Public inquiry into the declaration of the domestic transmission capacity service and fixed line services

Final report

March 2024

Acknowledgement of country

The ACCC acknowledges the traditional owners and custodians of Country throughout Australia and recognises their continuing connection to the land, sea and community. We pay our respects to them and their cultures; and to their Elders past, present and future.

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1. Executive Summary

The ACCC has concluded its public inquiry and prepared this final report setting out its findings.[1] The ACCC has decided that extending the expiry dates of declarations of the following services for a further 5 years will promote the long-term interests of end-users:

- Domestic transmission capacity service
- Wholesale line rental service
- Local carriage service
- Wholesale ADSL
- Fixed originating access service, and
- Fixed terminating access service.[2]

The ACCC's final inquiry report regarding the mobile terminating access service (MTAS) will follow in a separate report.

In reaching our final position, the ACCC also considered whether to vary the service description of each service. We decided it would be in the long-term interests of end-users to vary:

- the domestic transmission capacity service description to reflect technical changes in transmission capacity services, and
- the fixed originating access and fixed terminating access service descriptions to expressly include Session Initiated Protocol (SIP) interconnection.

The ACCC considers the service descriptions for the remaining services in the public inquiry remain appropriate and will promote the long-term interests of end-users. Service descriptions for each of the services are set out in Appendix A, B and C.[3]

We consider that declaration of the unconditioned local loop service and line sharing service will no longer promote the long-term interests of end-users. This is due to the very low number of services in operation and the availability of services such as wholesale ADSL and the resale fixed voice services. These services can be used by access seekers to provide plain old telephone services (POTS) and ADSL services to end-users over Telstra's customer access network. Based on these findings, the unconditioned local loop service and line sharing service declarations will be allowed to expire on 30 June 2024.

Services on Telstra's fixed line customer access network

With the completed rollout of the NBN, the impact of regulation of services on Telstra's customer access network has shifted strongly to regional and remote areas.

Telstra is currently required to maintain its customer access network outside of the NBN fixed line footprint until 2032. Within the NBN fixed line footprint, services provided on Telstra's network are required to be migrated to the NBN.

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[1] Section 152ALA(7) *Competition and Consumer Act 2010*.

[2] Section 152AL(3) and 152AO(1) *Competition and Consumer Act 2010*.

[3] Section 152AL(3) *Competition and Consumer Act 2010*.

Resale fixed voice services

Resale fixed voice services enable access seekers to resell landline services without having to invest in equipment in Telstra exchanges. Wholesale line rental and local carriage services are usually purchased together (often along with the fixed originating access service).

The ACCC's final position is that extending expiry dates of the declarations of these services for a further 5 years will promote the long-term interests of end-users. Given that Telstra's network outside of the NBN fixed line footprint will be operated until 2032, declaring these services enables access seekers to offer retail landline services in competition with Telstra. In particular, we consider that declaration is likely to promote efficient use of infrastructure as it will enable access seekers to utilise capacity in the network and lower the average cost per unit of service.

Wholesale ADSL

Wholesale ADSL enables access seekers to provide a fixed line broadband service without installing equipment in Telstra exchanges.

The ACCC's final position is that extending the expiry date of the declaration of wholesale ADSL for a further 5 years will promote the long-term interests of end-users.

Submissions to the discussion paper considered that it enables end-users to access services in regional areas where they may not have access to a comparable and reliable alternative. Over time, it is likely that alternative services will increasingly be viewed as close and viable substitutes. However, in the short term, extending declaration is likely to promote competition outside the NBN fixed line footprint.

As with the resale fixed voice services, extending declaration is likely to promote efficient use of infrastructure by enabling access seekers to utilise capacity in Telstra's customer access network.

Network access services

Network access services are wholesale services that provide access to Telstra's copper network. An access seeker can provide voice and/or broadband services to end-users through access to Telstra's copper network and by installing its own equipment in Telstra's exchanges. The two declared network access services are the unconditioned local loop service and the line sharing service.

The ACCC's final position is that the expiry date of the declaration of network access services should not be extended, and that the declaration should be allowed to expire.

Network access services were essential to the opening up of Telstra's fixed line network and enabling competition. They require access seekers to install equipment in Telstra's exchanges and can support access seekers wholesaling services to other access seekers or providing retail services.

However, as outlined above our view is that continued declaration of the unconditioned local loop service and line sharing service will no longer promote the long-term interests of end-users. This is due to the very low number of services in operation due to the roll out of the NBN and other technological advancements, and the availability of services such as wholesale ADSL and the resale fixed voice services.

Information provided to ACCC shows that there are only a very small number of these services still being provided, and almost all are within the NBN fixed line footprint. We therefore consider that there will be very little impact on consumers arising from not extending the declaration.

Voice interconnection services

Fixed voice interconnection services

There are two fixed voice interconnection services – the fixed terminating access service and fixed originating access service. The fixed terminating access service is a technology-neutral service that allows a voice call from one network to be carried from the point of interconnection to a party using a geographic number on another network. The fixed originating access service allows a call from a geographic number assigned to the access provider's network to be carried to a point of interconnection.

The ACCC's final position is that extending the expiry dates of the declarations of these services for a further 5 years will promote the long-term interests of end-users.

There are no close substitutes for these services and all submissions to the discussion paper and the draft report supported extending the declaration of these services due to their bottleneck characteristics. Declaration is therefore likely to promote competition by preventing network owners from exercising market power in pricing. Interconnection services are particularly relevant to any-to-any connectivity. Declaration is likely to promote this by ensuring that network operators can't deny interconnection or charge above cost-based pricing.

We have decided to vary the fixed voice interconnection service descriptions to reflect the shift in industry towards the use of IP-based interconnection.

Mobile terminating access service

The mobile terminating access service (MTAS), as currently provided in the service description, is a mobile voice termination service. This is a wholesale interconnection service provided by a mobile network operator to other network operators to connect or 'terminate' a voice call on its mobile network. It enables voice calls to be made to an end-user on a mobile network.

The ACCC's preliminary view was to extend the expiry date of the declaration of the mobile terminating access service for voice termination with changes to its service description, including the expansion of the service description to application-to-person SMS termination. The ACCC intends to release a separate final report on the declaration of the MTAS by June 2024.

Domestic transmission capacity service

The domestic transmission capacity service (DTCS) is a wholesale transmission capacity service for the carriage of communications between 2 transmission points (that is, point-to-point). The DTCS has been declared since 1997 as transmission capacity services are an essential wholesale input to the provision of other communications services.

There are high barriers to entry as network deployment is capital intensive. In regional and

remote areas, this makes duplicating existing infrastructure economically inefficient.

The ACCC's final position is that continued declaration of the DTCS will promote the long-term interests of end-users.

We consider that declaration is likely to promote competition in relevant markets, particularly in the markets for residential and business voice, and broadband and mobile services in certain geographic areas. While the rollout of the NBN has had a significant impact on these markets, access seekers continue to rely on non-NBN transmission services on routes from NBN points of interconnection to retailer transmission points, and on routes to mobile base stations.

Our final position is that declaration is likely to promote efficient use of and investment in infrastructure.

The high initial capital costs of transmission capacity infrastructure, and the ability of incumbents to upgrade capacity of existing optical fibre, narrow the opportunities for infrastructure-based competition in regional and remote areas. Regulated access to transmission capacity infrastructure where it exhibits natural monopoly characteristics is likely to result in efficient use of the infrastructure. Additionally, regulated access to DTCS is likely to have facilitated infrastructure investment over time, as demonstrated by the ACCC's gradual de-regulation of DTCS in some geographic areas in past declaration inquiries. Regulated access to DTCS allows service providers to build their customer base in downstream markets and subsequently, they are able to invest in other infrastructure to support their services.

We have decided to make variations to the DTCS service description to reflect technical changes in transmission capacity services characteristics and to align the service description closer to those services currently bought and sold in the wholesale market.

We have also varied the competition criteria that we use to assess whether competition is effective on an exchange service area basis. The new competition criteria reflect our focus on areas of monopoly infrastructure, particularly in regional areas where Telstra is the only provider while recognising the importance of connectivity to NBN points of interconnect.

As there are significant variations to the DTCS service description, we have decided that a transitional period will apply before the new service description takes effect from 1 December 2025. This will provide stakeholders with time to adjust any commercial arrangements to accommodate to the changes in scope.

Next steps

Based on the above findings, the ACCC intends to shortly commence inquiries about whether to make an access determination relating to access to the 6 services that remain declared. An access determination can set out both price and non-price terms in relation to access to the service.

2. Introduction

2.1. How this report is structured

This report is structured in the following way:

- Chapter 2 covers the consultation process and the ACCC's approach to declaring services,
- Chapter 3 covers the declared services provided on Telstra's customer access network namely wholesale line rental, local carriage service, wholesale ADSL, unconditioned local loop and the line sharing services,
- Chapter 4 covers the declared fixed voice interconnection services namely the fixed terminating access service and fixed originating access service,
- Chapter 5 covers the domestic transmission capacity service, and
- The appendices include the service descriptions for the 8 declared services.

2.2. Consultation process

On 31 May 2023, the ACCC released a discussion paper for the public inquiry into the declaration of the DTCS, fixed line services and the domestic mobile terminating access service (the discussion paper). The paper raised key issues relevant to this declaration inquiry and invited submissions from interested stakeholders. The ACCC received 13 submissions in response to the discussion paper and 8 supplementary submissions.[4]

On 20 December 2023, the ACCC released a report outlining our draft positions on all 9 declared services considered by this public inquiry (the draft report) into the declaration of the DTCS, fixed line services and the domestic MTAS. The draft report outlined the ACCC's preliminary views in relation to issues raised in the declaration inquiry and invited submissions from interested stakeholders on those draft positions. The ACCC received 11 submissions in response to the draft report.[5]

On 6 and 12 March 2024, the ACCC invited comments on proposed amendments to the service descriptions for the fixed voice interconnection services from stakeholders who had previously submitted on fixed voice interconnection services.

During the inquiry, the ACCC has also engaged extensively with stakeholders through additional meetings and information requests.

The ACCC has taken into account all submissions received in reaching it final position and would like to thank all stakeholders for their valuable input in the inquiry process.

Given the complexity of the issues raised in relation to the mobile terminating access service the ACCC has decided to issue a separate final report for this declared service. The ACCC expects to release a final report for the mobile terminating access service by June 2024.

Following the completion of the declaration inquiries, the ACCC will commence inquiries about whether to make an access determination relating to access to the services for which

[4] All submissions are available on the ACCC website here.

[5] All submissions are available on the ACCC website here.

the expiry dates are to be extended. The ACCC has deferred the commencement of these inquiries until the declaration inquiries are finalised.[6]

2.3. The ACCC's approach to declaring services

Our Guideline to the declaration provisions for telecommunications services under Part XIC of the *Competition and Consumer Act 2010* provides further guidance about the declaration process and the ACCC's general approach to declaration decisions. It can be found here.

A summary is provided below.

2.3.1. Legislative framework

There is no general right to access telecommunications services in Australia. Consequently, access to telecommunications services is usually unregulated unless the services are declared.

Under Part XIC of the *Competition and Consumer Act 2010* (Cth), the ACCC may, by written instrument, declare that a specified eligible service is a 'declared service'.[7] An 'eligible service' is:[8]

- a listed carriage service (within the meaning of the *Telecommunications Act 1997* (Cth) or
- a service that facilitates the supply of a listed carriage service

where the service is supplied, or is capable of being supplied, by a carrier or a carriage service provider (whether to itself or to other persons).

A carriage service is a service for carrying communications by means of guided and/or unguided electromagnetic energy.[9]

Once a service is declared, an access provider that supplies the declared service (whether to itself or to other persons) must, upon request, supply the declared service, to access seekers in accordance with the standard access obligations set out in Division 3 of Part XIC of the Competition and Consumer Act.

The ACCC may declare an eligible service if it:[10]

- has held a public inquiry under Part 25 of the *Telecommunications Act 1997* (Cth) (Telecommunications Act) about a proposal to make the declaration
- has prepared a report about the inquiry under section 505 of the Telecommunications Act;
- the report was published during the 180-day period ending when the declaration was made
- is satisfied that the making of the declaration will promote the long-term interests of end-users of carriage services or of services provided by means of carriage services.

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6 Section 152BCI(6) of the CCA.

7 Section 152AL of the CCA.

8 Section 152AL(1) of the CCA.

9 Section 7 of the Telecommunications Act.

10 Section 152AL(3) of the CCA.

2.3.2. Approach to assessing the long-term interest of end-users

In deciding whether a declaration will promote the long-term interests of end-users, the ACCC must have regard to the extent to which declaration is likely to result in the achievement of the following three objectives:[11]

- the objective of promoting competition in markets for listed services (which includes carriage services and services supplied by means of carriage services)
- the objective of achieving any-to-any connectivity in relation to carriage services that involve communication between end-users
- the objective of encouraging the economically efficient use of, and economically efficient investment in
    - the infrastructure by which listed services[12] are supplied, and
    - any other infrastructure by which such services are, or likely to become, capable of being supplied.[13]

In the context of this inquiry, the ACCC will consider whether extending, revoking, varying, allowing an existing declaration to expire or making a new declaration will promote the long-term interests of end-users.

Promoting competition

In determining the extent to which declaration is likely to achieve the objective of promoting competition in markets for listed services, the ACCC must have regard to the extent to which the declaration will remove obstacles to end-users gaining access to the relevant listed services.[14]

The ACCC will consider the market/s in which competition may be promoted. In most cases, this is likely to be the downstream market rather than the market in which the service is supplied. Where relevant the ACCC may also consider the market in which the service is supplied.

In assessing whether declaration will achieve the objective of promoting competition in markets for the relevant services the ACCC will:

- identify and define the relevant markets
- assess the current state of competition in those markets
- consider the likely future state of competition in those markets with and without declaration.

Achievement of any-to-any connectivity

The *Competition and Consumer Act 2010* (Cth) provides that the objective of any-to-any connectivity is achieved if, and only if, each end-user who is supplied with a carriage service that involves communication between end-users is able to communicate, by means of that

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11 Section 152AB(2) of the CCA.

12 "Listed services" are carriage services or services supplied by means of carriage services (see section 152AB(2) of the CCA).

13 Section 152AB(2) of the CCA.

14 Section 152AB(4) of the CCA.

service, with each other end-user who is supplied with the same service or a similar service, whether or not they are connected to the same telecommunications network.[15]

The ACCC considers that the achievement of any-to-any connectivity is particularly relevant when considering services that require interconnection between different networks (e.g. voice interconnection services). The ACCC will generally examine whether any-to-any connectivity will be agreed between service providers absent declaration.

Economically efficient use of, and economically efficient investment in, infrastructure

In determining the extent to which a declaration is likely to encourage the economically efficient use of, and economically efficient investment in infrastructure, regard must be had to the following:[16]

- whether it is, or is likely to become, technically feasible for the services to be supplied and charged for, having regard:
    - the technology that is in use, available or likely to become available; and
    - whether the costs that would be involved in supplying, and charging for, the services are reasonable or likely to become reasonable; and
    - the effects, or likely effects, that supplying, and charging for, the services would have on the operation or performance of telecommunications networks
- the legitimate commercial interests of the supplier or suppliers of the services, including the ability of the supplier or suppliers to exploit economies of scale and scope;
- the incentives for investment in:
    - the infrastructure by which the services are supplied; and
    - any other infrastructure by which the services are, or are likely to become, capable of being supplied.

The ACCC will examine efficiency from an economic perspective, based on the three components of productive, allocative and dynamic efficiency.

The ACCC will consider the extent to which declaration is likely to encourage such efficiencies. Whether efficiency in relation to the use and investment in infrastructure will be improved is relevant to, but not determinative of, whether a declaration will promote the long-term interests of end-users. The ACCC will also consider whether a declaration will create an environment in which participants have increased incentives to undertake efficient use of, and investment in, infrastructure.

[15] Section 152AC(8) of the CCA.

[16] Section 152AB(6) of the CCA.

3. Should services provided on Telstra's customer access network continue to be declared?

The ACCC's final position is that:

- **extending the declarations of the resale fixed voice services for a further 5 years will promote the long-term interests of end-users**
- **extending the declaration of the wholesale ADSL service for a further 5 years will promote the long-term interests of end-users**
- **the declaration of the network access services should be allowed to expire on 30 June 2024.**

3.1. Introduction

3.1.1. What are the services?

Before the NBN, fixed telecommunication services were delivered through an extensive, primarily copper-based network connecting telephone exchanges and premises across Australia. This network is owned and operated by Telstra and has been used primarily to provide a Plain Old Telephone Service (POTS), and/or Asymmetric Digital Subscriber Line (ADSL) broadband service to end-users.

Wholesale services provided by Telstra enable access seekers to access the copper network (and in some cases, on-sell Telstra's wholesale services) to deliver retail voice and broadband services.

For ease of use, we have divided these services into functional service groups:

Services provided on Telstra's customer access network by service group

Service group	Declared fixed line service
Resale fixed voice	Wholesale line rental Local carriage service Fixed originating access service
Resale broadband	Wholesale ADSL
Network access	Unconditioned local loop service Line sharing service

Resale fixed voice

The wholesale line rental, local carriage service and fixed originating access service are wholesale inputs usually purchased as a bundle to allow an access seeker to supply traditional retail fixed voice services over Telstra's copper customer access network.

Wholesale line rental provides access to the low frequency part of the copper line to enable fixed voice calls and includes a dial tone and telephone number. The local carriage service involves the carriage of a telephone call from one end-user to another end-user in the same standard zone or local exchange area. The wholesale line rental component is a monthly rental charge, the local carriage service is a per call charge and the fixed originating access service is a per minute charge for calls.

Resale broadband

The wholesale ADSL service is a point-to-point service delivered over Telstra's legacy copper network. It enables retail service providers to purchase a wholesale telecommunications service from Telstra without the need to install their own equipment at a Telstra exchange. This enables retailers to compete in providing high speed fixed line broadband services to end-users outside the NBN fixed line footprint on an ongoing basis.

Network access services

Network access services are wholesale services that provide access to Telstra's copper network. An access seeker can provide voice and/or broadband services to end-users through access to Telstra's copper network and by installing its own equipment in Telstra's exchanges.

There are two declared services subject to this inquiry:

- the unconditioned local loop service: this provides access to both the high and low frequency part of the copper line between the exchange and the end-user premises, enabling an access seeker to supply fixed voice, fixed broadband or a bundle of both, and
- the line sharing service: this allows the copper line to be shared by two parties by providing access to the high frequency part of the copper line between the exchange and the end-user's premises, enabling an access seeker to provide broadband services only.

Both services can be used by access seekers to supply retail services directly to an end-user or can be used to supply products to other access seekers at the wholesale level.

3.1.2. Why have we historically regulated the services?

Over the course of previous declaration periods, Telstra's Customer Access Network was the default network for fixed broadband and voice services in Australia. While there were limited viable alternatives to Telstra's copper network, declaration of fixed line services was critical to promoting competition in downstream retail markets.

As the NBN has rolled out, legacy network services such as landline phone services delivered over Telstra's Customer Access Network, all ADSL, ADSL2 and ADSL2+ services and Telstra HFC and Optus HFC internet/phone services have been (and are continuing to

be) progressively disconnected in areas within the NBN fixed line footprint.[17] Consumers generally have 18 months to transition to the NBN in their area once an NBN fixed line connection is declared 'ready for service'. After this time, Telstra disconnects the legacy services in those areas, as per the Migration Plan.[18]

Outside the fixed line NBN footprint, end-users may be able to access landline and ADSL services using Telstra's network, as well as NBN (through fixed wireless and SkyMuster) and other networks, subject to availability.

Some end-users within the fixed line NBN footprint, and outside of it, continue to use Plain Old Telephone Services and ADSL services delivered through Telstra's copper network.

3.1.3. Previous declaration inquiries

In 1997, the ACCC first declared the line sharing service and 'public switched telephone network originating and terminating access service', now known as fixed originating and terminating access services. In 1999, the ACCC also declared the unconditioned local loop service and the local carriage service. Wholesale line rental was declared in 2006 and wholesale ADSL was first declared in 2012.

The declarations of these services have been reviewed on several occasions since they were initially made. Most recently, in November 2018, the ACCC decided to extend the declaration of 6 declared fixed line services until 30 June 2024.[19] And, in December 2021 the ACCC extended the declaration of wholesale ADSL, also until 30 June 2024.

The most recent declaration inquiries noted that the relevance of Telstra's copper network is declining but it remains relevant to a substantial number of end-users in the meantime. The ACCC extended the declarations of these services in part to provide regulatory certainty within the industry and a more certain operating environment until the NBN rollout was complete. As part of performing its statutory functions in this inquiry, the ACCC will make an updated assessment where relevant on this issue.

3.1.4. State of competition in relevant markets

In assessing whether declaration will achieve the objective of promoting competition in markets for the relevant services the ACCC will

- identify and define the relevant markets
- assess the current state of competition in those markets, and
- consider the likely future state of competition in those markets with and without declaration.

The ACCC has assessed the state of competition in markets relevant to the services being considered. This section considers the markets relevant to wholesale services provided on Telstra's copper customer access networks as shown below:

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17 NBN Co, *which services will be impacted by the rollout of the nbn access network?*, NBN Co, n.d., accessed 24 May 2023.

18 ACCC, *Telstra's Migration Plan*, ACCC, Australian Government, 2021.

19 These services were: unconditioned local loop service; line sharing service; wholesale line rental; local carriage service; fixed originating access service (formerly PSTN Originating Access); and fixed terminating access service (formerly PSTN Terminating Access).

Service group	Declared fixed line service	Relevant markets
Resale fixed voice	Wholesale line rental	Wholesale fixed voice services Retail fixed voice services
	Local carriage service	
	Fixed originating access service	
Resale broadband	Wholesale ADSL	Wholesale fixed broadband services Retail fixed broadband services
Network access	Unconditioned local loop service	Wholesale fixed voice services Wholesale fixed broadband services Retail fixed voice services Retail fixed broadband services
	Line sharing service	Wholesale fixed broadband services Retail fixed broadband services

This section provides an assessment of the state of competition in these markets before moving on to our final assessment of whether declaration will promote the long-term interests of end-users for each of the services.

Wholesale fixed voice and broadband services

The most significant development in fixed voice and broadband services markets since the initial declaration of the fixed line services has been the build-out and completion of the NBN, a wholesale-only, open-access network. Telstra must disconnect fixed line services on its copper customer access network within 18 months of a fixed line NBN service becoming available. NBN services are available across Australia.

The legacy fixed line services on Telstra's network enable an access seeker to provide a retail landline and/or a broadband service to consumers. However, network access services (the unconditioned local loop and line sharing services) also enable an access seeker to provide a wholesale product to other access seekers. These services require the access seeker to install its own equipment in Telstra's exchanges, such as digital subscriber line access multiplexes (DSLAMs), multi-service access nodes (MSANs) and switching equipment.

