OPTUS

Submission in response to Productivity Commission Issues Paper

Telecommunications Universal Service Obligation

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Section 1. EXECUTIVE SUMMARY

1.1 The Universal Service Obligation (USO) remains rooted in principles more applicable to the analogue era of telecommunications. It is predominantly focused on the delivery of fixed voice handsets and voice calls over fixed line copper connections. The widespread deployment and use of mobile, data and broadband services now render it increasingly inappropriate.

1.2 Three decades after the genesis of the USO the industry is vastly different from that which existed in the late 1980s:

(a) Whilst Telstra retains a dominant position in the market, especially in regional Australia, competitive forces and regulation ensure that customers have access to genuine choice in a way that was not possible in the 1980s.

(b) The Telstra copper network has been over-built – even in rural areas that the USO policy implicitly considers to be uneconomic – by three digital mobile networks. The completion of the NBN will add a fourth additional national network.

(c) Further, customer's communication needs extend well beyond the need for basic fixed voice calls and are being delivered by a vast range of digital technologies and applications.

1.3 However, despite these vast changes in technology, competition and customer needs the USO has remained static. It continues as a blunt policy instrument aimed at delivering increasingly questionable outcomes over an increasingly outdated legacy technology.

1.4 It is time to recognise the current policy is a high cost solution to solve a problem that no longer exists. The current review provides an opportunity for much needed change. This submission will establish that:

(a) Given market developments in networks, technology and competition the rationale for a USO scheme in its present form no longer holds;

(b) The current USO policy imposes high and untested costs, with:

(i) No measurement of the number of USO services for over 20 years; and

(ii) No agreed estimate of the cost for over 20 years.

(c) USO funding of $290 Million per annum is far in excess of the likely costs incurred by Telstra. As a result:

(i) Competition is distorted across a range of communications markets; and

(ii) USO acts as a barrier to further rural investment by competitive networks.

1.5 Consequently, there is a strong argument in favour of removing the USO in its entirety and letting the market deliver services; backed-up as it is by an effective regulatory regime. The NBN policy settings, which guarantee access to infrastructure

and which set limits on wholesale prices, ensure that once the NBN is rolled-out all customers will be able to connect to affordable communications services.

1.6 In fact, this approach is already being adopted within the NBN fibre based footprint (covering 93% of premises). Within the NBN fibre footprint Telstra acts as a retail provider of last resort with NBN Co providing network connectivity. There is no reason why this approach should not be extended to the rest of the NBN network.

1.7 However, Optus recognises that such an approach, whilst it has strong policy merit, might be challenging politically.

1.8 Optus supports an alternate approach that phases out the current USO scheme, to be replaced by a more targeted and customer focused scheme than currently exists. A reformed USO should combine elements of a market based approach with regulation that provides certain consumer guarantees to access a basic voice service.

1.9 Under a revised scheme infrastructure access should be provided through the NBN and supplemented as necessary by the existing mobile networks. If coverage gaps exist in these networks, then these could be addressed through targeted investment schemes, such as the Government's Mobile Blackspots Programme. Whilst competition should ensure that customers have access to affordable voice services over either the NBN or mobile infrastructure, the Government could appoint a retail service provider of last resort as a back-stop guarantee to service provision. In many respects this mimics the arrangements already adopted within the NBN fibre footprint. If adopted for the NBN fixed wireless and satellite footprint it would enable Telstra to de-commission all or large parts of its legacy copper network.

1.10 Under this arrangement there should be no need for an additional funding mechanism. NBN Co's wholesale access fees can be set to meet the costs of service. Further, the costs savings Telstra will accrue from de-commissioning its legacy copper network should exceed any reduction in its USO funding. Other carriers would have their USO levy payments reduced, which will free up funds for investment in competitive infrastructure and services that are of greater benefits to consumers. This policy approach would be consistent with a pro-competition reform and innovation agenda. Furthermore, the building blocks are in place for it to be implemented with limited legislative change.

1.11 For the avoidance of doubt Optus does not believe there is a need for the USO to be expanded to include data capability. This is because universal access to a standard broadband service is already guaranteed under the NBN policy settings. Under the Statement of Expectations the NBN is required to deliver high speed broadband services to a particular standard to all premises *"of at least 25 megabits per second to all premises and at least 50 megabits per second to 90 per cent of fixed line premises as soon as possible."*[1]

[1] Australian Government, 2014, NBN Co Government Expectations, p.2

Section 2. DEVELOPMENTS IN THE SECTOR HAVE REMOVED THE NEED FOR A USO

2.1 The universal service obligation (USO) has its origin in the public policy objective to provide a ubiquitous telephone service throughout the nation. The USO was developed and designed at a time of transition from a state-owned monopoly to competitive duopoly arrangements. There were concerns in the community and government that a privatised Telecom, faced with limited competition, would face difficulties internally cross-subsidising the 'assumed' loss making rural fixed line connections. This concern was so great that the process of deregulation was delayed as a result.[2]

2.2 There has been no meaningful change to the USO obligations and funding arrangements since the original design. Yet over the same 25 year period, the industry has undergone significant transformation, most of which were unforeseeable:

(a) Competition has emerged and has brought immeasurable benefits to the community;

(b) The cost of providing telecommunications services has fallen drastically;

(c) Mobile phone networks have been deployed, with three competitive providers covering 98.5% of households;

(d) Technology and innovation has flourished; and

(e) Consumers no longer solely rely on fixed line connections for services.

2.3 Optus welcomes a fresh analysis of whether a USO scheme, designed in the 1980s, is still relevant in 2016 and beyond. Optus' position is that there is no rational policy justification for the current USO policy. This section outlines the reasons why. It discusses:

(a) The historical rationale of the USO;

(b) Differences in the current market environment from those of the late 1980s and early 1990s; and

(c) The roll-out of the Government-owned fixed line NBN network that removes any remaining policy reasons for a USO.

2.4 The USO is now an out-of-date and failed policy. Many independent reviews into the USO policy since its inception have recommended changes; but nothing has changed. Optus believes it is time to accept the USO is a relic of an analogue era that is no longer suited to the dynamic, multi-network digital environment.

Historical rationale of the USO

2.5 The current USO policy of industry subsidising the universal service of the incumbent operator was developed in line with the liberalisation of the industry – with

[2] DCITA, 2004, Review of the operation of the Universal Service Obligation and Customer Service Guarantee, 7 April, p.79

corporatisation of the incumbent monopoly in 1989[3] and the duopoly market in 1991. It followed the Community Service Obligation (CSO) imposed by legislation in the 1970s on the government-owned monopoly communications provider (Telecom and its predecessors).

2.6 The operation of the USO is therefore largely intertwined with the history of Telecom/Telstra. In summary, Telstra's origins date back to 1901 and Australian Federation when the Postmaster-General's Department (PMG) was established by the Commonwealth Government to manage all domestic telephone, telegraph and postal services. In 1946, the Overseas Telecommunications Commission (OTC) was established as a monopoly provider of all forms of telecommunications services between Australia and the rest of the world – the domestic and international monopolies were eventually merged into a single organisation (now known as Telstra) in 1992.

2.7 The USO was put in place during this period of market liberalisation to address a perceived market failure. During the liberalisation process the Government made it clear that it would protect the social policy embodied in the CSO. Concern that the provision of universal services may be inconsistent with the competitive provision of telecommunications was acknowledged in the 1988 Evans policy statement. There was recognition that the significant internal cross-subsidies required to sustain universal service "*may not be sustainable in an unregulated commercial market*."[4]

2.8 Ensuring universal access was the first policy objective in the 1988 Evans policy statement that began the long road to competition.[5] It was reinforced in the liberalising legislation of 1989 which reorganised Telecom as a commercial entity.[6]

2.9 The current USO policy was borne out of this policy environment. At the time of the 1988 policy statement, mobile subscribers amounted to only 27,000.[7] It is therefore unsurprising that no consideration was given to the future role of mobile technology in delivering these services.[8]

2.10 The introduction of Optus as the second telecommunications carrier in Australia came with the passage of the *Telecommunications Act 1991.*[9] The Act retained the concept of universal service obligations. The Government acknowledged the continuation of telephone service requirements and *"reaffirmed that provision and maintenance of basic telephone services to residential and business users throughout Australia, including the rural community, remains the principal obligation for the merged*

[3] The Australian Telecommunications Corporation Act 1989 required Telecom to act in a commercial manner through commercial objectives and financing.
[4] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New Framework, 25 May, para 3.8
[5] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New Framework, 25 May, para 1.12
[6] Australian Telecommunications Corporation Act 1989
[7] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New Framework, 25 May, para.3.14
[8] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New Framework, 25 May, chapter 3.
[9] Before the *Telecommunications Act 1991*, the concept of USO was subsumed as a predominant strand of the CSO which was first put into legislation in the *Telecommunications Act 1975* and reaffirmed in the *Australian Telecommunications Corporation Act 1989*. The objective underlying the USO is to ensure the provision of the basic telephone service and payphones to all people in Australia on an equitable basis, wherever they reside or carry business. Telecom, the dominant carrier, was a government-owned monopoly before the 1991 telecommunications reforms.

telecommunications carrier Telecom/OTC."[10] In addition, it also noted that the new second telecommunications carrier *"would be required to pay a fair share towards the costs of delivering a universal service because it would gain all of Telecom/OTC's network and customers. Both Telecom/OTC and the second carrier would be required to provide access to emergency services."*[11]

2.11 In summary, the USO policy required Telstra to provide access to basic voice services; the cost of which was to be funded by all the industry. This is where the USO policy has stayed for the next 25 years.

Current USO is a failed policy

2.12 Whilst the social policy objectives of universal access to communications have had widespread support, the arrangements to deliver this have been subject to widespread and constant criticism.

2.13 There have been a number of reviews and inquiries looking at the current USO arrangements over the last 15 years. These reviews have continually identified failings in the current scheme and have called-out the need for reform.

2.14 The Regional Telecommunications Inquiry in 2002 concluded that the USO model was not considered the best model for providing services into the future.[12]

2.15 The DCITA, in 2004, also raised doubts over the efficacy of the scheme:

> *While the existing arrangements for the costing and funding of the USO have met the minimum legislative requirements, there are significant problems with the way those arrangements have worked in practice …*[13]

2.16 In its 2008 Report, the RTIRC noted that:

> *There is substantial controversy about the current USO arrangements and the Committee notes that nearly all stakeholders dislike the current arrangements. ACMA referred to the USO arrangements as a 'broken concept'.*[14]

2.17 The 2008 RTIRC Report outlined in some detail the failings of the USO arrangements. In summary, it found:

(a) Limited consumer understanding of the USO which was considered to be "vague" and subject to limited enforcement mechanisms. The committee indicated that in its consultations with the community it has found a poor awareness of the USO arrangements and an even poorer understanding of how they operate;

(b) That the current arrangements undermine competition since they fund a single supplier. In turn this provides limited incentives for Telstra, as the universal service provider, to improve its performance in high cost areas where it faces no competition;

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[10] Minister for Transport and Communications, "Telephone service requirement to continue, Minister says", News Release, 11 April 1991, NR 19/91

[11] Minister for Transport and Communications, "Telephone service requirement to continue, Minister says", News Release, 11 April 1991, NR 19/91

[12] Connecting Regional Australia, The Report of the Regional Telecommunications Inquiry, 2002, p.36

[13] DCITA, 2004, p.xi

[14] Regional Telecommunications Independent Review Committee Report 2008, page 182

(c) Funding arrangements that operate as an effective tax on consumers and as such are *"inefficient and not well structured"*; and

(d) A cost and funding structure which discourages or even precludes the use of alternative and more efficient technologies. There is no obligation on Telstra to use the least cost technology. Further, there is no requirement to ensure that contributions received from Government and industry is invested in the provision of universal services.

