Australian Government
Department of Communications and the Arts

Regulation Impact Statement – Establishing a telecommunications Universal Service Guarantee

November 2018

Note: Some figures have been redacted on commerciality grounds

Contents

Executive summary

There is a strong case for reform of the current telecommunications universal service obligation (USO). As mobile and broadband services continue to play an increasingly important role in society, use of the services provided under the USO — fixed voice services and payphones — is plummeting. Several independent reviews have found that the USO contract between the Commonwealth and Telstra is outdated, inflexible and costly, and have unanimously called for these arrangements to be changed. These views have been echoed by key industry participants, who see the USO as a relic of the past and an inefficient use of both public and private funds. Key regional consumer groups have also voiced their concerns about the status-quo, raising issues about the long-term performance of existing technologies used to deliver the USO, and interest in improving broadband and mobile availability and performance.

In December 2017, the Australian Government announced a work program to implement a Universal Service Guarantee (USG) that would ensure all Australian premises, irrespective of location, have access to retail voice and broadband services by 2020. Under the model, USG services would generally be delivered by retailers on a commercial basis, leveraging the Commonwealth's investment in the National Broadband Network (NBN) and other commercial networks (like mobile networks). Where this could not be achieved, targeted government measures and programs would be adopted.

As part of this announcement, the Government identified 4 requirements for reform, namely that all Australian premises have access to broadband services, access to voice services, that any new service delivery arrangements be more cost-effective that the current USO, and that a new consumer safeguards framework be in place. Embracing a 'belt and braces' approach, the government made it clear that no changes will be made to the existing USO until and unless all of these criteria can be met.

This Regulation Impact Statement (RIS) has been prepared by the Commonwealth Department of Communications and the Arts to assist the Government make a decision about the design and creation of a telecommunications USG. Under this RIS, we consider 4 options for reform of the USO as it relates to both standard telephone services (STS) and payphones, namely 1) maintaining the status-quo, 2) reducing the scope of the agreement with Telstra, 3) terminating the agreement and replacing it with targeted measures, and 4) terminating the agreement with no further government intervention.

While the analysis confirms that voice services in and of themselves can likely be delivered to existing users more cost-effectively by using alternative wireless technologies, this change would lead to considerable new costs for NBN Co Limited (NBN Co) in delivering broadband services to regional Australia that would outweigh any expected savings or efficiency gains. Significant effort would also be needed to convince some regional, rural and remote consumers as to the merits of any change, given uncertainty about the viability and reliability of alternative platforms. As such, we consider the status-quo to be the only current viable option for the delivery of the STS in the immediate future, pending further work on potential ways forward.

Separately, the USO also funds the provision of Telstra's public payphones, the supply of which is also under review. The preferred option for payphones is to maintain the current contract, while working with Telstra and other key stakeholders to significantly lessen regulatory requirements that state where payphones must be retained, with a view to capturing attendant savings. If required, targeted programs would be developed to assist any vulnerable payphone users adversely affected. Community phones and Wi-Fi provided in remote Indigenous communities under the existing programs administered by the Department of the Prime Minister and Cabinet (PM&C) would be unaffected by this change.

This is a final RIS, prepared in advance of the Government's decision on the USG, and has been developed in accordance with the Australian Government Guide to Regulation, March 2014, and in consultation with the Office of Best Practice Regulation (OBPR) in PM&C.

Background

Access to telecommunications services is fundamental for effective participation in Australian society. This is especially true for those living in regional, rural and remote areas. As one of the largest countries by landmass, coupled with one of the world's lowest population densities, hundreds of thousands of Australians live in communities that are separated by vast distances and without the amenities of larger towns and cities. For these consumers, a phone or internet service can be a crucial link to the wider world and a literal lifeline in times of emergency.

Due to the significant infrastructure costs and low returns, voice and broadband services in regional, rural and remote Australia are usually not profitable, and therefore do not ordinarily attract private investment or competition. As such, it has long been an objective of the Commonwealth to ensure that Australians living and working in these areas have reasonable access to essential communications services, at a quality and price comparable to their urban counterparts.

Current USO services

The universal service obligation (USO) is a longstanding consumer safeguard that provides all Australians with access to landline telephones and public payphones. First enshrined in legislation in 1975,[1] the current legislative USO regime is found in the Telecommunications (Consumer Protection and Service Standards) Act (TCPSS Act). The TCPSS Act requires Telstra, as the primary universal service provider, to ensure that standard telephones services (STS) and payphones are reasonably accessible to all people wherever they live or work, and to supply, install and maintain these services throughout the country.

Section 9 - Universal service obligation

1) For the purposes of this Act, the ***universal service obligation*** is the obligation:
    a) to ensure that standard telephone services are reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business; and
    b) to ensure that payphones are reasonably accessible to all people in Australia on an equitable basis, wherever they reside or carry on business.
2) The obligation mentioned in paragraph (1)(a) includes the obligation to supply standard telephone services to people in Australia on request.
3) The obligation mentioned in paragraph (1)(b) includes the obligation to supply, install and maintain payphones in Australia.

The legislative USO regime was designed to eventually be phased out and replaced by alternative contractual arrangements.[2] To this end, in the context of broader NBN negotiations, the former Government entered into a 20 year contract with Telstra to provide the USO until 2032.

The Telstra Universal Service Obligation Performance Agreement (TUSOPA) requires that Telstra continue to fulfil the USO as it is currently defined under legislation,[3] but also introduces a series of new contractual USO provisions. Known as the copper continuity obligation (CCO), these provisions require

[1] The Telecommunications Act 1975 required Telecom Australia (now Telstra) to make its services available nationwide, while having particular regard for 'the special needs for telecommunications services of Australian people who reside or carry on business outside the cities' (s. 6(1)(b)(iiii).
[2] s. 8, Telecommunications (Consumer Protection and Service Standards) Act 1999.
[3] The TUSOPA also funds Telstra to provide other public interest telecommunications services, including the emergency call service and the migration of public interest services and voice-only customers to the NBN. For avoidance of doubt, references to TUSOPA in this document only refer to the standard telephone service USO (Module B) and payphones USO (Module C).

Telstra to maintain its existing copper network in areas outside of the NBN fixed line footprint, and to continue delivering voice services over this network for the duration of the contract.

Under the TUSOPA, Telstra receives a fixed and unindexed annual payment of $270 million (GST excluded) to provide USO services, consisting of $40 million for the payphones component and $230 million for the STS component (including the CCO). The TUSOPA is partly funded by the Commonwealth, through annual budget appropriations of $100 million, with the remainder funded by industry, through annual contributions towards the Telecommunications Industry Levy (TIL). The TIL contributions are calculated based on share of total industry revenue, with Telstra itself contributing the most of any carrier, followed by Optus and Vodafone Australia.[4]

Standard Telephone Services USO

In financial year 2017-18, Telstra provided 4.9 million retail fixed voice services across Australia, ostensibly in fulfilment of its obligations under the USO.[5] This includes standalone voice-only services, as well as those bundled as part of an ADSL broadband service.

Most of these fixed voice services are provided to premises in major cities or regional centres, where NBN Co is progressively replacing Telstra's legacy copper network. While these premises will eventually be required to migrate off Telstra's copper network once the NBN rollout is complete, they will still be able to access the USO via an NBN fixed line connection. This is because Telstra is contractually obligated to provide voice services over NBN fixed line connections, but for these premises, is no longer required to install or maintain the underlying infrastructure.[6]

In outer regional, rural and remote Australia, however, the obligations under the TUSOPA are broader, and require Telstra to continue to provide both the infrastructure and the associated retail fixed voice service. As at September 2018, Telstra provided approximately 600,000 fixed voice services to premises located outside of the NBN fixed line footprint, with around 96% of these services connected via Telstra's legacy copper customer access network. As per the terms of the CCO mentioned above, Telstra is required to maintain access to these copper lines and continue to deliver voice services over this network for the duration of the contract, except in a limited number of exceptional circumstances.[7]

The CCO provisions mean that, unlike in urban areas where Telstra's copper network is being disconnected, regional consumers generally have a choice for accessing fixed voice services. They can decide to sign up to NBN services and use a VoIP phone (like their urban counterparts), keep their Telstra landline service, or both. According to Telstra, between 15-20% of its NBN fixed wireless customers choose to maintain a separate Telstra fixed voice connection over copper. In most cases, regional consumers also have access to mobile networks for voice and broadband services.

Alternative STS technologies

A small number of premises are located in areas that are outside of the Telstra copper footprint, usually where it has been uneconomical for Telstra to roll out fixed line services. For these premises, Telstra is permitted to use alternative network technologies to supply the USO, including high capacity radio concentrator (HCRC), Telstra Next G Wireless Link (NGWL), Telstra fibre and Telstra USO satellite. These

[4] For the 2016-17 financial year, Telstra contributed $150m of the TIL (66% of total), compared to the Optus contribution of $47m (21%) and Vodafone contribution of $15m (7%). Only firms with annual eligible revenue in excess of $25m are required to contribute to the TIL.

[5] Telstra Annual Report 2018, p. 21.

[6] Except for a small number that may continue to be delivered over Telstra's own fibre network.

[7] These include, for example, where a line has deteriorated and can no longer provide a service, or where no service has been carried over the line for at least 3 years. The TUSOPA places an annual cap on the number of lines that Telstra can disconnect for these reasons, to ensure the network is maintained.

technologies, when used to deliver USO services, are subject to the same service requirements as fixed voice copper services, and must meet the connectivity test and comply with customer service guarantee (CSG) timeframes.[8]

Payphones USO

As at 30 September 2018, Telstra provided 15,997 public payphones throughout Australia in fulfilment of the USO. Just over half of Australia's payphones are located in major cities, averaging one payphone for every 1,845 people. While smaller towns have fewer payphones overall, they have more payphones on a per population basis, with an average of one payphone for every 788 people in towns of less than 10,000 but greater than 200.