As of 31 December 2023, there were only 36 unconditioned local loop and 51 line sharing services in operation.[20] Most of these network access services are not used to sell a wholesale service and the majority are operating within the NBN fixed line footprint.[21]

Outside NBN Co's fixed line footprint, Telstra must still provide its own infrastructure where needed, and must maintain its customer access network until 2032.[22] NBN Co uses fixed

[20] Snapshot of Telstra's customer access network as at 31 December 2023, Table 1, ACCC, Australian Government, March 2024.

[21] Information provided by a stakeholder.

[22] Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRCA), *Universal Service Guarantee – fact sheet*, DITRCA, *Australian Government,* n.d., accessed 17 March 2023.

wireless and satellite services to deliver wholesale NBN services outside its fixed line footprint.

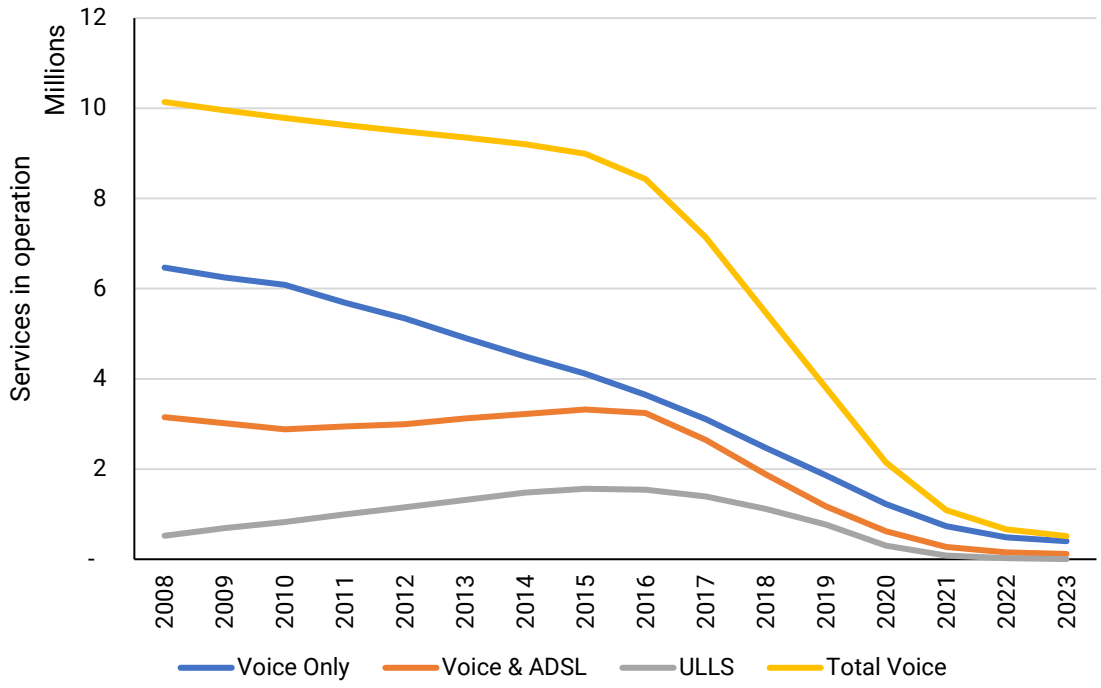
There has also been a substantial uptake in the use of low earth orbit satellite technologies providing telecommunications services to Australian consumers in recent years, largely in regional and remote areas. Relevantly, retail service providers in Australia have also announced plans to offer voice and broadband services using wholesale services provided over Starlink's low earth orbit satellites. In November 2022, Vocus announced plans to provide business-grade Starlink services to enterprise and government customers.[23] In July 2023, Telstra announced plans to resell Starlink satellite broadband and voice services to regional and remote customers from late 2023.[24]

Retail fixed voice and broadband markets

Retail fixed voice

The number of fixed line services in operation over Telstra's legacy customer access network has declined substantially since 2016. While voice-only services have declined continuously since 2008, voice and ADSL bundled services experienced a slight and steady increase between 2010 and 2016 and then decreased shortly before stabilising from around 2021 onwards. Unconditioned local loop services also followed a similar trend to voice and ADSL bundled services.

Figure 3.1 The number of fixed line services on Telstra's customer access network declined from 2008 to 2023



Source: Quarterly snapshots of Telstra's customer access network.

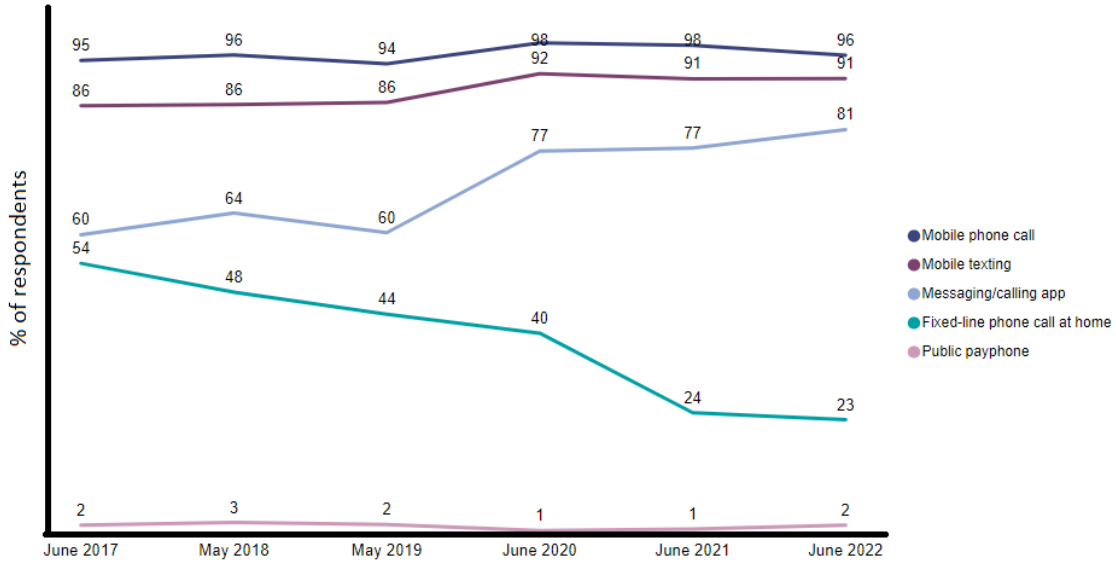
[23] Vocus, *Vocus signs new agreement with Space X to provide Starlink Business to customers*, 30 November 2023, accessed 15 December 2023.

[24] L Willaton, 'We're working with Starlink to connect more people in remote Australia', 3 July 2023, accessed 13 November 2023.

The Australian Communications and Media Authority's (ACMA) *Trends and developments in telecommunications report* notes that 23% of Australians report using fixed voice services in 2022 down from around 40% in 2020. The largest group of fixed line voice service users are older Australians with more than 63% aged over 75 using a fixed line voice services in the first half of 2022. [25]

The ACMA's research also shows that mobile services are now the preferred method of communication for Australians, fixed line voice services are in a severe and continuing decline, and there has been significant growth in the use of over-the-top services between 2017 and 2022.[26] Figure 3.2 shows how consumer preferences for telecommunications have changed over this period.

Figure 3.2 Mobile services are preferred, fixed line calls are declining, and over-the-top services are on the rise



Source: ACMA, Communication and media in Australia: How we communicate. 2022. Section 1 – Services used.

There were 72.8 billion minutes of voice call time in the year ending June 2021, compared to 67 billion in 2018. Only 8.7 billion of these minutes were carried on fixed line networks. [27]

Despite decreased usage of landline service, fixed line voice services remain critical for some vulnerable consumers and businesses who require access to a reliable and affordable service. This includes those who live in regional and remote areas, those with no or poor mobile coverage, the elderly, and consumers with complex medical needs.[28] Submissions to the discussion paper from ACCAN, Commpete, Pivotel, Optus and Telstra largely reflect this view.[29]

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25 ACMA, Communications and media in Australia: Trends and developments in telecommunications 2021-22, ACMA, Australian Government, July 2023, accessed 14 November 2023.

26 ACMA, *Communications and media in Australia: How we communicate – Executive summary and key findings*, ACMA, Australian Government, 2022, p 3.

27 ACCC, *ACCC communications market report 2020-21*, ACCC, Australian Government, 2021, p 63.

28 Migration from legacy networks to the NBN is mandatory within the NBN fixed line footprint, but voice services can still be provided to consumers outside the NBN fixed line footprint using the Customer Access Network. Most NBN fixed wireless and satellite services are located outside of metropolitan areas, and these may be areas with no or poor mobile coverage.

29 ACCAN, *Submission to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, 12 July 2023, p 3 and 4; Commpete, *Submission to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, 26 July 2023, p 4; Pivotel, *Submission in response to Public Inquiry into the*

It is also common for businesses to prefer a geographic phone number, rather than a mobile number. Optus submitted that residential and business end-users may be less willing to give up their fixed line voice services because of reliability/redundancy concerns (that is, end-users may be unwilling to rely solely on another technology) or, for businesses, if their business phone number is related to that service.[30]

Reflecting this, and despite the reduction in fixed line usage for voice services over the period, the number of fixed voice services in operation including both legacy copper services and those provided over NBN, have stabilised over the past 3 years. There were almost 7 million voice services in 2021-22 and 2022-23, falling to around 6.5 million voice services in 2022-23.[31]

For consumers that use a fixed line voice service in cities and metropolitan areas, and particularly young consumers, mobile services will likely be seen as an adequate substitute. However, because mobile services can have limited connectivity in remote and regional areas and are often less appealing to businesses and elderly consumers, they cannot be considered a close substitute for fixed line voice services in all circumstances. As such, the ACCC considers that there is only partial substitutability between fixed line services and mobile services.

The ACCC also considers that over-the-top services are likely to be viewed as a viable alternative for fixed line services only in limited circumstances, and as such the ACCC's preliminary view was that over-the-top voice services are not close substitutes to retail fixed voice services.

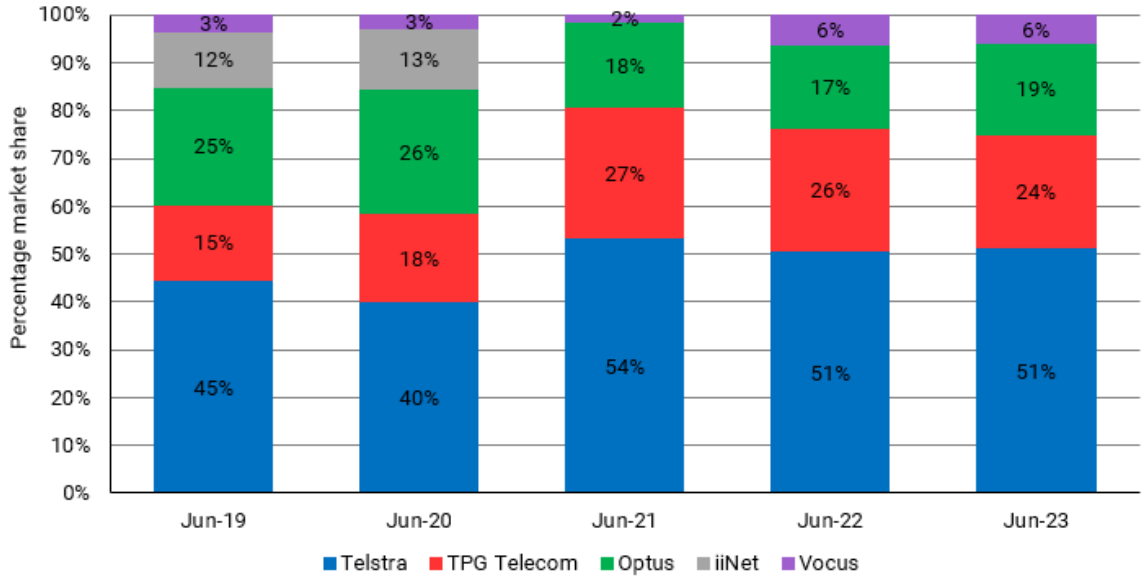
While there are many retail service providers in the retail fixed voice and broadband markets, these markets are still relatively concentrated. Telstra has consistently had the highest market share despite fixed line voice service market share fluctuating over the past 5 years (Figure 3.3).

declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper, 28 July 2023, pp 2 and 4; Optus, *Submission in response to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper, July 2023*, p 2; Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, pp 10 and 14.

30 Optus, *Submission in response to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 4.

31 Division 12 RKR, 2020-21, 2021-22 and 2022-23.

Figure 3.3 The retail market for fixed line voice services is relatively concentrated



Note: iiNet is reported under TPG Telecom from Jun-21 onwards following the merger.

Source: ACCC Communications Market Report 2022-23.

ACCC research indicates standalone fixed line voice service providers are moving to primarily offer all-inclusive plans that include unlimited local, national, and mobile calls for between $25 and $60. Plans with unlimited call inclusions are increasingly common and the availability of individual call tariff plans continue to reduce.[32]

Only a few standalone voice plans were available in 2022-23 over the legacy copper network. These were usually offered in regional and rural areas outside the NBN fixed line footprint. In March 2023, Dodo[33] was offering a $30 PSTN[34] voice plan while Telstra[35] and Optus[36] were offering $55 plans. The Telstra and Optus plans offered unlimited local, national and mobile calls while Dodo's plan charged 25c per call for local calls, 29c per minute for national calls and 39c per minute for calls to mobile numbers.

Larger fixed voice service providers, such as Telstra and Optus, now only offer a single unlimited fixed line voice product for their customer access network-based service.[37]

Retail fixed broadband

Prior to the NBN rollout, asymmetric digital subscriber line (ADSL)[38] delivered over copper networks was the major source of broadband internet connections in Australia. ADSL connections peaked in 2015-16 with over 5 million services in operation compared to less

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32 ACCC, *ACCC communications Market Report 2021-22*, ACCC, Australian Government, 2022, p 15.

33 Dodo, Critical Information Summary – Dodo Voice, accessed 1 March 2023

34 PSTN is an acronym for Public Switched Telephone network. It refers to the traditional telephone system designed to be used for voice-oriented communication.

35 Telstra, Ultimate Voice Plan, accessed 1 March 2023

36 Optus, Critical Information Summary - Optus Plus Phone Everyday, accessed 1 March 2023.

37 Telstra, *Home Phone*, Telstra, 2022, accessed 16 March 2023; Optus, *Home phone plan*, Optus, 2022, accessed 16 March 2023.

38 DSL service is a carriage service for the provision of DSL services along a metallic line using access technology, which allows the transmission of data from a modem at an end-user's premises to an exchange and using the non-voice spectrum of the communications wire. DSL technologies can be asymmetric or symmetric. ADSL (asymmetric) services have a high downstream data rate service coupled with a lower rate upstream service.

than half a million NBN services. Since then, there has been a significant fall in demand for ADSL accompanied by a significant increase in NBN take ups. In September 2023, there were almost 9 million NBN services in operation compared to around 100,000 DSL services[39] in the same period.[40]

From June 2019 to June 2022, Hybrid Fibre Coaxial connections also declined, while most other non-NBN services largely maintained their usage numbers.[41] The ACCC considers the substantial decline in ADSL services is likely to also reflect improvements in the quality of alternative broadband networks.

The ACCC's 2021 Wholesale ADSL Declaration Inquiry final report noted that as of September 2021 there were around 317,000 DSL services in operation, with many of these end users reliant on ADSL because they may not have access to equivalent or better broadband services outside the NBN fixed line footprint.[42] DSL services have continued to decline since 2021, falling to about 104,500 DSL services in operation at the end of the December 2023 quarter.[43] With approximately 8.8 million NBN and 4.3 million mobile broadband services in operation, DSL connections now account for less than 1 per cent of retail broadband connections in Australia.[44] Rates of disconnection from ADSL have typically been much slower in regional and remote areas.[45]

Despite the declining use of ADSL services, ACCAN, Commpete, Pivotel, Optus, and Telstra all supported extending the declaration of wholesale ADSL in their submissions to the discussion paper and the draft report. These stakeholders all emphasised the importance of ADSL to some end-users, particularly in regional Australia, who may not yet have access to a comparable and reliable alternative.[46]

Further, in 2021, the ACMA observed that businesses have been slower to connect to the NBN than consumers. Two in 5 (41%) businesses reported still having an ADSL connection as of June 2020, compared to 7% of Australian adults with an ADSL connection at home.[47]

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39 DSL Service figures include Telstra's retail DSL, business DSL and ADSL services that are serviced through the use of unconditioned local loop service, line sharing service and wholesale ADSL.

40 ACCC, *NBN Wholesale Market Indicators Report: September quarter 2023 report*, ACCC, Australian Government, 2023.

41 ACCC, *Internet activity RKR, data as at 31 December 2022*, ACCC, Australian Government, 9 June 2023.

42 ACCC, *Wholesale ADSL declaration Inquiry - Final decision*, ACCC, Australian Government, December 2021, page 6.

43 ACCC, Snapshot of Telstra's customer access network as at 31 December 2023, Table 1, ACCC, Australian Government, March 2024.

44 ACCC, *NBN Wholesale Market Indicators Report, September quarter 2023 report*, ACCC, Australian Government, 30 November 2023; Communications Market Report 2022-23, ACCC, Australian Government, 15 December 2023, p 31.

45 ACCC, *Telstra customer access network record keeping rule*, ACCC, Australian Government. The record keeping rule refers to cities as 'Band 1', metropolitan areas as 'Band 2', regional areas as 'Band 3' and remote areas as 'Band 4'.

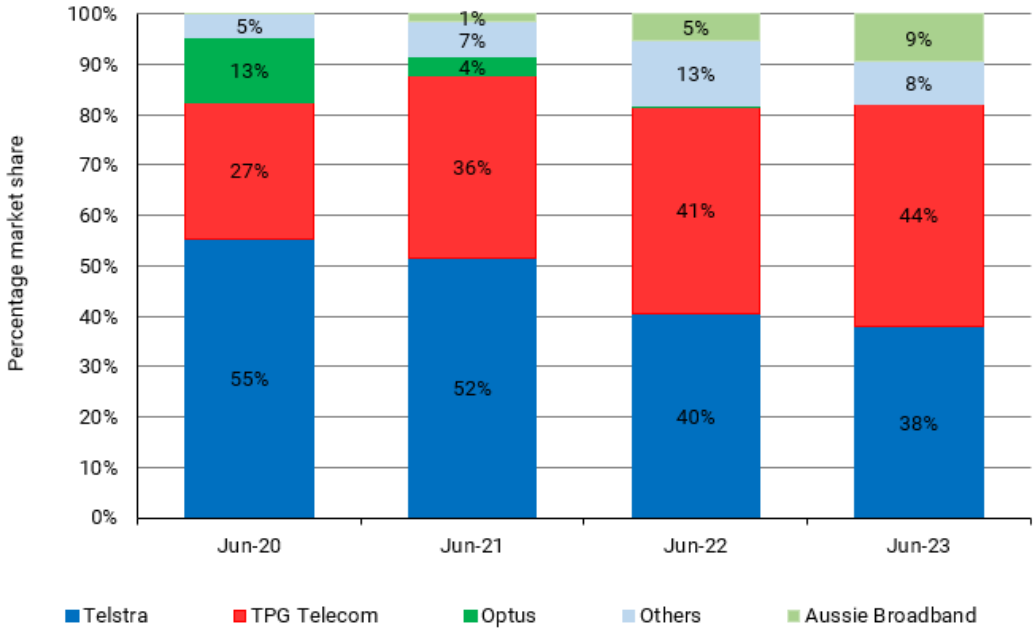
46 ACCAN, *Submission in response to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, 12 July 2023, pp 3 and 4; Submission *in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, February 2024, p 1; Commpete, *Submission in response to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, 26 July 2023, p 4; Optus, *Submission in response to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper,* July 2023, p 2; Submission *in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service,* February 2024, p 2; Pivotel, *Submission in response to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, 28 July 2023, pp 2 and 4; Submission *in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, February 2024, p 5; Telstra, *Submission in response to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service,* July 2023, pp 10 and 14; Submission *in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, February 2024, p 5.

47 ACMA, Trends and Developments in telecommunications 2020-21, ACMA, Australian Government, December 2021, page 8.

As noted above, there were around 104,500 DSL services in operation at the end of the December 2023 quarter.[48]

Retail non-NBN market shares have changed over the past 4 years due to the decommissioning of legacy ADSL services and the growth of alternative fixed line fibre services. For example, retailers such as TPG Telecom and Aussie Broadband have increased their market share of fixed line non-NBN connections to 44% and 9% respectively, in June 2023 (Figure 3.4).

Figure 3.4 Retail non-NBN market shares for major retailers have changed from 2020 to 2023



Note: The market shares above cover most, but not all, of the retail market for non-NBN fixed broadband services. Excludes non-NBN fixed satellite access technologies.

Source: ACCC Communications Market Report 2022-23.

While a substantial number of ADSL users have moved to the NBN, the type of NBN connection that is available can be important to the quality and service and pricing available to the end user. NBN fixed line connections and NBN fixed wireless connections utilise different technologies that are not directly comparable in terms of performance. Around 4% of NBN consumers are served by NBN fixed wireless, typically in rural and regional areas, but it may also be used in outer metropolitan centres.[49]

As of June 2023, fixed line NBN connections (that is, Hybrid Fibre Coaxial and FTTC/N/B/P) account for 94.4% of all NBN services, Fixed Wireless accounts for 4.6% of services and (geostationary) Satellite accounts for the remaining 1%. In June 2023, NBN Co launched a premium Sky Muster satellite plan, featuring 'burst' speeds of up to 100 Mbps and uncapped data.[50] As a result, all NBN services now have the potential to offer faster download speeds

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48 ACCC, Snapshot of Telstra's customer access network as at 31 December 2023, Table 1, ACCC, Australian Government, March 2024. Note: This figure includes Telstra's retail DSL, business DSL and ADSL services that are serviced through the use of unconditioned local loop service, line sharing service and wholesale ADSL.

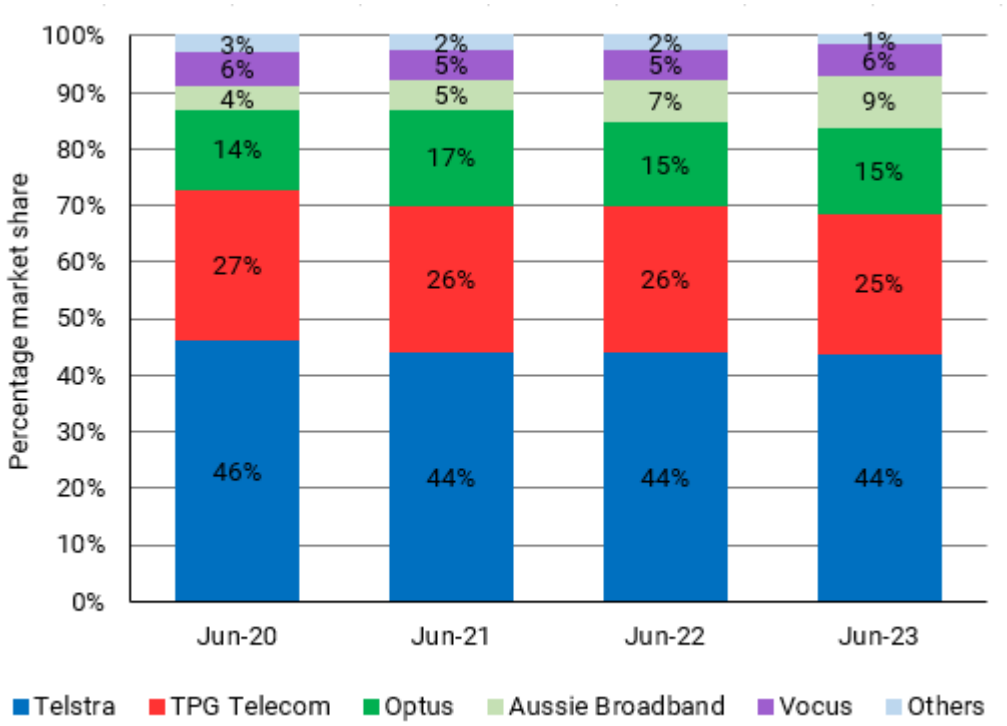
49 ACCC, *Broadband performance data*, ACCC, Australian Government, September 2023.