2.18 The arrangements in place today are little different from those in place when the RTIRC, Department and ACMA undertook their reviews from 2000 to 2008.

2.19 Further, the current policy provides little or no scope to evolve as customer requirements evolve. Optus notes that services offered over mobile and fixed broadband networks are rapidly displacing traditional voice-based services. This is being driven by the universal availability of applications and services provided by over the top retailers such as Google, Apple, Facebook, and Whatsapp, etc.

2.20 Whilst network infrastructure is increasingly being tailored to meet customer demands for data and IP traffic, the USO policy appears to be frozen in a 1980s analogue paradigm.

2.21 The ACMA's 2011 Broken Concepts report concluded that the USO misplaces its emphasis on the provision of a service rather than in coverage; and that the USO – *"with its focus on voice telephony – may not be an adequate mechanism to achieve this policy objective."*[15]

2.22 Most recently, the 2015 RTIRC Inquiry also recognised that there are significant deficiencies with the current universal service arrangements. In particular, it has noted that:

(a) The current Standard Telephone Service (STS) is declining in relevance as consumers increasingly use alternate means of communication to the traditional fixed voice telephony service such as mobile, VOIP and social media applications;

(b) The cost effectiveness of the USO agreement between the Australian Government and Telstra is questionable; and

(c) That the nature of the STS current and the funding arrangements mean that the current USO fails to adequately deal with the needs of regional Australia.[16]

2.23 Respondents to the Inquiry also supported the need to change the USO to introduce a technology-neutral obligation to provide both voice and data services.

2.24 Despite almost continuous recognition since early 2000s that the USO is an out-of-date concept, the 1989 USO model remains a policy fixture in 2016. The extent and cost of the current USO remain centred on the archaic concept of fixed line access.

There is no need for a USO

2.25 As noted above, the USO policy was designed and implemented during a period of market liberalisation – it addressed the perceived risk that a commercial network provider would not provide services to certain areas in Australia in a deregulated

[15] ACMA, 2011, Broken concepts: The Australian communications legislative landscape, August, p.20
[16] RTIRC, 2015, Regional Telecommunications Review 2015.

market. An implicit objective of the USO is to provide 'compensation' for the provision of service in "*areas where it was possible a profit-driven telecommunications carrier may not provide services, on the basis that these areas may be loss making*."[17]

2.26 This objective holds today and was effectively reaffirmed in the 2010 USO policy changes associated with the transition to the NBN that require Telstra to maintain its legacy copper network in regional areas for a further 20 years. But it is clear that this objective of the USO policy is no longer relevant given:

(a) That notwithstanding competition, Telstra continues to enjoy substantial revenues and margins;

(b) The dominance of mobile and other non-fixed networks to deliver services to consumers, including in those areas assumed by the current policy to be non-commercial;

(c) The roll-out of a Government-owned national fixed line network; and

(d) That competition, supported by regulation ensures customers have access to affordable services nationwide.

2.27 Optus finds that each of these market developments mean that there is no justification for a public subsidy for the commercial supply of universal services.

Current market environment markedly different

2.28 At the time, the USO was designed and implemented the market environment was focused on fixed line services. Mobile was perceived as an expensive tool for business users. The reality that mobile phones would be the primary access device for all people was in a distant future.

2.29 The market environment for communication services today is markedly different. In 1990 there was almost 42 times the number of fixed connections compared to mobile connections. In 2016, fixed connections now comprise less than one third the number of mobile connections. There has also been a significant increase in the contribution of mobile to total revenues – in 1995, mobile revenue comprised only 8% of Telstra's total revenue;[18] it now makes up over 40% of total revenue.[19]

2.30 In addition to the large number of mobile connections, the importance of mobile technology can also be seen through mobile usage (such as voice traffic) – mobile originating voice minutes was 51.5 billion minutes, 2.5 times greater than fixed line originating minutes of 20 billion minutes. The dominance of mobile origination has grown substantially since 2011, when both fixed and mobile had roughly equivalent volumes around 36-7 billion minutes.[20]

2.31 At the time the USO policy was being developed, the concept of network competition was also a distant objective. This is now a reality. Telstra's market share – which stood at 100% in 1990 – is down to 64% for fixed voice, 41% for fixed broadband, and 45% for mobile.[21]

[17] Australian Communications Authority, Net Universal Service Cost Assessment for 1997–98, October 1999, p.12
[18] Telstra, Annual Report 1996-7, p.28
[19] Telstra, Half Year ended December 2015
[20] ACCC, 2016, Telecommunications Report 2014-15, p.15
[21] ACCC, 2016, Telecommunications Report 2014-15, pp.23-25, 28

2.32 There are three competitively deployed mobile networks, covering almost all Australian households. These networks extend deep into the areas considered "uneconomic" by the USO policy. As a result of this competition, the cost of mobile services has declined significantly. For example, Telstra's mobile ARPU in 1995 was $106 in current dollars.[22] This can be compared to current market mobile ARPU of around $45 – a reduction in constant terms of 58%. Needless to say, the services provided through today's advanced mobile networks are far superior to the basic voice services of 1995.

2.33 Consumers have an abundance of service provider choice; and multiple communications networks to choose from. Yet the USO scheme is still based on a natural monopoly concept.

Figure 1 Changes in market since 1990

	1990	2015
Fixed Line Voice SIO (000s)	7,786	9,051
Telstra fixed EBITDA margin	31%	53%
Telstra retail market share (fixed)	100%	64%
Mobile SIO (000s)	185	30,225
Alternate network mobile coverage (pop)	0%	98.5%
Telstra retail market share (mobile)	100%	45%

Source: Company reports, ACCC Telecommunications Report 2014-15.

Universal provider is financially able to provide universal service

2.34 It is also instructive to see whether the original concerns underpinning the USO policy have merit in today's market. The original USO was developed due to concerns that universal service "*may not be sustainable in an unregulated commercial market*."[23]

2.35 Such concerns have proven to be unwarranted. While Telstra has faced competition in metro fixed line areas, and in broadband and mobile markets, it remains the most dominant incumbent not only in Australia, but on a global basis, with high profit margins on fixed-line services.

2.36 A comparison of Telstra's financial results pre-liberalisation and over the last three years is shown below in figure 2. Between 1987 and 1990, Telecom (as it was then known) received just over $24 Billion in revenue. Telecom's accumulated EBITDA over this period was $10.7 Billion. This can be compared to Telstra's performance over the last three years, where it received almost $79 Billion and had accumulated EBITDA of $32.5 Billion. The growth in revenue and EBITDA can be largely attributed to growth in new services such as mobiles – which as outlined above was not envisaged at the time the USO was implemented.

2.37 This significant growth in revenue and profit directly counters the claim that a commercialised Telstra, facing market competition, would be unable to fund universal service through internal cross-subsidies.

[22] Mobile ARPU was $64 in 1995 dollars.

[23] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New framework, 25 May, para 3.8

2.38 It may be argued that it would be more accurate to compare historical returns with Telstra's current fixed line returns, as the 1987-90 revenue would comprise mostly, if not all, fixed-line revenues. While fixed line service revenue fell to just under $19 Billion over the period 2013-15, the EBITDA remained relatively stable at just under $10 Billion. This is not surprising given the efficiency gains due to market liberalisation. Fixed line margins have increased significantly from 44% to 53%.

Figure 2 Telecom/Telstra financial data

	1987-90	2013-15	
		Total	Fixed
Revenue (mill)	$ 24,055	$ 78,883	$ 18,823
EBITDA (mill)	$ 10,657	$ 32,509	$ 9,953
EBITDA Margin	44.3%	41.2%	52.9%

Source: Company annual reports

2.39 Historical analysis of Telecom and Telstra financial results also shows that the fixed line operational expense per subscriber has fallen drastically since liberalisation. Annual fixed line operating expense per SIO has more than halved from $784 in 1990 to $351 in 2015.

2.40 Optus finds there is no evidence to support the concern that absent the USO funding subsidy, Telstra would find it uneconomical to supply universal services over its networks. As shown above, Telstra's fixed line margins have increased significantly to 53% since liberalisation. It is clear that notwithstanding competition, Telstra continues to enjoy substantial revenues and margins.

Mobile and satellite networks removes need for commercial USO

2.41 The increased prevalence of alternative networks, across multiple technology platforms (fixed, mobile and satellite) also undermines the rationale for the continued provision of USO over a legacy and increasingly outdated Telstra copper network.

2.42 Optus supports the adoption of a technology-neutral view of universal communications. As consistent with market and consumer expectations, connectivity is more often than not delivered primarily through mobile technology. For example, the ACCC has increasingly recognised changing consumer preferences and its possible implications on the USO, whereby:

> *Consumers are increasingly using mobile handsets, which are the most popular device for making voice calls and accessing the internet.* [24]

2.43 The 2015 RTIRC Inquiry also recognised that the USO has significant deficiencies as consumers use mobile networks as an alternative to fixed line services.

2.44 The mobile market is regarded as the one success of liberalisation policies, with three competitive mobile networks, multi-billion dollar investments each year, advanced technology, and low prices for consumers.

2.45 There are at least two commercial networks that provide communications to 98.5% of households using mobile technology. These deploy advanced technology to deliver voice and data services at uniform national prices. It is arguable, and it is Optus'

[24] ACCC, 2016, ACCC telecommunications report 2014-15, Report 1: Competition in the Australian telecommunications sector, 17 February, p.11

position, that there should be no USO funding to households covered by existing commercial networks.

2.46 In addition to mobile networks, satellite technology has a long association with the delivery of communication services to remote parts Australia. For example, Optus and NBN Co both have satellites providing services across 100% of Australia's landmass.

2.47 Recent developments in small cell infrastructure and satellite technology have opened up new opportunities for mobile technology to be deployed to smaller pockets of population in remote areas through small cell technology. This technology enables the fast deployment of reliable mobile coverage in a cost-effective manner, eliminating blackspots in even the most remote and rural communities in Australia.

2.48 A single small cell can, for example, be deployed to service communities of between 300 to 500 people, although with multiple cells deployed off a single VSAT dish this can be increased to around 1,000 people. A single cell is capable of supporting up to 32 concurrent calls.

2.49 The following table provides an overview of the technical capabilities of the small cell satellite technology.

Figure 3 Technical aspects of small cells

Category	Technical capabilities
3G Voice capability	• Supports up to 32 concurrent calls Typically supports communities with 300 to 500 services depending on usage patterns
Data capability	• Maximum Data Rates • 21Mbit/s Download • 5Mbit/s Upload • Oodnadatta Tested at 15/2Mbit/s
Hardware	• 3G Small Cell Equipment - Lightweight • Low power consumption • Typically 1.2 VSAT • Operating Temperature -40 to 60°C
Other options	• Integrated WiFi • Integrated microwave backhaul for clusters

Source: Optus

2.50 Small cell technology is not a theoretical capability. Optus has already deployed and tested its small cell technology at the iconic Pink Roadhouse in Oodnadatta, South Australia. Anecdotal feedback has been very positive, particularly travellers who are surprised to find Optus mobile coverage and the service has provided beneficial when phone lines to the town experience service interruptions.

2.51 The substantial investment in mobile technology in regional Australia brings into question a key basis for the USO; that it is needed guarantee the provision of services into high-cost regional areas. It also undermines the case to maintain the Telstra copper network in regional areas.