Table 1. Payphones by locality

	Number of payphones	2016 population[9]	Number of people per payphone
Major cities (100,000 or more)	9,023	16,647,383	1,845
Large towns (50,000 to 99,999)	490	787,288	1,607
Medium towns (10,000 to 49,999)	1,449	1,801,990	1,244
Small towns (200 to 9,999)	2,892	2,279,357	788
Rural remainder of state or territory	2,143	1,839,515	858
TOTAL	**15,997**	**23,401,892**	**1,463**

Further, a total of 577 Telstra payphones are located within, or primarily service, Indigenous communities. This is in addition to a comparable number of community phones and Wi-Fi provided in remote Indigenous communities by the Government under a separate program.[10]

The scope of the payphones obligation is outlined in the USO contract, and supported by a broader legislative framework. This provides for the Minister for Communications and the Arts to make determinations for payphone provision, removal and performance. The Australian Communications and Media Authority (ACMA) also provides guidelines to help assess whether a payphone is delivering a net social benefit, which Telstra must take into account when making decisions about installations and removals. The current Net Social Benefit (NSB) criteria includes, for example, an examination of whether an individual payphone is being used, if its revenue covers its costs, if it's located in an area with mobile coverage and if it's in an area of high socio-economic disadvantage.

Changing technologies and consumer preferences

Standard Telephone Service

The USO was designed in an era when fixed voice services were the primary, if not only, means by which Australians could communicate in real-time over a distance. In the subsequent decades, however,

[8] The CSG is a consumer safeguard which provides minimum connection and repair timeframes for fixed voice services. Telstra is not permitted to allow its customers opt out of the CSG, meaning all USO services must be CSG-compliant. On 10 September 2018, Telstra announced its Next-G Wireless Link (NGWL) services is compliant with the CSG.

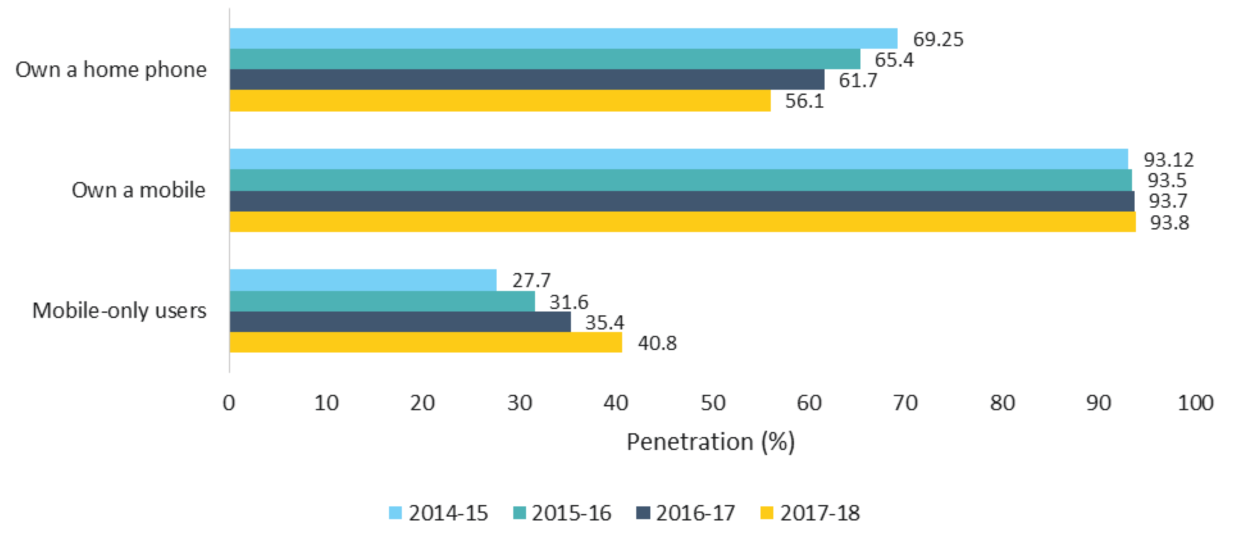
[9] ABS, Table 2, 2071.0 Census of Population and Housing: Reflecting Australia - Stories from the Census, 2016 - Small Towns

[10] The Department of the Prime Minister and Cabinet separately funds provision of community and Wi-Fi phones in small remote Indigenous communities. These phones are not provided under the USO, and are generally located in communities with a population of less than 50 people. Some calls and limited data is provided free of charge to these communities, with additional services provided on a user pays basis. There are currently 546 phones provided under this program; 245 community phones that connect to the Telstra copper network, and 301 solar-powered satellite phones with Wi-Fi capability. Procurement is currently underway to extend these services until June 2021, at a cost of around $4 million per annum.

Australia's telecommunications landscape has changed dramatically to meet the communications needs of the 21st century.

With the rise of mobile telephony and messaging services, fixed voice is no longer the principal or even preferred communications tool for most Australians. According to Nielsen Consumer and Media View data, 94% of Australians aged 14+ own or have full use of a mobile phone, but only 56% have maintained a home telephone.[11] This has led to the rise of people relying exclusively on mobile for their voice needs (mobile-only users), which have grown rapidly over a short period; from 28% in 2014-15 to 41% in 2017-18 (Figure 1).

Figure 1. Nielsen Consumer & Media View data on telecommunications penetration in Australia, April-March 2014-15 to April –March 2017-18



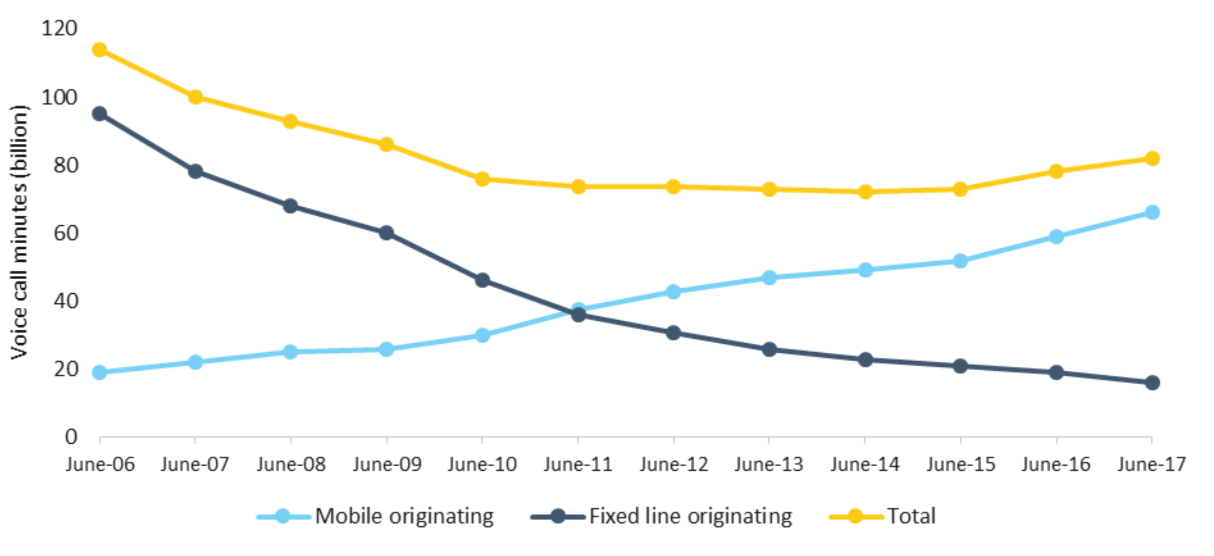
Source: Nielsen (2018), Consumer & Media View, National 12 month database, 2014-15 to 2017-18.

A further 9% of home phone owners report that they are intending to give up their fixed voice service within the next 12 months, suggesting the number of mobile-only users will continue to grow, particularly as mobile operators improve coverage and maintain price competition.

The broad shift to mobile is also reflected in overall call volumes. Data from the ACCC shows that, in financial year 2005-06, most voice call minutes (83%) originated from fixed line phones. By comparison, in financial year 2016-17, fixed line call minutes had fallen to just 20% of the total (Figure 2). With the vast majority of call minutes now originating on mobile devices, and this reversal having occurred in just over a decade, there is strong evidence of a permanent shift in consumer preference towards using mobile phones to make and receive calls.

[11] Department of Communications and the Arts findings based in part on data provided by Nielsen through its Consumer & Media View for the Telecommunications category for the 4 years trend starting April 2014 and ending May 2018, for Total Australia 14+/mobile phone users/home phone users/home internet users, according to the Nielsen standard product hierarchy. Copyright © 2018, The Nielsen Company.

Figure 2. Voice services (mobile and fixed line originating) call minutes, June 2006-2017



Source: ACCC (2018), Communications Sector Market Study – Final report, p. 146.