50 NBN Co, nbn unveils nbn® Sky Muster® Plus Premium: offering even more connectivity options for Australia, 1 June 2023

than ADSL (ADSL2+ can operate at up to 24Mbps, but average download speeds when last measured by the ACCC in 2020 were 10 Mbps)[51]

NBN Co reported that the number of wholesale residential services in operation (including satellite services) was 8.77 million services as at December 2023.[52] In June 2023 Telstra has the largest market share in the retail market for NBN fixed broadband services (44%), followed by TPG Telecom (25%) and Optus (15%) – a full summary of market shares is provided in Figure 3.5.

Figure 3.5 Telstra has the highest retail NBN market share from 30 June 2020 to 30 June 2023



Note: The market shares above cover most, but not all, of the retail market for NBN fixed broadband services because some smaller providers are not counted. Sub-brand data includes Telstra's Belong, Vocus's Dodo and iPrimus and TPG Telecom's iiNet and Vodafone.

Source: ACCC Communications Market Report 2022-23.

While customers are mostly using NBN services for their data downloads, mobile services have been the second most popular technology for this purpose. In June 2023, over 10 million TB of data was downloaded through NBN services, almost 2 million TB through mobile services and less than 1 million TB for other non-NBN services.[53] As at 30 June 2023, there were over 29 million mobile services, including 4.3 million mobile broadband services.[54]

There has also been a substantial uptake in the use of low earth orbit satellite technologies providing telecommunication services to Australian consumers in recent years. Starlink has

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51 ACCC, *Measuring Broadband Australia, Report 10*, ACCC, Australian Government, September 2020, p 4.

52 ACCC, *NBN Wholesale Market Indicators Report, December quarter 2023 report*, ACCC, Australian Government, 14 March 2024.

53 ACCC, Internet Activity Report for the period ending 30 June 2023, December 2023, p. 4.

54 ACCC, Internet Activity Record Keeping Rule Report, ACCC, Australian Government, June 2023, accessed 14 November 2023.

been providing broadband services in Australia via its low earth orbit satellite constellations since it first launched the service in 2021. Starlink reached over 120,000 Australian customers by May 2023.[55] The company also offers high priority plans targeting business' needs and a mobility product for caravans and vessels.[56]

3.2. Resale fixed voice services

Resale fixed voice services enable access seekers to resell landline services without having to invest in their own equipment in Telstra telephone exchanges.

Wholesale line rental provides access to the low frequency part of the copper line to enable fixed voice calls and includes a dial tone and telephone number. The local carriage service involves the carriage of a telephone call from one end-user to another end-user in the same standard zone or local exchange area (i.e. a local call). The two services are usually purchased together and are charged as a monthly line rental charge for wholesale line rental and a per call charge for local carriage service. Alongside these services, the fixed originating access service is typically bundled with wholesale line rental and the local carriage service as part of a wholesale PSTN access service because of its role in pre-selection and override – the fixed originating access service is also relevant to interconnection and is discussed in Section 4.2.

The service descriptions for the wholesale line rental and the local carriage service are set out in full in Appendix A.

3.2.1. Promoting competition in relevant markets

The markets relevant to the resale fixed voice services are:

- wholesale fixed voice services, and
- retail fixed voice services.

Is declaration likely to promote competition in relevant markets?

Wholesale fixed voice service market

In the draft report, the ACCC considered that while declaring the resale fixed voice services was likely to lead to more access seekers purchasing those services, the extent of competition in those markets would not be affected because Telstra would remain the near-monopoly service provider. The ACCC's preliminary view was therefore that extending the declarations of the wholesale line rental and local carriage services would not promote competition in wholesale fixed voice markets.

However, we noted that absent declaration, Telstra is likely able to set prices for these services above efficient levels.

Retail fixed voice services market

The draft report considered that resale fixed voice services play a role in promoting competition in the retail fixed voice services market by enabling access seekers to offer

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55 A Choros, 'Starlink now has Australia-wide coverage', *Reviews.org,* 6 November 2023, accessed 13 November 2023.

56 J Taylor, 'NBN chief says 'all options on the table' to improve satellite service as Starlink lures customers', *The Guardian,* 25 May 2023, accessed 17 November 2023.

retail landline services in competition with Telstra, without having to invest in exchange infrastructure. This competition is especially important in regional areas where alternative services such as mobiles are unavailable or unreliable.

The ACCC's preliminary view was that extending the declarations of the wholesale line rental and local carriage services was likely to promote competition in the retail fixed voice services market, particularly in regional areas.

Final Position

All stakeholders who submitted on the fixed voice resale services broadly supported the continued declaration of these services.[57] However, submissions did not specifically comment on how declaration will promote competition in markets.

For the reasons outlined above and based on broad stakeholder support, the ACCC's final position remains that extending the expiry dates of the declaration of the resale fixed voice services (which are the wholesale line rental service, local carriage service and the fixed originating access service, which is often purchased with the other two services), will promote competition in the retail fixed voice services market.

Declaring these services is likely to lead to more access seekers offering retail voice services in the future than would be likely to occur in the absence of declaration. We consider this to be important in some regional and remote areas where suitable alternatives to fixed line voice services are not readily available.

3.2.2. Achieving any-to-any connectivity

The wholesale line rental and local carriage service do not involve switching between networks and do not support any-to-any connectivity.

The ACCC's view is that declaration of the wholesale line rental and local carriage services is not relevant to achieving any-to-any connectivity.

3.2.3. Encouraging efficient use of, and investment in, infrastructure

The draft report noted that declaring the wholesale line rental and local carriage services is likely to contribute to the efficient use of the legacy copper infrastructure because it will enable more service providers to access and utilise existing telecommunications infrastructure through the resale services. This will reduce idle capacity and lower the average cost per unit of service overall.

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[57] ACCAN, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 14 February 2024, p 1; Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; Optus, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 21 February 2024, p 2; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; TPG, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2.

Resale fixed voice services enable multiple providers to share the same network infrastructure, reducing the need for duplicative infrastructure investments and promoting the efficient sharing of resources.

We acknowledge that declaring services imposes maintenance and reporting costs on access providers, preventing those resources from being invested in newer technologies. However, because of universal service obligations (USO), we consider the resourcing cost of declaring wholesale line rental and local carriage services would not be substantially higher than access providers would face to meet USO obligations in the absence of declaration.

While resale fixed voice services have also been declining like all services over the copper network, there are thousands of services still in operation.[58] In response to the ACCC's information request, Optus submitted that while it is in the process of decommissioning its unconditioned local loop services, it still requires continued support for wholesale line rental services to support its business customers particularly in the NBN fixed wireless areas.[59]

Final Position

All submissions that commented on fixed voice resale services broadly supported the ACCC's preliminary views regarding the continued declaration of these services.[60] However, none of the submissions specifically commented on how declaration will encourage efficient use of, and investment in, infrastructure.

For the reasons outlined above, and based on broad stakeholder support, the ACCC's final position remains that extending the expiry dates of the declaration for the resale fixed voice services for a further 5 years will encourage the economically efficient use of, and investment in, infrastructure. This will ultimately enable more service providers to access and utilise these services, enable efficient sharing of resources, and will reduce idle capacity as well as lowering average cost per unit of these services overall.

3.2.4. The ACCC has decided to extend the declarations of resale fixed voice services

For reasons discussed above, the ACCC has decided to extend the expiry date of the declarations of wholesale line rental and local carriage service, as doing so will promote the long-term interests of end-users by:

- promoting competition in the retail fixed voice services market, particularly in regional areas, and
- encouraging the economically efficient use of, and investment in, infrastructure.

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58 Information provided by a stakeholder.

59 Optus, *Submission in response to information requested by the ACCC*, August 2023, p 8.

60 ACCAN, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 14 February 2024, p 1; *Aussie Broadband, Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; Optus, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 21 February 2024, p 2; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; TPG, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2.

3.2.5. Scope of proposed declaration

Service description

No amendments to the service descriptions for these services have been proposed. The ACCC's view is that the current service descriptions remain appropriate and will promote the long-term interests of end-users.

Length of declaration

In submissions to the discussion paper, Optus supported a declaration period of 5 years while TPG Telecom and Telstra supported a declaration of 3 years for the resale fixed voice services. Proposals for a 3-year declaration period noted that this shorter period would allow the ACCC to reconsider any changes in the rollout of NBN, 5G and satellites, and the impact of technological developments and policy changes (particularly as it relates to regional Australia) to be reassessed.[61] Other submissions did not comment on the declaration period for these services.

The ACCC's preliminary view was that the resale fixed voice services should be declared for another 5 years rather than 3 years. The ACCC considered this an appropriate period for the impact of emerging technologies and possible reforms to be revealed, and their impact assessed.

Final Position

In response to the draft report, Telstra maintained its view that 3 years is the appropriate declaration period[62], whereas all other submissions supported the ACCC's proposed 5-year period.[63]

Telstra submitted that a declaration period of 3 years would be more appropriate because:

- emerging technologies such as LEO satellites will change the fixed services landscape and may deliver voice services that are of the same quality as, or are superior to copper-based voice services. Telstra expects these technologies to be delivered within the next 12-18 months, rendering a 5-year declaration period unnecessary

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61 Optus, *Submission in response to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper,* July 2023, p 2; Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 14; TPG Telecom, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 4.

62 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 5-7.

63 Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; TPG, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2; Optus, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 21 February 2024, p 2; Twilio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1.

- innovation of new emerging services will be hampered by a protracted regulatory period for legacy services by distorting service and investment decisions, and delaying new technologies to end-users, and
- there are ongoing costs to regulation, such as maintenance costs for a network approaching end-of-life which should be removed at the earliest opportunity.[64]

The ACCC has considered Telstra's submission and continues to consider that a 5-year period is more appropriate.

The ACCC acknowledges the emergence of new technologies, however we have not seen evidence that fixed line declarations are currently stifling innovation, or that the rate of deployment of new technologies would be accelerated if fixed line service declarations are in place for a shorter period. Further, the ACCC considers it may be desirable for consumers to have access to fixed line services in addition to these emerging technologies, particularly until the availability and reliability of these technologies is demonstrated in the market.

The ACCC also considers that maintenance costs are unlikely to be substantially higher with a 5-year declaration, given that Telstra will have maintenance obligations for the network in the absence of declaration.

The ACCC also notes that from a practical perspective, a 3-year declaration inquiry would require the ACCC to commence the next declaration inquiry in around 18 months. This may be too soon to assess the impact of emerging technologies and would impose an administrative burden on the ACCC and stakeholders who wish to respond. Further, the ACCC could reconsider the declarations (including whether to vary or revoke them) through a public inquiry during the 5-year period, should there be a need to respond to significant changes in circumstances.

Based on the support of most stakeholders and for the reasons outlined above, the ACCC's final position is to extend the expiry dates of the declarations for each of the resale fixed voice services for 5 years until 30 June 2029.

3.3. Wholesale ADSL

Wholesale ADSL is a point-to-point service delivered over Telstra's Customer Access Network. It enables retail service providers to purchase a wholesale telecommunications service from Telstra without the need to install their own infrastructure at a Telstra exchange. This enables access seekers to compete in providing fixed line broadband retail services to end-users.

The service description is set out in full at Appendix A.

3.3.1. Promoting competition in relevant markets

The markets relevant to wholesale ADSL are:

- wholesale fixed broadband services, and
- retail fixed broadband services.

[64] Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 5-7.

Is declaration likely to promote competition in relevant markets?

Wholesale fixed broadband services market

The ACCC considers that the extent of competition in wholesale markets will not be affected by the declaration of wholesale ADSL because Telstra will remain the near-monopoly wholesale ADSL service provider and other wholesale fixed broadband services will not be impacted.

Pivotel's submission to the discussion paper indicated that Telstra enjoys the unique position where it is both the supplier of fixed line infrastructure to access seekers in wholesale markets (which provide retail services to end-users), but also offers retail products to its customers, which could incentivise it to raise wholesale prices or restrict access to services.[65] The ACCC considers that, absent declaration, Telstra has the incentive to increase the price of wholesale ADSL services, heightening barriers to entry for access seekers. This would make it difficult for these access seekers, who may be operating in certain places where alternative services do not exist or are unreliable, to migrate, to the detriment of end-users.[66] We do not consider that, absent declaration, other existing regulation is sufficient to constrain Telstra's ability to raise pricing for wholesale ADSL above efficient levels.

Retail fixed broadband services market

While the number of end-users serviced by ADSL is declining as the availability and quality of alternative services continues to improve (see Section 3.1.4), we consider that it is still important to some consumers. This is supported by submissions to the discussion paper in which ACCAN, Commpete, Pivotel, Optus, and Telstra all noted the importance of ADSL to some end-users, particularly in regional Australia, who may not yet have access to a comparable and reliable alternative.[67] Pivotel's submission to the discussion paper also noted that migration to the NBN, together with other potential substitutes in regional areas such as low earth orbit satellite services, may over-time make declaration of wholesale ADSL unnecessary.[68] However, each of these stakeholders supports the redeclaration of the wholesale ADSL service at this time.

A survey of ADSL users conducted by ACCAN in support of its submission to the 2021 Wholesale ADSL Declaration Inquiry suggested that, at that time, Telstra was by far the dominant ADSL service provider.[69] We consider that declaration of wholesale ADSL services is likely to promote competition in the retail fixed broadband market, outside the NBN fixed

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65 Pivotel, *Submission to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, 28 July 2023, p 14.

66 The ACCC understands that all of the remaining wholesale ADSL services now operate outside the NBN fixed line footprint.

67 ACCAN, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, 12 July 2023, p 3; Commpete, *Submission to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, 26 July 2023, pp 2 and 4; Pivotel, *Submission to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, 28 July 2023, pp 2 and 4; Optus, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 2; and Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, pp 10 and 14.

68 Pivotel, *Submission in response to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, 28 July 2023, p 13.

69 *ACCAN, Submission in response to Public Inquiry into the declaration of Wholesale ADSL Declaration*, 7 September 2021, p 7.

line footprint, by enabling access seekers to offer a retail broadband service over a different technology than fixed wireless or satellite.

Absent declaration, Telstra has the ability to charge its competitors prices above efficient levels. Therefore, declaration of wholesale ADSL, along with regulated pricing, is likely to promote competition in the retail fixed broadband market, particularly in regional and remote areas.

Final Position

All the submissions that commented on wholesale ADSL broadly supported the ACCC's proposals in the draft report.[70]

Pivotel agreed that declaration of wholesale ADSL will promote competition. Pivotel noted that over time alternative services (such as LEO satellite services) will become substitutes for ADSL, but regulation is needed in the short term to promote competition, particularly outside the NBN fixed-line network.[71]

Other submissions did not specifically comment on why extending the declaration for the wholesale ADSL services would promote competition.

For these reasons, the ACCC's final position remains that extending the declaration of the wholesale ADSL service is not likely to promote competition in the wholesale fixed broadband services market. However, we consider declaring wholesale ADSL is likely to promote competition in the retail fixed broadband market, particularly in regional and remote areas. This will ensure that access seekers can access the service on efficient terms.

3.3.2. Achieving any-to-any connectivity

The wholesale ADSL service does not involve interconnection between networks and does not support any-to-any connectivity.

The ACCC's view is that the declaration of the wholesale ADSL services is not relevant to achieving any-to-any connectivity.

3.3.3. Encouraging efficient use of, and investment in, infrastructure

The ACCC's preliminary view was that extending the declaration of the wholesale ADSL service is likely to contribute to the efficient use of the legacy copper infrastructure because it will enable more service providers to access and utilise the existing telecommunications

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70 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; TPG, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2; Optus, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 21 February 2024, p 2; Twilio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1.

71 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 1-2.

infrastructure through resale services. This will reduce idle capacity and lower the average cost per unit of service.

This was supported by Pivotel's submission to the discussion paper, which stated that an ACCC decision to extend the declaration will continue to encourage the efficient use of Telstra's DSL infrastructure. In Pivotel's view, extending the declaration would also provide certainty for those end-users that continue to use ADSL services, particularly in regional and remote areas.[72]

We also considered that the wholesale ADSL service will enable multiple providers to share the same network infrastructure, reducing the need for duplicative infrastructure investment and promoting the efficient sharing of resources and investment in infrastructure.

We noted that Telstra is required to maintain its customer access network outside the NBN fixed line footprint under its copper continuity obligation under the USO. If Telstra is maintaining the network so that Telstra can continue to offer voice services, it would be efficient to declare the wholesale ADSL service so that access seekers can continue to deliver ADSL2+ services until the network is decommissioned.

Final Position

All the submissions that commented on wholesale ADSL broadly supported the ACCC's proposals in the draft report.[73]

Pivotel agreed that declaration of wholesale ADSL will encourage the economically efficient use of, and investment in, infrastructure. It accepted the ACCC's preliminary view that declaring the service will provide businesses a more certain operating environment through ensuring continuity of supply.[74] Other submissions did not specifically comment on why extending the declaration would encourage efficient use of, and investment in, infrastructure.

The ACCC's final position remains that extending the expiry date of the declaration of the wholesale ADSL service for a further 5 years will encourage the economically efficient use of, and investment in, infrastructure.

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72 Pivotel, *Submission in response to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, 28 July 2023, p 14.

73 Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p. 1; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p. 5; Optus, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 21 February 2024, p. 2; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p. 1; Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p. 5; TPG, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p. 2; Twilio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1.

74 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1.

3.3.4. The ACCC has decided to extend the declaration of wholesale ADSL

For the reasons discussed above, the ACCC has decided to extend the expiry date of the declaration of wholesale ADSL as doing so will promote the long-term interest of end-users by:

- promoting competition in the retail fixed broadband market, particularly in regional and remote areas, and
- encouraging the economically efficient use of, and investment in, infrastructure.

3.3.5. Scope of proposed declaration

Service description

No amendments to the service descriptions for these services have been proposed. The ACCC's view is that the current service description remains appropriate and will promote the long-term interests of end-users.

Length of declaration

In submissions to the discussion paper, Optus[75] supported a declaration period of 5 years while Pivotel[76], Telstra[77] and TPG Telecom [78] supported a declaration of 3 years for wholesale ADSL services. Other submissions did not comment on the declaration period for these services.

Pivotel originally suggested 3 years for wholesale ADSL and 5 years for the fixed voice interconnection services.[79] Pivotel's latest submission accepted that 5 years is appropriate for wholesale ADSL on the basis of promoting a more certain operating environment through ensuring service continuity.[80]

The ACCC's preliminary view was that the expiry date for the wholesale ADSL service should be extended for another 5 years. This is consistent with previous declaration inquiries and would provide businesses requiring these services with a more certain operating environment through ensuring continuity of service supply.

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75 Optus, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 2.

76 Pivotel, *Submission to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, 28 July 2023, p 16.

77 Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 3.

78 TPG Telecom, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 4.

79 Pivotel, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, pp 2-3.

80 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1.

Final Position

In response to the draft report, Telstra maintained its view that 3 years is the appropriate re-declaration period[81], whereas all other submissions supported the ACCC's proposals in the draft report.[82] Commpete explicitly endorsed the ACCC's proposal to re-declare wholesale ADSL for 5 years and Pivotel submitted that, while it initially considered 3 years an appropriate declaration period for wholesale ADSL, it accepted that extending declaration for 5 years would give businesses a more certain operating environment through ensuring continuity of service supply.[83]

As outlined in section 3.2.5 above under the heading 'Final Position', Telstra submitted that a declaration period of 3 years is more appropriate.

The ACCC's final position is to extend the expiry date of the declaration of the wholesale ADSL service for 5 years until 30 June 2029.

3.4. Network access services

The unconditioned local loop and line sharing services provide access to the Customer Access Network. Both services require the access seeker to install their own equipment in exchanges, such as DSLAMs, MSANs and switching equipment.

The network access services enable access seekers to provide products:

- to other access seekers at the wholesale level, such as wholesale fixed voice services or wholesale fixed broadband services, or
- directly to end-users at the retail level:
    - the unconditioned local loop service gives access to the copper line and can be used to supply fixed voice, fixed broadband or a bundle of both, and
    - the line sharing service gives access to only the high frequency part of the copper line and can be used to supply fixed broadband where the end-user has a legacy voice service with another provider.

The service descriptions for the unconditioned local loop service and line sharing service are set out in full in Appendix A.

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81 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 5-7.

82 Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p. 5; TPG, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p. 2; Optus, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 21 February 2024, p. 2; Twilio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p. 1; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1.

83 Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1.

3.4.1. Promoting competition in relevant markets

The markets relevant to the network access services are:

- wholesale fixed voice services (unconditioned local loop services only)
- wholesale fixed broadband services
- retail fixed voice services (unconditioned local loop services only), and
- retail fixed broadband services.

This is because both network access services enable an access seeker to purchase services from Telstra which they can then provide on a wholesale basis to other carriage service providers or to their own retail customers.

Is declaration likely to promote competition in relevant markets?

Wholesale fixed broadband and fixed voice services

In theory, declaring the unconditioned local loop service and line sharing service could increase competition in the provision of resale fixed voice and broadband services, where these resale services are offered by access seekers that themselves purchase a network access service. However, given there are few network access services remaining in operation, we consider that continued declaration is likely to have a limited impact on competition in the wholesale fixed voice and broadband resale services market.[84] Further, the continued decline in services in operation indicates that access seekers are unlikely to expand their investment in exchange equipment regardless of declaration.

The ACCC does not consider continued declaration of the unconditioned local loop and/or line sharing service is likely to promote competition in wholesale markets.

Retail fixed broadband and fixed voice services

In the past, declaration of the network access services promoted competition in the retail fixed voice and broadband markets, particularly in metropolitan areas. This is because declaration allowed access seekers to use Telstra's copper lines in conjunction with their own exchange equipment to provide retail services in competition with Telstra's own retail services. However, the roll out of the NBN and other technological advancements has meant that most network access services have now been disconnected. Further, we understand that the few services remaining in operation are in the process of being migrated to other services. Therefore, we consider that declaration of the network access services is not likely to promote competition in retail markets.

Further, section 3.2 and 3.3 note that, in general, fixed line voice services and ADSL are both far more likely to be provided through resale services at the wholesale level, rather than network access services.