Government ownership of fixed network removes need for commercial USO

2.52 This rationale is further challenged by the roll-out of the NBN into regional areas. The NBN is required to provide broadband services to all households and businesses within Australia at certain specified standards and at prices that are consistent across the country and affordable.

2.53 The NBN reforms move the fixed line market back to the pre-1991 state, with social policy obligations being imposed on a government-owned network by Shareholder Ministers. The 2010 Statement of Expectations noted that *"the Government expects NBN Co to be cognisant of the Government's wider telecommunications objectives, relating to both social and industry policy considerations."*[25] Further, the Government has issued directives to NBN Co to underpin the universal provision of services, including;

(a) Affordability by ensuring non-discriminatory pricing.[26]

(b) Connectivity of services to all addressable locations.[27]

(c) Continuity of *standard telephone service* over the NBN.[28]

2.54 These social policy objectives have been carried through to the current Statement of Expectations and the obligations relating to the network provider of last resort.

2.55 It is clear from above, that the NBN will operate as a universal service network provider. It is a government-owned legislated monopoly with social policy requirements that embody social policies that are consistent with the existing USO.

2.56 Optus notes that the Commission asks whether the NBN should be treated as an alternate USO – it is clear that the NBN is the universal fixed line network provider. The more pertinent question is whether there needs to be an additional subsidy to commercial networks to provide exactly the same obligations to the same 'net cost' households.

No justification for multiple sets of infrastructure to deliver USO

2.57 In essence, the presence of NBN, multiple mobile and satellite networks, and USO-funded copper lines means there are multiple public-funded and commercial networks for the supply of telecommunications services. This is counter to the policy reasons for a USO scheme: the fear that services would not be provided in areas deemed as "uneconomic".

2.58 Optus is strongly of the view that the roll-out of the NBN removes the need to continue the current USO policy which requires Telstra to maintain a duplicate legacy copper network. Where there are NBN connections there is no case for the existing USO obligations, as connectivity is provided by the government-owned monopoly network subject to its own customer service obligations.

Retail competition over competitive infrastructure ensures supply

2.59 Another concern which is raised in the context of the USO, is the need for a consumer safeguard guarantee that at least one retail service provider would offer

[25] Australian Government, Statement of Expectations, Letter to NBN Co, dated 17 December 2010, p.12
[26] Australian Government, Statement of Expectations, Letter to NBN Co, dated 17 December 2010, p.7
[27] Australian Government, Statement of Expectations, Letter to NBN Co, dated 17 December 2010, p.5, 14
[28] Australian Government, Statement of Expectations, Letter to NBN Co, dated 17 December 2010, p.8, 14

retail services to all premises within a network's footprint – and to ensure that rural premises do not face higher fees than equivalent premises in metro locations. This is referred to as the social or equity objectives of the USO.

2.60 However, the existence of effective retail competition removes these social and equity concerns. The Australian communications retail market is a national market – where retail providers offer the same retail services to all end-users that are covered by the relevant network. Where retail competition exists, market data shows that premises in both rural and metro areas are offered the same plans at the same cost and on the same terms.

2.61 Optus submits that where alternative networks (be it NBN or mobile networks) exist, there is no need for any social or equity-based service guarantee as competition delivers guaranteed service on the same terms as in metro areas. Retail competition also ensures that end-users are receiving the lowest cost services possible.

2.62 For example, the township of Widgelli in NSW is located outside of Griffith in the Riverina district. Telstra classifies the Widgelli ESA as a zone 4 ESA. There is no retail competition using the old legacy PSTN as this is a zone 4 area, where costs of access are prohibitive. But, Widgelli is also covered by other communications networks, such as:

(a) NBN fixed wireless network. According to NBN Co, the properties in this area have access to 123 retail service providers (RSPs), including the major providers Telstra, Optus, and iiNet.

(b) 4G LTE mobile networks coverage from Optus.

(c) 3G mobile network coverage from Telstra and Vodafone.

2.63 As a result of this network coverage, households in Widgelli have access to the same retail services as households in the major capital cities. For example:

(a) Optus offers an $80 per month unlimited broadband and voice bundle package (over NBN fixed wireless network) for households in Widgelli.

(b) Optus offers the same $80 per month unlimited broadband and voice bundle package (over ADSL2+ or HFC) for households in Chatswood.

2.64 The same service is also available on mobile networks, again for example:

(a) Households in Widgelli have access to Optus' 4G plus mobile network, allowing end-users to purchase a $35 per month contract which has unlimited national and local calls, unlimited SMS and 1.5GB of data.

(b) Households in major cities also have access to Optus' 4G plus mobile network, allowing end-users to purchase a $35 per month contract which has unlimited national and local calls, unlimited SMS and 1.5GB of data.

2.65 Optus also notes that there are a range of service providers offering broadband and VOIP services on the NBN Sky Muster satellite platform. For example, Harbour ISP offers broadband and home phone plans (using VOIP) at $30, $55 and $80 per month depending upon the data allowance chosen.[29] These prices are in line with broadband plans offered in metropolitan areas.

[29] ($30 for 15GB/20GB peak/off-peak; $55 30GB/35GB peak/off-peak; and, $80 40GB/60GB peak/off-peak). Other examples include broadband and voip plans offered by Clear Networks and IPStar

2.66 In summary, where the underlying network allows retail competition (either through competing networks, or non-discriminatory wholesale access), retail competition has proven to be effective to guarantee service and to provide it on the same terms as those provided to metro households.

Section 3. CURRENT USO IMPOSES HIGH AND UNTESTED COSTS

3.1 This section looks at the scope and cost of the USO. It shows that:

(a) There appears to have been no actual measurement of the number of USO services for over 20 years;

(b) There has been no agreed estimate of the cost to provide the USO for over 20 years;

(c) A rational analysis of the current market shows that USO services could be less than 150,000; and the annual cost to provide the USO should be around $20 Million and not the $290 Million assumed in the current contractual arrangements with Telstra.

3.2 While this section looks at these issues in the context of the current USO, it is important to recognise that the majority of Australians see mobile technology as their main source of communications. Focusing solely on the delivery of services through fixed line technology is almost certainly addressing the wrong question, and will inevitably lead to the wrong policy design.

Extent of the current USO

3.3 The Commission's Issues Paper asks:

(a) How many USO standard telephone services are currently provided and where?

(b) Who are the main groups of users of USO standard telephone services and payphones? What are the respective shares of these user groups?

3.4 Net cost areas were defined in the 1997-98 assessment as:

> … *areas where it was possible a profit-driven telecommunications carrier may not provide services, on the basis that these areas may be loss making*.[30]

3.5 Historically, this information has been difficult to obtain. Clearly, there is only one provider who has access to this information. Optus is not aware of any recent statistics on the number or location of net cost households. The last figure publically available on the number of USO SIOs is some 20 years old. These were:

(a) The NUSC Report for 1997-98 stated there were 416,586 SIOs relevant to the estimation of the net cost of the USO.[31]

(b) It was reported in 2000 that Telstra served a set of 400,000 to 500,000 subscribers in "net less areas".[32]

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[30] Australian Communications Authority, Net Universal Service Cost Assessment for 1997–98, October 1999, p.12

[31] Australian Communications Authority, Net Universal Service Cost Assessment for 1997–98, October 1999, Table 31.

[32] Ovum, 2000, Calculation of the Intangible Potential Benefits of being the Universal Service Provider, A report to the Australian Communications Authority, p.12

3.6 The last 'significant' review of the USO in 2004 by the Department made no reference to the number of SIOs included in net cost areas.[33]

3.7 The most recent public document referring to the number of net cost SIOs is the 2011 report to the Department of Broadband, Communications and the Digital Economy by Castalia Advisors (**the Paterson Report**).[34] In this report, the author was instructed by the Department to assume that "*STS USO net cost area is limited to 810,000 copper-based fixed line services in operation (SIOs), with these SIOs located in a limited number of contiguous blocks associated with the more remote areas of Australia*".[35]

3.8 Optus is not aware of any analysis that supported the instruction to assume 810,000 SIOs in net cost areas. On the face of it, a doubling of SIOs in net cost areas from 1997 to 2011 seems inconsistent with new revenue growth; network cost declines over the same period; and the take-up of new services.

3.9 It is also inconsistent with the meaning of net cost areas, namely areas where it is was *possible a profit-driven telecommunications carrier may not provide services*. A modern interpretation of this definition must include competitive telecommunications infrastructure other than the traditional copper network. If an area is covered by multiple mobile networks and/or fixed networks, then clearly profit-driven carriers are providing services. This is more so given the development of bundling products – so that the universal service provider would still commercially provide loss-making fixed services if it locked in mobile subscriptions or other bundled products.

3.10 The latest 'assumed' figure of 810,000 net cost SIOs implies:

(a) 9% of Australian households are net cost households; and

(b) A profit-driven telecommunications network would only cover 91% of households.[36]

3.11 This is counter to actual network investments undertaken by profit-driven telecommunication companies in Australia. All three profit-driven mobile networks in Australia have voice population (household) coverage greater than 91%. Optus' mobile network covers 98.5% of the population. In addition, profit-driven commercial satellite networks are able to provide services to 100% of the population.

3.12 Actual market evidence demonstrates that profit-driven commercial telecommunication carriers are providing services to approximately 9.13 million households. It is therefore more realistic to approximate that net cost households comprise a maximum of 100,000 to 150,000 premises. This is likely to be reduced further by the Commonwealth's mobile Black Spot programme.

3.13 This figure is below the estimated number in 1997, and significantly below the 'assumed' number in 2011. Assessment of the USO should not rely on 2011 assumptions which is not based on any evidence. It is critical that the number of net cost SIOs is accurately estimated as this will have a material impact on the estimated cost of providing universal service.

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[33] DCITA, 2004, Review of the operation of the Universal Service Obligation and Customer Service Guarantee

[34] Castalia Advisors, 2011, Net Cost of Meeting the Standard Telephone Service and Payphone Universal Service Obligation, Report by Paul Paterson for the DBCDE, June.

[35] Castalia, 2011, p.1. Optus notes that no justification for the doubling of the assumed USO SIOs has been given.

[36] Assumes total Australian households are 9.268M. Source: ABS, 3236.0 - Household and Family Projections, Australia, 2011 to 2036.

3.14 Optus welcomes the Commission undertaking an up-to-date analysis of the number of net cost areas, taking into account the bundling of fixed voice, broadband and mobile services and the impact of the Mobile Black Spot funding.

Costs of the current USO

3.15 The Issues Paper ask what are the main benefits and costs of the current USO.

3.16 Flowing on from the unavailability of data on the extent of the USO, it is impossible to estimate the actual cost of providing the USO – the cost of providing services to net cost areas.

3.17 It was acknowledged by the Department in its 2004 review that there has been significant disagreement over the cost of the USO since 1991. It stated:

> *… since 1991 there has been no consensus on the approach and methodology for estimating the costs of the USO, and decisions on subsidy amounts have been based on a variety of approaches, including through consultation between major participating carriers.*[37]

3.18 This remains the case today – with no agreed estimate of the cost of the USO for some 25 years. The costing for the USO continues to be opaque and disputed, including the $100 Million increase in funding as part of the NBN deals that was not related to the cost to provide universal service.