The decline in home phone usage is broadly consistent in both urban and regional areas. Age, however, appears to be the primary driver of high home phone penetration. Elderly Australians are significantly more likely to have an active home phone, with an 81% take-up rate in 2017-18 compared to 56% take-up nationwide (aged 14+). This segment of the population is also more likely to be very or quite satisfied with their home phone, and are 47% less likely than the national average (aged 14+) to consider disconnecting landline services within the next 12 months.[12]

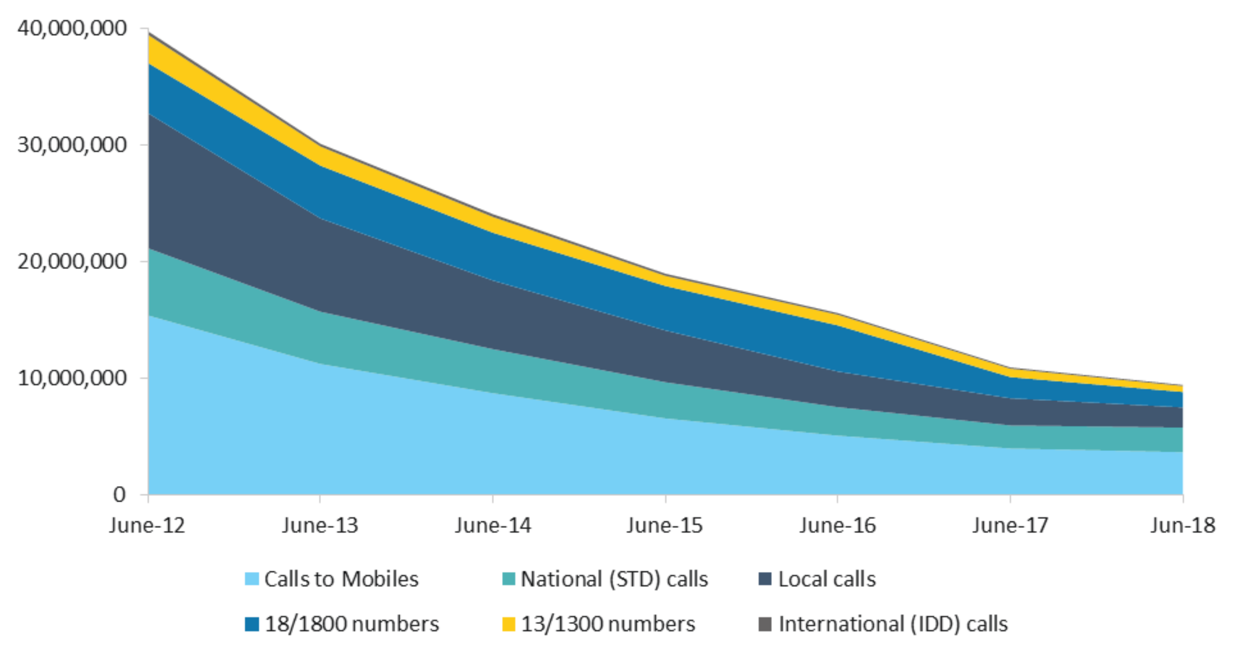
The lowest penetration of home phone services, and highest levels of fixed-to-mobile substitution, are among people with English as their second language. Unemployed Australians (aged 14+) are also more likely to be mobile-only users.

Payphones

The rise of mobile has also impacted on Telstra's payphone business, leading to a dramatic decline in payphone use and relevance in Australian society. Of the 15,997 public payphones in operation across the country, over 97% are located in areas with existing handheld mobile coverage. This suggests Australians already have access to an alternative telecommunications service at the majority of payphone sites, reducing the need for universal access to payphones. Highlighting this trend, the number of calls made annually from Telstra payphones fell by 76% between 2011-12 and 2017-18, with calls made to local numbers seeing the largest decline over the period (Figure 3).

[12] Department of Communications and the Arts findings based in part on data provided by Nielsen through its Consumer & Media View for the Telecommunications category for the 4 years trend starting April 2014 and ending May 2018, for Total Australia 14+/mobile phone users/home phone users/home internet users, according to the Nielsen standard product hierarchy. Copyright © 2018, The Nielsen Company.

Figure 3. Telstra public payphone call volumes, by call type, 2011-12 to 2017-18



Source: Telstra (2018), Excludes Triple Zero calls, SMS and other low volume call types (e.g. 1900 premium services)

Less than 3% of Australians report using a public payphone in the previous six months at June 2018, unchanged from the previous year.[13] This suggests that only a very small number of Australians actively use payphones in their everyday communications and signals a clear consumer preference towards alternative forms of communication services.

Research from other countries shows a strong link between an individual's wealth and payphone usage.[14] Given the high penetration of mobile phones in Australia, payphone usage may be driven by a number of factors, like mobile users running out of call credit, wanting to minimise cost of calls, experiencing battery problems, or unable to get coverage in a particular area.

Just under a quarter of calls from payphones are made to either 18/1800 free call or 13/1300 numbers. Data provided by Telstra suggest that reverse charge call services make up the vast majority of 1800 calls made from payphones, followed by calls to specific social services and banking lines. Between February and April 2018, a large number of 1800 payphone calls were also made to Centrelink's BasicsCard inquiry line and the Commonwealth Bank's Indigenous banking services, which could suggest a higher reliance on payphones among Indigenous Australians.

[13] ACMA-commissioned consumer research, yet to be published.

[14] See, for example, Canadian Radio-television and Telecommunications Commission (2015), Results of the Fact-Finding Process on the Role of Payphones in the Canadian Communications System.

Table 2. Categories of top 1800 calls made from Telstra payphones, February to April 2018

Call category	Percentage of top 1800 calls
Reverse charge call services	60%
Social services (e.g. Centrelink income management)	14%
Banking services (e.g. banking self-service lines)	11%

Source: Telstra (2018)

Most of the 13/1300 calls from payphones over the same period were made to taxi services, suggesting that payphones continue to play a role at major transportation hubs like airports and train stations, where overseas visitors may not have access to local mobile services. Calls to 'self-service' banking and social services lines were also common, which may be driven by some consumers wishing to avoid higher call rates when dialling 13/1300 numbers from their mobile service.

Table 3. Categories of top 13/1300 calls made from Telstra payphones, February to April 2018

Call category	Percentage of top 13/1300 calls
Transport (e.g. taxi services)	40%
Banking services (e.g. banking self-service lines)	29%
Social services (e.g. Centrelink income reporting)	13%

Source: Telstra (2018)

Payphones represent a very small percentage of total calls made to emergency services in Australia, making up just 2.3% of Triple Zero call volumes in 2016-17.[15] According to Telstra data, 200,000 payphone calls were made and connected to the Triple Zero emergency call service in 2017-18, but only 104,000 of these calls (52%) were considered genuine emergencies and transferred on to either police, fire or ambulance services.

Considering the above factors, payphones do continue to play a role in some pockets of the community. More information on the demographics of payphone users, their reasons for using payphone, and their access to alternative telecommunications would be beneficial for any future reform work.

Investment in alternative communications networks

Corresponding to these trends in the use of data and mobile services, there has been considerable public and private sector investment in alternative networks capable of providing high-speed broadband and mobile services.

The Australian Government has committed a total of $51 billion peak funding for NBN Co, comprising of $29.5 billion in public equity funding, and a Commonwealth loan facility of up to $21.5 billion. Roll out of the NBN has now passed the half way mark, with more than 6 million homes and businesses now able to access an NBN service and approximately 2.7 million homes and businesses having already connected to the NBN. This has been accompanied by smaller investments by carriers like TPG, OptiComm, OPENetworks and Spirit.

Private sector investment by all 3 mobile carriers has delivered 3G and 4G mobile coverage to more than 99% of the population and over 30% of the Australian landmass, including large parts of regional Australia. This investment is continuing, with Telstra and Optus, for example, both announcing in 2017 that they each planned to invest up to $1 billion to improve regional telecommunications. Separately,

[15] ACMA (2017), Communications Report 2016-17, p. 95.

the Government has committed $220 million to the Mobile Black Spot Program to improve mobile coverage across regional Australia. Round 4 of this program was announced on 10 June 2018.

Establishing a Universal Service Guarantee

Driven by changing consumer demands and investment, and the recommendations of the 2015 RTIRC report, the Government asked the Productivity Commission (PC) in 2016 to explore whether policies continue to be required in order to support universal access to a minimum level of telecommunications services. After a year-long inquiry, the PC found the existing USO arrangements to be outdated, inflexible, costly, and an inefficient use of funds. The PC recommended the contract be terminated following completion of the NBN in 2020.

The Government responded to the PC inquiry report on 20 December 2017, announcing a new program of work to establish a Universal Service Guarantee (USG). The objective of the USG is to provide all Australian premises, regardless of their location, with access to both voice *and* broadband services, while making better use of existing and emerging telecommunications networks. The announcement also signalled the Government's interest in moving towards a new regime for universal service that would be delivered by the market in the first instance, and where this could not be achieved, allow for options to be developed for targeted government measures.

The Government announced 4 prerequisites that would need to be met before any changes would be made to the USO, including that:

- broadband services are available to 100% of Australian premises, on request, at the completion of the NBN rollout in 2020;
- voice services are available to 100% of Australian premises on request;
- any proposed new service delivery arrangements are more cost effective than the existing USO contract (including any transitional costs); and
- a new consumer safeguards framework is in place, following a review and associated public consultation process.

Interactions with SIP and mobile operators

Under the proposed USG framework, the majority of services would be delivered on a commercial basis, leveraging the NBN and other commercial networks like mobile, supported by targeted measures where necessary. This is because these alternative networks are already capable of providing broadband and voice services to the majority of regional premises currently serviced by Telstra under the USO. Many regional consumers are already choosing to give up their landline telephones, either because they have migrated their fixed voice services to the NBN, or have decided to rely exclusively on their mobile. Revising the scope of USO reform to focus on premises without access to reliable broadband and voice services will reduce the need for further government intervention, and potentially allow for funds to be better spent elsewhere.

The Statutory Infrastructure Provider (SIP) legislation, currently before Parliament, will require NBN Co (and other carriers if appropriate) to provide the necessary infrastructure to ensure all Australian premises are able to access broadband services offering peak wholesale download speeds of at least 25Mbps. Once the legislation is passed, NBN Co will become the default SIP, with a legal obligation to connect premises and supply wholesale broadband services on reasonable request. This regime will guarantee all Australian premises can access high-speed broadband services, therefore meeting the broadband component of the USG.

Under the proposed SIP regime, services provided on fixed line and fixed wireless networks will also have to support voice services for consumers. This should mean that up to 97% of Australian premises (those able to connect to NBN fixed line or fixed wireless services) will have access to good quality and reliable fixed voice services via the NBN. The remaining 3% of premises are eligible to receive broadband services via the NBN Sky Muster satellites, however these are not considered a sufficient alternative to a standard telephone service due to issues around latency (particularly due to ‘double hop’ calls made to and from premises in the satellite footprint) and susceptibility to rain fade. As such, alternative technologies are required to deliver voice services to these populations, as originally identified by the PC in its USO inquiry.

Many regional and rural consumers are also able to receive voice services via existing mobile networks. Based on Departmental calculations, up to 88% of premises outside the NBN fixed line footprint are estimated to be able to receive 3G handheld mobile coverage from Telstra, with an even greater number of premises able to connect to mobile with the assistance of additional equipment such as external antennas or mobile repeaters. Under the proposed USG framework, an alternative voice technology would need to be identified for the remaining NBN Sky Muster customers.