For these reasons, the ACCC's preliminary view was that extending the declarations of the unconditioned local loop service and line sharing service was unlikely to promote competition in retail fixed line voice or fixed broadband markets.

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[84] ACCC, Snapshot of Telstra's customer access network as at 31 December 2023, Table 1, ACCC, Australian Government, March 2024.

Final Position

ACCAN, Aussie Broadband, Commpete, Optus, Pivotel, Symbio, Telstra and TPG Telecom broadly supported the ACCC's proposal to allow the declarations of the network access services to expire.[85] Submissions from Sinch and Twilio did not comment on the ACCC's proposal to allow the declaration of the network access services to expire and no submissions opposed the ACCC's proposal.[86]

The ACCC's final position remains that extending the declarations of the unconditioned local loop service and line sharing service is unlikely to promote competition in retail fixed line voice or fixed broadband markets.

3.4.2. Achieving any-to-any connectivity

The unconditioned local loop service and line sharing service do not involve interconnection between networks and do not support any-to-any connectivity.

The ACCC's view is therefore that declarations of the unconditioned local loop service and/or line sharing service are not relevant to achieving any-to-any connectivity.

3.4.3. Encouraging efficient use of, and investment in, infrastructure

Preliminary view

We consider that because the unconditioned local loop service and line sharing service are in place to facilitate access to copper infrastructure for access seekers that own equipment (such as DSLAMs, MSANs and switching equipment) in telephone exchanges, declaration could encourage efficient use of existing infrastructure - both in terms of the Customer Access Network and exchange equipment - until the network is decommissioned or existing equipment reaches the end of their useful asset lives.

However, in the context of the number of users of the service being likely to fall to zero, declaration is unlikely to have the effect of promoting efficient use of infrastructure.

With the rollout and initial build phase of the NBN complete, NBN Co has moved into an operational and investment phase, which involves expanding the fibre footprint to replace copper in some areas.[87] Meanwhile ongoing large capital investments are continuing in

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85 Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; Optus, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 21 February 2024, p 2; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 3, 5.TPG, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2.

86 Sinch, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024; Twilio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024.

87 NBN Co, Initial build complete, NBN Co announces next phase of network investment to meet future demand, 23 September 2020.

mobile networks and there is an ongoing trend of declining use of each of the fixed line services (and the retail products they support). In this context, we consider that minimal investment and innovation currently occurs in copper-based infrastructure. As such, we consider declaration is unlikely to promote efficient investment in infrastructure or improve dynamic efficiency.

Final position

ACCAN, Aussie Broadband, Optus, Commpete, Pivotel, Symbio, Telstra and TPG Telecom broadly supported the ACCC's proposal to allow the declarations for the network access services to expire.[88] Submissions from Sinch and Twilio did not comment on the ACCC's proposal to allow the declarations for the network access services to expire and no submissions opposed the ACCC's proposal.[89] Submissions did not specifically comment on how declaration of the network access services would impact efficient use of, and investment in, infrastructure in relevant markets.

The ACCC's final position remains that continuing to declare the unconditioned local loop service and/or line sharing service is not likely to encourage the economically efficient use of, and investment in, infrastructure.

3.4.4. The ACCC has formed a view that that the declarations of network access services should not be extended

After completing the public inquiry, the ACCC's view is that extending the declarations of the network access services is unlikely to promote competition in relevant markets. This is due to the very low, and declining, number of these services in operation, combined with the availability of alternative wholesale services and close retail substitutes for end-users.

Overall, the ACCC does not consider that continued declaration will encourage the economically efficient use of, and investment in, infrastructure. The ACCC's view is that re-declaration of the unconditioned local loop service and/or line sharing service may encourage the economically efficient use of the infrastructure by which services are supplied but is unlikely to encourage the economically efficient investment in the infrastructure.

Considering these reasons, the ACCC is of the view that extending the declarations for the unconditioned local loop and line sharing services will not promote the long-term interests of end-users. Accordingly, the unconditioned local loop service and line sharing service will be allowed to expire on 30 June 2024.

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88 Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; Optus, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 21 February 2024, p 2; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 3, 5.TPG, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2.

89 Sinch, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, February 2024; Twilio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, February 2024.

4. Should fixed voice interconnection services continue to be declared?

The ACCC's final position is that:

- **extending the declarations of the fixed voice interconnection services for a further 5 years will promote the long-term interests of end-users.**
- **the service descriptions should be varied to reflect the shift in industry towards the use of IP-based interconnection.**

4.1. Introduction

4.1.1. What are the services?

Interconnection services are wholesale services which enable the handover of telephone calls between network operators. These services enable an end-user to call any other end-user regardless of their network or service provider.

There are currently 2 declared fixed voice interconnection services:

- Fixed originating access service

  This service enables calls from a geographic number assigned to the access provider's network to be carried to a point of interconnection.

- Fixed terminating access service

  This service enables calls from one network to be carried from the point of interconnection to a party being called using a geographic phone number on another network (the access provider's network).

4.1.2. Why have we historically regulated these services?

Australia has historically had a calling party pays system which means that when calls are made from one network to another, the originating network pays the terminating network to connect the calls. In this system, the terminating network does not charge its subscribers for receiving calls, and the cost of the call is generally paid by the subscriber that makes the call. The terminating network therefore typically has market power in the provision of termination services to the originating network as it controls access to its subscribers. Absent regulation, the terminating network can have the incentive and ability to exercise market power to either refuse access or to provide call termination on unreasonable terms.

While the originating network operator also has exclusive access to its own end-users, its ability to refuse to originate calls to another network is typically restricted by the ability of its own subscribers to switch providers if they cannot make calls to other networks. However, when a network operator has a significant proportion of the overall subscriber base, it may

nonetheless possess a degree of market power such that it could refuse to originate calls to smaller network operators, as the potential risk of churn is smaller. This provides a basis for regulating the fixed originating access service.

The provision of the fixed originating access service is also important for access seekers to provide a full suite of voice services, including the pre-selection and override function (relevant to Section 3.2) as well as calls to special service numbers such as 13/1300 (local rate) and 180/1800 (toll free) numbers.

4.1.3. Previous declaration inquiries

Fixed originating access service and fixed terminating access service

The ACCC first declared fixed interconnection services in 1997, under the titles of 'domestic PSTN originating access' and 'domestic PSTN terminating access'.[90] In 1999, the ACCC also declared 'local' PSTN originating and terminating access to enable access seekers to connect to a local level switching point in Telstra's network. There were no fundamental functional or pricing differences for the 'local' service compared to the 'domestic' originating and terminating access services.[91] In 2006 the ACCC effectively merged the 'domestic' and local services.[92]

In 2009, the ACCC changed the name of the of 'PSTN originating access' and 'PSTN terminating access' to 'Fixed Originating Access Service' and 'Fixed Terminating Access Service' respectively, to reflect that the service declarations are technology neutral.[93]

In 2014, the ACCC amended the service descriptions for the fixed originating access service and fixed terminating access service which have remained in place until now (set out in Appendix A).

4.2. The fixed originating access service and fixed terminating access service

The fixed voice interconnection services, are used to allow the connection of voice calls between end-users on different networks, involving at least one call to or from a geographic phone number. These services support any-to-any connectivity between end-users.

The fixed terminating access service allows a call from one network to be carried from the point of interconnection to a party being called using a geographic phone number on another network (the access provider's network). For example, the fixed terminating access service allows a telephone call from an Optus customer, made using any device, to be connected to a customer on Telstra's network that has been assigned a geographic number (such as a customer with a POTS or a VoIP call service). In this case, the fixed terminating access service allows Telstra to recover the efficient cost from Optus for the use of its network in terminating the call.

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90 ACCC, Fixed Services Review Declaration Inquiry for the ULLS, LSS, PSTN OA, PSTN TA, LCS and WLR: Final Decision, July 2009.

91 ACCC, Declaration inquiry for the ULLS, PSTN OTA and CLLS, Final Determination, July 2006, p 12.

92 ACCC, Declaration inquiry for the ULLS, PSTN OTA and CLLS, Final Determination, July 2006.

93 Carriers with IP-based core voice networks were able to use PSTN OA and PSTN TA to interconnect with voice networks using PSTN/TDM switching cores. In this respect, the ACCC considers that the service descriptions for PSTN-OA and PSTN-TA were already technologically neutral, in that they are not limited by network infrastructure.

The fixed originating access service allows a call from a geographic number assigned to the access provider's network to be carried to a point of interconnection, typically where the call is a called party pays.

Access seekers predominantly use fixed voice interconnection services to provide the following services:

- national long-distance calls
- international calls
- mobile-to-fixed calls
- fixed-to-mobile calls, and
- local calls.

The current service descriptions for the fixed originating access service and the fixed terminating access service are set out in Appendix A. As part of this inquiry, we have considered possible changes to the service descriptions (Section 4.2.5) and have decided to vary the service descriptions to expressly include Session Initiated Protocol (SIP) interconnection. The new service descriptions are set out in Appendix B. This section provides the ACCC's assessment of whether the continued declaration of fixed voice interconnection services, as varied, will promote the long-term interests of end-users.

4.2.1. Promoting competition in relevant markets

Relevant markets

The ACCC's view is that the following markets are relevant for the provision of fixed voice termination and/or origination:

- wholesale fixed voice interconnection markets
- retail market for fixed voice services, and
- retail mobile services market.

Wholesale fixed voice interconnection markets

The ACCC considers that wholesale fixed voice interconnection markets are relevant markets. The demand for wholesale fixed voice termination or origination is a function of demand for the connection of fixed or mobile voice calls in the retail market.

There are no close substitutes for wholesale voice termination services on different fixed networks. An end-user making a voice call cannot choose the network a given number is connected to. Fixed networks continue to have exclusive access to subscribers on their own networks and control the termination of voice calls to and from the geographic number used by an end-user.

In previous declaration inquiries, we have noted the importance of the fixed originating access service to facilitate calls to special numbers such as 13/1300 (local rate) and 1800 (toll free) numbers. In its submission to the discussion paper, Telstra noted that calls to special numbers use a service called Inbound Originating Access (Inbound OA), which is often managed through bilateral commercial arrangements, rather than the fixed originating

access service.[94] Nevertheless, the fixed originating access service will continue to play a role in facilitating interconnection and can provide a fallback in circumstances where parties are unable to agree on commercial arrangements.

Retail market for fixed voice services

The ACCC considers that the retail market for fixed voice services is a relevant market. Fixed voice termination is commonly regarded as an essential input into fixed-to-fixed voice calls, and fixed voice origination continues to be seen as important for this purpose by some access seekers. The originating fixed network for the call purchases fixed termination and recovers these costs from its end-users, meaning that the retail market is affected by fixed termination.

Retail mobile services market

We also consider that the retail market for mobile services is a relevant market for fixed termination. Fixed voice termination is an essential input into mobile-to-fixed voice calls. The originating mobile network for the call purchases fixed termination and recovers these costs from its end-users. Therefore, the retail market in which mobile-to-fixed calls are made is affected by the fixed terminating access service. There are no potential substitutes for mobile calls made to fixed telephone numbers.

State of competition in relevant markets

Wholesale fixed voice interconnection markets

The ACCC considers there are no close substitutes for any of the interconnection services. Fixed voice origination and termination are therefore likely to be bottleneck services which are appropriate to declare. Network operators continue to have a monopoly over originating and terminating voice calls from and to their subscribers. Given this, it is unlikely that competition in the wholesale fixed voice interconnection markets is feasible as other networks must acquire termination services from the fixed voice operator, and origination can only be supplied by the originating network to which the subscriber is connected.

In the absence of declaration, larger network owners would have the ability and incentive to use their market power to either deny interconnection or to impose charges for interconnection services that may encourage end-users to switch from smaller networks to larger networks and discourage switching to smaller networks.

Retail market for fixed voice services

As noted in section 3.1.4 above, the use of fixed line voice calls is declining. For consumers in cities and metropolitan areas, and particularly younger consumers, mobile voice services will often be seen as an adequate substitute. However, where there is limited mobile connectivity in regional and remote areas, and where mobile services may be less appealing (such as to older consumers and businesses that prefer a geographic phone number), fixed voice services remain important. Submissions from ACCAN, Commpete, Pivotel, Optus and Telstra to the discussion paper all share this view.[95]

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94 Telstra, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 13.

95 ACCAN, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3; Commpete, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 4; Pivotel, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission*

Telstra remains a dominant provider of retail fixed line voice services as seen in Figure 3.4 above. This suggests that the retail fixed voice market is highly concentrated.

Retail market for mobile services

The retail market for mobile services is also highly concentrated and continues to be dominated by the three national mobile network operators: Telstra, Optus and TPG Telecom.

ACCAN submitted that the mobiles market is highly concentrated with significant barriers to entry, with declaration necessary to ensure smaller players can access mobile voice termination on competitive terms.[96] Commpete noted while there is some degree of competition in the retail mobiles market, there is far less in the wholesale mobiles markets.[97]

Telstra submitted that the Australian mobiles market is highly competitive, with continued increase in mobile phone services in operation and consumers having a large choice of mobile service providers, including sub brands and mobile virtual network operators. Telstra also noted that customers have benefitted from strong competitive outcomes including price and non-price competition and product innovation.[98] However, despite a highly competitive market, Telstra considered that mobile voice termination remains a bottleneck given the control mobile network operators have over connecting calls to their end-users.[99]

Since the last declaration, the most significant market development was the merger of Vodafone Hutchison Australia and TPG Telecom. This solidified the three-operator structure for the national mobiles market.

The ACCC considers that the retail mobile services market is a national market, although competitive dynamics in metropolitan areas and regional areas differ due to varying levels of infrastructure competition across Australia.

Overall, the mobile services market is highly concentrated and continues to be dominated by the three national mobile network operators: Telstra, Optus and TPG Telecom. The mobile network operators also have sub-brands that compete for the more price sensitive segment of the retail market.[100] Figure 4.1 below shows that the national mobile network operators (including their sub-brands) make up approximately 90% of the market. Figure 4.1 also shows that market share for each individual national mobile network operator has remained largely unchanged in the last 3 years.

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capacity service, fixed line services and domestic mobile terminating access service, July 2023, pp 3,11-12; Optus, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 4; Telstra, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

96 ACCAN, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 4.

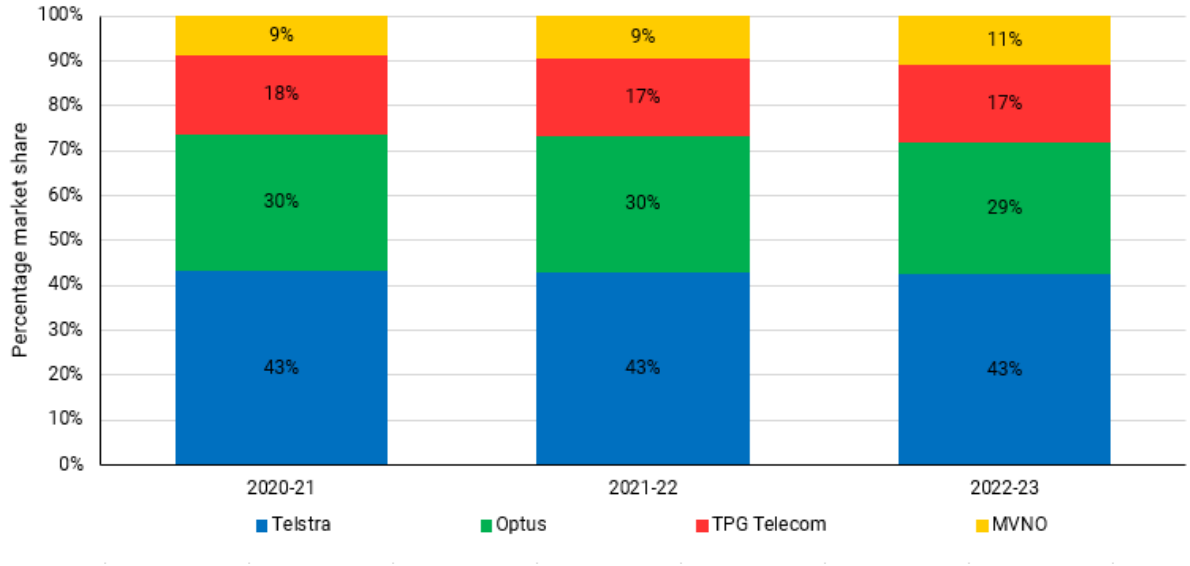
97 Commpete, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 2.

98 Telstra, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 16.

99 Telstra, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 16.

100 These include Belong (Telstra), Gomo (Optus) and Felix (TPG Telecom).

Figure 4.1 The retail mobile services market is highly concentrated



Source: ACCC Communications Market Report 2022-23

While unlimited mobile calls are prevalent in mobile plans, we have observed that since the last declaration inquiry, consumers have been paying significantly more for a range of plans supplied by the mobile network operators. We note increases in the prices of many post-paid plans and an effective increase in the prices of pre-paid plans where expiry periods were reduced, requiring customers to recharge more frequently.[101]

Is declaration likely to promote competition in relevant markets?

Preliminary view

Almost all the submissions to the discussion paper supported re-declaring the interconnection services with none opposed to re-declaring. Vocus submitted that the fixed voice interconnection services should remain regulated, despite the increasing trend for voice calls to be made using mobiles and over-the-top services. According to Vocus, the continued declaration of the voice interconnection services will promote competition in the related retail markets for end-users.[102] Optus also submitted that voice interconnection services remain a bottleneck service.[103] Symbio noted that the declared terminating access services have been critical to enabling it to enter and compete by creating a level playing field.[104]

As noted above, there is no substitute to the provision of wholesale fixed voice originating or terminating access and therefore declaration cannot promote competition in the wholesale fixed voice interconnection markets. However, given the monopoly position of networks over access to their own subscribers, declaration of fixed voice interconnection services helps to ensure access to these services.

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101 ACCC, *Communications Market Report 2020-2021, Australian Government,* 2021, p .

102 Vocus, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 4.

103 Optus, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 2.

104 Symbio, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 1.

Our preliminary view was that declaration is likely to promote competition in the retail markets for fixed voice and mobile services. As in previous declaration inquiries, the ACCC's preliminary view was that network effects mean that a network owner with a large number of fixed voice services has the ability and incentive to exercise market power by raising the price of termination on its network to any network owner that has a smaller number of customers. The exercise of such power would likely cause competitive harm and result in higher costs being passed on to end-users. Additional competitive harm could also arise from end-users switching to the larger provider to avoid the costs.

Final position

All submissions provided in response to the draft report that commented on fixed voice interconnection services broadly supported the continued declaration of these services.[105]

Pivotel agreed with the ACCC's preliminary view that there are no viable substitutes for any of the interconnection services and declaration is likely to foster competition by limiting the exercise of market power by network operators. Further, in the absence of declaration, larger network operators could exercise their market power to deny interconnection or impose excessive charges that persuade end-users to move to larger networks.[106] Similarly, Commpete submitted that the fixed voice interconnection services remain relevant to the competitive provision of special number and geographic number services, and declaration contributes to a level playing field.[107]

Other submissions did not specifically comment on why extending the declaration for the fixed voice interconnection services would promote competition.

The ACCC's final position remains that extending the declaration of fixed originating access service and fixed terminating access service is not likely to promote competition in wholesale fixed voice interconnection markets.

However, by ensuring access to fixed interconnection services will remain available to access seekers on efficient terms, declaring the fixed voice interconnection services (as varied) is likely to promote competition in the retail market for fixed voice services and retail market for mobile services.

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105 ACCAN, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 14 February 2024, p 1; Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 1, 4; Optus, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 21 February 2024, p 2; Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 3, 5; TPG Telecomm, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2; Twilio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 1, 2; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1.

106 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2.

107 Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February, pp 2, 5.

4.2.2. Achieving any-to-any connectivity

Preliminary view

Competing telecommunications networks need to interconnect with each other so that each end-user of a telecommunications service can communicate with another end-user on the same or a similar service. For this reason, any-to-any connectivity is particularly relevant to interconnection services as they enable end-users of one network to connect with end-users and services of another network.

Except Symbio, (which commented on the fixed terminating access service, but not the fixed originating access service in its 25 July 2023 submission), all submissions to the discussion paper on the role of the fixed voice interconnection services observed that ongoing declaration will support any-to-any connectivity.[108] Further, some stakeholders submitted that declaration is essential for this connectivity.[109]

Final position

All submissions to the draft report that commented on the fixed voice interconnection services endorsed the ACCC's proposals. Pivotel agreed with the ACCC's preliminary view that there are no viable substitutes for any of the interconnection services. It also agreed that extending declaration will promote any-to-any connectivity by ensuring that all end-users (including those connected to legacy copper networks) can communicate with other end-users on similar or different fixed and mobile networks.[110] Commpete noted the importance of declaration to ensuring a level playing field and to ensuring all operators are able to offer a service to complete a call originating on their network to an end-user on any other network, which is the essence of any-to-any calling.[111]

As noted above, network operators have a monopoly over access to their subscribers. Network operators have the ability and incentive to use this market power to either deny interconnection or to impose above cost charges for these interconnection services. Doing so would either prevent or discourage any-to-any connectivity between end-users on different networks. Consequently, the ACCC's final position is that declaring the fixed voice interconnection services (as varied) will promote any-to-any connectivity.

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108 ACCAN, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3; Aussie Broadband, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3; Optus, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 6; Pivotel, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3; Telstra, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, pp 11, 12; Virtutel, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, pp 2, 3; Vocus, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 4.

109 Commpete, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service,* July 2023, p 4; TPG, Submission in response to ACCC discussion paper, July 2023, pp 3-4.

110 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2.

111 Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 2, 5.

4.2.3. Encouraging efficient use of, and investment in, infrastructure

Preliminary view

Several submissions to the discussion paper noted that declaration of the fixed interconnection services is necessary to support access and pricing that encourages the efficient use of, and investment in, infrastructure.[112]

The ACCC's preliminary view was that declaration of the fixed interconnection services is likely to encourage the efficient use of, and investment in, infrastructure.

In the absence of declaration, large fixed network operators face little competitive constraint when negotiating the prices and terms and conditions of access to their networks for terminating and originating calls. Declaring the fixed voice interconnection services is likely to ensure access is based on reasonable terms. By preventing inefficiently high wholesale pricing, declaration also promotes allocative efficiency because the final prices paid for retail services by end-users will better reflect the efficient costs of provision of these services.

By promoting competition in related markets, declaration is likely to improve productive and dynamic efficiency in these markets by providing service providers the incentive to find lower cost means of producing their retail service. Declaration would also encourage businesses to invest and innovate in ways that will ensure they produce services of a chosen quality at the lowest possible cost in the future.

This is an industry where investment is characterised by sunk costs and economies of scale. Continued declaration is likely to reduce barriers to entry and have a positive effect on investment by access seekers.

The price that the carriage service providers can charge competitors for interconnection services is a determinant of these providers' decision to maintain, improve or expand their existing infrastructure, or whether to invest in new infrastructure. The ACCC considers that declaration in accordance with the telecommunications access regime allows the carriage service providers to recover the efficient costs of supplying and charging for fixed terminating access service and fixed originating access service and provides the correct incentives to the competing providers to invest efficiently in their existing networks.