3.19 Optus is aware of the following historical costing analyses:

(a) The original study into the cost of the community service obligation of Telecom was conducted by the Bureau of Transport and Communications Economics in 1989. It estimated that the avoidable cost of the CSO amounted to around $230 Million per year.[38]

(b) The ACA attempted to develop an engineering-based cost model during the late 1990s. Based on this model, Telstra claimed its net costs were $1.8 Billion per year, although the ACA reduced this claim to $548 Million for 1997-98.[39] Telstra did not share the data and assumptions on which its estimate was based. Government and industry had concerns that Telecom was using the high estimate to limit competition in the newly deregulated industry.[40] As a consequence of this, the Government introduced legislation to cap the USO at $250 Million per year.[41]

3.20 Given Telecom's gaming of the system during the 1990s, the engineering-based costing approach was never formally approved or accepted by Government and industry. As such, the original 1989 estimate of $230 Million continued to be the basis of USO funding until 2011.

3.21 It was widely recognised in 1989 that the net cost of the USO would fall over time. Since 2001, the ACMA has utilised a cost trend analysis. In its 2004 USO review, the

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[37] DCITA, 2004, Review of the operation of the Universal Service Obligation and Customer Service Guarantee, 7 April, p.83

[38] CSO estimate based on a WACC of 13.4%. See: BTCE, 1989, The Cost of Telecom's Community Service Obligation, Report 64, Canberra, AGPS

[39] ACA, 1999, Net Universal Service Cost Assessment for 1997–98, October, p.6

[40] Lovell, 1999, The Universal Service Obligation Recent Events and Coming Attractions, Communications Law Bulletin, Vol 18 No 2, p.12

[41] Telecommunication Laws Amendment (Universal Service Cap) Act 1999

ACA observed it is more likely that costs will continue to decrease, albeit at a slower rate.[42]

3.22 The USO remained at this level through to 2005. From 2005 to the NBN reforms in 2012 the USO subsidy fell to $145 Million per annum, reflecting the declining cost trend.

3.23 During the NBN negotiations the USO arrangements were re-negotiated and required Telstra to continue to provide copper-based voice services in the non-fibre NBN areas. During the negotiations, the Department engaged a consultancy to estimate the costs of providing universal service.

Estimating the net cost of the USO

3.24 The Department engaged Castalia Advisors to prepare a report estimating the net cost of meeting the standard telephone service and payphone universal services obligations (**the Paterson Report**) for the financial year 2009-10. The final report was published in June 2011.

3.25 The modelling of the net cost of providing the standard telephone service USO (voice USO) was based on two regulatory cost modelling referenced by the ACCC at that time. It did not rely on Telstra cost inputs. One model was prepared by Analysys Mason and was a forward looking long run incremental cost model. This model was not used by the ACCC to set fixed line regulated charges. The second model referenced by the Paterson Report was the draft building block model used for the setting of fixed line regulated charges.

3.26 There are substantial methodological differences between the two modelling approaches. This has implications for estimating actual cost of the USO:

(a) The Analysys Mason model estimated costs for a hypothetical fixed line operator and made several efficiency maximising assumptions. The model and the cost inputs did not necessarily reflect actual costs of providing services in Australia. The outputs of the model were not used when setting regulated costs. Under this method, the USO net cost was estimated at $262 Million

(b) The preferred approach adopted by the ACCC – and consistent with costing methodologies used for electricity, gas and water – is the Building Block Model (BBM). The BBM uses actual historic cost data from Telstra to calculate the cost of individual services. It ensures that Telstra can recover its efficient costs over the regulatory period. It relies upon cost and demand inputs provided by Telstra. The BBM, therefore, has a direct connection to the actual costs incurred by Telstra when meeting the voice USO. Under this method, the USO net cost was estimated at $168 Million.

3.27 The ACCC has regulated fixed line services since 2011 utilising the BBM approach. The building block method was used again in the recently finalised fixed line service FAD Inquiry, setting regulated charges to 2019.

3.28 At the time of the Paterson Report, more weight was placed upon the completed hypothetical Analysys Mason modelling as the actual-cost BBM was only in draft form. As a result, the Paterson Report concluded that the net cost of the standard telephone USO was between $215-262 Million in 2009-10; and the net cost of the payphone USO was in the range of $35-48 Million in 2009-10.

[42] ACA, 2004, Review of the operation of the Universal Service Obligation and Customer Service Guarantee, p.93

3.29 Clearly, the reasons put in support of the older hypothetical cost estimates no longer hold. The ACCC now relies upon the actual-cost BBM for setting fixed line costs for the period up to June 2019. Moreover, the cost and volume data on which the original estimate is based is more than six years old. Therefore, it cannot be used as an estimate for the current or future cost of the USO.

3.30 As such, Optus recommends no weight should be placed on the Paterson Report conclusions as it relies on outdated data and a modelling approach not used in the industry.

Updating the Paterson Report

3.31 Nevertheless, while the output and conclusions in the 2011 Paterson Report are no longer relevant or valid, Optus sees value in updating the methodology to reflect:

(a) Changes in the level of usage; and

(b) Cost estimates which have been recently finalised to set regulatory access prices to 2019.

3.32 An updated cost estimate will help inform the Commission on the likely costs incurred by Telstra when complying with its voice USO obligation. It is also a useful reference point when assessing whether the increase in the USO Levy as a result of the Government-Telstra NBN deal was reasonable and cost-based. It is not to say that the estimates produced through this update reflect the exact cost of providing the USO. Nevertheless, it does provide a guide as to the magnitude of the costs.

3.33 The following updates have been applied to the methodology and calculations used in the original Paterson Report:

(a) 2015 ACCC Fixed Line Services Final Access Determination cost rates are used to calculate the relevant cost inputs;[43]

(b) Telstra market shares of 64% for fixed line voice[44] and 45% for mobile[45]

(c) Total national PSTN lines sourced from ACCC Customer Access Network (CAN) Snapshot reports;[46]

(d) Call volumes sourced from Telstra's TEM FY2016 H1 Report;[47]

(e) Relevant revenues sourced from Telstra's TEM FY2016 H1 Report;

3.34 The following inputs and assumptions remained unchanged:

(a) ULLS Band 4 cost ratio mark-up (4.14%);

(b) Core network cost rural cost mark-up (2.7).

[43] https://www.accc.gov.au/regulated-infrastructure/communications/fixed-line-services/fixed-line-services-fad-inquiry-2013/final-decision
[44] ACCC, Telecommunications Reports 2014-15, Figure 2.5
[45] ACCC, Telecommunications Reports 2014-15, Figure 2.7
[46] https://www.accc.gov.au/system/files/Snapshot%20of%20Telstra%27s%20customer%20access%20network%20-%20Dec%202015.pdf
[47] Available at: https://www.accc.gov.au/regulated-infrastructure/communications/monitoring-reporting/telecommunications-reports-record-keeping-rules/telstra-ssu-migration-plan-reporting/tem-reports

3.35 Adopting the same approach as in the original Paterson Report, but updating the inputs results in the net cost of the USO in FY2016 of approximately $109 Million. This is around one third the annual payments under the current USO scheme of $290 Million.

3.36 The updated estimate above still retains the 'assumption' that there are 810,000 USO SIOs. Optus repeats that it is unable to find any evidence to support this 'assumption'. Optus' preferred estimate of USO SIOs are those that are outside of alternate commercially deployed telecommunications networks. As discussed above, this is likely to range between 100,000 to 150,000 (being households outside the mobile footprint).

3.37 Estimating the net cost of the USO with the number of USO SIOs at 150,000 results in a significant lessening of the cost estimate to $22.9 Million per year.

Figure 4 Updating the cost of the voice USO

	Paterson Report 2011	2016 Update	
		810,000 SIOs	150,000 SIOs
Inside USO Cost	($940 million)	($635.8 million)	($117.7 million)
Inside USO Revenue	$626 million	$507.8 million	$94.0 million
Inside USO Net Cost	**($314 million)**	**($127.9 million)**	**($23.7 million)**
Outside USO Cost	($22 million)	($5.9 million)	($3.6 million)
Outside USO Revenue	$74 million	$25.0 million	$4.4 million
Outside USO Net Cost	**$52 million**	**$19.1 million**	**$0.8 million**
TOTAL NET COST USO	**($262 million)**	**($108.9 million)**	**($22.9 million)**

Source: Paterson Report, Telstra, ACCC

3.38 Telstra continues to receive gross payments of $290 Million annually for the USO voice service. And will continue to do so for a further 18 years. As the analysis above has demonstrated, such a subsidy is likely to be far in excess of the costs incurred by Telstra.

Section 4. THE USO DISTORTS COMPETITION

4.1 As noted in section 2 above, the original intent of the USO was to ensure through a compensation arrangement that a commercial network provider would provide services in areas that would otherwise be uneconomical to do so. In other words, commercial networks would not provide coverage to these households absent the USO payments.

4.2 The USO would have no impact on competition if it was implemented as intended. It would:

(a) Be used to compensate the costs of providing services in areas where there are no other networks.

(b) Represent the efficient costs of monopoly supply in areas that have natural monopoly characteristics.

(c) Arguably allow the benefits of retail competition – that is, uniform national retail pricing – in areas which would otherwise have no service.

(d) Be competitive neutral, with the overall USO amount reflecting the minimum efficient cost of supply, and competitive networks paying in proportion to the benefits they receive.

4.3 These benefits, however, are all theoretical. In practice;

(a) USO payments are far in excess of the costs incurred;

(b) There is no accountability on the number of net cost premises; and

(c) There is no accountability on the use of the subsidy by the universal service provider.

4.4 The USO payments currently act as a subsidy paid by competitive mobile providers to the incumbent network provider which is dominant across mobile and fixed. The USO acts as a barrier to rural investment by competitive mobile networks; and acts as a barrier to the competitive provision of alternative networks.

4.5 The USO regime fundamentally distorts the competitive landscape. It represents an annual transfer of $74 Million from competitors to the dominant incumbent operator. In addition to the $100 Million funded from Government, this results in a $174 Million annual subsidy to Telstra.

4.6 As the previous section has demonstrated, the payment does not appear to be based on any reasonable estimate of cost and since 2011 it has included a $100 Million uplift associated with no additional costs or obligations. A reasonable estimate of the cost of the USO is less than one tenth the current funding.

4.7 It has long been recognised that the costing and funding arrangements for the USO has the potential to limit the development of competition in regional and rural areas. For example, the Regional Telecommunications Inquiry in 2002 recommended a further review into the funding of the USO into whether it was impeding competition.

4.8 This section looks at the impact of the USO on competitive networks

Impact of USO on competitors

4.9 Telstra has been the beneficiary of significant government funding and industry subsidies over the years. Much of this funding has related to schemes designed to support the roll-out of infrastructure in regional areas. With the exception of the recent Mobile Blackspots Programme, few of the government schemes have sought to enhance competition or at least ensure that funds were allocated in a competitively neutral manner. Optus estimates that since 1992 Telstra has received $1.7 Billion (in real terms) in subsidies from industry under the USO arrangements. These USO payments will increase as a result of the arrangements agreed between Telstra and the Government to secure Telstra's participation in the roll-out of the NBN.

4.10 Even in mobile Telstra is able to leverage its fixed line infrastructure to support its mobile business in regional Australia. In particular, it can utilise its fixed line network to provide backhaul transmission capacity to mobile base stations. The cost of backhaul is a significant component in the cost of delivering mobile services. This cost is proportionally higher in regional Australia with large distances between population centres resulting in longer backhaul runs and lower traffic volumes over which these costs can be recovered. Telstra has a significant advantage as it has existing sunk infrastructure available to provide backhaul services. This advantage has become more pronounced with the increasing growth of data services that require higher capacity backhaul to be provisioned to mobile sites.