1. What is the problem?

Independent reviews have found the USO regime to be outdated, inflexible and costly: it is no longer providing services that most Australians prefer. The Government has announced its intention to establish a new framework that provides access to both voice and broadband services, while being more cost effective than the status quo. The two key issues, therefore, are the cost of alternative solutions, and their ability to be implemented, including both stakeholder support and Telstra's willingness to renegotiate its contract with the Commonwealth.

Over the last 3 years, several independent reviews examining the current USO regime and the contract between the Commonwealth and Telstra have flagged concerns regarding the scope and efficacy of the USO. The 2015 report of the Regional Telecommunications Independent Review Committee (RTIRC) noted the existing arrangements were 'rapidly becoming obsolete'.[16] The subsequent year-long inquiry into the USO by the PC found the regime to be 'anachronistic and costly', while locking parties into 'long-term, inflexible and opaque arrangements'.[17] This was followed by the 2017 audit by the Australian National Audit Office (ANAO) into the management of the TUSOPA, which concluded that key aspects of the contract 'do not reflect value for money principles, as it does not reflect the demonstrated decline in demand' for USO services.[18]

Central to all of these concerns is that the current USO is failing to provide for the types of basic communications services now demanded by consumers – particularly broadband and mobile services – while separately locking Telstra and the Commonwealth into a costly and potentially inefficient 20 year contract to provide fixed voice and payphone services which are being used less and less. None of these reviews, however, actually costed different approaches to USO delivery.

In December 2017, the Government acknowledged the need for change to the USO by indicating it would work to develop a USG that covered broadband as well as voice. This would represent an expansion of the scope of services to which consumers would have guaranteed access. The Government flagged that this work would be underpinned by the SIP regime that is currently before the Parliament, and complemented by a consumer safeguards framework, which is being developed separately and is not considered further here.

However, the Government also indicated that the new USG would need to be more cost-effective than existing arrangements. This recognises that the current investment in the NBN is already significant, and is in response to concerns that the USO contract with Telstra may not be providing value for money. The working assumption is that more efficient, cost-effective delivery is likely to be achievable if the most efficient technology and provider can be used, as reflected in the Government's preference for commercially based solutions.

Moreover, to be effective, the new USG needs to be able to be implementable. This has two main dimensions.

First, the new USG will need to be acceptable to consumers, particularly those living in regional, rural and remote areas, for whom the USG will guarantee the delivery of telecommunications services that are often considered a lifeline. Isolated regional consumers are particularly concerned about the

[16] Regional Telecommunications Independent Review Committee (2015), Regional Telecommunications Review, p. 46.
[17] Productivity Commission (2017), Telecommunications Universal Service Obligation – Inquiry Report, No. 83, 28 April 2017, p. 327.
[18] ANAO (2017), Management of the Contract for Telephone Universal Service Obligations – Report No.12 2017–18, p. 9.

reliability and performance of their telecommunications services, and ensuring alternative communications solutions are available to act as a redundancy service in cases of emergency.

Second, as reform would likely result in the Telstra copper network being switched off, we estimate that any new delivery model would need to enable the practical migration of around 600,000 voice services, 235,000 ADSL services and 8,000 special services to new platforms and potentially new providers, with minimal disruption for consumers. This is a significant logistical exercise.

Given the existing and inflexible USO contract with Telstra, any new arrangement also need to be able to be negotiated with Telstra. There is limited flexibility for the Commonwealth to amend or terminate the contract unilaterally, with any proposals for cost-savings requiring agreement with Telstra.

As has been noted by the PC and the ANAO, the existing contract with Telstra lacks transparency and accountability in terms of what is delivered to the community for the cost that has been contracted. For example, the total number of services provided, the circumstances in which they are provided, the technology used, and the level of performance achieved are all poorly reported on, and generally only at an aggregate level. This makes it difficult for the Government, industry and the general public to understand what services Telstra is actually providing as part of its obligations.

In summary, therefore, given the Government's public commitment to ensure people in Australia have ready access to voice and broadband services, building on the NBN and other commercial networks, the problems to be addressed are:

- Ensuring the services delivered will meet the requirements of consumers when it comes to functionality, quality, reliability, accessibility and affordability;
- Ensuring the services can be delivered in a more cost-effective manner than is currently the case, *prima facie*, through greater reliance on more efficient commercial and competitive solutions, particularly in the delivery of voice;
- Ensuring the delivery model can be implemented in terms of consumer expectations, practical operation, and re-negotiation of the USO contract with Telstra; and
- Ensuring there is greater transparency and accountability in service delivery.

These problems drive the options that we have developed and costed, and the criteria used to assess those options.

2. Why is government action needed?

> Voice and broadband services are essential to participation in modern society. The Australian Government has therefore committed to ensure they are readily available to people across Australia under a new Universal Service Guarantee (USG). In most instances these services will be available on a commercial basis, but in some areas Government intervention will be required. In the case of broadband, universal access is being provided through the NBN, underpinned by the SIP regime. In the case of voice, universal access is currently provided by the USO, however it is not clear that these arrangements are still cost-effective.
>
> As policy maker, the initiator of legislation, and the contractor with Telstra for the USO, Government alone can seek to change the USO arrangements to ensure they can deliver the necessary service outcomes in a manner that is cost-effective, implementable, transparent and accountable.

As noted in section 1, access to modern telecommunications services is afforded high priority in Australia because they are seen as essential to daily economic and social activity. In this context, the Government has committed to developing a new USG that will provide access to broadband services as well as voices services, to which access has hitherto been provided under the USO.

In most instances, access to voice and broadband services will be delivered on a commercial basis. However there are instances, particularly in regional, rural and remote Australia, where their supply would be loss-making in normal circumstances, and Government intervention is required to ensure these services are available at a generally affordable price.

The Government is best placed to manage this issue and has done so historically. Service providers are unlikely to address it because their interests are in maximising returns from profitable service areas. Consumers are unable to resolve it because they are unlikely, in all instances, to have sufficient funds to meet commercial service costs and may not be able to co-ordinate their activities well enough where they may be able to be resolved on a cooperative basis. Typically large sums are needed to provide access in regional, rural and remote areas, and Government is best placed to mobilise these funds.

Government therefore needs to take action to ensure these key services are available to people across Australia. This is consistent with long standing practice and announced commitments.

In this context, in the case of broadband, the Government has established the NBN and has introduced the SIP legislation for the long term delivery of broadband services across Australia. In the case of voice and payphone services, there has been the long-standing USO, which is supported by the TUSOPA with Telstra, albeit it at considerable expense.

The move to the USG will ensure ongoing access to both broadband and voice services. To the extent voice services can be delivered by mobile technology under the USG, it can indirectly assist with access to mobile services as well, for which there is strong community demand as shown by the data above.

As explained in section 1, however, it is not clear that simply continuing with the existing arrangements for service delivery will ensure the optimal outcome for the future. Key problems are that the existing arrangement may not be the most cost-effective for the future, particularly given the financial commitment under the TUSOPA with Telstra and the difficulty in varying the contract. This may be exacerbated by the arrangements limiting competition in the delivery of services, and thus limiting innovation and efficiency.

These issues require careful examination by the Government as the policy maker, initiator of legislation and the contractor with Telstra under the USO.

Effective Government action can ensure that:

- services that meet the requirements of consumers when it comes to functionality, quality, reliability, accessibility and affordability are delivered;
- those services are delivered in the most cost-effective manner, potentially free-up existing funding for other priorities;
- greater reliance is placed on commercial and competitive solutions, particularly in the delivery of voice, producing more efficient, innovative outcomes;
- the delivery model can be implemented in terms of consumer expectations, practical operation, and re-negotiation of the USO contract with Telstra; and
- there is greater transparency and accountability in service delivery.

Relevant considerations in developing USG policy options

As part of the USG development process, we have identified a number of key issues relevant to the consideration of the options, particularly relating to costs.

First, the existing TUSOPA between the Commonwealth and Telstra limits the Government's options. While Telstra has publicly indicated that it is open to reform, it would need to be in a form agreeable to Telstra. There is no termination for convenience clause in the contract, and limited scope for unilateral change. If the Commonwealth were to seek to unilaterally terminate the contract, Telstra may seek compensation, equal at least to the remaining value of the contract. As such, we have actively consulted with Telstra in the development of USG options. As part of this process, Telstra provided us with extensive data on services provided under the USO, and information on voice quality and network technologies. It also provided views on how the USG could work in practice, involving greater flexibility and technology choice.

Second, we expect that any cost savings from USO reform will only be maximised if reform enables Telstra to completely decommission its copper network. This means that to obtain Telstra's agreement to USO reform under the TUSOPA, it is likely any option will need to support this outcome, and the eventual migration of up to 600,000 voice services and 235,000 ADSL services to new platforms, including the NBN.

Third, as noted above, we estimate Telstra is currently providing around 235,000 ADSL services on its copper network to premises that are outside NBN Co's fixed line footprint. Telstra continues to operate these services because the investment in copper is sunk and it maximises revenue from the continued operation of services over the copper network in these areas.

Due to Telstra's commercial decisions and the CCO provisions, NBN Co has planned its fixed wireless network on the basis that these ADSL services will remain in operation for the duration of the TUSOPA – to 2032. As such, in ADSL areas, NBN Co's fixed wireless network does not currently have the capacity to accommodate all of these additional customers. However, ADSL services are provided by Telstra on a commercial basis, and there is no obligation for it to maintain these services. Telstra could decide to exit the ADSL market at its discretion. Moreover, it is open to Telstra to seek an early termination of its copper continuity obligations under the TUSOPA, with adequate prior notice. If the CCO were removed as part of USO reform, it is more likely that Telstra would terminate the ADSL services to realise savings from decommissioning the copper network.