Final position

All submissions that commented on fixed voice interconnection services were broadly supportive of the ACCC's proposals in the draft report.[113]

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112 Optus, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 6; Pivotel, *Submission in response to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service discussion paper*, 28 July 2023, p 13. Vocus, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 4.

113 ACCAN, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 14 February 2024, p 1; Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 2, 5; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2023, pp 1, 2; Optus, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 21

Pivotel and Commpete submitted that the proposal to continue to declare would provide improved certainty to businesses and promote the efficient use of and investment in infrastructure.[114] Remaining submissions did not specifically comment on why extending the declaration would encourage efficient use of, and investment in, infrastructure.

Based on stakeholder support and for the reasons outlined above, the ACCC's final position is that declaring the varied fixed originating access service and fixed terminating access service is likely to encourage the economically efficient use of, and investment in, infrastructure.

4.2.4. The ACCC has decided to extend the declarations of fixed originating and terminating access services with variations to the service description

For reasons discussed in this report, the ACCC has decided to extend and vary the declarations of the fixed originating and terminating access services, as doing so will promote the long-term interests of end-users by:

- Promoting competition in the retail fixed voice services market and retail mobile services market,
- Achieving any-to-any connectivity; and
- Encouraging the economically efficient use of, and investment in, infrastructure.

4.2.5. Scope of proposed declaration

Service description

Aussie Broadband[115], Symbio[116] and Virtutel[117] suggested in their submissions on the discussion paper that the fixed terminating access service description should be updated to reflect the current technology used and changes in industry practices. In addition, Virtutel suggested that the fixed originating access service description should be amended to clearly extend to IP Interconnect in addition to the signalling systems and techniques that are currently captured by the service description. The remaining submissions either did not comment on service descriptions or supported keeping them unchanged.

The current fixed terminating access service description is based on The Australian Communications Industry Forum's (now CommsAlliance) specification on signalling system no.7 interconnect Integrated Services Digital Network User Part. Prior to the release of

February 2024, p 2; Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 3, 5; TPG, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2; Twilio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1.

114 Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 2, 5; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2.

115 Aussie Broadband, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

116 Symbio, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 25 July 2023, p 1.

117 Virtutel, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

Communications Alliance Industry Guideline G672:2023 in December 2023, Time Division Multiplexing (TDM) was the only industry agreed interconnect model in Australia.[118]

Preliminary view

The ACCC's preliminary view was that the fixed originating access service and fixed terminating access service descriptions should not be revised as they remain appropriate for capturing the nature of the services and technologies. While progress was being made, at the time that the draft report was released the ACCC was not aware of an industry standard that the ACCC could link proposed IP-based interconnection service description changes to, and it would not be appropriate for the ACCC to suggest a standard through a revised service definition. We noted revisions to clearly capture IP interconnect should be considered in future declaration inquiries.

In the draft report, the ACCC also provided preliminary views on two additional proposals:

- to combine the service descriptions for the fixed terminating access service and mobile terminating access service; and
- to amend the service description to address an issue relating to the interaction between the standard access obligations and industry scam blocking obligations.

These issues are further addressed in section 4.3 below.

Length of declaration

In submissions to the discussion paper, Aussie Broadband[119], Pivotel[120] and Optus[121] supported a declaration period of 5 years. Telstra[122] supported a declaration of 3 years for both interconnection services and Symbio[123] supported 3 years for the fixed terminating access service alone (and did not comment on the fixed originating access service). Other submissions did not comment on the declaration period for these services.

Our preliminary view was that the expiry dates for the fixed voice interconnection services should be extended for another 5 years, in line with submissions from most stakeholders. Both services are technology-neutral and serve an important role in voice service markets. This aligned with our preferred declaration period for the mobile terminating access service and provides regulatory certainty for stakeholders.

Final position

Service Descriptions

Aussie Broadband, Commpete and Symbio responded to the draft report proposing the

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118 TDM is a technique that allows multiple signals to share a single communication channel by dividing it into time slots so that each signal can use the channel.

119 Aussie Broadband, *Submission in response to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service discussion paper*, Submission to the 2023 declaration inquiry, July 2023, p. 3.

120 Pivotel, *Submission in response to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service discussion paper*, 28 July 2023, p 3.

121 Optus, *Submission in response to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service discussion paper*, July 2023, p 2.

122 Telstra, *Submission in response to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service discussion paper*, July 2023 p 10.

123 Symbio, *Submission in response to Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service discussion paper*, July 2023, p 1.

following changes:

1. including a reference to Session Initiated Protocol (SIP) interconnection, as described in the December 2023 Communications Alliance Industry Guideline G672:2023 (the SIP Guideline), in the service descriptions for the fixed voice interconnection service descriptions.[124] SIP is a signalling protocol for initiating, terminating, and modifying user sessions over an IP network, and
2. including a reference to termination of 13/1300 numbers in the fixed terminating access service description.[125]

Telstra's submission to the draft report agreed with the ACCC's preliminary view that the existing service descriptions should be retained.[126] In March 2024, the ACCC undertook a further, short consultation with stakeholders concerning the possible inclusion of references to SIP interconnection in the service descriptions of the two fixed voice interconnection services.

1. SIP Interconnect

In submissions responding to the ACCC's draft report, Aussie Broadband, Commpete and Symbio submitted that SIP Interconnection is a newer protocol which is increasingly used in the telecommunications industry. Given that the new SIP Guideline had recently been released, these stakeholders considered it appropriate for fixed voice interconnection service descriptions to reference the new guideline. Symbio also submitted that all interconnected carriers have, or are proposing to, move to SIP Interconnection.[127]

On 6 March 2024 the ACCC consulted stakeholders on a proposal to vary the service descriptions for the fixed voice interconnection services to include a reference to SIP interconnection and the SIP Guideline. Aussie Broadband, Commpete, Pivotel and Symbio provided submissions that endorsed the proposed variation and Optus expressed that it had no major concerns with it.[128]

Telstra opposed the proposed variation on the basis that the current service descriptions remain fit for purpose and should be retained. Telstra also submitted that if the ACCC decided to pursue variations:

- migrations to SIP interconnect are sufficiently progressed that technology neutral service descriptions can be adopted,

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124 Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 1-3.

125 Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 1-3.

126 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2.

127 Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2.

128 Aussie Broadband, *Submission in response to the ACCC's 6 March service description variation consultation for fixed voice interconnection services*, 8 March 2024, p 1; Commpete, *Submission in response to the ACCC's 6 March service description variation consultation for fixed voice interconnection services*, 8 March 2024, p 1; Optus, Response to the ACCC's 6 March service description variation consultation for fixed voice interconnection services, 8 March 2024; Pivotel, *Submission in response to the ACCC's 6 March service description variation consultation for fixed voice interconnection services*, 8 March 2024; Symbio, *Submission in response to the ACCC's 6 March service description variation consultation for fixed voice interconnection services*, 8 March 2024, p 1.

- Communications Alliance Industry guidelines were not intended to operate as default terms and conditions (in the absence of an alternative agreement) and are not referred to in the service description for MTAS or other services, and,
- some of the time division multiplexing (TDM) specific requirements should remain for pre-selection and override services, which are only supplied over the PSTN. Mandating the inclusion of these call cases on new SIP Interconnect will raise significant unnecessary and inefficient costs for Telstra.[129]

In response to Telstra's submission, on 12 March 2024 the ACCC circulated revised variations to the fixed voice interconnection service descriptions for consultation. The proposed variations more closely aligned wording with the MTAS service description with technology neutral drafting, except for the pre-selection and override/access codes. Commpete, Pivotel, Symbio and Telstra endorsed the revised service descriptions, Pivotel also queried the need to refer to preselection and override/access codes in the fixed terminating access service description.[130]

Following this targeted consultation, the ACCC has decided to vary the fixed originating access service and fixed terminating access service descriptions to be expressly technology neutral in relation to interconnection protocols, except for pre-selection and override services. In response to Telstra's concerns, the ACCC has decided to vary the service descriptions to clarify that certain TDM specific requirements will remain for pre-selection and override/access codes (specifically for channel capacity, signalling and the nature of switchports) for the fixed originating access service. The ACCC acknowledges Telstra's submission that mandating SIP interconnect for pre-select and override services may incur unnecessary and inefficient costs. The ACCC considers Pivotel's observation is apt and has proposed to further simplify the fixed terminating access service description by removing the detailed provisions concerning 'Channel Capacity', 'Signalling' and the 'Nature of Switchports' that were included in the proposed variation circulated on 12 March 2024.

The ACCC considers that these variations ensure currency and clarity of the scope of the service descriptions. The ACCC also considers that these variations balance submissions from stakeholders to include SIP interconnection protocol, with the concerns raised by Telstra.

The ACCC also proposes to delete the definition of 'NBN Corporation' in the fixed termination access service, as the definition is redundant.

The ACCC will vary the service descriptions in the manner set out in Appendix B on and from 1 July 2024. Service descriptions for these services set out in Appendix A will remain in effect until 30 June 2024.

2. 13/1300 numbers

Aussie Broadband, Commpete and Symbio submitted that changing the fixed terminating access service description to include termination on 13/1300 numbers would better reflect current industry trends, including aligning wholesale arrangements for the interconnection of

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129 Telstra, *Submission in response to the ACCC's 6 March service description variation consultation for fixed voice interconnection services*, 14 March 2024, p 2.

130 Commpete, *Submission in response to the ACCC's 12 March service description variation consultation for fixed voice interconnection services*, 13 March 2024, p 1; Pivotel, *Submission in response to the ACCC's 12 March service description variation consultation for fixed voice interconnection services*, 13 March 2024, p 1; Symbio, *Submission in response to the ACCC's 12 March service description variation consultation for fixed voice interconnection services*, 13 March 2024, p 1 Telstra, *Submission in response to the ACCC's 12 March service description variation consultation for fixed voice interconnection services*, 14 March 2024, p 2.

calls to 13/1300 numbers.[131] Symbio also suggested that the fixed originating access service should be amended to expressly carve out 13/1300 Special Service codes.[132]

The ACCC has considered these submissions, however there is a lack of information or evidence to suggest that making this change would promote the long-term interest of end-users. Further, the ACCC understands that the process to connect 13/1300 calls involves outgoing calls diverting to a database at the point of interconnect where they are ascribed the geographic number of the desired called location. As such, calls that are placed to a 13/1300 number do not terminate on a 13/1300 number – instead they terminate on geographic numbers, which are already captured by the current fixed terminating access service description.

For these reasons, the ACCC does not propose to amend the fixed originating access service description or the fixed termination access service description at this stage.

Length of declaration

In response to the draft report, Telstra maintained its view that 3 years is the appropriate re-declaration period.[133] Telstra's reasons for a shorter declaration period are further detailed in section 3.2.5. However, all other submissions endorsed a 5-year declaration period.[134]

In addition to the reasons provided in section 3.2.5 (which describes declaration periods as they relate to call resale services) the ACCC notes that the fixed voice interconnection services are technology neutral and, as such, the possibility of end-users transitioning away from making calls through fixed line services is not a compelling reason to impose a shorter declaration period for the fixed voice interconnection services.

The ACCC considers 5 years to be an appropriate period for the impact of emerging technologies to be assessed. As such, the ACCC's final position remains that a 5-year declaration period is appropriate for the fixed originating access service and fixed terminating access service.

Conclusion

The ACCC's final position is that the expiry dates for the fixed originating access service and fixed terminating access service should be extended for a period of 5-years until 30 June 2029, and the service descriptions for these services should be amended in the manner set out in Appendix B.

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131 Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 5; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 1-3.

132 Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2.

133 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 5-7.

134 Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 3; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1;TPG, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 2; Twilio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1.

4.3. Other matters relating to interconnection

4.3.1. Combining the mobile terminating and fixed terminating access services into a single service description

In the discussion paper, the ACCC recognised that there is a growing substitutability between fixed and mobile networks to the point that differentiation in mobile and fixed voice termination may no longer be required. The paper noted that this raises the possibility of combining fixed and mobile termination into a new single termination service description. The ACCC sought submissions on whether such a change is technically feasible and if it presents any efficiency gains to access providers and seekers alike.

Commpete was the only stakeholder to explicitly support combining the two services under a single service description in their submission to the discussion paper, however it provided limited reasons in support of its position.[135] Virtutel submitted that it preferred to keep the fixed terminating access service and mobile terminating access service separate but was not opposed to the ACCC combining service descriptions and changing the definition to Network Terminating Access.[136]

Optus, Pivotel and Telstra's submissions to the discussion paper opposed combining the fixed terminating access service and mobile terminating access service under a single declaration based on technical feasibility issues and difficulties in determining a regulated price due to different cost drivers.[137] However, Pivotel supported further analysis and industry consultation on this issue during the next declaration period to see whether this may be workable in the future.[138]

The ACCC's preliminary view was to not combine the fixed terminating access service and MTAS service descriptions at this point in time. Pivotel and Symbio's submissions to the draft report agreed with this view.[139] Pivotel reiterated its view that it is not technically feasible to combine the service descriptions, and that pricing a combined service would be extremely challenging.[140] Other submissions to the draft report did not specifically comment on this issue.

As such, the ACCC's final review remains that it is likely premature to explore combining the two services at this time. The ACCC has decided not to combine the two services as part of this inquiry. However, the ACCC intends to explore the merits and issues associated with

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135 Commpete, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 7.

136 Virtutel, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, pp 3-4.

137 Optus, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 9; Pivotel, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 11; Telstra, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, pp 19-20.

138 Pivotel, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 11.

139 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 3; Symbio, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 4.

140 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 3;

this approach, including by further engaging with industry, prior to the next declaration review.

4.3.2. Treatment of scam blocking obligations

In the draft report, we highlighted a potential issue concerning the intersection between the standard access obligations under Part XIC of the CCA, and industry obligations to combat Scam Calls and Scam SMS under Industry Code *C661:2022 Reducing Scam Calls and Scam SMS.* Further, we highlighted Telstra's request that the ACCC consider including mechanisms in the declaration service descriptions, or subsequent access determinations, for the fixed terminating access service and mobile terminating access service to allow providers to refuse to terminate traffic that they suspect is scam or harmful to their end-users.[141]

In the draft report, the ACCC proposed that should the fixed terminating access service and mobile terminating access service continue to be declared, it would consider this issue as part of any access determination inquiry process, rather than through the declaration process.

Aussie Broadband submitted that the Industry Code *C661:2022 Reducing Scam Calls and Scam SMS* should be used to combat scams, rather than via declared services.[142]

Commpete, Pivotel and Telstra submitted that the intersection between the standard access obligations and scam obligations is best considered as part of the subsequent access determination inquiries.[143] Telstra submitted that it is in the long-term interests of end-users to support industry measures to address scam and spam SMS and call traffic.[144] TPG Telecom also submitted that the ACCC must include conditions in its voice termination service description to allow MNOs to prevent scam traffic from entering Australia's public mobile networks.[145]

However, Commpete urged the ACCC to closely consider access determination safeguards to ensure any-to-any connectivity, and that access providers are not given the means to disrupt legitimate access seeker traffic. Commpete expressed concerns that since early 2023, some mobile network operators have been disrupting legitimate traffic in the name of scam prevention. Commpete also outlined concerns with the mobile network operator practice of whitelisting numbers, noting that it could provide insight into an access seeker's customer base and may begin to attract a charge.[146]

Consistent with the ACCC's preliminary views in the draft report, and based on stakeholder submissions, we do not propose to address this issue by revising the service descriptions of the fixed voice interconnection services in this inquiry. Rather, we propose to address this issue through the access determination process.

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141 Telstra, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 20.

142 Aussie Broadband, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 1.

143 Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 3-4; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 9; Telstra, *Submission in response to ACCC draft report - mobile terminating access service*, 23 February 2024, pp 20-21.

144 Telstra, *Submission in response to ACCC draft report - mobile terminating access service*, 23 February 2024, pp 20-21.

145 TPG Telecom, *Submission in response to ACCC draft report - mobile terminating access service*, 23 February 2024, p 14.

146 Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, pp 3-4.

The ACCC will soon commence access determination inquiries for the fixed voice interconnection services and, if extended, the MTAS once that declaration inquiry is finalised. Among other matters, the ACCC intends to consider whether the access determinations for these services should include terms that support or facilitate the adoption of measures that address scam traffic by industry. As part of the access determination inquiries, we will consider submissions made in response to the draft report and will consult with relevant stakeholders, including consumers, industry and the ACMA.

5. Should the domestic transmission capacity service continue to be declared?

The ACCC's final position is that:

- **extending the declaration of the DTCS for a further 5 years will promote the long-term interests of end-users**
- **the service description should be varied to reflect technical changes in transmission capacity services characteristics and to align the service description closer to those services currently bought and sold in the wholesale market**
- **the service description should be varied to focus on areas of monopoly infrastructure.**

5.1. Introduction

Previous domestic transmission capacity service (DTCS) declaration inquiries have gradually deregulated transmission capacity routes where the ACCC has considered there is sufficient contestability.

As part of this inquiry, several stakeholders highlighted that the DTCS declaration remains relevant in some geographic areas, particularly those where there is a monopoly infrastructure provider. Stakeholders raised that the NBN now serves a broader geographic area and particular downstream markets, making the DTCS less relevant in those areas and for the retailers serving end-users in those areas.

As the following discussion will outline, the ACCC has decided to extend the expiry date of the DTCS declaration and vary the DTCS service description by:

- Amending the scope of the DTCS declaration to further deregulate some geographic areas. This includes a change to the 'competition criteria' that the ACCC has previously used to assess whether competition is effective on an exchange service area (ESA) basis.
- Amending the DTCS service description to be simpler and closer to the types of transmission capacity services currently bought/sold.

This section provides an overview of previous DTCS declaration inquiry positions and of the 2019 DTCS service description.

5.1.1. What are the services?

The DTCS was first declared in 1997 because it was recognised to be an essential input for other telecommunications services. Communications networks rely on transmission capacity services to connect transmission points, which ultimately create an end-to-end connection between end-users.

The technical definition of the DTCS and the geographic scope of regulation have evolved over the years to reflect market developments, industry consolidation and common trading practices.

Previous iterations of the DTCS service description

The physical infrastructure is the key component required to create a communications network connection. Transmission capacity services run over the top of physical assets, meaning the physical asset operates in a 'conditioned' state. The conditioned state requires equipment attached that facilitates the transfer of data over the physical asset. For our analysis, we refer to conditioned services over physical infrastructure as 'transmission capacity services'.

The unconditioned state of physical optical fibre assets is known as 'dark fibre' and no communications can be sent over the asset until it is conditioned.

The DTCS is a wholesale transmission capacity service for the carriage of communications between 2 transmission points (that is, it is a point-to-point service). It is one type of product in the market for wholesale transmission capacity services.

The 2019 DTCS service description specified the following features:

- It is symmetric (meaning that the download and upload data rates are the same).
- It is provided on a permanent, uncontended basis (meaning users do not share capacity with each other).
- It applies to specific point-to-point geographic routes depending on where the 2 transmission points are. The geographic routes that are captured by the DTCS are detailed at Appendix C.
- It may be acquired at different capacities at and above 2 Megabits per second (Mbps).
- It is a wholesale input into the provision of other services.
- It does not cover transmission capacity between:
    - One customer transmission point and another customer transmission point. This refers to the internal cabling inside an end-user's premises that is not part of the access provider's transmission; or
    - One access seeker network location and another access seeker network location. This refers to cabling within an exchange building or transmission point location, to connect the access seeker's nearest point of presence to the transmission owned by the access provider.

The ACCC has decided to vary the DTCS service description.

Route types

The geographic scope of non-intercapital transmission markets is difficult to define due to the diversity of routes between transmission points. The ACCC has previously defined transmission capacity service routes into the following categories based on geographic reach:

- inter-capital – routes from an exchange service area within the boundary of a capital city to an exchange service area within the boundary of another capital city (capital cities boundaries do not apply to Darwin or Hobart)

- regional – where either or both the beginning and end of a route are outside the boundaries of a capital city
- metropolitan – where both the beginning and end of the route are within the boundary of the same capital city
- tail-end – where both the beginning and the end of the route are located within the same exchange service area
- mobile base station routes.

We understand that access seekers purchase and optimise combinations of DTCS and similar products based on the locations that they need their traffic transported between, as well as their ability to aggregate traffic across these geographies. There may however be cost benefits from utilising one supplier as the provider of transmission capacity services.

5.1.2. Why have we historically regulated these services?

Transmission capacity services are an essential wholesale input to the provision of other communications services, they are acquired as an underlying transport layer for other communications.

There are high barriers to entry to the market for wholesale transmission capacity, as network deployment is capital intensive. In some cases, particularly in regional and remote areas, this makes it economically inefficient to duplicate network infrastructure. Telstra remains the dominant transmission capacity supplier in these areas.

Regulation of the DTCS has ensured that carriers and carriage service providers are able to access transmission services under reasonable terms in areas where competition for the supply of these services is insufficient or inexistent.

5.1.3. Previous declaration inquiries

The DTCS was first declared in 1997 because it was recognised to be an essential input for other telecommunications services. The technical definition of the DTCS and the geographic scope of regulation have evolved over the years to reflect market developments, industry consolidation and common trading practices. Over time, the ACCC has removed regulation in areas that have been found to be competitive, maintaining regulation of the DTCS in areas where there is no effective competition or where access to transmission is limited.

The ACCC held the last DTCS declaration inquiry between March 2018 and April 2019. In the 2019 declaration inquiry, the ACCC varied the service description to acknowledge typical speed tiers and to include valued-added services commonly included in equivalent commercial products.

Taking into account further investments in infrastructure, the ACCC also decided that an additional 137 metropolitan exchange service areas and 27 regional exchange service areas were sufficiently competitive and would be deregulated with effect from 1 January 2020.

5.2. The domestic transmission capacity service

5.2.1. Promoting competition in relevant markets

The ACCC has identified two broad types of markets where re-declaration of the DTCS is likely to promote competition:

- The wholesale market within which transmission capacity products are bought and sold. The DTCS is one type of product in this market.
- Retail markets that are dependent upon access to transmission capacity services.

Submissions to the discussion paper recognised both types of markets.[147]

We also found that the most relevant downstream markets are for:

- retail mobile services
- retail residential voice and broadband services
- retail voice and broadband services for corporate and government customers (together referred to as business services).

Wholesale market for transmission capacity products

The wholesale market provides access to a range of transmission capacity services, which are then used by retail service providers to deliver differentiated telecommunications services and bundles to consumers and business customers.

Demand for transmission services is entirely a function of the need for retail service providers to backhaul traffic from access networks to their core networks, including over-the-top and cloud computing providers requiring backhaul from their networks to access networks.

The wholesale market is complex in terms of product substitutability. We consider that there are separate wholesale products available to access seekers depending on the end-users' use case, being:

- service-specific products, where there are restrictions that apply to the types of traffic that access seekers can transport or aggregate
- service-agnostic products, where access seekers have the choice of what traffic they transport or can aggregate multiple types of traffic.

Given the nature of the underlying infrastructure, variation in the geographic dimensions of the wholesale market is significant. The physical infrastructure over which transmission services are run is expensive to deploy, particularly in regional and remote areas.