Historic payments

4.11 The scope of the competitive advantage can be seen by the size of the USO payments over time. Since 1992, total USO payments in current terms, equates to $6.9 Billion. Of this, the net receipts that have accrued to Telstra equates to over $1.7 Billion in 2015 dollars.

4.12 It is also instructive to note that the proportion of the USO paid by competitive networks is increasing significantly over time. For example, in the second year of the USO scheme in 1993-94, Telstra contributed 96% of the annual funding to itself. By 2014-15 Telstra's contribution had fallen to 45% when Government contributions are taken into account. In real terms, Telstra received a net subsidy of $14 Million in 1993-94; this has increased to $174 Million in 2014-15.

4.13 It is this significant increase in the size of non-Telstra contributions to the USO that has the most notable impact on competition in the market.

NBN agreements increased industry liabilities

4.14 As discussed above, the Commonwealth (in the Definitive Agreements) agreed to substantially increase the annual USO and associated charges levy amount to $330-340 Million to secure Telstra's support for structural reform and its participation in the NBN. In recognition of the magnitude of the increase the Government committed to contribute to the annual funding by at least $50 Million for financial years 2012-13 and 2013-14, and $100 Million per annum after that. The residual costs will continue to be funded through an industry levy scheme, with amounts based on each carrier's share of eligible revenue.

4.15 As a result of this, non-Telstra industry faced a significant increase in their USO tax liabilities. In other words, the Government and Telstra agreed to increase the USO tax on third parties. There were no negotiations or consultation with affected third-parties. Nor was there any commensurate increase in the requirements or costs

imposed on Telstra. Total USO amounts increased from $145 Million to $290 Million after the NBN agreements.

4.16 As a result, non-Telstra annual contributions also increased. In 2010-11, the last year before the changes, industry provided $57 Million in 2015 terms to Telstra. This has increased to $174 Million in 2014-15 (including the $100 Million Government contribution).

4.17 The table below provides a breakdown of the funding amounts before and after the policy change.

Figure 5 Change in USO liabilities

LIABILITIES	PRE-2012	POST 2012
USO voice	$ 131.3 m	$ 230 m
USO payphones	$ 13.8 m	$ 40 m
Emergency call handling	..	$ 20 m
USO Sub-Total	*$145.1 m*	*$ 290 m*
National Relay Service	$ 17.9 m	$ 20 m
Voice-only migration	..	$ 15 m
Public Interest Services	..	$ 0-10 m
TUSMA administration costs	..	$ 5 m
TOTAL	*$ 163 m*	*$ 330-340 m*

Source: Explanatory Memorandum to the TUSMA Bill 2011

4.18 As a consequence of these changes, Telstra will receive a three-fold uplift in annual USO levy contributions; it will receive $100 Million per annum from taxpayers and contributions from third parties will increase from around $60 Million per annum to around $100 Million per annum by the end of the contract. However, as indicated in the section above there are no material changes to the basic obligations or scope of services Telstra will have to fulfil, notwithstanding this significant increase in annual funding.

NBN Agreement increases industry liabilities

4.19 The impact of the agreement between government and Telstra also results in Telstra receiving a larger net-subsidy as the NBN as rolled out; and as NBN Co gains revenue.

4.20 Telstra is due around $174 Million net funding under the current arrangements for USO scheme in 2014-15. Under the eligible revenue scheme, Optus forecasts that the net annual subsidy received by Telstra will increase to over $200 Million within the life of the current TUSMA contracts.

4.21 Over the term of the contract Optus forecasts that Telstra is due to receive $3.8 Billion in nominal net payments from industry and government. This increase is not justified on any cost basis, and will magnify the anti-competitive impact of the scheme.

4.22 The funding provided to Telstra under the USO arrangements is very significant, especially when looking at the real terms over a period of years:[48]

(a) For the 20 years prior to the NBN reforms, industry contributed $1.3 Billion in 2015 terms to Telstra.

(b) Following the NBN reforms, industry and Government collectively is likely to contribute a further $3.2 Billion in current terms.

USO tax diverts competitive rural investment

4.23 The rural 'advantages' to Telstra that have been identified above are not insurmountable to overcome. It requires significant investment from competitor networks. Optus has been the major alternative communications investor in Australia.

4.24 Optus has invested around $20 Billion since its beginnings in 1992. Last financial year, Optus invested $1.7 Billion in its networks, and will invest a further $1.8 Billion this financial year.

4.25 However, Optus could invest more in rural areas if it was not burdened with USO liabilities – a direct transfer to the incumbent network to the detriment of competitors.

4.26 For example, industry contributions to Telstra amounted to around $74 Million in the last USO assessment. Of which, Optus contributed almost $50 Million. This represents a significant diversion of efficient competitive capital to the incumbent dominant player.

4.27 Optus recommends the Commission assess whether competitive investment of $74 Million per annum into rural and regional telecommunications would provide greater benefits to rural end-users than the current USO diversion of resources to the incumbent dominant player.

4.28 In addition, Optus estimates the total financial impact of the USO scheme since 1992 and forecast to 2032 is a transfer of around $4.5 Billion (in 2015 terms) from government and industry to the incumbent dominant network Telstra. The Commission should examine whether transferring such large amounts to a provider with significant market power promotes the intended objectives of the USO. Optus submits that the USO scheme results in a net detriment to the Australian public.

Interaction with other government policies

4.29 The Commission queries what other current government policies interact with the current USO or may be seen as a substitute for the USO. It is shown above that the current USO policy diverts investment away from rural networks. Optus believes that the current Mobile Blackspot Programme, which has bi-partisan support, demonstrates how properly targeted rural policies can provide significant benefits to regional communities. Optus is of the view that it is instructive to compare the impacts of the Mobile Blackspot Programme with the potential use of USO money for mobile investment

4.30 The Government has noted that the Mobile Blackspot Programme is:

> *… the most significant one time increase in mobile network coverage to outer metropolitan, regional and remote Australia delivered by a single public funding programme in the history of mobile communications in Australia.*[49]

[48] Assume 2% inflation rate in forward years.

4.31 The first round of the Mobile Blackspot Programme included $100 Million of Government funding, matched by industry and other bodies. Total funding amounted to $385 Million. As a result of this funding:

(a) An additional 500 new or upgraded mobile base stations will be built over three years.

(b) Increase handheld coverage to 68,600 square kilometres and new external antenna coverage to over 150,000 square kilometres, and over 5,700 kilometres of major transport routes will receive new handheld or external antenna coverage.

(c) Handheld or external antenna coverage to all or part of around 3,000 of the black spot locations nominated by Australians – almost half of the 6,221 black spot locations originally nominated.[50]

4.32 In effect, the annual USO levy represents three years' worth of Mobile Blackspots funding. The USO is a $290 Million per annum subsidy, and total Mobile Blackspot funding for Round 1 was $385 Million over three years.

4.33 Optus argues that the community benefit from the first round of the Mobile Blackspot Programme is likely to exceed the benefits from the outdated fixed line USO scheme. As will be discussed in section 5, this programme offers a useful alternative form of targeted funding where gaps in service provision are identified.

[49]http://www.minister.communications.gov.au/malcolm_turnbull/news/mobile_black_spot_programme_to_deliver_almost_500_new_or_upgraded_base_stations_with_total_investment_of_$385_million#.V3sl6rZ97RY
[50] Ibid.

Section 5. ALTERNATE USO POLICY OPTIONS

5.1 The above sections have demonstrated that:

(a) Given market developments in networks, technology and competition the rationale for a USO scheme in its present form no longer holds;

(b) The current USO policy imposes high and untested costs, with:

(i) No measurement of the number of USO services for over 20 years; and

(ii) No agreed estimate of the cost for over 20 years.

(c) USO funding of $290 Million per annum is far in excess of the likely costs incurred by Telstra. As a result:

(i) Competition is distorted across a range of communications markets; and

(ii) USO acts as a barrier to further rural investment by competitive networks.

5.2 In summary, Optus finds that it is likely that the current USO policy and funding arrangements impose a significant net cost on the communications industry and limits the expansion of competitive commercial networks into regional and rural areas. Further, as noted in section 2 above, there is extensive alternate infrastructure in regional areas; with three mobile networks and the deployment of the NBN fixed wireless and satellite networks. These networks are fully funded and in the case of the NBN guarantee access to all households and business premises within Australia. There are legitimate reasons to simply remove the current USO policy and funding arrangements.

5.3 Competition across the NBN fixed line infrastructure and the mobile networks ensures that customers can access affordable voice based services. As outlined in section 2 above, retail competition results in households in rural areas having access to the exact same retail products as households in the major capital cities. The USO is not needed to guarantee service provision, or to provide equality of service, to rural households.

5.4 There is a strong case for the USO to be removed since the market, backed by regulation, can provide access to affordable voice services nationwide. However, Optus recognises that outright removal of the USO would be a significant step, and while beneficial, it would likely consume a large amount of political capital.

5.5 Accordingly, Optus would support an alternate approach that phases out the current USO, to be replaced by a more targeted and customer focused scheme. A reformed USO should combine elements of a market based approach with regulation that provides certain consumer guarantees. It should seek to achieve the following key objectives:

(a) It should operate as a safety net mechanism in conjunction with ordinary commercially based market solutions;

(b) It should be designed to meet real and not perceived gaps in customer needs;

(c) It should minimise the cost of delivery and not create market distortions;

(d) As far as possible it should be technology and competitively neutral; and

(e) It should facilitate the phase out of the legacy Telstra copper network and the associated industry funding for that network.

5.6 Optus has set out a model below for an alternate USO scheme. Optus' proposed alternative scheme has the following benefits:

(a) **Utilises the cost efficiency of natural monopoly** – It would leverage off NBN infrastructure, ensuring that the infrastructure costs incurred are not duplicated and are able to provide both voice and high speed connectivity;

(b) **Promotes retail competition and uniform retail pricing** – Ensure continuing retail provision of services by enabling RSPs to leverage off the national NBN to offer services on a nationally consistent pricing basis;

(c) **Allows efficient investment in competitive infrastructure** – Allow funding for the existing USO scheme to be re-deployed; creating the opportunity for more investment in competitive regional infrastructure; and

(d) **Consistent with existing contractual arrangements** – Will keep Telstra "whole" in terms of the value of its existing contracts, thereby allowing the scheme to be implemented.

A reformed USO should leverage off the NBN infrastructure

5.7 A key issue with the current USO policy is the requirement for Telstra to maintain, at a great expense, its legacy copper network for a period of 20 years even as services transition to alternate NBN and mobile infrastructure. This runs counter to the long-standing policy justification for the USO – that natural monopoly characteristics of supply means only one network can efficiently supply services.

5.8 This component of the policy needs to be revisited as a matter of priority as it is the source of many of the problems with the current USO.

5.9 In recent years there has been significant investment in alternate infrastructure in regional areas, including in those areas that the current USO policy consider to be 'uneconomic'. Investments have been made by each of the three mobile networks operators in 3G and 4G services and the Australian Government has invested heavily in the roll-out of the NBN. There are now multiple networks that provide 4G coverage to over 90% of the population.

5.10 Optus' proposed alternate USO scheme would leverage off the announced NBN investments in rural areas. This would ensure that the efficiency benefits of monopoly provision in natural monopoly areas can be achieved. The NBN infrastructure, in particular, provides a platform on which a revised USO scheme can be based. Over time the NBN will be rolled out so that it can supply high speed broadband services to **all** premises within Australia. Whilst the network is focused on the delivery of broadband services it will also deliver high quality voice service.