NBN Co estimates its net costs as a result of USO reform could range from [figures redacted] over the period to FY2032. This excludes future spectrum-related costs the company would also need to incur to continue operating the fixed wireless network. While these costings are high level, the impact on NBN Co and its network design would clearly be significant. As such, a cautious approach to reform is required. If NBN Co had to find this additional funding because of changes to the USO, it would impact on its financial performance and, while NBN Co is a Government business enterprise, it would likely seek additional funding from the Commonwealth. Any additional funding provided to NBN Co as a direct consequence of USO reform needs to be factored into the Government's decision, and therefore poses a considerable obstacle to reform.

Fourth, to assist with its analysis of the cost of the various options, we contracted a consultant, Network Strategies, to develop various options and model their costs using a discounted cash flow. While forward-looking modelling of telecommunications costs is inherently problematic, Network Strategies has concluded that the delivery of STS using the copper network is the most expensive of the main options under consideration, with alternative technologies proving cheaper over the term of the TUSOPA. Network Strategies also identified a number of network technologies on the horizon which could further reduce the cost of STS provision prior to the scheduled end of TUSOPA, such as low Earth orbit (LEO) satellites which will be operational in the early 2020s.

Fifth, there is a clear trend around the world to reduce the number of public payphones given the take-up of mobile telephony. This is true of payphones provided by incumbent operators like Telstra and the relatively small number provided by private sector operators — recent tenders to find a new payphone provider in both Ireland and Spain attracted no responses. We have identified no real interest from an alternative payphone provider in the Australian market. Given this trend and the capital cost would be involved in establishing a new stock of payphones, it is considered unlikely that a new payphone provider would enter the market without significant new Government support. As such, alternative solutions for payphones users are more likely to focus on improved access to mobile or Wi-Fi services than the provision of new payphones of a traditional kind by a new provider. This is an important factor in the assessment of market-driven payphone options below.

Sixth, in relation to payphone provisioning, Network Strategies modelled a number of scenarios involving ongoing supply by Telstra on the basis it owns the existing base of payphones and savings will be most credibly be achieved by reducing that base in line with the broad dependence on mobile telephony in the population. [sentence redacted] While the amount of funding for payphones may therefore be reasonable in a cost sense, there is still a question around the value of that funding given the low and falling usage of the payphones. Network Strategies also found that reductions in payphones would lead to commensurate reductions in cost.

Seventh, it needs to be recognised that revenue from payphones, albeit it small, in areas that are lower cost to serve (e.g. in busy city centres) may partially offset the cost of payphones in areas where they are more expensive to provide (e.g. remote areas with long travel times). Removing more commercial payphones while leaving less commercial payphones in place could actually lead to a higher net payphone cost overall. This is further complicated in that lower cost payphones (e.g. in cities) may provide less utility in that they are likely to be in areas with mobile coverage, while higher cost payphones (e.g. in remote areas) may be outside mobile coverage.

3. What policy options are you considering?

Building on the considerations outlined above, 4 broad policy options have been examined in relation to both STS and payphone delivery:

1) retaining the status quo;
2) retaining current contractual arrangements with an altered or reduced scope;
3) abolishing current arrangements in favour of SIP and commercial solutions with targeted Government programs; and
4) abolishing current arrangements with no further Government intervention.

Options 1 and 2 are based on continuation in some form of the existing Telstra contract. Options 3 and 4 are based on termination of the USO contract as it currently exists.

While there are some linkages between the STS and payphone options in each category, they are largely standalone, allowing options to be mixed and matched to a large degree.

Table 4. Key options for STS and payphones

	Maintain obligations on Telstra		Remove obligations on Telstra	
	Option 1: Status quo	**Option 2: Reduced scope**	**Option 3: Targeted programs**	**Option 4: Removal**
Service A: Standard Telephone Service (STS)	- Retain all contractual obligations regarding the STS - Review arrangements in 2021	- Retain most contractual obligations regarding the STS, but remove the copper continuity obligation (CCO)	- Rely on SIP and commercial outcomes - Develop targeted programs to address gaps - Terminate STS obligations	- Rely on SIP and commercial outcomes - Terminate STS obligations
Service B: Payphones	- Retain all contractual obligations regarding payphones - Review arrangements in 2021	- Retain most contractual obligations regarding payphones, but amend regulatory requirements	- Rely on commercial outcomes - Develop targeted programs to assist payphone users - Terminate payphone obligations	- Rely on commercial outcomes - Terminate payphones obligations

Option 3 is most consistent with the approach recommended by the PC and the broad approach to the USG envisaged in the Government's December announcement.

Option 4 reflects the most hands-off approach, involving minimal government intervention. It relies on voice services being delivered as an unmanaged Voice over Internet Protocol (VoIP) service and does not inherently guarantee access to reliable voice services across Australia. As such, it may not technically meet the Government's voice requirements for the USG, and is unlikely to be considered an acceptable solution to USO reform, but it has been included for comparison purposes.

Assessment criteria

Based on the problem and objectives identified in sections 1 and 2, the USG policy options have been assessed against 5 criteria. These criteria are on a 1 to 5 scale. However, criteria 1 and 2 focus on service availability and cost, and both must be achieved in order to meet the requirements of the USG announcement from December 2017 (scoring at least a 3 out of 5). Criteria 3, 4 and 5 focus on desirable outcomes of USO reform, based on concerns with the current contractual arrangements with Telstra, and broader benefits to consumers.

Table 5. Assessment criteria for USG options

Criteria	Description	Key Questions
Criteria 1: USG must deliver access to telecommunications (mandatory – must score at least 3 out of 5)	As per the Government's 2017 announcement, the USG *must* ensure that all Australian premises have access to voice and broadband services, on reasonable request.	- Do the arrangements ensure all Australian premises are able to access voice and broadband services, through either existing or new providers/programs? - Do the arrangements provide for Australians with specific telecommunications needs (e.g. people with disabilities)?
Criteria 2: USG must be cost-effective (mandatory – must score at least 3 out of 5)	As per the Government's 2017 announcement, the USG *must* be more cost-effective than the current USO contract, taking into account any potential transition costs.	- Are services able to be delivered at an equal or lower cost than under the existing USO contract? - Do the arrangements reduce industry contributions and/or compliance costs? - Do the arrangements provide the Commonwealth with value for money?
Criteria 3: USG should facilitate consumer choice and not restrict competition	The USG *should* be technology and provider agnostic, encouraging flexible and innovative solutions that meet the changing needs of consumers.	- Are services provided under these arrangements able to be delivered via market mechanisms? - Do the arrangements allow for innovative solutions and consumer choice? - Are Government programs, if required, able to be contested by providers and change over time?
Criteria 4: USG should be implementable and acceptable to the community	The USG should be administratively simple, easy to implement, and considered an acceptable replacement to the USO by consumers.	- Are services provided under the arrangements considered acceptable to consumers, taking into account preferences around service performance and network reliability?
Criteria 5: USG should encourage accountability and transparency	The USG *should* encourage greater levels of accountability through clear reporting obligations and transparent funding arrangements that are directly tied to the provision and performance of services.	- Is information available on how and where services are delivered? - Is there a direct relationship between the provision of services and the associated funding arrangements?

Assessment of STS options

Option A1: Status-quo

Under Option A1, Telstra would be required to continue to ensure that standard telephone services are reasonably accessible to all people in Australia for the foreseeable future. This would include the obligation for Telstra to maintain its copper network in areas outside of the NBN fixed line footprint, and to provide voice services over its copper network in fulfilment of the USO (as per the CCO).

While this option does not address any of the concerns that have been raised with regard to the existing contract, the status-quo would maintain an important safety net for regional consumers in the short-term (guaranteeing access to fixed voice and the continuation of the Telstra copper network), while not precluding USO reform at a later date. This is because the TUSOPA requires an independent review of the USO be conducted in mid-2021, providing a further avenue for the Government to identify cost savings and negotiate changes to the contract.

There would be no regulatory impacts under this option, as Telstra would be required to continue to meet its obligations under the USO, and consumers would not be required to migrate off the copper network.

Advantages:

+ Ensures universal access to fixed voice services is retained, including for consumers with disabilities or other particular communications needs, via well-established and understood mechanisms
+ Does not create additional costs for NBN Co, as customers would not be forced to migrate off Telstra's copper network (unless Telstra otherwise decided to stop providing ADSL services)
+ Would likely be supported by regional consumers, particularly those reliant on copper services
+ Would not require any regulatory changes
+ Allows for the Government to make a more informed decision on the future of the USO in 2021, following the completion of the NBN rollout, and once there is greater certainty about both NBN take-up rates and new network technologies such as LEO satellite constellations

Disadvantages:

- Does not provide any immediate cost savings to industry or the Government
- Fails to promote competition, maintaining Telstra's role as the sole universal service provider of fixed voice services for the foreseeable future
- Fails to address the inefficiencies in current arrangements, by maintaining funding for continued operation of costly, legacy communications infrastructure in regional and rural Australia, in spite of viable alternatives

Option A2: Reduced scope (removal of the copper continuity obligation)

Under Option A2, the Government would seek to negotiate with Telstra to remove the CCO provisions from the TUSOPA, with a view to securing a reduction in the annual USO payment under TUSOPA. This means that Telstra would still be required to ensure all Australians have reasonable access to voice services, but it could realise savings by choosing to deliver services over the most cost-effective or innovative network technologies available, including on NBN fixed wireless, Telstra's own mobile network, or leased satellite capacity. Under this option, however, Telstra would not be permitted to provide USO services over NBN Sky Muster satellite, unless it could satisfactorily address latency and reliability concerns.

There would be minimal impacts on industry under this option. Removing the CCO would not provide Telstra with any regulatory cost savings, as all existing USO requirements on Telstra are provided for and funded under contract. Any negotiated savings could, however, be passed through to industry (including Telstra) via a reduction in annual TIL contributions.

If Telstra decided to move copper-based services to alternative technologies, consumers may be inconvenienced by the change, particularly those relying on copper for both voice and broadband services. This impact could be partially mitigated through enacting an existing TUSOPA provision which requires Telstra to develop a comprehensive migration plan to assist households transition off the network, and for which it can seek payment.