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147 See e.g. Vocus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, July 2023, pp 1-2; Optus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic MTAS*, July 2023, p 5; TPG Telecom, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 2; ACCAN, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service discussion paper*, 12 July 2023, p 2; Commpete, *Submission on Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

State of competition

In the discussion paper the ACCC identified 3 well-defined tiers of providers in the market for transmission services.

- A first group is comprised of the four national access providers (Telstra, Vocus, TPG Telecom and Optus), all of which also provide services in downstream markets.
- A second group of providers compete with the major national access providers within a narrower scope, generally limited to transmission in capital cities' central business districts (CBDs), backhaul to NBN POIs, links between datacentres and from landing points of international subsea cables.
- A third group operates telecommunications networks to support their core activities in other industries like railways or power networks, selling excess transmission capacity as a side business. These services are generally limited to the state where these utilities operate, and normally lack a diverse path protection.

Submissions to the discussion paper noted market changes leading to increasing competition in the transmission market, including from the NBN and due to investments in transmission networks driven by the growing demand for data, the growing number of datacentres and the presence of large over-the-top providers. [148]

However, while competition is strong along the most lucrative routes, Telstra remains the sole operator of transmission networks in many regional and remote areas.[149]

Product dimensions of the market

The product dimension of a market refers to the good and/or service supplied in that market and the potential sources of substitutes. The current DTCS service description is technology agnostic. There are a number of technologies used to supply transmission capacity services, including:

- terrestrial optical fibre cables
- digital microwave
- submarine cable
- satellite.

Optical fibre is the predominant technology used for transmission capacity services.

Submissions to the discussion paper generally agreed in that no DTCS products are currently being purchased in the wholesale transmission capacity market. There were various reasons presented for this, including:

- Commpete submitted that Telstra has sought to avoid and manipulate the service declaration by bundling services together with additional 'managed' elements to avoid the service declaration and has implemented various exclusivity provisions to discourage take up of the declared service.[150]

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148 Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 6., Vocus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, July 2023, p 2., Vocus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

149 Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 7.

150 Commpete, *Submission on Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 6.

- A stakeholder noted that there can be capacity restrictions on DTCS products, such that it needs to acquire another commercial transmission capacity product instead.[151]
- A stakeholder outlined that Telstra did not allow the purchase of its DTCS product, known as the Data Carriage Service, with other commercial transmission capacity service products such as the Managed Lease Line.[152]

Telstra stated that in the past, there was no customer interest into the DTCS product. It did not therefore see it as an attractive offering for its customers, and thus did not focus its sales or marketing efforts on the DTCS product. Telstra noted that it was a choice for the customer to select either the DTCS product or Telstra's commercial offering.[153]

Telstra submitted that the DTCS reflects an effective 'anchor' product in the market which has proven to promote competition, innovation and investment.[154]

Vocus, as the second largest transmission capacity provider, similarly submitted that it sells and acquires transmission services similar to the DTCS service, rather than the regulated DTCS product. Accordingly, its downstream corporate and government customers use services similar to DTCS rather than a DTCS product itself.[155]

Impact of the NBN

In this inquiry we have identified two NBN-related developments that took place since the 2019 DTCS declaration inquiry, which have impacted on the relevant markets for transmission capacity services:

- the migration of almost all residential voice and broadband services to the NBN
- the move towards NBN services for enterprise and government customers, including NBN Enterprise Ethernet services.

Stakeholders generally agreed in that migration to the NBN has shifted the demand for transmission capacity services from local exchanges to NBN POIs.[156]

In the 2019 DTCS declaration inquiry, we were of the view that NBN services were not yet fully substitutable for DTCS services as the NBN build phase was not complete.[157] Our preliminary view in the Draft Report was that some NBN products are now substitutes for transmission capacity services, but the competitive impact of the NBN varies depending on the downstream market being considered.

Dark fibre

Dark fibre services are provided commercially by a subset of the providers who supply transmission capacity and wholesale aggregation services. Our preliminary view was that while dark fibre can be a substitute to capacity acquired on a running network, it is generally

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151 Information provided by stakeholder.

152 Information provided by stakeholder.

153 Information provided by stakeholder.

154 Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 5.

155 Information provided by Vocus.

156 See e.g. Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 9.

157 ACCC, *An ACCC Final Report on the review of the declaration for the Domestic Transmission Capacity Service*, April 2019, p 17.

available along competitive routes and as such, not available in areas where declaration of the DTCS would likely promote competition.

Geographic dimension of the market

The draft report identified a national market for the supply of wholesale transmission capacity services, with geographic variations in the contestability of routes. The draft report noted that the contestability of routes also depends on the downstream market, since the NBN carries most of the traffic for residential voice and broadband and voice and broadband for corporate and government end-users and transmission services are competitive in most of the NBN POIs.

Several stakeholders, in response to the discussion paper, submitted that metropolitan areas have had more transmission capacity services available in recent years, leading to greater competition in the wholesale market in those areas. We also noted in the paper that we had observed that investment in transmission capacity infrastructure since the previous DTCS declaration Inquiry has focused on 4 high-traffic sectors:

- existing, and alternative, national transmission corridors (mostly inter-capital)
- backhaul to NBN POIs
- fibre between datacentres
- fibre densification in metropolitan areas.

This preliminary view was informed by submissions to the discussion paper, which acknowledged the contrast between increasing investment in high-traffic routes and stagnant development of transmission infrastructure in regional areas, which generally have Telstra as the sole provider and should continue being regulated. [158]

There continues to be limited competition in regional and remote locations

Most submissions to the discussion paper agreed that regional and remote locations, where there is generally only one access provider, continue to require regulated access to a transmission capacity service. [159]

In response to the discussion paper, Commpete submitted that the DTCS remains critical in the modern telecommunications environment and access to DTCS persists as a bottleneck.[160] Virtutel submitted that without DTCS, Telstra, being the largest network provider, would potentially restrict or outprice other service providers who seek access to

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158 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 8; TPG Telecom, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, pp 2-3; Information provided by stakeholder.

159 Vocus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, July 2023, p 3; Virtutel, *Submission to ACCC Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 2.; Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 8; ACCAN, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service discussion paper*, 12 July 2023, p 2.; Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 7; Optus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic MTAS*, July 2023, p 6.

160 Vocus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

their network for transmission services, hindering or restricting competition in regional locations.[161]

In its submission to the discussion paper, Pivotel outlined that it has faced challenges in securing access to adequate transmission services on reasonable terms, particularly in more sparsely populated regions with less backhaul options.[162] Pivotel submitted that without declaration, Telstra's dominance in rural and regional areas will be further entrenched to the detriment of consumers and the market more generally.[163] Pivotel added that Telstra is the only operator of transmission networks in many regional and rural areas.[164]

Telstra acknowledged that in areas where it is the sole operation of transmission capacity services – and similar - circumstances, declaration continues to be appropriate.[165]

ACCAN submitted that there are many regional transmission corridors in which there are limited or no economically viable alternatives to monopoly DTCS.[166] In ACCAN's view continued declaration of DTCS where there is limited, or no competition is appropriate and consistent with promoting the long-term interests of end-users.[167] Similarly, Optus submitted that in many regional and remote areas, Telstra continues to maintain a monopolistic position in the supply of wholesale transmission services.[168]

Final position on state of competition in wholesale market for transmission capacity products

In response to the draft report, no stakeholder explicitly commented on the wholesale market for transmission capacity services. However, Telstra submitted that it welcomed the ACCC's recognition that the NBN has driven fundamental changes to the market for transmission capacity services.[169] Pivotel also expressed its viewed that declaration is likely to promote competition in relevant markets.[170]

Telstra and Pivotel also commented on the lack of competition in some geographic areas. Telstra submitted that it is the sole operator of transmission capacity networks in some regional and remote areas.[171]

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161 Virtutel, *Submission to ACCC Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 2.

162 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 9.

163 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 3.

164 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 8.

165 Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 7.

166 ACCAN, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service discussion paper*, 12 July 2023, p 2.

167 ACCAN, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service discussion paper*, 12 July 2023, p 2.

168 Optus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic MTAS*, July 2023, p 6.

169 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, February 2024, p 3.

170 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 10.

171 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, February 2024, p 4.

The ACCC considers there is a separate wholesale market for DTCS transmission services and that these are used in a range of downstream markets (both other wholesale markets and retail markets). We recognise that the non-NBN transmission capacity products in the wholesale market could be used to provide services in various downstream markets. That is, the wholesale market is generally not separated by the downstream services provided. The NBN has had a significant impact on the transmission capacity services wholesale market, as will be outlined further below.

We consider that the level of competition in the market for transmission services varies depending on geographic areas and routes. The DTCS service description distinguishes the level of competition on those routes depending on the geographic location of the route end points.

Retail market for mobile services

Mobile network operators use transmission capacity services to connect their mobile base stations to their core network, the Internet and other networks, to support mobile services.

Mobile network operators pursue different strategies for mobile backhaul, including self-build, use of dark fibre and of transmission capacity services from other carriers like Telstra. Reliance on third party mobile backhaul is more likely in regional areas but is also common in outer metro areas.

Backhaul costs are a significant component of a mobile network operator's capital and operational expenditure. Submissions to the ACCC's Regional Mobile Infrastructure Inquiry noted, that depending on location, mobile backhaul can be the largest cost incurred by a mobile network operator.[172]

Several stakeholders submitted that DTCS remains a crucial input to the delivery of fixed and mobile services. Optus submitted that DTCS regulation has benefitted the market for mobile services as it has enabled greater use of fibre backhaul and played an important role in the provision of mobile backhaul.[173] Pivotel considered that transmission capacity services remain a crucial input to the delivery of fixed and mobile services.[174] Access to DTCS products allows Pivotel to compete in downstream markets for the supply of fixed and mobile services, and to collaborate as a neutral host provider.[175] Commpete submitted that overall, the main bottlenecks for transmission capacity service relate to traffic for mobile networks.[176]

State of competition

Telstra, Optus and TPG Telecom are vertically integrated mobile network operators, meaning that they supply to both wholesale and retail customers.

During the last declaration inquiry, the ACCC recognised that the characteristics of demand and supply of this market are unique, as [177]

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172 ACCC, *Regional Mobile Infrastructure Inquiry*, 30 June 2023, p 42.

173 Optus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic MTAS*, July 2023, p 5.

174 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 6.

175 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 7.

176 Commpete, *Submission on Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 1.

177 ACCC, *Final Report on the review of the declaration for the Domestic Transmission Capacity Service*, April 2019, accessed 20 November 2023, p 22.

- demand for mobile backhaul only comes from other mobile network operators.
- access to mobile backhaul can be hampered by the remoteness of mobile tower sites, difficulty in accessing those sites, and
- the costs of deploying and maintaining mobile backhaul transmission in remote areas may be higher than in metropolitan areas.

Several stakeholders submitted that mobile services are now the primary source of demand for DTCS-like products, given other services such as residential and business, can be generally served by the NBN.

Commpete submitted that overall, the main bottlenecks for telecommunications are in the mobile network.[178] Vocus noted that mobile backhaul was a large segment for non-NBN transmission capacity providers.[179] Vocus also noted that mobile backhaul networks are increasingly moving to more flexible IP-based platforms. Various stakeholders submitted that increasing data consumption and demand underlies investment and development in the market for transmission services including mobile backhaul.[180]

Services are predominately provided over optical fibre

Mobile network operators can use a mix of access and transmission capacity services to provide mobile backhaul, primarily over optical fibre. Most mobile backhaul uses Ethernet-based products, with transmission services in place likely to remain active in the short to medium term. However, the 5G rollout requires high-capacity mobile backhaul, which we expect is leading to increasing demand from mobile network operators for dark fibre in 5G rollout areas.[181]

Microwave links are the second most used technology to provide transmission capacity services. Microwave links normally have less capacity than optical fibre and require signal regeneration after a smaller number of kilometres in comparison to optical fibre.

In regional areas, a mobile network operator may choose a microwave link as an alternative to purchasing third-party optical fibre. We consider that microwave links are not a strong substitute for transmission capacity services over optical fibre, due to their:

- relative inability to support higher capacity links compared to optical fibre backhaul, meaning that access seekers are likely to rely on optical fibre connections in higher traffic areas
- requirement for line-of-sight connectivity
- significantly lower transmission range than optical fibre transmission capacity services
- higher risk of failure due to microwave antennas being exposed, weather conditions, etc.

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178 Commpete, *Submission on Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 1.

179 Information provided by Vocus.

180 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 7; Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 5; Commpete, *Submission on Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

181 For example Ciena, a leading equipment manufacturer in optical and routing systems, notes one 5G end-user can generate up to 10 times the bandwidth than a comparable 4G LTE end-user. Ciena, *Spotlight on 4G/5G backhaul networks*, 13 August 2020.

Satellite technology, both LEO satellite and geostationary orbit, can be used to provide mobile backhaul. We have not received enough evidence to support that satellite is a substitute to DTCS products. We recognise that there are ongoing developments in satellite technologies, particularly for LEO satellite systems. Mobile backhaul through LEO satellites is yet in a trial stage and might in future be a more suitable complement to optical fibre and microwave in remote areas.[182]

Impact of the NBN

Several stakeholders, such as Pivotel, submitted that NBN Co's Enterprise Ethernet services could be used for other purposes such as mobile backhaul, but NBN Co does not currently permit this.[183]

We understand that NBN Co does currently offer a product called the Cell Site Access Service which can be used for mobile backhaul.[184] We understand that NBN Co has consulted on withdrawal of this product and is currently considering next steps, taking into account feedback received.[185]

NBN Co's *Enterprise Ethernet Fair Use Policy* prohibits the use of NBN Enterprise Ethernet as an input for data aggregation or to support connections with the purpose of interconnection for Carriers, Carriage Service Providers or Content Service Providers.[186] There is a similar clause in NBN Co's *Ethernet Fair Use Policy*.[187]

Due to these restrictions, our preliminary views is that NBN services are not substitutes for DTCS products in the wholesale transmission capacity market where the end-user is acquiring a mobile service.

Geographic variations

We have determined in this inquiry that routes that are used for mobile backhaul can be:

- a tail-end service, from the mobile base station to the first point of aggregation
- an inter-exchange link that includes a tail end and a link to the access seeker's network (at its nearest physical point of interconnection on the access seekers network).

Mobile backhaul services are more concentrated in metropolitan areas as mobile network operators will often build their own optical fibre or have access to multiple optical fibre providers and as a result, mobile backhaul can be acquired from multiple providers.[188]

Numerous stakeholders raised that Telstra remains the dominant, and often the sole, supplier of mobile backhaul in regional areas.[189]

Final position on state of competition in retail market for mobile services

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182 iTWire, *Telstra adopts OneWeb LEO for remote mobile backhaul*, accessed 1 December 2023

183 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 10.

184 NBN Co, *Other agreements*, accessed 19 December 2023.

185 Information provided by NBN Co.

186 NBN Co, *Fair Use Policy - nbn™ Enterprise Ethernet Product Module - Wholesale Broadband Agreement*, effective 1 December 2020, accessed 24 November 2023, s 4.3.

187 NBN Co, *Fair Use Policy - nbn® Ethernet Product Module - Wholesale Broadband Agreement*, effective 1 December 2023, accessed 4 December 2023, s 4.3.

188 Optus, *Submission in response to ACCC discussion paper – Public inquiry into the declaration of the DTCS, fixed line services and domestic MTAS*, July 2023, p 5.

189 Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic MTAS*, July 2023, p 7.

In response to the draft report, Pivotel submitted that it agrees that declaration is likely to promote competition in relevant markets, particularly in the markets for mobile services.[190] Pivotel submitted that extending the DTCS declaration to capture mobile base station routes in certain geographic areas is likely to promote competition in the retail market for mobile services.[191] Pivotel noted that there continues to be limited competition in regional and remote locations.[192] Other stakeholders did not explicitly comment on the retail mobile market.

We recognise that while the NBN has had a significant impact on transmission capacity services, it cannot be used to serve the retail mobile market. Consequently, retailers in the mobile market continue to be reliant on non-NBN transmission capacity services. In some geographic areas, mobile network operators may prefer to self-provide the transmission capacity required to serve a mobile base station. However, in regional and remote areas, the cost of doing so increases and the population density decreases, making it less commercially viable to do so. This means that there is a higher level of dependence on access to transmission capacity services in more regional and remote areas.

The ACCC's final position is that competition in retail mobile markets is likely to be promoted through the declaration of the amended DTCS, to apply in certain geographic areas where there is insufficient competition.

Retail market for residential voice and broadband services

The migration of residential voice and broadband services to the NBN has shifted the demand for transmission services to carry residential voice and data from thousands of Telstra exchanges to the 121 NBN POIs. NBN retailers can acquire wholesale transmission services in a fairly competitive setting at the majority of POIs, which has reduced the impact of declaration of the DTCS on this downstream market.

Over the course of this inquiry we found out that:

- The majority of residential end-users purchase a broadband product utilising the NBN customer access network.
- Mobile network operators provide 4G and 5G based home broadband services which can be similar to fixed broadband services, but have more limited availability.
- A large majority of consumers now take broadband as part of a bundle of services, with voice options.[193]

State of competition

Voice and broadband services are largely provided over the NBN and, to a much lesser extent, on Telstra's legacy copper network. Over the NBN, most residential customers buy retail home broadband services from Telstra, Optus and TPG Telecom. In more recent years, smaller retailers such as Vocus and Aussie Broadband have increased their market share.[194]

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190 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 10.

191 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 10.

192 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 10.

193 ACCC, *NBN Wholesale Market Indicators*, December 2023.

194 ACCC, *Internet Activity Report – June 2023*, December 2023.

Impact of the NBN

As NBN services currently accounts for around 91% of all voice services and around 98% of broadband services in Australia,[195] most of the demand for transmission services to carry this type of traffic is concentrated in transmission routes between the 121 NBN POIs and service providers' core networks in major capital cities.

Our preliminary view was that the primary products utilised to provide retail home broadband and voice services are NBN services. This means that the DTCS is largely irrelevant to the provision of these residential voice and broadband services, except in the few areas where a retail service provider requires a regulated transmission capacity service to connect an NBN POI to its nearest point of network presence.

Geographic variations

The 4 major carriers (Telstra, Optus, TPG Telecom and Vocus) currently provide transmission services at 97 of the 121 NBN POIs, with 19 more POIs serviced by 3 access providers. Only 5 NBN POIs are served by just two major access providers.[196] Smaller carriers also provide transmission services at some NBN POIs in competition with the established carriers.[197]

Several stakeholders highlighted the importance of the availability of competitive transmission services to NBN POIs. On this basis, our preliminary view was to continue to have the DTCS apply at the 5 NBN POIs where there are only two providers.

Final position on state of competition in retail market for residential voice and broadband services

We did not receive specific comments on this market in response to our draft report. We note that Telstra submitted that there should not be different criteria used to assess competition at an exchange service area with an NBN POI as compared with other exchange service areas.[198]

We consider that competition for transmission services is strong in the majority of NBN POIs and that accordingly regulation of the DTCS would not likely promote competition in the supply of NBN services. The ACCC maintains its view that on most routes, there is a lack of demand for DTCS products in the supply of residential voice and broadband services.

However, we note that there are 5 NBN POIs that have 2 or less providers, and that stakeholders have particularly raised the importance of connectivity to NBN POIs. We consider that at these 5 NBN POIs, it is likely that competition would be promoted in the retail market for residential voice and broadband services to the extent that a retail service provider requires a transmission capacity service to connect from the NBN POI to its nearest point of network presence.

Consequently, our final position is that DTCS regulation should continue to apply at the 5 NBN POIs where there are 2 or fewer providers.

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195 ACCC, *NBN Wholesale Market Indicators*, December 2023.

196 The 5 NBN POIs are: Darwin, NT; Bundaberg, QLD; Katanning, WA Bathurst, TAS and St John which is also in TAS.

197 ACCC analysis based on Infrastructure RKR 2023 reports.

198 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4.

Retail market for voice and broadband services for corporate and government customers

Several stakeholders noted that business end-users are increasingly preferring to purchase a holistic IP-based 'solution' from one retailer to connect to the Internet and relevant locations, instead of dedicated transmission services to interconnect their branches as they did in the past.

Transmission capacity services have historically been used to provide:

- connectivity between business sites
- connectivity to data centres
- business connectivity to virtual private networks
- connectivity to the Internet and cloud computing.

We heard that businesses will look for services that support their overall business, rather than purchasing parts of a solution. For example, a business may want to support an online sales platform, connectivity to an app, or a call centre with voice calls, and will look for a retail service option that provides that connectivity.

Based on information provided to us during the inquiry, we understand that some businesses may purchase an Ethernet based point-to-point product between two or more locations. Alternatively, they may become cloud-based, and purchase an IP-based Internet solution which provides connectivity between sites, data centres and to the Internet.

We understand that many retail service providers will look to buy transmission capacity services with a set of performance characteristics (such as capacity) to suit their end-users, and then form a retail IP-based network product over the top of this to serve end-users. This enables connectivity to applications, voice services over the Internet (such as Microsoft Teams), and the Internet.

A characteristic of the supply chain for business services is that the end-user may not know which network operator is supplying the underlying transmission capacity service, as retail service providers may use a mix of their own and third-party transmission capacity services. Some stakeholders indicated that business end-users are largely indifferent as to who owns the underlying transmission capacity service(s).

State of competition

We have not been provided with information about market concentration or market shares for retailers providing services to business end-users. There are vertically integrated network operators such as Vocus, Telstra, Optus, and others, which provide retail fibre broadband to businesses.[199]

We understand that large businesses customers will typically need to connect to different sites such as a head office, data centres, and the Internet, requiring for this purpose a range of products including an NBN Enterprise Ethernet, or a transmission capacity service product. Retailers may combine a range of transmission capacity services which feed into their network operations, such that there is not a clear 'single product' type that is commonly purchased in the market.

Vocus noted that the over-the-top services segment is a large component of business services that require significant capacity on inter-capital and international routes, but there

[199] We have not been provided with information about market concentration or market shares for retailers providing services to business end-users.

are also small network builders serving regional customers seeking interconnection to data centres in capital cities.[200]

Impact of the NBN

Stakeholders submitted that NBN Co now has products in the business market that are a competitor to DTCS products.[201]

NBN Co offers 2 types of business-grade products: business Ethernet and Enterprise Ethernet. Business Ethernet features symmetrical speeds between 5 and 100 Mbps with a committed information rate up to 100 Mbps depending on the underlying NBN technology. The committed information rate depends on the technology of delivery.[202] As at 31 December 2023, there were close to 25,000 Traffic Class 2 services in operation.[203]

Enterprise Ethernet features symmetrical speed tiers ranging from 10/10Mbps to 10/10Gbps, with a committed information rate option. Enterprise Ethernet services are not available across the full NBN fixed line footprint but can be acquired in any of 321 *Business Fibre Zones* across Australia, including 142 regional centres.[204]

We understand that NBN Enterprise Ethernet as a product can support a range of downstream services that retail service providers either sell as a business internet service or use as an input into a broader service.[205] NBN Enterprise Ethernet is symmetric. While it would perform similarly to a DTCS product, it is not permanent in the sense that traffic wouldn't always follow the same path. It also operates with a committed information rate which means contention is unlikely, although it is not strictly uncontended.[206] NBN Enterprise Ethernet also operates over shared core network infrastructure with dedicated access network infrastructure, meaning contention is limited but it is not strictly uncontended.[207] TPG Telecom submitted that NBN Co's business grade services should not be considered a complete substitute for access to Telstra's transmission services.[208]

Several stakeholders provided information during the inquiry that business end-users are also utilising NBN Traffic Class 4 with additional service level agreements available for business use. For small to medium sized businesses, stakeholders noted that often the NBN Traffic Class 4 services will provide sufficient bandwidth and speeds for the end-user. Stakeholders noted that most businesses can operate on a 100/40 Mbps NBN speed tier and that increasingly, businesses are not concerned with having symmetric services.[209]

The ACCC considers that there is a high degree of demand-side substitution between NBN products (Traffic Classes 2 and 4 and Enterprise Ethernet) and other products built over non-NBN transmission capacity services, despite differences in characteristics of the retail products.