5.11 Both NBN Co's fibre and fixed wireless technologies have been designed to provide voice capability. In respect of NBN Co's fibre services, voice services can be provided through a Voice over IP (VOIP) solution (using NBN Co's Uni-D port on the NTD) or through an analogue adaptor (using NBN Co's Uni-V port). Similarly, voice services can be provided over NBN Co's fixed wireless platform using VOIP technology. Optus

understands that whether the voice is delivered by VOIP or analogue technology over these networks it will meet the requirements of the current STS.

5.12 Outside the fibre and fixed wireless footprint, NBN Co will deliver access services on its satellite network, which accounts for the last three per cent of the population. As with the fibre and fixed wireless networks, the satellite network will support voice calls through the use of VOIP technology.

> *… homes and businesses on Sky Muster™ connections are capable of supporting VOIP services.*[51]

5.13 Optus acknowledges that there is some uncertainty over the ability of NBN Co's satellite services to deliver voice services of a fully equivalent quality to that delivered over other technologies. This is due to possible latency associated with the up and down links that might be utilised in the provisions of certain calls – such as a satellite to satellite call. However, it remains to be determined how significant such differences are and whether there may be compensating benefits from use of satellite (such as mobility).

5.14 Further, within the NBN satellite footprint many households will have mobile coverage from either or both of the Telstra and Optus mobile networks. Telstra claims that its mobile network provides coverage to 99% of the population, implying that only around 100,000 premises would be considered outside mobile coverage. This number is likely to be reduced further as the first, second and third tranches of Government's Mobile Blackspots Programme are implemented.

5.15 In summary, we have a situation today where the basic voice needs of customers can be met through a combination of the NBN and existing mobile infrastructure. These networks provide voice coverage to 99-100% of the population. Since these networks are in place and providing services there would appear to be no obvious case to require Telstra to maintain all or large parts of its regional copper network. This results in unnecessary and costly duplication.

5.16 To the extent that there are gaps in network coverage and/or service capability of the NBN and mobile infrastructure then these should be identified; and targeted cost effective responses to these should be considered. In particular, the cost and benefits of extending the current Mobile Blackspots Programme should be examined since this is likely to provide a more cost effective solution than simply maintaining the legacy Telstra copper network.

Promoting retail competition for provision of services

5.17 If a combination of the NBN and the mobile networks can provide access to necessary infrastructure for customers in even the most remote locations, then the next issue to address is how to ensure that customers can be guaranteed of receiving services over that infrastructure to a minimum standard and on affordable terms.

5.18 In terms of the "service", Optus believes that a revised USO scheme should continue to guarantee access to a basic voice service. However, the current STS should be reviewed to ensure that it is technology neutral and does not preclude delivery of voice services by means of broadband or mobile infrastructure.

5.19 Optus' proposed alternate USO scheme – which leverages off the NBN – also ensures that retail competition can be delivered in rural and USO areas. At the moment, households in rural and USO areas typically only have access to a single

[51] http://www.nbnco.com.au/content/dam/nbnco2/documents/sky-muster-fact-sheet.pdf

retail provider, and are precluded from the significant price and service benefits that flow from retail competition.

5.20 Since the NBN is a wholesale-only open access network with prices set on a uniform basis, competition across the NBN should ensure that customers can access affordable retail voice services. However, as is the case within the NBN fibre footprint today, it would be open to the Government to designate a retail provider of last resort to act as a safety net to ensure that customers in remote areas are guaranteed access to basic voice services.[52]

5.21 The designated retail provider of last resort (RPOLR) could be required to provide a basic voice service to a specified standard. It would be down to the RPOLR to determine whether a particular service was delivered over NBN or mobile infrastructure. Whilst competition should ensure that any service is competitively priced, a guarantee could be applied as a back-stop mechanism. For example, the RPOLR could be required to ensure that its basic voice service is priced on the same basis to remote customers as it is priced to its metropolitan customers.

5.22 For the avoidance of doubt Optus does not believe there is any need for the USO to be expanded to include data capability. This is because universal access to a standard broadband service is already guaranteed under the NBN policy settings. Under the Statement of Expectations the NBN is required to deliver high speed broadband services to a particular standard to all premises:

> *The design of a multi-technology mix NBN will be guided by Government's policy objective of providing download data rates … of at least 25 megabits per second to all premises and at least 50 megabits per second to 90 per cent of fixed line premises as soon as possible.*[53]

Freeing up USO funding for investment in competitive infrastructure

5.23 Under the current arrangements, industry and government is collectively spending approximately $290 Million (excluding NRS) per annum to subsidise Telstra maintaining its copper network in the last 7 per cent of the population. Aside from the inefficiency of maintaining this duplicate infrastructure it also has a distorting impact on competition and regional investment. Of this amount:

(a) $100 Million is provided to Telstra each year by the Government; and

(b) $75 Million was provided to Telstra by its direct competitors in 2014-15. This is forecasted to increase to over $100 Million by the end of the current contract.

5.24 Under the alternate USO scheme proposed above there should be no requirement for additional industry funding of the reformed USO scheme. The NBN infrastructure is fully subsidised through wholesale access charges and existing mobile infrastructure has been deployed on a commercial basis.

5.25 This would have the significant benefit of 'freeing' up over $175 Million in government and competitive funding, which could be used for further investment in rural and regional areas. The potential benefits of this can be seen below:

(a) Optus alone is liable for $50 Million in USO contributions each year. Should this money be freed up, Optus could re-direct it to network investments. The

[52] See, for example, http://www.nbnco.com.au/content/dam/nbnco/documents/fibre-in-new-developments-policy-update-statement-22-jun-11.pdf

[53] Australian Government, 2014, NBN CO Government Expectations, p.2

benefits are likely to be significant. As an example, re-investment of this money into the mobile network could result in an additional 58 greenfield sites each year – even more if sites were shared or upgraded.

(b) The Government's annual $100 Million contribution could be re-directed into an enhanced Mobile Blackspot Programme, which uses direct Government funding to leverage investment from Mobile Network Operators, State and Territory Governments and other third parties. In Round 1 of the Mobile Blackspot Programme Government funding of $100 Million generated an additional $274 Million of funding which provided 68,600 square kilometres of new handheld coverage and over 150,000 square kilometres of new external antenna coverage. This scheme involves no levy on industry or consumers.

5.26 Further, competitive mobile network investment combined with targeted Blackspots funding has arguably already produced greater benefits than decades of opaque and untraceable USO funding. Optus expects significantly greater benefits to accrue under the alternate scheme than has been achieved through the existing scheme.

Keeping Telstra's USO contractual position whole

5.27 The current USO policy arrangements were locked in under a contract between the Australian Government and Telstra that aimed to deliver increased funding to Telstra to compensate it for meeting the USO thereby secure Telstra's participation in the NBN policy reforms. Optus recognises that any reform measure will require Telstra's consent to vary the contract with the Commonwealth and as such will need to have a neutral or positive financial impact to Telstra.

5.28 Telstra has long maintained that the requirement to meet the USO represents a significant cost to its business which is only partially offset by contributions from third parties. The burden of fulfilling the USO may well increase if customers migrate off its legacy copper network to alternate networks (such as the NBN). Optus' proposal will enable Telstra to de-commission its copper network either in part or whole, which must represent a cost benefit to Telstra.

Appendix A. HISTORIC RATIONALE OF THE USO

A.1 The current USO policy of industry subsidising the universal service of the incumbent operator was introduced in 1991 with the introduction of limited competition in the market. It followed the Community Service Obligation (CSO) imposed by legislation in the 1970s on the government-owned monopoly communications provider (Telecom and its predecessors).

A.2 The operation of USO is therefore largely intertwined with the history of Telstra. In summary, Telstra's origins date back to 1901 and Australian Federation when the Postmaster-General's Department (PMG) was established by the Commonwealth Government to manage all domestic telephone, telegraph and postal services. In 1946, the Overseas Telecommunications Commission (OTC) was established as a monopoly provider of all forms of telecommunications services between Australia and the rest of the world – the PMG and OTC were eventually merged into a single organisation (now known as Telstra) in 1992.

A.3 Prior to competition, high cost connections were cross-subsidised from Telstra's profitable urban markets. After the introduction of competition, a mechanism was introduced to compensate the national carrier for incurring such losses.

Origins of the current policy

A.4 The USO was originally put in place to address a perceived market failure. In a market dominated by a single vertically integrated provider, subject to little or no competitive constraint, there would be limited incentives for that provider to service the needs of customers in high cost areas that it would deem uneconomic.

A.5 Historically, the *"CSOs provided by Telecom can be divided into three broad groups: universal service (i.e. access to a standard telephone service, including pay phone); emergency services; and concessions (to the disabled and charitable organisations). Government-provided CSOs involve telephone rental concessions to pensioners and telephone interpreter service."*[54]

A.6 The Australian telecommunications system was based on the requirement of the monopoly carrier to provide access to standard telecommunications services at affordable prices. The liberalisation of the sector was conducted with regards to the constraint of the *"embedded pricing structure and community service obligations."*[55]

A.7 The process of liberalisation involved the unwinding of large embedded cross-subsidies and efficient alignment of prices with the cost of provision. It was recognised that at the end of the 1980s the costs of such a system outweighed any benefits. One of the main tasks of liberalisation was to *"reduce costs and adjust prices to meet the business requirement of the new operating environment, while satisfying important social objectives."*[56] One key question was:

[54] Minister for Transport and Communications, "Telephone service requirement to continue, Minister says", News Release, 11 April 1991, NR 19/91, Attachment – Main findings of the Interdepartmental Committee on Community Service Obligations in Telecommunications

[55] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New framework, 25 May, para 2.53-5

[56] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New framework, 25 May, para. 2.62

How universal service is to be maintained, whilst moving towards overall pricing structures that are consistent with the economics and market imperatives of the emerging information economy.[57]

A.8 The Government during the liberalisation process made it clear that it would protect the social policy embodied in the CSO. Ensuring universal access was the first policy objective in the 1988 Evans policy statement that begun the long road to competition.[58]

A.9 It was this policy environment out of which the current USO policy was born. At the time of the policy statement mobile subscription has grown to 27,000, with Telecom investing $487 Million in mobile technology.[59] It is not surprising therefore that no consideration was given to the future roll-out of mobile technology in delivering these services.[60]

A.10 Concern that the provision of universal services may be inconsistent with the competitive provision of telecommunications was acknowledged in the 1988 policy statement. There was recognition that the significant internal cross-subsidies required to sustain universal service "*may not be sustainable in an unregulated commercial market*."[61]

A.11 The USO was developed under the assumption that any new entrant would target the highest profit markets – where prices were the highest compared to cost – and would undercut the incumbent who is required to price at high levels to maintain the cross-subsidy to fund its universal service obligations. There was a belief that local loop services and remote network services would face no competition because prices were significantly subsidised. There was an expectation that competition would occur in the business market to the detriment of consumers. Such an outcome "*would be counter to the social equity policy objective of sustaining universal affordable access*."[62]

A.12 It was this concern that led to the rejection of competition in 1988 and the continuation of the monopoly network provision of the basic PSTN by Telecom within Australia and the OTC internationally.