Advantages

- \+ Preliminary costings indicate cost savings to Telstra if it were able to use the most cost-effective technical solution available – potentially resulting in a net decrease in TUSOPA payments and industry contributions (subject to negotiations)
- \+ Provides Telstra with flexibility to adopt different, more efficient solutions over time to better address the changing needs of its regional customers
- \+ Maintains the administrative simplicity of single provider service delivery model

Disadvantages

- \- Would create additional costs for NBN Co, which it estimates would be significant, as Telstra would be incentivised to utilise NBN infrastructure to deliver voice services where appropriate and, over time, ADSL customers would migrate to NBN as the copper network is switched off.
- \- Fails to promote competition, maintaining Telstra's monopolistic position as the sole universal service provider
- \- May not be acceptable for regional consumers, unless it can be proven that any alternative wireless technologies used by Telstra can address reliability, redundancy and power concerns

Option A3: Market solutions with targeted Government programs to address access gaps

Under Option A3, the Government would seek to negotiate the removal of all STS obligations from Telstra following the completion of the NBN rollout. The majority of Australian premises would be able to access equivalent voice services through NBN retail service providers, mobile carriers or other commercial telecommunications providers. Where services that meet consumer needs are available on a commercial basis, provisioning obligations would be taken to be fulfilled. For the small number of premises unable to access commercial voice services, the Government would establish targeted programs to address their specific telecommunications needs.

These programs would be funded through appropriate arrangements, probably modelled on those for existing public interest telecommunications service and, depending on their form, may involve new contracts with service providers. These programs could include, for example, providing households with external antennas and/or mobile repeaters (for those premises within existing mobile coverage footprints but with poor reception), or subsidies to access voice services from alternative satellite services. Trials could also be conducted to test the viability of alternative solutions, and if supported by key regional stakeholders, could be scaled up and deployed nationwide under an appropriate migration process.

A move towards a market-focused regime would have minimal regulatory impact. Some industry participants may face administrative costs if they chose to tender for the delivery of services under any new targeted measures, however any compliance costs incurred by providers of services under the USG would be directly funded as part of the scope of work under contract.

Regional consumers could be negatively impacted by this change. This is because they would no longer be able to rely on Telstra for the provision of fixed voice services, and would have to seek alternative services on a commercial basis, or apply for services under targeted programs if no such services existed, both of which would involve search and other administrative costs.

The impact on consumers could be partially mitigated through existing TUSOPA provisions which require Telstra to develop a comprehensive household migration plan to assist with the transition off copper (for which it could seek payment). A number of other initiatives could also be pursued to help educate consumers about their choices, explain why the change is happening, and discuss the advantages of alternatives technologies over the legacy copper network. Benefits to consumers under this option could include cheaper access to voice services, particularly if charged at mobile call rates, and better information about the types of services that are available to them.

Advantages

+ Allows USO funding to be to be better spent, targeting areas of most need
+ Promotes competition, through market delivery mechanisms and contestable funding arrangements
+ Potentially provides lower cost, more flexible services (e.g. with mobility) for regional consumers
+ Improves accountability and transparency measures, as the cost of providing loss-making services to regional Australia becomes transparent, which would allow the Government to make more informed, evidence-based decisions on where and how funding should be allocated
+ Is more equitable, providing opportunities for smaller industry participants

Disadvantages

- Would create additional costs for NBN Co, which it estimates would be significant, as Telstra would be incentivised to utilise NBN infrastructure to deliver voice service where appropriate and ADSL customers would migrate to NBN as the copper network is switched off
- May not be acceptable for regional consumers, unless it can be proven that alternative wireless technologies can address reliability, redundancy and power concerns
- Involves greater implementation risk, as targeted programs under the USG would need to be set-up and administered, requiring new funding arrangements and program development, community support and migration of around 600,000 voice service and 235,000 ADSL services.

Option A4: Remove all obligations (no contract or targeted measures)

Under Option A4, subject to contract renegotiations, the STS USO would be removed from Telstra and not be replaced. This would recognise that fixed voice services are decreasing in popularity, and that all premises should have access to unmanaged VoIP services via a basic broadband connection under the proposed SIP regime.

Option 4 is not recommended for reform of the STS, as it fails to address the fundamental policy objective underpinning the establishment of the USG – namely guaranteed availability of reliable voice services. Relying solely on market solutions fails to address this threshold requirement, as the removal of the STS USO could leave a number of Australians without access to a reliable voice service, particularly those in loss-making areas or outside mobile coverage. It would also not provide for minimum service standards or may not deliver services to Australians with particular telecommunications needs, such as people with a disability. As such Option 4 has only been considered to provide a point of contrast for the other options.

Advantages

+ Would likely provide cost savings to industry
+ Potentially provides lower cost, more flexible services (e.g. with mobility) for regional consumers, at least where there is mobile coverage

+ Would remove any distortionary impact from the USO on network investment and service delivery in regional and rural Australia

Disadvantages

- Would create additional costs for NBN Co, which it estimates would be significant, as Telstra would be incentivised to utilise NBN infrastructure to deliver voice service, where appropriate, and ADSL customers would migrate to NBN as the copper network is switched off
- Fails to ensure universal access to adequate and reliable voice services, removing a key safeguard for consumers
- Could provide poorer quality voice services to people in regional Australia outside mobile coverage, who may have to rely on the NBN Sky Muster satellites (or more expensive commercial satellite plans) for basic voice services

Assessment of payphone options

Option B1: Status-quo

Under Option B1, Telstra would be obligated to continue installing and maintaining payphones, as per the requirements of the TUSOPA. All regulatory requirements would be preserved, including the Net Social Benefit test and the limitations on how many payphones Telstra is able to remove in a 5 year period without triggering an independent review. This would ensure that any members of the public who still rely on public payphones could continue accessing voice services in the community. As per Option A1, the independent review of the TUSOPA in 2021 could identify alternative technologies for service delivery, potentially resulting in future cost-savings.

There would be no regulatory impacts under this option, as the requirements would remain on Telstra, and nothing would change for consumers.

Advantages

+ Ensures ongoing availability of payphones around current levels, providing a safety net for consumers who regard payphones as their only means of access to voice services
+ Allows for the Government to make a more informed decision on the future of payphones, following further analysis of payphone customers and usage patterns

Disadvantages

- Does not provide any cost savings to industry or Government
- Fails to address the inflexibility and inefficiencies in current arrangements, maintaining funding for services that are largely no longer required, funding which could be better spent directly addressing the needs of a diminishing number of payphone users
- Maintains onerous and costly administrative processes on Telstra
- Discourages competition in the provision of payphones or substitutes, although there is no identified interest in the payphone sector from new entrants

Option B2: Reduced scope (relaxation of payphone requirements)

Option B2 involves the relaxation of payphone installation and removal requirements, essentially reducing the scope of the obligation on Telstra to provide payphones. Telstra would no longer be required to install new payphones, the removal process would be simplified, and Telstra would only have to maintain existing payphones where there is a clearly defined and demonstrated need (for example, in Indigenous communities, areas where there is no mobile coverage, and in disadvantaged urban communities). This more limited number of payphones would continue to be funded through TUSOPA. The remaining payphones would be defunded, and no longer subject to any regulation, providing Telstra with the ability to retain any it considers commercially viable (for example, those in high-traffic areas) and remove low demand, loss-making ones.

There would be no notable regulatory impacts on industry under this option. Reducing the scope of Telstra's payphone obligations would not provide Telstra with any regulatory savings, as all reporting, notification and compliance requirements on Telstra are provided for and funded under contract. Any negotiated savings could, however, be passed through to industry (including Telstra) via a reduction in TIL contributions.

A limited number of consumers could be negatively impacted by this option, however a targeted subsidy scheme could be established, if warranted, to assist those who are heavy payphone users to migrate to mobile services, where appropriate.

Advantages

+ Depending on net costs and negotiations with Telstra, this option could provide cost savings and a reduction in TIL contributions, as a much smaller number of payphones would need to be funded through the TUSOPA
+ Represents a more efficient use of funds, as only payphones with a clearly defined need would be retained over time, reducing burden on Telstra
+ Improves transparency around the provision of payphones

Disadvantages

- Significant funding of payphones would still be required, despite their low and falling use, preventing such funding being directed to other higher-value purposes (e.g. improving mobile coverage and directly addressing the needs of heavy payphone users)
- Discourages competition in the provision of payphones or substitutes, although there is no identified interest in the payphone sector from new entrants
- Could introduce a small cost for affected consumers in that that they may need to seek support to access alternative solutions.

Option B3: Market-based solutions

Under Option B3, subject to the outcomes of contract renegotiations, Telstra's payphone obligations under the TUSOPA would be terminated shortly after the completion of the NBN rollout, with the expectation Telstra would choose to gradually decommission its loss-making payphones. In areas with particular need, including those without any mobile coverage, the Government would assess community requirements for an ongoing public communications service, and could develop targeted programs where a clearly defined need exists (for example, in Indigenous communities, areas where there is no mobile coverage, and in disadvantaged urban communities).

This could either consist of tendering for the installation and maintenance of replacement community phones, similar to the operation of the PM&C program for remote Indigenous communities, or the installation of small-cell mobile facilities in areas currently serviced by a payphone but without mobile coverage. A supporting mobile subsidy scheme could assist those who are reliant on payphones for everyday communications to migrate to mobile services, where appropriate.

Advantages

+ Depending on net costs and negotiations with Telstra, this option could provide cost savings and a reduction in TIL contributions
+ Allows for funds to be reallocated to directly address the needs of payphone users, using a variety of platforms (e.g. community phones, public Wi-Fi or mobile handsets)
+ Improves transparency around the provision of payphones

Disadvantages

- There would be more complexity around delivery as it is possible that multiple targeted programs would replace the existing contractual obligations
- There is no identified interest in the payphone sector from new entrants, limiting the options for a new community phone program
- The ability to leverage Telstra's existing stock of payphones is unclear, and the cost of replacing them would be high

Option B4: Removal

Under Option B4 (subject to the outcomes of contract renegotiations), the payphones USO would be removed from Telstra at the earliest convenience and not replaced. This would be on the basis that public payphone usage has fallen substantially year-on-year in light of near-ubiquitous mobile take-up, indicating that payphones are no longer fulfilling a community need and should therefore not be regulated or funded through Government programs. Telstra could continue to operate payphones if it saw a commercial reason to do so.