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200 Information provided by Vocus in a meeting with the ACCC.

201 Vocus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

202 Services up to 20Mbps are provided across the full NBN fixed line footprint (that is, FTTB, FTTN, FTTC and HFC technologies). Services above 30Mbps and up to 100Mbps are only available on NBN fibre (FTTP) footprint.[202]

203 ACCC, *NBN Wholesale Market Indicators*, December 2023.

204 NBN Co, Business NBN enterprise ethernet, accessed 27 October 2023.

205 Information provided by NBN Co.

206 Information provided by NBN Co.

207 Information provided by NBN Co.

208 TPG Telecom, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

209 Information provided by stakeholder.

Geographic variations

As noted in the draft report, stakeholders generally provided information to us that suggested their business end-users were based in capital cities or in regional towns where an NBN service is available. We understand that there may be select circumstances (such as mining companies), where end-users operate outside of regional centres which may only have non-NBN transmission capacity available. Consequently, we understand that most business end-users are inside the NBN fixed line or fixed wireless footprints.

In regional and remote areas that are outside the NBN footprint, we heard that LEO satellite options such as Starlink are increasingly being considered by businesses. For example, Vocus submitted that this market is supplemented by satellite providers. Vocus offers Vocus Satellite – Starlink services to enterprise and government customers providing low-latency, high-bandwidth connectivity across Australia.[210]

Final position on state of competition in retail market for voice and broadband services for corporate and government customers

Stakeholders did not explicitly comment on this market in response to the draft report.

We consider that the NBN has had a significant impact on the transmission capacity services purchased to serve the corporate and government market. We note that there is a high degree of demand-side substitution between NBN products (Traffic Classes 2 and 4 and Enterprise Ethernet) and other products built over non-NBN transmission capacity services. Consequently, we consider that declaration of DTCS will have limited impact on promoting competition in this market.

However, we note that, similar to the retail market for residential voice and broadband services, connectivity to NBN POIs is of particular importance for retail service providers. Our final position is that competition is likely to be promoted for this market at the 5 NBN POIs where there are 2 or fewer transmission providers.

Is declaration likely to promote competition in relevant markets?

Preliminary view

Transmission capacity services are provided at the wholesale level, often by vertically integrated suppliers who utilise the capacity as an input to their own downstream retail services and provide access to spare capacity to other carriers.

As outlined, there are geographic variations in the contestability of transmission capacity routes and areas where there is a high level of market concentration. Additionally, wholesale transmission capacity services market is characterised by high barriers to entry. This indicates that the threat of entry is unlikely to constrain the behaviour of access providers in monopoly areas.

Several stakeholders raised high barriers to entry, particularly in relation to the downstream market for mobile services. ACCAN submitted that barriers to entry were particularly high in regional transmission corridors and that regulation was required to lower these barriers and ensure access for service providers wishing to provide retail services such as mobile

[210] Vocus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

services.[211] A stakeholder also submitted that the capex requirements and high upfront special linkage costs were a barrier to entry.[212]

As noted in the draft report, high costs of constructing new transmission capacity links are exacerbated in many regional areas by lower population density and longer distances to cover, resulting in lower returns on investment. We also noted our expectation of only a marginal expansion of transmission capacity in regional and remote areas in the next 5 years.

We also expressed our preliminary view that the NBN has had a significant impact on the wholesale market for the supply of transmission capacity services, and the retail markets for residential voice and broadband and business voice and broadband, as this traffic has now largely moved to the NBN. Services provided by NBN Co cannot form part of a declared service in this declaration inquiry.[213]

We found that due to migration of services to the NBN, access seekers rely less on Telstra to provide products in some retail markets in comparison to when we last reviewed the declaration of the DTCS.

Despite all these changes, we considered that the market for wholesale transmission capacity services continues to display monopoly characteristics in many routes interconnecting regional Australia, where Telstra is often the sole provider. The ACCC has recognised over successive inquiries that these disparities are unlikely to be resolved organically. Our preliminary view was that a continued declaration of the DTCS will allow retail service providers to utilise existing infrastructure to provide retail services. Without declaration, in areas where there is a sole provider such as Telstra, the sole provider could impose monopoly prices to its competitors or deny access, with a flow-on effects on downstream markets that rely on transmission as an essential input.

We found that there are 2 situations where access seekers continue to rely on non-NBN transmission capacity services:

- Routes from NBN POIs to retailer transmission points (usually capital cities). While transmission services to most of POIs are competitive, there are still some served by a duopoly of major carriers.
- Routes to mobile base stations, given that current NBN products cannot be used for mobile backhaul and/or are not available in locations where mobile operators would demand them. We do not expect that this will change in the next 5 years.

In the Draft Report we expressed the preliminary view that:

- Extending the declaration of the DTCS, to maintain the current regulatory coverage to areas around five NBN POIs served by only 2 transmission providers,[214] is likely to promote competition in the retail markets for residential and business voice and home broadband services in certain geographic areas. Without declaration, access providers will likely have the incentive to increase the barriers for access seekers to acquire transmission capacity services from these 5 NBN POIs.
- Extending the declaration of the DTCS to cover mobile base station routes, in certain geographic areas, is likely to promote competition in the retail market for mobile services.

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211 ACCAN, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 12 July 2023, p 2.

212 Information provided by stakeholder.

213 Section 152AL(3A) of the CCA.

214 The 5 NBN POIs are: Darwin, NT; Bundaberg, QLD; Katanning, WA; Bathurst, TAS and St John also in TAS.

Our preliminary view was that without declaration, in areas where there is a monopolist, vertically integrated infrastructure provider, predominately Telstra, the monopolist would have the incentive to restrict access to transmission capacity services. Declaration will require such infrastructure provider to provide access to the DTCS on terms set by the ACCC. This would likely enhance the ability of access seekers to acquire transmission capacity services, including a DTCS product, to provide downstream retail mobile services.

In the draft report, we also considered that connectivity to NBN POIs was important for the retail residential home broadband and voice market, and the corporate and government service market. Although most (116) of the NBN POIs have 3 or more providers of transmission capacity services to the NBN POI, there are 5 NBN POIs which have 2 or less providers. We considered that without declaration at these NBN POIs, the providers could have the incentive to seek high access prices from access seekers.

The draft report also proposed amendments to the DTCS service description to bring the DTCS closer to the other products bought/sold in the transmission capacity services market for the regulated service to operate more effectively.

Final position

The ACCC's final position remains that the most relevant downstream market for transmission capacity services is the retail mobile market. We note that continuing growth in mobile data usage increases the use of transmission capacity services. A similar trend is observed in other markets. Our view is that declaration of the amended DTCS is likely to promote competition in the retail mobile market, in certain geographic areas.

We consider that the NBN has had a significant impact on the retail markets for residential voice and broadband services, and for voice and broadband services for corporate and government customers. We understand that the majority of traffic for these markets is now served by the NBN. Consequently, access seekers are relying less on non-NBN access providers to serve these retail markets. The NBN is an access network which provides connectivity from an end-user to an NBN POI. This means that retailers do still require non-NBN transmission capacity to connect from NBN POIs back to the retailer's core network.

For these routes from NBN POIs back to a retailer's nearest network presence, we consider that there are limited geographic areas where declaration of the amended DTCS is likely to promote competition. These geographic areas are limited to the 5 NBN POIs which currently have 2 or fewer transmission capacity providers available. [215] Without declaration, we consider there may be incentive for inefficient access to NBN POIs including through high access prices. The costs of access to transmission capacity services could represent a significant barrier for smaller NBN retailers who compete with the vertically integrated providers of transmission capacity services.

Further, we note that there is a significant disparity in the number of transmission capacity providers that serve the other 116 NBN POIs compared to the 5 NBN POIs which continue to be regulated. This suggests that the duopoly at those 5 NBN POIs is likely to remain. Two of the 5 NBN POIs are located in Tasmania, where Telstra owns the main piece of transmission infrastructure traversing the Bass Strait to provide connectivity to mainland Australia. There is also a fibre link running along a power cable operated by Basslink, but the capacity of this cable is much smaller than Telstra's and lacks an alternative path redundancy. For these 2 NBN POIs in Tasmania, they are effectively served by a monopoly access provider.

[215] The 5 NBN POIs are: Darwin, NT; Bundaberg, QLD; Katanning, WA; Bathurst, TAS and St John also in TAS.

The ACCC's final position is that extending and varying the declaration of DTCS as outlined in this report is likely to promote competition in the retail markets for residential voice and broadband services, and for voice and broadband services for corporate and government customers, in the geographic areas where the 5 NBN POIs are located.

5.2.2. Achieving any-to-any connectivity

Preliminary view

The objective of achieving any-to-any connectivity is most relevant for services which involve end-to-end communications between end-users. The DTCS is an input to an end-to-end service and does not itself connect end-users. Consequently, the any-to-any connectivity criterion is given less weight in the DTCS context as it is less relevant.

In the 2019 DTCS declaration inquiry, the ACCC considered that the continued declaration of DTCS would assist to indirectly facilitate any-to-any connectivity for the areas where competition was not effective.[216]

In the discussion paper for the current declaration inquiry, the ACCC sought views on whether declaration would promote any-to-any connectivity.

In ACCAN's view declaration of the DTCS will promote any-to-any connectivity.[217] Noting the high barriers to entry in the DTCS market in regional transmission corridors, ACCAN submitted that continued declaration ensures access for service providers wishing to acquire transmission services on efficient terms to provide retail services in regional areas and nationally.[218]

Pivotel submitted that declaration of the DTCS promotes any-to-any connectivity particularly in regional and remote parts of Australia.[219] This allows consumers to communicate with each other where they are receiving a similar service. In the absence of declaration, Pivotel submits that there is a real risk that access seekers will not be able to offer the full suite of services to customers on transmission routes where there is lack of competition.[220]

The ACCC's preliminary view in the draft report was that extending the declaration of the DTCS in the proposed, varied form will have limited impact on the achievement of any-to-any connectivity between end-users. Indirect effects of DTCS on any-to-any connectivity may be achieved through continued declaration given that regulation will apply to areas where there is a monopoly provider of transmission capacity services.

Final position

Pivotel was the only stakeholder that commented on any-to-any connectivity in response to our draft report. Pivotel reiterated the view that extending the declaration of DTCS will promote any-to-any connectivity by enabling consumers to communicate with each other

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216 ACCC, *Domestic transmission capacity service declaration inquiry 2018-19 final report*, 1 April 2019, p 52.

217 ACCAN, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service discussion paper*, 12 July 2023, p 2.

218 ACCAN, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service discussion paper*, 12 July 2023, p 2.

219 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 10.

220 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 6.

where receiving a similar service, and by ensuring that operators can offer the full suite of services to consumers.[221] Pivotel also questioned the ACCC's view that continued regulation of the DTCS would have a limited impact on the objective of ensuring any-to-any connectivity.[222]

Any-to-any connectivity is achieved if, and only if, each end-user who is supplied with a carriage service that involves communication between end-users is able to communicate, by means of that service, with each other end-user who is supplied with the same or similar service, whether or not the end-users are connected to the same telecommunications network. We maintain that the relevance of any-to-any connectivity in achieving the long-term interests of end-users is more relevant when considering a service that involves communications between end-users.[223] Declaration of the DTCS facilitates access to an essential input into the supply of a range of downstream services. To that extent, the DTCS contributes indirectly to the interconnection of end-users.

Further, the draft report proposed the removal of regulation in exchange service areas with at least 2 providers of transmission services, except for exchange service areas with an NBN POI.

Accordingly, the ACCC maintains the view that the declaration of the wholesale DTCS is not relevant to achieving any-to-any connectivity.

5.2.3. Encouraging efficient use of, and investment in, infrastructure

As discussed earlier, the level of planned and actual investment in infrastructure is closely related to the extent of current and future competition in the wholesale transmission capacity market. The ACCC considers that where competition is effective, this will create incentives for efficient use of and investment in infrastructure.

Efficient use of infrastructure

Preliminary view

The ACCC's preliminary view in the draft report was that extending the declaration of the proposed varied DTCS would be likely to encourage the efficient use of existing transmission infrastructure in geographic areas where there is one provider of transmission services.

In the draft report, we noted that high initial capital costs and ability to upgrade capacity of existing optical fibre narrow the opportunities for infrastructure-based competition in regional areas, further entrenching the monopoly infrastructure provider's dominant position in the market. We also highlighted that there is less of a need to rely on non-NBN transmission capacity infrastructure. Several submissions to the draft report argued that traffic for some end-users (particularly for residential home broadband and voice, and corporate and government services) is now predominately carried over the NBN network. Consequently, we considered that varying the DTCS to further reduce the number of

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221 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 10.

222 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 10.

223 Trade Practices Amendment (Telecommunications) Bill, Explanatory Memorandum, 1996, pp. 40-41.

exchange service areas subject to regulation was unlikely to impact the ability of access seekers to obtain transmission capacity services.

The ACCC's preliminary view was that the proposed varied DTCS services description will serve to cover transmission capacity services where there is a monopoly provider and therefore areas where there is a clear lack of effective competition. Transmission capacity services require high initial capital expenditure, which is usually higher in more regional and remote areas where there are larger distances to cover. In these areas, there is also lower population density and lower amounts of communications traffic generated. Consequently, the revenue generated from end-users in these areas is lower. Additionally, technology improvements mean that increasing the capacity of existing optical fibre is generally becoming easier and cheaper, which provides a further advantage to owners of existing optical fibre compared with those who may want to build new infrastructure. Duplication of transmission networks is commercially challenging outside metro and inter-capital routes, although there are a small number of exceptions located along non-Telstra interstate optical fibre routes (Optus, TPG Telecom, Vocus and others).

These 2 factors (high initial capital costs and ability to upgrade capacity of existing optical fibre) narrow the opportunities for infrastructure-based competition, further entrenching the monopoly infrastructure provider's dominant position in the market. The ACCC has generally considered that unregulated access to infrastructure that exhibits natural monopoly characteristics is likely to result in an inefficient use of the asset. This is because absent regulation a monopolist operator of transmission capacity networks is likely to apply profit-maximising prices without regard to the full use of the asset's capacity.

Further, in the case of vertically integrated network operators, the incumbent's ability to obtain monopoly returns is compounded by its incentive to hinder competitors' entry in related markets by restricting the supply of transmission services.

Submissions to the discussion paper largely supported this view. Optus considered that regulation of DTCS has enabled Optus to offer services in areas where it is uneconomical or inefficient for Optus to deploy transmission links and that absent regulation there would be fewer downstream providers in many areas.[224]

Pivotel further submitted that there are high barriers to entry in providing transmission services given the capex requirements.[225] ACCAN considered that continued declaration of the DTCS promotes the economically efficient use of the network infrastructure where there is little competition.[226] TPG Telecom agreed with the ACCC's observations regarding the challenges involved in duplicating Telstra's network in areas outside the main transmission corridors.[227]

The ACCC notes these access seeker views which overall submit that re-declaration of the DTCS will encourage efficient use of infrastructure in areas where it is commercially challenging to build new infrastructure.

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224 Optus, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service,* July 2023, p 6.

225 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service,* 28 July 2023, p 8.

226 ACCAN, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service discussion paper*, 12 July 2023, p 2.

227 TPG Telecom, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service,* July 2023, p 2.

Final position

We did not receive further stakeholder views on efficient use of infrastructure in response to our draft report. Our final position remains unchanged from our preliminary view.

We consider that facilitating access to DTCS plays an important role in ensuring that existing infrastructure is used efficiently. This is particularly the case where it is inefficient to duplicate existing infrastructure. This is likely to be where infrastructure has natural monopoly characteristics and is a bottleneck for the supply of downstream services.

Our final position is that maintaining regulation in areas where there is a monopoly provider, as they are likely to remain underserved by alternative providers, will enable access to DTCS products on regulated terms and at regulated prices.

We also consider that NBN POIs now form an important location from which DTCS investment and competition is likely to emerge. However, there are a small number of POIs where it is less economically viable for multiple providers to enter. Consequently, our view is that maintaining a higher threshold for deregulation at NBN POIs is likely to promote efficient use of the infrastructure at those locations.

Overall, we consider that extending and varying the DTCS declaration as outlined in this report is likely to create an environment that promotes the objective of encouraging the economically efficient use of infrastructure.

Efficient investment in infrastructure

Preliminary view

We noted in the draft report that in assessing the effect of extending the declaration of the DTCS on efficient investment, we have considered:

- incentives for investment in the existing infrastructure used to supply transmission capacity services
- incentives for investment in new infrastructure that can be used to supply transmission capacity services
- incentives for investment in other infrastructure to provide communications services that rely on transmission capacity services (for example, mobile equipment at a base station).

The approach in previous DTCS declaration inquiries has been to remove regulation after investment has occurred, e.g. when there are 3 or more providers on a route. In the draft report, we considered that there are clear geographic areas where the absence of declaration would lead to inefficient investment through duplication of existing infrastructure. These are regional and remote areas where there is currently one provider, indicating that it is not commercially viable to duplicate infrastructure in these areas. In these areas, the declared DTCS forms a regulatory safety net.

Declaration of the DTCS is likely to have facilitated infrastructure development over time, by allowing service providers to build their customer base to later on invest in developing their own transmission capacity networks as they gain scale, or invest in other infrastructure to support their services, such as in mobile network infrastructure. The ACCC's steady pace of de-regulation during each DTCS declaration inquiry illustrates that competition for transmission capacity services in some areas has increased over time, with the support of regulation.

The ACCC's preliminary view was that declaration of the DTCS has not reduced efficient investment incentives, given the continuing de-regulation of DTCS exchange service areas over time. The ACCC's preliminary view was that the proposed re-declared and varied DTCS will likely continue to promote efficient investment. The type of transmission capacity network investment that the ACCC expects to see is:

- Investment for transmission capacity in high population areas, as this generates high volumes of traffic and thereby a high return on investment.
- Investment in tail-ends in metropolitan areas.
- Investment along major inter-city routes, such as between capital cities.
- Investment of fibre to data centres, which tend to be located in the outer suburbs of capital cities.

Submissions to the discussion paper agreed in noting continued investment in transmission networks and expressed views on the likely impact of the DTCS on investments. [228]

In the draft report we considered it unlikely to be economic to duplicate transmission capacity efficiently in some regional areas. Our preliminary view was that re-declaring the DTCS would continue to allow service providers to provide retail services and build a customer base in those areas, leveraging on the incumbent's existing infrastructure.

The ACCC also noted stakeholders' views indicating the increasing investment in infrastructure, particularly in CBD areas and expressed its preliminary view that deregulation in those areas would also promote efficient investment in infrastructure.

Final position

Stakeholders did not provide further submissions on this topic in response to our draft report. We maintain the same position as in our draft report.

We consider that extending and varying the DTCS declaration as outlined in this report is likely to promote efficient investment in infrastructure by avoiding the need for access seekers to duplicate investment in infrastructure, where it would be inefficient to do so. We consider that the incentives for efficient investment in existing or new infrastructure are largely driven by demand for transmission capacity services, and the potential return on investment in providing those services. As outlined, the demand for data is increasing with corresponding increases in demand for transmission services.

We acknowledge there have been investments in transmission infrastructure since the last declaration review of the DTCS in 2019. We observe that existing transmission capacity providers continue to expand and enhance their networks.

We do, however, recognise that there are geographic areas that are likely to remain underserved by alternative DTCS services and will continue to be supplied by a monopoly provider, predominately Telstra. Maintaining regulation in these areas, where investment in new transmission capacity services is unlikely to occur, is likely to promote investment in areas where it is more efficient to invest.

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[228] Vocus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, July 2023, p 3; Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, pp 5-;, Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 7; ACCAN, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service discussion paper*, 12 July 2023, p 2.

Access to DTCS in some geographic areas under reasonable terms will promote efficient investment, particularly in mobile infrastructure and other infrastructure underpinning the supply of services in downstream markets.

Additionally, the removal of regulation is likely to provide the incentive for other access providers to invest in infrastructure in those areas, and for access seekers to seek out alternative suppliers. We consider this is particularly the case for tail-end services in city areas, which are now deregulated.

5.2.4. ACCC's final position is to extend the declaration of the DTCS with variations to the service description

In the Draft Report, we noted our preliminary view to extend the declaration of the DTCS in some geographic areas, as we were, in principle, satisfied that doing so would promote the long-term interests of end-users. Our preliminary view was that continued declaration of the DTCS is in the long-term interests of end-users as it would likely promote competition in downstream markets which utilise DTCS as an input, allowing access seekers to build up a customer base which subsequently is likely to encourage efficient use of, and investment in, infrastructure.

We consider that in some geographic areas, the DTCS continues to be a bottleneck service, driven by the high costs of building new infrastructure.

Our final position is that extending and varying the DTCS declaration as outlined in this report will promote the long-term interests of end-users by:

- promoting competition in the retail mobile market and ensures that access seekers can gain access to transmission capacity services on routes where there is a monopoly infrastructure provider,
- indirectly promoting any-to-any connectivity, and
- encouraging the economically efficient use of and investment in infrastructure, for example by avoiding unnecessary duplication in areas where it is not commercially viable to do so.

5.2.5. Scope of proposed declaration

Preliminary view

Over time the ACCC has redefined the DTCS service description to reflect technical changes in the characteristics of transmission capacity services.

In the draft report, we noted that transmission capacity services had moved on from the type of service the 2019 DTCS is based on and consequently the 2019 DTCS service description was no longer relevant to the products in the wholesale market for transmission capacity services.

In summary, the draft report noted our preliminary view that:

- The DTCS declaration should be extended, with variations to the service description, in certain geographic areas where there is not sufficient competition.

- The DTCS service description should be varied to be simpler and closer to the types of transmission capacity services currently bought/sold in the wholesale market and used for mobile backhaul.
- The service descriptions should not specify if the DTCS is shared with other users (contended) or not.
- The proposed redeclared and varied DTCS, should focus on areas of monopoly infrastructure, largely those where Telstra is the only provider, except in the case of the five NBN POIs served by only two providers, which should remain declared, given the importance of transmission capacity connectivity to NBN POIs.