Limited competition (1991-1997)

A.13 The process leading to the introduction of limited competition included a review of the CSO and how it would work under a corporatised incumbent facing competition for the first time. The Government observed that *"it is not axiomatic that Telecom would discontinue the provision of loss-making CSOs in a competitive duopoly. There are*

[57] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New framework, 25 May, para, 2.64
[58] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New framework, 25 May, para 1.12
[59] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New framework, 25 May, para.3.14
[60] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New framework, 25 May, chapter 3.
[61] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New framework, 25 May, para 3.8
[62] Minister for Transport and Communications, 1988, Australian Telecommunications Services: A New framework, 25 May, para 3.32

sound commercial reasons for supplying loss-making services (provided the losses can be absorbed).”[63]

A.14 The Committee observed that where a carrier is not compensated for loss-making service, it will seek to cross-subsidise those services. But there were concerns over the efficiency of continued reliance on internal cross-subsidies.[64]

A.15 The introduction of a second telecommunications carrier in Australia came in 1991.[65] The passage of the *Telecommunications Act 1991* also introduced the concept of universal service obligations. This provided a regulatory framework replacing the former vague and generalised CSOs. In particular, Part 13 in the Act sets out the USO arrangements that largely continue to apply today. The USO is defined under section 288 of the Act.

A.16 With this announcement, the Government also acknowledged the continuation of telephone service requirements and *“reaffirmed that provision and maintenance of basic telephone services to residential and business users throughout Australia, including the rural community, remains the principal obligation for the merged telecommunications carrier Telecom/OTC.”*[66] In addition, it also noted that the new second telecommunications carrier *“would be required to pay a fair share towards the costs of delivering a universal service because it would gain all of Telecom/OTC’s network and customers. Both Telecom/OTC and the second carrier would be required to provide access to emergency services.”*[67]

Introduction of an open market (1997-2000)

A.17 As the market transitioned from a duopoly to full competition – following the partial privatisation of Telstra in 1997, a revised Universal Service Regime[68] was introduced with the concept of contestability, including both a primary universal service provider and competing universal service providers. Despite these provisions, Telstra remained the sole universal service provider.

A.18 The passage of the *Telecommunications Act 1997* introduced full market competition to the industry. New carrier licences could be granted, subject to meeting a set of minimum requirements and the obligation to contribute to USO funding arrangement. The basis for calculating contribution shares was therefore changed to a new concept of ‘eligible revenue’.

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[63] Minister for Transport and Communications, “Telephone service requirement to continue, Minister says”, News Release, 11 April 1991, NR 19/91, Attachment – Main findings of the Interdepartmental Committee on Community Service Obligations in Telecommunications, para. 5

[64] Ibid., para.10

[65] Before the *Telecommunications Act 1991*, the concept of USO was subsumed as a predominant strand of the CSO which was first put into legislation in the *Telecommunications Act 1975* and reaffirmed in the *Australian Telecommunications Corporation Act 1989*. The objective underlying the USO is to ensure the provision of the basic telephone service and payphones to all people in Australia on an equitable basis, wherever they reside or carry business. Telstra, the dominant carrier, was a government-owned monopoly before the 1991 telecommunications reforms. Therefore, the provision of telephone services at prices below costs was left to the discretion of Telstra based on internal cross-subsidisation.

[66] Minister for Transport and Communications, “Telephone service requirement to continue, Minister says”, News Release, 11 April 1991, NR 19/91

[67] Minister for Transport and Communications, “Telephone service requirement to continue, Minister says”, News Release, 11 April 1991, NR 19/91

[68] Despite this, the original definitions for the USO remain largely intact and instead subsumed in Division 2 of the *Telecommunications (Consumer Protection and Service Standards) Act 1999*.

A.19 The mid-1990s saw substantial industry unrest over the USO regime and the associated levels of funding. Telstra made ambit cost claims, which in the views of government and industry, were designed to damage competition rather than recover costs. Parliament passed legislation in 1998 which effectively capped the 1997-98 subsidy amount to $250 Million, the same level as first noted in 1988.

Contestable USO (post 2000)

A.20 The passage of amendments to the *Telecommunications (Consumer Protection and Service Standards) Act 1999* established a framework for greater competition in the supply of universal services, motivated in part by a desire to encourage greater competition in the provision of rural and regional telecommunications services.

A.21 Around this time, the Productivity Commission also conducted an inquiry on the state of competition in the telecommunications market, and the impact of new technologies and delivery platforms. The USO arrangements were similarly considered in that report, where it was recognised that:

> *The universal service obligation (USO) also has significant regional implications. Under the USO, all Australians are guaranteed a certain standard of telecommunications service at a reasonable cost, regardless of where they live. The cost deficit is currently funded by Telstra, with reimbursement by a levy on carriers, including Telstra itself. However, there have been large discrepancies between the estimates of the size of the USO to be funded, inconsistency between the methods used for pricing access and calculating the USO, and a concern about the transparency and accountability of the process. This raises potential risks for competitive neutrality and efficiency if the estimates are significantly different from the actual costs of provision*.[69]

A.22 It was therefore in support of the use of a market-based tendering process for encouraging efficient competition in the provision of universal service. While concurrently, it was also in favour of the regulator (and not the Minister) to have the power to determine the aggregate universal service levy amount, with the proviso that a full merits review of determinations could also be submitted to the Australian Competition Tribunal.

USO reforms since 2001

A.23 The Government has conducted a number of reviews on the delivery and funding arrangements for the USO since the opening of carrier competition in the telecommunications market. There has also been significant changes and advancement in the communications industry over the same period, most notably the introduction of mobile services, and more recently a policy to deliver high-speed broadband services to all Australians in the form of the NBN.

A.24 In summary, USO reviews that have been conducted since the 2000s include:

(a) DCITA (2004) – Review of the operation of the USO and CSG

(b) DCITA (2007) – Telecommunications USO review

(c) RTIRC (2008) – Regional Telecommunications Review

[69] Productivity Commission, 2001, Telecommunications Competition Regulation, Inquiry Report, 20 September, pp.xxxv-xxxvi

(d) DBCDE (2010) – Implementation of the USO reform for transition to the NBN environment

(e) DBCDE (2011) – USO legislation for the transition to the NBN

A.25 The 2004 Review found that, at the time, the USO regime was broadly meeting its legislative objectives. The telecommunications market has continued to evolve since that time, raising new challenges for the USO regulatory framework.[70] The Department concluded that while the existing USO regime met the minimum legislative requirement, there were significant problems with the way these arrangements have worked in practice.[71]

A.26 The 2007 Review examined the architecture of the universal service regime and the most effective way to deliver universal service to consumers. The review also considered whether the load is being shared equitably by industry. The Review noted the significant industry developments since 1997 which have direct implications for the efficiency of delivering the USO:

> *A variety of formerly disparate services can now be delivered over any one of several technology platforms. An example of this technological convergence is mobile networks. Previously used to deliver only voice services, many mobile networks are now designed to support text, broadband and video applications*.
>
> *In this context, there is a risk that the USO delivery model is becoming a blunt instrument that encourages outcomes that are less efficient and effective than desired. The USO delivery model does not recognise or provide incentives for diversified product offerings. Given that the USO regime provides for industry to subsidise the delivery of homogenous 'vanilla' services, it may actually be working to limit this diversity by suppressing the competitive delivery of services and thereby limiting choice.*[72]

A.27 The Regional Telecom Inquiry review in 2008 came to a similar view *"that the current Universal Service Obligation (USO) arrangements are not working well."* The Report called for a new approach.[73]

USO and the NBN

A.28 The introduction of a new Government-owned NBN provided further scope for the review of the overall delivery and funding arrangements of the USO model.

A.29 The 2010 Review included reforms to support the transition to NBN, in particular the establishment of a new entity the USO Co, which would over time become the entity with the regulated responsibility for delivering the Government's public policy objectives in the telecommunications sector. As recognised by the DBCDE in its 2010 discussion paper:

> *"Initially, given the nature and period of the transition to the National Broadband Network and the importance of ensuring continuity of basic services, USO Co's service agreements will primarily be with the current USO Primary Universal Service Provider, Telstra. Over time it is intended that USO Co will undertake competitive tendering processes to fulfil its function and where feasible this may*

[70] DCITA, 2007, Telecommunications Universal service Obligation (USO) Review, Issues Paper, p.2

[71] DCITA, 2004, Review of the operation of the Universal Service Obligation and Customer Service Guarantee, 7 April, p.xi

[72] DCITA, 2007, Telecommunications Universal service Obligation (USO) Review, Issues Paper, p.8

[73] RTIRC, 2008, Regional Telecommunications Review, Framework for the Future, September, pp.xii-xiii

involve unbundling the delivery of services into infrastructure and retail components."[74]

A.30 The 2011 legislative package for USO reforms established the current USO arrangements that continue to exist today. In advocating the need for change, the USO Reform Bills articulated that:

> *The USO regulatory arrangements were designed for a market where there was a vertically integrated operator of a national telecommunications network. The rollout of the NBN will result in a fundamental change to the structure of the Australian telecommunications market as Telstra's near ubiquitous national copper fixed line network will be progressively decommissioned as NBN Co rolls out its next-generation fibre network nationally.*
>
> *The NBN will be operated on a wholesale-only and equivalent basis. In an environment where all retail service providers are able, via the NBN, to offer high quality voice and high-speed broadband services nationally, it is appropriate that the model for delivering universal service and other public policy telecommunications outcomes be reformed to facilitate the competitive supply of universal service and other public policy telecommunications outcomes. A regime that enables competitive supply arrangements will be of benefit to consumers and industry as it promotes more innovative, effective and efficient service delivery arrangements."*[75]

A.31 Following the ascent of these reforms, on 1 July 2012, the Telecommunications Universal Service Management Agency (TUSMA) was established as a statutory agency with the responsibility for the delivery of universal service outcomes and public interest services.

A.32 Under these arrangements, these services are being delivered under a contract-based model overseen by the TUSMA. The most significant element in these arrangements is the 20-year contract the Government has entered into with Telstra for the supply of public interest services, including:

(a) the USO for STS and payphones;

(b) Telstra's role as the Emergency Call Person for the emergency call service; and

(c) Migration of voice-only customers from Telstra's copper network to the NBN fibre network.

A.33 In addition, the Telstra TUSMA Agreement also flagged that once commenced, a mandatory ten year technology review for STS and Payphone USO will be required to be undertaken to assess for the continued technology choice used to provide these services. The outcomes of this review process are binding, with mechanisms to deal with any overlap between the geographic areas covered by the review and the long-term NBN fibre footprint.

A.34 As acknowledged by the Vertigan Panel in its 2014 report to Government:

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[74] DBCDE, 2010, Implementation of Universal Service Policy for the transition to the National Broadband Network environment, Discussion Paper, October, p.4

[75] *Telecommunications Legislation Amendment (Universal Service Reform) Bill* 2011, Explanatory Memorandum, p.3

"The contract, commonly known as the TUSMA Agreement, imposes a number of additional USO-related obligations on Telstra. Telstra must maintain its copper network throughout the country until elements of it are disconnected and services migrated to the NBN in accordance with the SSU and the Migration Plan. In effect, this means that Telstra must maintain its copper network outside the NBN fibre footprint. Furthermore, the contract requires Telstra to supply standard telephone services within the fibre footprint using the NBN fibre network. It is expected that the TUSMA Agreement will be renegotiated to incorporate the changes required by NBN Co's new MTM model. In particular, if copper assets were transferred to NBN Co the obligation may rest there rather than with Telstra." [76]

A.35 Following a change in Government direction, on 1 July 2015, TUSMA was abolished with its functions transferred to the Department of Communications. The collection of the Telecommunications Industry Levy (TIL) remains within the remit of the ACMA.