Option B4, while cost-effective, is not considered an appropriate solution for payphones, as it would allow Telstra to immediately begin removing its loss-making payphones without the Government having effective measures in place to meet the reasonable needs of residual payphone users.

Advantages

\+ Subject to contract renegotiations, it is likely to provide cost savings, as there would no longer be a requirement on the Commonwealth or industry to contribute funding for payphones

Disadvantages

- Likely to impact access to voice services for the small number of payphone users, who may include more vulnerable members of society, including for contacting emergency and support services

4. What is the best option from those you have considered?

Status-quo (Option A1) is the best option for STS

There are two mandatory assessment criteria for USO reform: effective ongoing access to services and cost-effectiveness.

Options A1, A2 and A3 would all meet the Government's threshold access criteria, guaranteeing the availability of voice and broadband services to all Australians. Option A4, however, fails this test, as the SIP regime alone is unlikely to provide a sufficient safety net for existing USO customers and could result in a number of rural and remote premises losing their access to a basic, reliable fixed voice service. This is because the SIP regime does not require NBN Co's satellite broadband platform to support voice services because of the limitations of satellite transmission of voice.

In order to test the cost-effectiveness criteria, we undertook independent modelling to compare the ongoing cost of operating Telstra's copper network (Option A1) with the cost of operating alternative wireless network technologies in regional and rural Australia (Options A2 and A3). Preliminary results from this exercise suggest that reform could prove more cost effective than maintaining the existing USO arrangements (see Table 4 below). This is because, over time, mobile and satellite technologies are likely able to deliver high-quality, reliable services cheaper than Telstra's copper legacy network.

Table 6. Estimated annual net costs for STS USO options, 2019-20 to 2031-32 [figures redacted]

	Option A1	Option A2	Option A3	Option A4
Annualised net cost, inclusive of inflation (lower bound)	$[redacted]	$[redacted]	$[redacted]	$[redacted]
Annualised net cost, inclusive of inflation (upper bound)	$[redacted]	$[redacted]	$[redacted]	$[redacted]

While these costs do not provide an accurate indication of the magnitude of savings that could be achieved through commercial negotiations, nor include transitional expenses, all costed options nevertheless compare favourably against the annual unindexed payment to Telstra of $230 million per annum. This strongly suggests STS could be delivered at a lower cost than under the TUSOPA.

Importantly, however, these figures do not account for the cost impact of USO reform on NBN Co. NBN Co estimates that if Telstra were to decommission its copper network, NBN Co could expect to incur additional net costs of between **[figures redacted]** per annum as a result of needing to upgrade its fixed wireless and satellite networks to support incremental users. This amount is higher than what is currently paid to Telstra, and as such, is a significant barrier to any USO reform. NBN Co could incur these additional costs under Options A2, A3 and A4, effectively eliminating any potential for savings. Based on the mandatory cost-effectiveness criteria, Option 1A is therefore the Government's only viable option to ensure the continued access of voice services throughout Australia. By maintaining the copper continuity obligation, Telstra is prevented from disconnecting its copper network, reducing the likelihood that NBN Co will need significant additional fixed wireless capacity in the short-to-medium term. This approach differs from the recommendations of the PC and the approach originally envisaged for the USG, but this is because the magnitude of the cost implications for NBN Co have only become fully apparent through this process.

Table 7. Summary of the assessment of options for standard telephone service

Assessment Criteria	A1 (preferred)	A2	A3	A4
1. Delivers access (mandatory)	5	5	4	2
2. More cost-effective (mandatory)	3	1	1	2
3. Facilitates consumer choice	1	2	5	5
4. Acceptable and implementable	5	4	3	1
5. Accountable and transparent	2	3	4	1
Total score	**16**	**15**	**17**	**11**

While NBN costs are currently the primary barrier to reform, this may be subject to change over time. Under the proposed SIP regime, NBN Co will be legally required to provide broadband services to all Australian premises on request. If there is a larger than projected take-up of NBN services in the regional Australia, or if Telstra decided to stop offering ADSL services, NBN Co could face these network upgrade costs irrespective of any action towards reforming the USO. However, until there is greater certainty about the size of NBN Co cost impacts, and a means to fund the costs, the status-quo is the only appropriate course of action. As part of the broader work program to implement the USG, we propose further testing of NBN Co's cost estimate as part of the next NBN Corporate Plan review process.

If the NBN cost issue is able to be resolved, Option A3 would then be the preferred approach to reform. This is because alternative carriers are likely able to provide reliable voice services at a lower cost than under current arrangements, while also enabling consumer choice and providing for greater levels of transparency and accountability over service funding and provision. While some regional consumers would be opposed to these reforms, steps could be undertaken to address their concerns and assure them that the solutions to be offered would be robust, reliable and affordable, with options available for back-up power and redundancy. Trials to demonstrate this could be an important of such a process.

Reduced scope (Option B2) is the best option for payphones

The 4 options for payphone reform is similarly assessed against the 5 key criteria outlined in section 3 above, with access and cost-effectiveness again being mandatory requirements.

Out of the 4 payphone options, maintaining the status-quo (Option B1) ranks last, failing the cost-effectiveness test. This is because the current arrangements do not provide sufficient benefit to the community to justify the amount of money that is being spent annually. While the contract itself provides for annual unindexed payment of $40 million until 2032, [content redacted]. This represents an inefficient use of both Commonwealth and industry funds, particularly given how infrequently payphones are used across the country.

Table 8. Estimated annual net costs for payphones USO options, 2020-2032 [figures redacted]

	Option B1	Option B2	Option B3	Option B4
Annualised net cost, inclusive of inflation	$[redacted]	$[redacted]	$[redacted]	$[redacted]

The vast majority of Australians have ready access to mobile phones, and most payphones are located in areas with good mobile coverage. As such, there is little ongoing rationale for guaranteeing all

Australians continue to have access to payphones. Payphones are used by less than 3% of the population, and international experience shows that they can be broadly rationalised or removed entirely without significant negative consequences.[19] Further, even if regulatory requirements are lessened or removed entirely, Telstra is likely to retain a number of payphones in high-traffic urban areas on commercial grounds, as they provide Wi-Fi services and generate advertising revenue. As such, Option B1 will only be acceptable if the Commonwealth is unable to renegotiate new payphone arrangements with Telstra.

However, the option for complete removal of payphones with no further Government intervention (Option B4) is also not recommended, on the basis that pockets of need still exist within the community. Payphone usage is somewhat higher, for example, in rural areas, Indigenous communities, areas of high socio-economic disadvantage and localities without mobile coverage. As these communities are among the most vulnerable in society, care needs to be taken to ensure reform does not restrict or limit access to important telecommunications services.

The best option for payphone reform is therefore either B2 or B3.

Option B2 is based on modelling a scenario where Telstra is only required to retain payphones in areas without mobile coverage, and in small regional centres (with population less than 10,000), but can also begin to actively remove any additional payphones located at a single site. As seen below, Option B2 costs considerably less than Option B1, but is still projected to cost slightly more than what Telstra currently receives under the TUSOPA. This may be a function of the approach taken to the costing. For consistency, Option B2 should be assessed against Network Strategies' costing for B1, which suggests a considerable saving could be achieved by relaxing regulation on Telstra. These outcomes would be subject to future negotiations with Telstra, as the Government would not pursue any options where it pays Telstra more for delivering fewer payphones, and would expect to realise some savings.[20]

Option B3 is based on the termination of the payphones contract with Telstra, and Government tendering for an alternative provider to install and maintain new community phones (or small-cell mobile facilities) in locations outside of mobile coverage areas. This could be complemented by a new mobile handset and call credit subsidy scheme for the small number of Australians who rely on payphones for their everyday communications. Option B3 is projected to be more cost-effective than Option B2, but is highly sensitive to the number of people who would be eligible for any subsidies and the high administrative costs of running such a program.[21]

Subject to both further market research on payphone users and formal negotiations with Telstra, Option B2 is considered the best option for reform. This is because Option B2 meets the mandatory access requirement by maintaining payphones in communities where a clearly defined need still exists (for example, in Indigenous communities), while taking into account the extent of mobile coverage and consumer preference for mobile and Wi-Fi services. It is also considered to be more easily implementable than Option B3, as it does not require any new capital expenditure or subsidy schemes, would not involve considerable change, and is unlikely to generate significant concern among those

[19] Public payphones have been removed from the USO of various European countries including the Netherlands (in 2008), France and Belgium (in 2015), and Norway (in 2016), due to competition from mobile services and a significant decline in usage. Other countries, like Canada, have recently relaxed pricing regulations relating to payphones on the basis they are no longer considered essential services.

[20] It should also be note that the costs to provide Option B2 could be impacted by the decision on the STS USO. If the copper continuity obligation is removed, it could make the delivery of payphone services more difficult in regional and rural Australia, as Telstra may incur additional costs to migrate payphones off the copper network and onto mobile or satellite solutions. If the Government decided to renegotiate the copper continuity provisions, this issue would need to be addressed in more detail prior to the implementation of the policy.

[21] USG program costs for Option B3 are calculated based on the installation and maintenance of 500 community phones, a once-off payment for mobile equipment to 290,000 people and subsidised mobile phone plans for 360,000 people (based on number of people eligible for low-income support, but ineligible for the Telephone Allowance).

most reliant on payphones. Further, under Option B3, the Government could face difficulty in attracting interest among providers when tendering a small number of community phones in high-cost areas, and any targeted programs to provide mobile handsets or call credit could prove costly, difficult to deliver, and highly susceptible to fraud or abuse.

