able to access mobile data in the field when protecting lives and property.

The risks resulting from the potential absence of, or inability to access, mobile communications networks resulting from the 3G shutdown must be avoided or adequately mitigated.

Primary responsibility for network availability naturally lies with MNOs, who should ensure that their 4G/5G coverage footprints are as good as, or better than, those of the 3G networks they are replacing. If required, MNOs will have the opportunity to retain selected 3G sites as operational on their networks, beyond their current, official shutdown dates, to ensure critical coverage gaps do not occur prior to their full 4G/5G roll-out. Should this not otherwise be addressed by MNOs, then the Commonwealth should consider exercising its powers to intervene and provide this assurance to the community.

Public safety risks extend to 3G-reliant devices, including personal medical alarms. While individuals hold responsibility for their own devices, MNOs and governments

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have the responsibility to ensure best efforts are made to communicate the impending 3G shutdown to these customers. MNOs have the opportunity to directly contact individuals operating 3G devices on their networks, in addition to the general communications they have released and continue to promote.

Governments similarly have the opportunity to support this communication by identifying opportunities to inform individual affected groups through their relevant functional agencies.

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