A.36 An irony of the 2011 reforms is that within the NBN fibre footprint a fundamental policy change was implemented. NBN will be used to provide access to infrastructure, but the market will be left to deliver services albeit with the safety net of Telstra acting as a retail provider of last resort. The opportunity to adopt the same approach in the NBN fixed wireless and satellite areas was missed; instead Telstra was contracted to keep its legacy copper network in place for the next 20 years to continue to fulfil the legacy UOS arrangements.

[76] Vertigan, 2014, Independent cost-benefit analysis of broadband and review of regulation, Volume I – National Broadband Network Market and Regulatory Report, Appendix 3, August, p.158

Appendix B. ISSUES PAPER QUESTIONS

	The Current USO	
1	How many USO standard telephone services are currently provided and where? Who are the main groups of users of USO standard telephone services and payphones? What are the respective shares of these user groups?	It is not fully clear what is meant by the term "USO services". Historically, this would likely have referred to STS provided in net-cost (or uncommercial) areas. There is no publicly available statistic on the number of USO STS services in operation. However, given the coverage of commercial mobile networks and the NBN, net-cost areas are likely to be limited and relate only to regional or remote areas. This lack of transparency has continued to the subject of widespread and constant criticism since the 1990s. Refer to Section 3.
2	Aside from the rollout of the NBN, what are the major factors affecting the use of USO standard telephone services? What will be the impact of the NBN rollout on the provision of USO standard telephone services, particularly once the NBN rollout is completed? What are the major factors affecting the use of payphones?	The NBN is intended to be ubiquitous with near 100% geographic reach to all households. Once roll-out is completed, the need for the USO STS in its current form becomes redundant, as connectivity to affordable services would be achieved. In many cases, mobile and/or satellite network coverage will also be available, giving consumers further network choice for connectivity. Refer to Section 2.
3	What are the main benefits and costs of the current USO? How effective is the current USO in meeting its objective of being 'reasonably accessible' to all people in Australia on an 'equitable basis', wherever they reside or carry on business?	The current USO policy is a net cost to the community. The USO tax is substantially greater than the efficient costs of provision, damaging competition and reducing rural investment. The USO is not required to provide reasonable access to all people as competitive mobile networks and the NBN already do this. Refer to Section 4.
4	To what extent is the current USO consistent with promoting competition and innovation in the telecommunications sector? Has the current USO affected competition positively or adversely? Has it discouraged innovation or created distortions that have affected the use, quality and reach of telecommunications services in Australia?	The current USO is service-specific and relates to provision of STS (voice-only). In the current digital age, there is little benefit of solely offering a legacy connection. A service, such as voice, can be delivered over multiple technology platforms (fixed, mobile, satellite), so restricting it solely to fixed-line over legacy copper is counter to the pro-competitive objective and the innovation agenda. Refer to Section 2.

	Other current policies and programs	
5	What other current government policies and programs interact with the current USO or may be seen as acting as a substitute for the USO? What are their main benefits and costs? How effective are these policies and programs in achieving their objectives?	A number of government policies and programs may be seen as acting as a substitute for the USO. The NBN policy guarantees access to infrastructure and affordable services. In addition, there are more are targeted initiatives aimed at increasing access and connectivity to previously underserved and/or uneconomic areas. For example, the Mobile Blackspots Programme. Refer to Section 4
	Rationales and Objectives	
6	Are the underlying rationales for the current USO still valid in today's evolving telecommunications market? Can the NBN be treated as an alternative (wholesale) USO service? What is the justification for funding two sets of infrastructure (the NBN and the current USO standard telephone service) in the highest cost areas?	The USO remains rooted in principles more applicable to the analogue era of telecommunications. It continues as a blunt policy instrument aimed at delivering increasingly questionable outcomes over an increasingly outdated legacy technology. There is no justification for multiple sets of infrastructure to deliver USO. Refer to Section 2.
7	What evidence is there to support the rationales? For example, are changes in technologies reducing the costs of providing telecommunications services in regional and remote areas? To what extent are there market-based alternatives to the delivery of universal services through the current USO? What evidence is there to support social or equity based rationales?	Developments in the sector are increasingly removing the need for the USO policy in its current form. Competitive mobile networks and the NBN are providing universal service. Refer to Section 2.
8	What should be the objectives of any new universal services policy? Are objectives such as universal availability, affordability and accessibility appropriate?	The universal service objectives should be technology-neutral not service-specific (i.e. voice STS over copper). Refer to Section 2 and Section 5.

	Broad Policy Options	
9	What policy options should be considered in addressing universal services objectives? Is there a single policy or combination of policies that should be considered? What are their benefits and costs?	There is a strong argument in favour of removing the USO in its entirety and letting the market deliver services; backed-up as it is by an effective regulatory regime. However, Optus recognises that such an approach, whilst it has strong policy merit, might be politically challenging. Optus supports an alternate approach that phases out the current USO scheme, to be replaced by a more targeted and customer focused scheme than currently exists. Refer to Section 5.
10	Which countries should be considered in relation to any new universal services policies in Australia? What aspects of their universal services policies should be considered? Which evaluations or reviews shed light on the benefits and costs of different policies?	The Australian market characteristics are unique to Australia. The combination of Australia's landmass and population distribution, combined with the NBN policy means little be gained by referring to international experience.
11	Could the 'optimal' policy option for Australia be no USO?	Yes; there is a strong argument in favour of removing the USO in its entirety and letting the market deliver services; backed-up as it is by an effective regulatory regime. Refer to Section 2.
	Scope	
12	What types of services should be included in any universal services policy? Should current USO services — the standard telephone service and payphones — continue? If not, what alternatives to these services should be considered? Given the ubiquitous nature of mobile services, should fixed line services remain the focus of the USO?	There is a strong case to remove the USO in its entirety. However, if the USO is maintained in some form it should be limited to voice-only service. Under a revised scheme infrastructure access should be provided through the NBN and supplemented as necessary by the existing mobile networks. If coverage gaps exist in these networks, then these could be addressed through targeted investment schemes, such as the Government's Mobile Blackspots Programme. Refer to Section 5.

13 Given emerging market, technological and policy developments, what areas of market failure should be targeted by any new universal services policy?	USO should focus on areas where voice-capable networks are not available. If coverage gaps exist in existing networks, then these could be addressed through targeted investment schemes, such as the Government's Mobile Blackspots Programme. Refer to Section 5.
14 Should there continue to be a voice services safety net for particular user groups and, if so, what would be the best approach to providing this?	Competition should ensure that customers have access to affordable voice services over either the NBN or mobile infrastructure. However, the Government could appoint a retail service provider of last resort as a back-stop guarantee to service provision. In many respects this would extend the arrangements already adopted within the NBN fibre footprint. Refer to Section 5
15 Which particular user groups (for example, Indigenous communities) and locations (for example, remote locations) should be targeted by any universal services policy? What are the telecommunications needs of these particular groups?	Where alternative networks (be it NBN or mobile networks) exist, there should be no need for any social or equity-based service guarantee as competition delivers guaranteed service on the same terms as in metro areas. Retail competition also ensures that end-users are receiving the lowest cost services possible. Refer to Section 2.
16 Should telecommunications users in regional and remote locations reasonably expect exactly the same service quality and price (including usage) as those living in cities irrespective of the cost of provision?	Regional and remote end-users currently have access to the same quality and price. There should be no need for any social or equity-based service guarantee as competition delivers guaranteed services on the same terms as in metro areas. Retail competition also ensures that end-users are receiving the lowest cost services possible. Refer to Section 2.
17 What should be the criteria for the inclusion or exclusion of particular telecommunications services, user groups and locations?	Refer to 16 above.

	Quality	
18	How should the benchmark for minimum standards of quality be set for universal services? Are existing consumer protections applicable to telecommunications services provision reasonable? Is there scope to make these measures more efficient or cost-effective? Should consumer protection requirements be replaced or supplemented by transparent reporting by retail service providers?	The telecommunications industry is subject to extensive reporting and transparency requirements. There is no need for further requirements. Where alternative networks (be it NBN or mobile networks) exist, there should be no need for any social or equity-based service guarantee as competition delivers guaranteed service on the same terms as in metro areas. Retail competition also ensures that end-users are receiving the lowest cost services possible. Refer to Section 2.
	Universal Service Providers	
19	How should universal service providers be determined? Should there be competitive tendering for the provision of services? Should a provider of last resort be designated and if so, on what basis? What incentives are required to ensure that a provider of last resort operates at minimum cost? Is imposing reporting requirements on universal service providers as to who uses the services technically feasible? What, if any, requirements should apply to all service providers?	Under a revised scheme infrastructure access should be provided through the NBN and supplemented as necessary by the existing mobile networks. The NBN currently is, and should remain, the infrastructure provider of last resort. No additional incentives or rules are required to ensure that a provider of last resort operates at minimum cost, as NBN is controlled by the Government, and regulated by the ACCC on terms set out in its Standard Access Undertaking. However, the Government could appoint a retail service provider of last resort as a back-stop guarantee to service provision. In many respects this would extend the arrangements already adopted within the NBN fibre footprint. If adopted for the NBN fixed wireless and satellite footprint it would enable Telstra to de-commission all or large parts of its legacy copper network. Refer to Section 5.
	Other Policy issues	
20	How might technological neutrality be implemented under any new universal services policy? How frequently should any universal services policy be reviewed, particularly given rapid changes in technology? What other issues should be considered with respect to universal services policies?	The USO, and the STS, should be technological neutral. Optus' preferred solution addresses these issues. Refer to Section 5.

	Funding	
21	How should the costs of delivering universal services be determined or benchmarked, and by whom?	In the model proposed by Optus there should be no need to identify the cost of the service provision as it would be included in NBN Co's wholesale access costs and charges. If a separate form of funding is retained, however, then increased transparency is required to best assess the appropriate costs required to deliver the USO. Where required, the USO should be cost-based and this must be substantiated before receipt of payments to the USP. The ACCC, as an expert independent body, would be best placed to assess any such costs. Refer to Section 4.
22	Who should pay for the costs (and wear the regulatory burden) of delivering universal services? Is it reasonable that telecommunications users in regional and remote locations do not bear more of the actual infrastructure costs of providing telecommunications services?	The current USO funding arrangements distorts competition, and diverts competitive rural investments. Refer to Section 4. Optus' preferred option would have NBN Co to continue to cross-subsidise the provision of services to net-cost areas through its uniform access prices. There would be no need for a separate USO finding arrangement. Refer to Section 5.
23	What should be the main mechanisms used for funding the delivery of universal services? What is the role of government in funding social policy objectives? What should be the basis for determining any industry levy? How should any user co-payment for services be determined? Should there be means testing for users to access universal services?	Optus' preferred option would have NBN continue to cross-subsidise the provision of services to net-cost areas through its uniform access prices. Alternatively, competitive mobile networks internally cross-subsidise provision. There would be no need for a separate USO finding arrangement. Refer to Section 5.
24	Should a universal service fund be established, particularly, to address new or future changes in technology and in consumer needs and preferences?	The existing USO funding arrangement should be wound back. Refer to Section 5. If coverage gaps exist in these networks, then these could be addressed through targeted investment schemes, such as the Government's Mobile Blackspots Programme.

	Implementation and Transition	
25	How will agreements relating to the current USO affect the implementation of, and transition to, any new universal services policy? What impact will the timing of the NBN rollout have? Is there a need to review current governance arrangements? What should be the role of state and territory governments? What other matters should be considered in relation to implementing and transitioning to any new universal services policy?	Optus supports an alternate approach that phases out the current USO. Refer to Section 5