Table 9. Summary of the assessment of options for payphones

Assessment Criteria	B1	B2 (preferred)	B3	B4
1. Delivers access (mandatory)	5	4	3	1
2. More cost-effective (mandatory)	2	3	4	5
3. Facilitate consumer choice	1	3	4	2
4. Acceptable and implementable	5	5	2	1
5. Accountable and transparent	1	3	4	5
Total score	**13**	**18**	**17**	**14**

5. Consultation

A series of Government consultation processes have been undertaken regarding USO reform, targeting a number of key stakeholders. These have canvased a wide range of views on potential options for reform, including those explored in this RIS.

Productivity Commission

As part of its inquiry into the USO, the PC undertook a comprehensive year-long public consultation process, which included the publication of an issues paper and a draft report for public comment, followed by a number of public hearings held in both regional and urban locations. As the PC suggested terminating the USO contract, this consultation process canvased a broad range of views on key USO reform proposals, which informed our thinking.

The PC received 61 initial and 118 post-draft public submissions from a mix of carriers, consumer and regional organisations, local councils and individuals. The majority of submissions expressed support for reform, with general agreement that the existing USO is out of date and should be updated to reflected modern technologies and consumer preferences. A technology neutral approach was also broadly supported, with a numbers of telecommunications carriers expressing a preference for redirecting USO funds towards contestable programs.

Targeted stakeholder engagement by the USO Taskforce

Due to the comprehensive nature of the PC's approach, the USO Taskforce did not undertake a formal written consultation process. Instead, the USO Taskforce met with key industry participants, consumer groups and Government organisations. These consultations canvassed a range of topics on USO reform, and in particular, sought views on:

- current or emerging technology that could provide more cost-effective ways to deliver voice services in NBN Co's satellite footprint;
- the level of voice quality and reliability that is considered acceptable;
- consumer preference for mobile versus fixed-line services;
- the ongoing need for payphones and where it may be appropriate for Telstra to reduce the number of existing payphones provided under the USO; and
- specific telecommunications needs that should be considered under the USG.

Industry

During the course of policy development, industry was encouraged to speak directly with the USO Taskforce and provide input into the policy development process. We engaged closely with NBN Co on its costings issue, and with Telstra on seeking additional data and understanding its views on possible options for reform. In addition, we met with Optus and Vodafone Australia on multiple occasions, to better understand mobile coverage and discuss potential alternative technologies and mechanisms for delivering voice services to regional consumers. Representatives from the USO Taskforce also met with satellite retailers and attended the 2018 Australasia Satellite Forum.

Overall, the USO Taskforce has met with the following industry stakeholders:

- Activ8me
- Communications Alliance
- Commpete (formerly Competitive Carriers' Coalition)

    - Amaysim
    - Macquarie Telecom
    - MyRepublic
    - MyNetFone
    - Southern Phone
    - TasmaNet
- IPSTAR Australia
- NBN Co
- OneWeb
- Optus
- Pivotel
- Telstra
- TPG
- Vocus
- Vodafone Australia

Industry, in general, was supportive of USO reform. Carriers saw scope for more efficient delivery of services, and the establishment of the USG as an opportunity to either reduce their contributions to the TIL or redirect existing funding to improve their regional networks and build up regional customer bases. Consultation with industry did not identify any new alternative technologies, beyond mobile and satellite, that could be used to deliver voice services at present. While noting that there are a number of emerging technologies and supporting business models that could be deployed to improve regional telecommunications (e.g. low earth orbit satellite constellations, Project AirGig, drones, and TV white space), industry confirmed these are largely untested solutions and unlikely to be ready for mass-market deployment in Australia until at least the early-to-mid 2020s.

Regional and consumer groups

The USO Taskforce met with a number of regional and consumer representative groups to discuss their telecommunications needs and concerns. The Taskforce met regularly with members of the Regional, Rural and Remote Communications Coalition (RRRCC) and participated in a number of regional forums including the Broadband for the Bush Forum in Darwin, the annual conference of the Queensland branch of the Isolated Children's Parents' Association in Winton, and the Annual Federal Conference of the Isolated Children's Parents' Association of Australia in Canberra. Bi-lateral meetings were also held with various organisations representing Indigenous, homeless and disadvantaged Australians. The Taskforce also enabled members of the public to contact it directly via its website.

Overall, the USO Taskforce met with the following consumer and regional stakeholders:

- Regional, Rural and Remote Communications Coalition (RRRCC)
    - Australian Communications Consumer Action Network (ACCAN)
    - Better Internet for Rural, Regional and Remote Australia (BIRRR)
    - Broadband for the Bush Alliance Network (BB4A)
    - Cotton Australia
    - Country Women's Association – National, NSW and South Australia
    - GrainGrowers
    - Isolated Children's Parents' Association (ICPA) – Federal
    - National Farmers' Federation (NFF)
    - National Rural Health Alliance
    - National Rural Women's Coalition
    - Northern Territory Cattleman's Association
    - NSW Farmers
    - The Pastoralists' Association of West Darling

    - Rice Growers Association of Australia
    - Queensland Farmers' Federation
    - South Australia Country Women's Association
    - Victorian Farmers Federation
    - WAFarmers
- Isolated Children's Parents' Association (ICPA) - QLD
- First Nations Media Australia (formerly Indigenous Remote Communication Association)
- Centre for Appropriate Technology
- St Vincent de Paul/Amelie Housing
- Telecommunications Industry Ombudsman (TIO)

Remote and regional stakeholders voiced their need for reliable, high-quality voice and broadband services. Most saw Telstra's copper network as a trustworthy and proven network, and were concerned with the prospect of Telstra shutting down its copper services. Some regional stakeholders, however, noted ongoing problems with the copper network and indicated an openness to alternative wireless delivery mechanisms, which had proven track records. Of the technologies canvassed among the groups, there was some support for terrestrial mobile solutions (like fixed wireless), but scepticism about satellite services due to a perception of poorer performance and higher cost.

A general sentiment among regional and rural stakeholders was the need for telecommunications redundancy. Regional stakeholders put the view they could not rely on one solution or network alone, and raised the need for, or at least ability to integrate, emergency power back-up as part of any alternative solutions. To this end, there was support for the expansion of mobile services and coverage, but not at the expense of losing a fixed voice service. This gave weight to the view that the USO contract should be retained, at least until regional consumers concerns can be addressed and guaranteed access to reliable alternative services provided.

Targeted discussions with relevant stakeholders indicated that community and Wi-Fi satellite phones in remote Indigenous communities continue to play an important role in the community, and Telstra's public payphones are also seen to continue to play an important role in Indigenous communities, areas outside of mobile coverage and in some pockets of the community.

Government

Key USG issues were canvased broadly across a number of relevant Commonwealth agencies, State and Territory governments and local government associations, using existing forums where possible. In addition to bilateral meetings, the USO Taskforce chaired an Inter-Departmental Committee (IDC) on USO reform, consisting of central and key policy agencies, which met on a regular basis every 2-to-3 months. State and Territory consultation occurred through a sub-set of the NBN Liaison Group, which met 4 times over the course of the policy development.

Consultations were held with the following Government stakeholders:

- Australian Communications and Media Authority (ACMA)
- Australian Competition and Consumer Commission (ACCC)
- Australian Local Government Association (ALGA)
- Data61/CSIRO
- Department of Agriculture and Water Resources
- Department of Finance
- Department of Home Affairs
- Department of Human Services
- Department of Industry, Innovation and Science
- Department of Infrastructure, Regional Development and Cities

- Department of Social Services
- Department of the Prime Minister and Cabinet (including Indigenous Affairs and Office for Women)
- Department of the Treasury
- State and Territory representatives (through the NBN Liaison Group)

RTIRC 2018

Development of the USG was also canvassed in the issues paper of the 2018 Regional Telecommunications Independent Review Committee (RTIRC), with the committee indicating its openness to hearing community views on the USG and referring these on to the Government. The Taskforce liaised with the Committee's secretariat to obtain an understanding of what issues relevant to the USG were raised with the Committee.

Generally issues raised with RTIRC relevant to the USG were the same as those raised with the Taskforce. A number of individual submissions raised issues with the reliability and quality of voice services provided over landline, noting that services were impacted by poor weather and that regional consumers often faced long repair times. Many submissions also emphasised the importance of retaining access to Telstra's copper network, due to poor or patchy mobile coverage and negative experiences on NBN.

6. How will you implement and evaluate your chosen option?

The status-quo is the best option for the STS USO, and an implementation plan is not required for this component. This is because Telstra would continue to provide standard telephone services under the TUSOPA, with no immediate changes to the operation of the contract, but with the better administrative oversight that has been implemented as per the recommendations of the ANAO report.

In the longer term, however, reform may still be possible if current barriers are able to be addressed. The scheduled TUSOPA review in 2021 provides an opportunity for the Government to reconsider the technologies and processes used by Telstra to deliver the USO, and possibly seek a reduction in payments due to cost savings. Work to date has also identified that, given the significant changes underway in the sector, there is some concern and confusion amongst regional, rural and remote consumers about the voice and broadband services available to them and how to resolve practical issues. As such, further work is proposed to test preliminary findings, help further develop pathways forward and to address immediate consumer issues and concerns. Work is also required on possible legislative change in the event an alternative approach to USG delivery is found.

A separate body of work is required to implement the preferred payphone option, which involves the relaxation of regulatory obligations on Telstra with a view to achieving savings. A first step to implementing this option is to obtain additional primary data about payphones users and their usage patterns, to test and fine-tune the proposed changes. This would be followed by formal contractual negotiations with Telstra and, if required, a targeted support program to assist any vulnerable users of payphones (e.g. the homeless) adversely impacted by any reduction in payphones. Finally, a regulatory reform process is required to implement the changes.

Evaluation of preferred options

TUSOPA Review

There is a natural evaluation point in the existing USO contract, by way of the independent TUSOPA review, which needs to take place in 2021 absent any further change. The 2021 review will re-examine the technologies and processes used to deliver both STS and payphones and if potential alternative delivery approaches allow the Government to pursue cost-savings. If they do not lead to earlier change, the further steps outlined above are expected to assist the review process and the assessment of future ways forward.