Changes to the service description

Exchange service areas remain relevant

In defining the geographic scope of the DTCS, the ACCC has normally adopted a two-step approach.

The first step consisted in classifying exchange service areas according to the availability of competing transmission services to the closest capital city. Exchange service areas that met a given set of criteria were nominated as 'deregulated exchange service areas, while the rest were deemed 'regulated exchange service areas'. Next, once the exchange service areas were classified in this way, the service description defined the scope of the regulated service with reference to the list of exchange service areas.

Under the 2018 competition assessment, areas with 3 or more active providers of transmission networks were considered for deregulation, while areas that did not meet this requirement remained regulated. As a result, services provided between two deregulated areas were generally not regulated under the DTCS.[229]

Preliminary view

The ACCC has generally defined the geographic scope of the DTCS after assessing the extent of competing infrastructure at exchange service areas.

Our May 2023 discussion paper sought industry views on whether an exchange service area-centred competition criteria remains appropriate to assess the level of competition for transmission services in different areas of Australia. In response to the discussion paper, most stakeholders supported the continued use of an exchange service area-based approach to identify areas where regulation of the DTCS should be maintained or removed.[230]

In response to the discussion paper, Telstra submitted in support of the ongoing application of a criteria-based approach to assessing areas for deregulation, although it considered that the 2018 competition criteria methodology should be modified to insert an initial criterion to assess whether there are NBN-based alternative products.[231] Telstra submitted that the

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229 ACCC, *An ACCC Final Report on the review of the declaration for the Domestic Transmission Capacity Service,* April 2019, p 45.

230 TPG Telecom, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service,* July 2023, pp 2-3; ACCAN, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service discussion paper*, 12 July 2023, p 2; Virtutel, *Submission to ACCC Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service,* July 2023, p 2.

231 Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 7.

exchange service area concept should be retained outside of the NBN footprint. Outside these areas, Telstra is typically the only provider and the exchange service area concept should remain unless/until there is full NBN coverage.[232]

In its submission, Pivotel outlined that the exchange service area concept remains appropriate, and that the ACCC should continue to assess whether there are three independent transmission providers at the exchange service area.[233] In contrast, Vocus considered that transmission for corporate and government voice and data services had largely shifted away from local exchanges to the POIs.[234]

Commpete submitted that the geographic areas should be redefined to reflect the transition from copper network exchange areas to NBN POI locations, taking account also of the location or potential location of new mobile infrastructure and small cells.[235]

Since our analysis shows that mobile services are now the most likely impacted by the declaration of the DTCS and less affected by the NBN, our preliminary view was that the exchange service area-based methodology remains appropriate.

Final position

In response to our draft report, Pivotel was the only stakeholder to provide specific comments on the continued use of an exchange service area-based approach to identify which geographic areas are regulated. Pivotel considered that the exchange service area approach was appropriate.[236]

The previous DTCS service description used exchange service areas to identify the geographic boundaries of DTCS regulation. We acknowledge that the NBN rollout has been on a different basis, rolled out into regions called fibre serving area modules (FSAMs) with traffic directed to NBN POIs.

We consider that while the NBN has had an impact on the structure of the geographic market for transmission capacity services, in that traffic has now largely shifted towards NBN POIs, this is not relevant to all downstream markets.

As mentioned in the draft report, we consider the market for mobile services the most likely to be impacted by declaration of the DTCS. To the extent that NBN Co does not allow mobile traffic to be carried over the NBN, the boundaries of the NBN do not provide a valid reference for a competition assessment.

Accordingly, we maintain the view that the exchange service areas surrounding Telstra exchanges remain the relevant unit of analysis for a competition assessment to determine the geographic boundaries of the DTCS regulated service.

An exception for exchange service areas with NBN POIs

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232 Additional information provided by Telstra.

233 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 10.

234 Vocus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, July 2023, p 2.

235 Commpete, *Submission on Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

236 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 11.

Preliminary view

Competitive NBN POI backhaul services are currently available at most of the NBN's 121 POIs. However, there are 5 of the 121 NBN POIs connected by 2 transmission capacity providers, while the rest have 3 or more providers interconnecting the POI to a capital city.

Further, 2 of those 5 POIs are located in Tasmania, where Telstra owns the main piece of transmission infrastructure traversing the Bass Strait to provide connectivity to mainland Australia. There is an alternative fibre link running along a power cable operated by Basslink, but the capacity of this cable is much smaller than Telstra's and lacks an alternative path for redundancy. Consequently, competition in the supply of backhaul to capital cities from those 2 POIs is limited.

The ACCC's preliminary view outlined in the draft report is that ongoing declaration would be required to promote competition in this particular area of the market for NBN voice and broadband services. The report proposed to retain the current '3-provider or more' criterion for deregulation in relation to NBN POIs only.

Accordingly, the draft competition assessment contemplated the continued declaration of the DTCS in these five geographic areas relevant to traffic handed over from NBN services.

Final position

Telstra was the only stakeholder to provide further views on the proposal to maintain regulation around five NBN POIs served by only 2 providers. Telstra submits that the updated competition criteria should apply nationwide with no exception.[237] Telstra submits that having 2 transmission providers in an area is often the result of high investment costs, which means that it is not economically feasible for additional providers to enter.[238] Where there are 2 providers, Telstra submits that the second provider imposes a significant competitive constraint such that there is no need for exceptions for NBN POIs.[239]

During the inquiry, stakeholders raised the impact of the NBN on the geographic structure of the market for transmission capacity services, given the shift of traffic onto the NBN.

We consider that the differentiated criteria for deregulation of exchange service areas with NBN POI's is warranted. This is due to the importance of competitive access to NBN POIs, which we consider is likely to promote competition in the downstream residential voice and broadband and the corporate and government retail markets. Further, we note the significant disparity in the number of transmission providers serving other NBN POIs in comparison to the 5 in the areas that will continue to be subject to DTCS regulation. The ACCC considers that, absent regulation, backhaul costs could represent a significant barrier for smaller retailers utilising the NBN to compete with larger, and vertically integrated providers of transmission capacity services.

Accordingly, the ACCC maintains the view that DTCS regulation should apply to those exchange serving areas with NBN POIs that are served by less than 3 transmission providers.

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237 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4

238 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4

239 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4

Managed products are a feature of the market, but we do not consider it necessary to include them in a re-declared DTCS

Preliminary view

As noted in the draft report, there is an increasing use of managed transmission capacity services. A managed transmission capacity service enables an access provider to add various features beyond the current DTCS service description, such as head-end aggregation. These features may be attractive to an access seeker in providing higher quality downstream services.

An example is Telstra's Managed Lease Line service, which offers priority management over the layer 2 backhaul, with capacities ranging from 100Mbps to 10Gbps, a point-to-multipoint option and a range of protection and service assurance level alternatives.[240]

The question of Telstra's Managed Lease Line product was raised in submissions responding to the discussion paper, in terms of whether a re-declared DTCS service should incorporate managed features similar to this product.

Submissions to the discussion paper were mixed on the need to include additional features to the DTCS service description. Commpete submitted that its members' experiences have been that Telstra has sought to avoid the DTCS regulation by making it commercially unattractive to acquire the declared services by way of various bundling strategies. Commpete submitted that DTCS should accordingly be framed to avoid the possibility of access providers evading their obligation to provide regulated access by bundling what would otherwise be declared services with other components (such as service management).[241]

Pivotel also submitted that the current service description should be modified to cover services that are functionally equivalent to the DTCS, as this would ensure that equivalent services to the DTCS are provided on non-discriminatory terms and in line with DTCS FAD. Specifically, Pivotel submitted that the DTCS service description should be amended to ensure that is captures symmetric transmission services that are functionally equivalent to the DTCS.[242]

Further, Pivotel submitted that despite the changes made to the DTCS service description, Telstra continues to provide services in a manner that inhibits customers from purchasing the regulated DTCS service. For example, Telstra may not offer particular services, such as reporting services, as part of its DTCS offering. Rather it offers similar transmission services (e.g. Ethernet) at higher rates and claims they are not subject to regulation. [243]

Another stakeholder stated it seeks a symmetric, uncontended, point-to-point service. Head-end aggregation is also a feature that the stakeholder values as it allows multiple services that converge at the same B-end to be aggregated into a single service that is then handed over to its network.[244]

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240 Telstra, *Data solutions for the most demanding requirements*, accessed 24 November 2023.

241 Commpete, *Submission on Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

242 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 3.

243 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, pp 9-10.

244 Information provided by stakeholder.

In contrast, Telstra considers that the current service description should be maintained, as it has facilitated efficient and innovative operation of the market, while also offering regulated terms as a fallback option.[245] Telstra submitted that the service description for DTCS should not necessarily reflect what access seekers most commonly acquire but it should rather act as an 'anchor' product.[246]

We considered additional service features of managed transmission capacity service products, such as Telstra's Managed Lease Line, acknowledging that added features, such as head-end aggregation and protection, are attractive to some access seekers.

Our preliminary view was that a re-declared DTCS should be a 'basic' service that could form the building blocks of an access seeker's network or could act as a fallback service. Consequently, we did not propose to include any managed features in the amended DTCS service description. We also expressly qualified in the proposed amended service description that the DTCS is a 'Layer 2' service.

We considered in principle that the addition of the 'Layer 2' service qualification has essentially the same effect as the previous wording in the 2019 DTCS service description that it is 'permanent'. The purpose of this change is to clarify that no additional value-added features that may be provided at Layer 3, such as the paths that data packets are routed in an IP-based network, are captured.

Final position

Telstra supports the ACCC's preliminary view to not include managed products as part of the DTCS.[247] Telstra submitted that the range of additional features that could form part of a managed transmission capacity service is too extensive for inclusion in a service description.[248]

Pivotel was supportive of the reference to 'Layer-2' carriage services.[249] Pivotel submits that language regarding DTCS being able to providers 'via an online ordering tool and with enhanced service monitoring' is worthwhile.[250] Pivotel submits that this inclusion would 'reduce the risk that access providers could avoid declaration by simply offering these as optional add-ons.' Pivotel proposed the following wording:

> *… and includes the provision of online ordering capabilities and enhanced service monitoring where those are commercially available.*

We have considered Pivotel's proposed amendment, and note that similar wording formed part of the 2019 DTCS service description. Given that online ordering capabilities were previously part of the DTCS service description, and that online ordering and enhanced service monitoring are common features of transmission capacity services, our final position is to include this in the DTCS description. We have returned to the 2019 DTCS

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245 Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 8.

246 Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 8.

247 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4.

248 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4.

249 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 11.

250 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 11.

service description wording, adding the following sentence to the DTCS service description at Appendix C:

> *The DTCS may be provided via an online ordering tool and with enhanced service monitoring where these services are available.*

We have also added the relevant definitions, as follows:

> *Service Monitoring* means the monitoring of faults by an access provider.

Symmetric transmission capacity services remain relevant

Preliminary view

From input provided by stakeholders, we understand that all transmission capacity products currently in the market are symmetric.[251]

Some stakeholders provided information that over optical fibre, they currently only purchase symmetric transmission capacity services. One stakeholder noted that satellite services would be the only source of asymmetric products but would be only used for remote mobile base stations.[252]

While we were presented with opinions that this may change in the future (particularly with regards to satellite services), our preliminary view in the draft report was that retaining the 'symmetric' element of the service description is appropriate at this time, as it reflects the current products in the market.

Final position

No stakeholders made further submissions on whether the DTCS should continue to be defined as a symmetric service. The ACCC maintains the position to describe DTCS as a symmetric service. We consider that this ensures DTCS aligns with transmission capacity services most commonly acquired in the market, over optical fibre.

Ethernet is now the overwhelmingly dominant network interface

A major change has been the move to Ethernet, which has become a more widely used network interface protocol. We understand that Ethernet is now the preferred technology for most transmission capacity services in Australia. Typically, Ethernet transmission capacity services are provided over optical fibre.

Point-to-point transmission capacity services are generally based on Ethernet standards and are specified by the clocking data rates of the interface (e.g. 100 Mbps, 1 Gbps or 10 Gbps). Ethernet can be used to deliver lower data rate, point-to-point transmission capacity.

Preliminary view

Information presented to us during the inquiry only referred to Ethernet-based services, or where an alternative network interface was being used, that the alternative network interface would be phased out in the next year or so. For example, we are aware that Telstra's Managed Lease Line product predominately uses Ethernet and the previous SDH technology is being phased out.[253]

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251 Information provided by Telstra; Information provided by stakeholder.

252 Information provided by stakeholder.

253 Information provided by Telstra.

Given the overwhelming use and preference for Ethernet, the Draft Report proposed to explicitly refer to the DTCS as an Ethernet-based service in the service description. This would remove the references to the SDH (Synchronous Digital Hierarchy) and other protocols that were historically used but are now being phased out. Our preliminary view was also that specifying a network interface is required so that there is certainty for access seekers as to what service will be subject to regulation.

Final position

In response to our draft report, some stakeholders made submissions referring to the explicit inclusion of Ethernet in the DTCS the service description.

Telstra agrees with the changes proposed to the DTCS service description to explicitly refer to the DTCS as an Ethernet-based service, given that this is now the predominant network interface.[254] Similarly, Pivotel submitted it is supportive of the proposed amendment to explicitly refer to Ethernet.[255] Pivotel submits that this will 'help ensure that services which may be argued to currently fall outside the declaration are captured.'[256]

We maintain our position, which is define the DTCS as an Ethernet service. This is on the basis that this type of interface is widely adopted, with other interfaces like PDH and SDH having been, or are being, phased out. We also maintain the view that specifying the type of interface is likely to add certainty on the technical scope of DTCS service to be declared.

DTCS can be either contended or uncontended

Preliminary view

In the draft report we noted that the 2019 DTCS service description referred to the DTCS as being provided 'on a permanent uncontended basis'. This is because historically, transmission capacity services were used in 'circuit-switched' networks and required a dedicated path between two end-users. Communications networks now generally operate on a packet-switched basis, where resources are shared dynamically between users. This means that they may be contended or shared between multiple access seekers.

As noted in the draft report, our understanding is that there has been a move to IP-based networks. An Ethernet-based service, is not based on a true dedicated channel, meaning that it is not strictly 'on a permanent uncontended basis' as described in the 2019 DTCS service description. Ethernet gives the ability to share capacity, but also is able to closely replicate an uncontended service.

Submissions to the discussion paper agreed with this view.

Telstra noted that 'Plesiochronous Digital Hierarchy (PDH) and Synchronous Digital Hierarchy (SDH)' network interfaces are no longer deployed or supported by carriers[257] and that the 'permanent uncontended basis' component of the service description should be changed to a 'Committed Information Rate' concept. [258] Telstra noted that its Managed

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254 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4.

255 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 11.

256 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 11.

257 Information provided by Telstra.

258 Information provided by Telstra.

Lease Line services are usually uncontended.[259] Some stakeholders also noted that they purchase uncontended, point-to-point services.[260]

A stakeholder noted that they purchase uncontended, point-to-point services.[261]

Our view in the draft report was that transmission capacity services have moved on from the 'permanent and uncontended' concept. While not always perceived by the access seeker, transmission capacity products bought/sold in the market, including those used for mobile backhaul, have a mix of levels of contention.

Accordingly, the draft report proposed to not include a reference to whether the regulated service should be contended or uncontended (i.e. it could be either). The ACCC considered in principle that allowing for both options would bring the service description closer to the products currently in the market.

Final position

In their submission to the draft report, both Telstra and Pivotel supported the proposal to remove the reference to uncontended from the service description.[262]

Our final position is to not specify a level of contention in the DTCS service description, i.e. it could be either contended or uncontended. This recognises that transmission services have moved on from the 'permanent and uncontended' concept and allowing for both options brings the service description closer to the products currently in the market.

Speed references start from 10 Mbps

Preliminary view

In response to the discussion paper, some stakeholders submitted that there should be varying speed references included.

Optus submitted to the discussion paper that there are separate wholesale transmission markets for (1) low-capacity bandwidth services less than 10 Mbps, (2) mid-capacity bandwidths greater than 10 Mbps and below 1 Gbps and (3) high-capacity bandwidths greater than 1 Gbps.[263] Optus suggested this should be reflected in the service description.

Other stakeholders submitted that low-capacity services are no longer relevant in the service description because they generally or exclusively purchase services above 10 Mbps. Telstra submitted that the 2 Mbps to 10 Mbps low-capacity service should be changed due to providers no longer being able to cost effectively deploy services at this bandwidth range.

A stakeholder noted that it would generally buy 10Gbps and above transmission capacity services.

We proposed to amend the DTCS service description to refer to DTCS being supplied 'at 10 Megabits per second or above'. This is to reflect that the lowest rate Ethernet is provided is at 10 Megabits per second. The 2019 DTCS service description was at 2 Megabits per second or above.

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259 Information provided by Telstra .

260 Information provided by stakeholder.

261 Information provided by stakeholder.

262 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024.

263 Optus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the DTCS, fixed line services and domestic MTAS*, July 2023, p 5.

Our preliminary view was that it is unnecessary to define ranges of data rates, as there appears to be a degree of variability in the transmission capacity products bought/sold and the need for higher capacity services is continually increasing.

Final position

No stakeholder made specific reference to the proposed removal of typical capacity tiers from the service description. Further, in their respective submissions Telstra and Pivotel supported the proposed amendment to the service description to define the DTCS as a service supplied at '10 Mbps or above'.[264]

We maintain the view that it is unnecessary to define ranges of data rates, as the proposed scope of services at and above 10Mbps suffices to encompass the range of capacities commonly acquired in the market.

We have consolidated route types and deregulated tail end services in capital cities

Preliminary view

The following areas were regulated under the 2019 DTCS service description:

- All tail ends (if bought separately) and all routes that are bundled with or incorporate a tail end
- Any route where both ends are outside a capital city
- All routes connecting to Darwin or Hobart, including where both ends are within Darwin or Hobart
- Any route where one end is outside a capital city and connects to Perth or Canberra
- Any route where one end is in a regulated exchange service area.

The draft report proposed to amend the DTCS service description to refer to the DTCS as a service provided over 2 types of routes:

- 'tail-end routes that are in a regulated tail-end exchange service area, including a route that is bundled with or incorporates a tail-end where the tail-end is in a regulated tail-end exchange service area.' This would enable the ACCC to list the exchange service areas where tail ends are regulated, i.e. outside most capital city boundaries, except for Darwin and Hobart (excluding the Bathurst ESA), which would remain regulated. In the 2019 DTCS service description, all tail-ends are regulated.
- 'Any route where one of both of the transmission points are located in a regulated route exchange service area'. This is a simplification in relation to the 2019 service description that still describes the routes intended to be captured under the current service description.

As noted in the draft report, this simplification would have the effect of deregulating some routes which are currently regulated in the current DTCS service description. For example, the current DTCS service description regulates any route where both transmission points are outside a capital city. Our preliminary view was that this specification is not necessary if the 2 transmission points are in deregulated exchange service areas.

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[264] Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 11.

The draft report proposed the above simplified wording to assist access seekers and access providers in assessing which routes are subject to regulation, although we acknowledged the change would involve publishing a longer list of exchange service areas.

We discuss deregulation of tail-ends in capital cities further below.

Final position

We did not receive submission that expressly referred to this simplification of the DTCS service description.

Accordingly, our final position is to maintain the simplified definition of the geographic scope of the regulated service proposed in the Draft Report. We are satisfied that defining the scope of the DTCS with reference to the list of regulated route exchange service areas and tail-end exchange service areas will provide a straight-forward method to assist access seekers and access providers to determine which routes are subject to regulation.

Deregulation of tail-ends in capital cities

Historically, tail-end infrastructure was generally located in capital cities' CBDs and within the urban mesh of major regional centres, with Telstra the sole operator of this type of access infrastructure. Telstra's market dominance justified the ACCC's regulation of tail-ends across Australia.

The DTCS service description defines a tail-end as a transmission service where both the transmission points for the beginning and end of a service are located within the same exchange service area. Typically, this tail component is a fibre link between a transmission point in an exchange (or similar facility) and a customer's premises in the area surrounding the exchange.

Preliminary view

Tail-ends are currently defined as a transmission capacity service where both the transmission points for the beginning and end of a route are located within the same exchange service area. Typically, this tail component is a transmission link between a transmission point (in an exchange or similar facility) and a customer's premises. The Draft Report did not propose changes to this definition.

In the draft report, we outlined that we considered that in capital city boundaries, the density of end-users and the increasing demand for data means that the economics for tail-end connections has improved since the last declaration inquiry. For business and residential voice and home broadband services, there is the option for NBN tail-ends. We heard from some stakeholders that they will consider building their own optical fibre to mobile base stations in capital cities. Consequently, we consider there is sufficient potential for effective competition for tail-ends within most capital city boundaries, except for Darwin and Hobart (excluding the Bathurst ESA in the Hobart area, which we have found to be competitive).

Stakeholders generally agreed with this view.[265] A stakeholder submitted that they are more likely to have a commercial business case to build their own tail-ends in capital cities. This is in contrast to regional and remote areas where it is not viable to build tail-end transmission capacity and where they rely on a third party, predominately Telstra.[266]

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[265] Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 8; Information provided by stakeholder.

[266] Information provided by stakeholder.

Pivotel considered that the majority of regional and remote routes that include a tail-end remain beholden to Telstra and that given the complexity in deregulating tail-end selectively, all routes that include a tail-end should be re-declared. [267]

Optus submitted that the majority of services it acquires from Telstra are backhaul tails to regional and remote base stations.

Over time, other carriers have sought commercially viable options to develop access infrastructure, to compete against Telstra for corporate and government customers. Data collected under the ACCC's Infrastructure Record Keeping rules shows that since the last DTCS declaration inquiry, smaller carriers have built their own tail-end infrastructure in major state capitals. In light of these developments, the ACCC considered that a more nuanced regulation of services involving a tail-end is now appropriate.

Accordingly, the draft report proposed to remove tail-end regulation within the boundaries of major capital cities on the basis that ongoing regulation is unlikely to further promote competition and efficient use of, and investment in, infrastructure in those areas.

Final position

Telstra was the only stakeholder expressing views on the proposed removal of regulation of tail-end services in capital cities. Telstra submitted it agrees with the changes, among other changes proposed, and considered the amendments would simplify the process going forward.[268]

Accordingly, we maintain the view that the supply of tail-end services has become competitive within the boundaries of currently regulated capital cities (excluding Darwin and most of the Hobart ESAs) to an extent that warrants removal of regulation. Our final position is to exclude most capital city exchange service areas and the Bathurst ESA in Tasmania from the list of regulated tail-end exchange service areas. Tail-end services in Darwin and Hobart (except the Bathurst ESA) will remain regulated.

Other changes to service description

Preliminary view

The 2019 DTCS service description refers to DTCS as being for 'certain communications'. The draft report proposed to amend this to 'communications in the digital form', for clarity, since the meaning of 'certain communications' was not specified in the existing service description.

Final position

Stakeholders did not provide submissions on the proposed amendment to the wording of the DTCS. Accordingly, we have removed the phrase for 'certain communications' and replaced it with 'communications in the digital form', for the reasons outlined in our draft report.

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267 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 8.

268 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4.

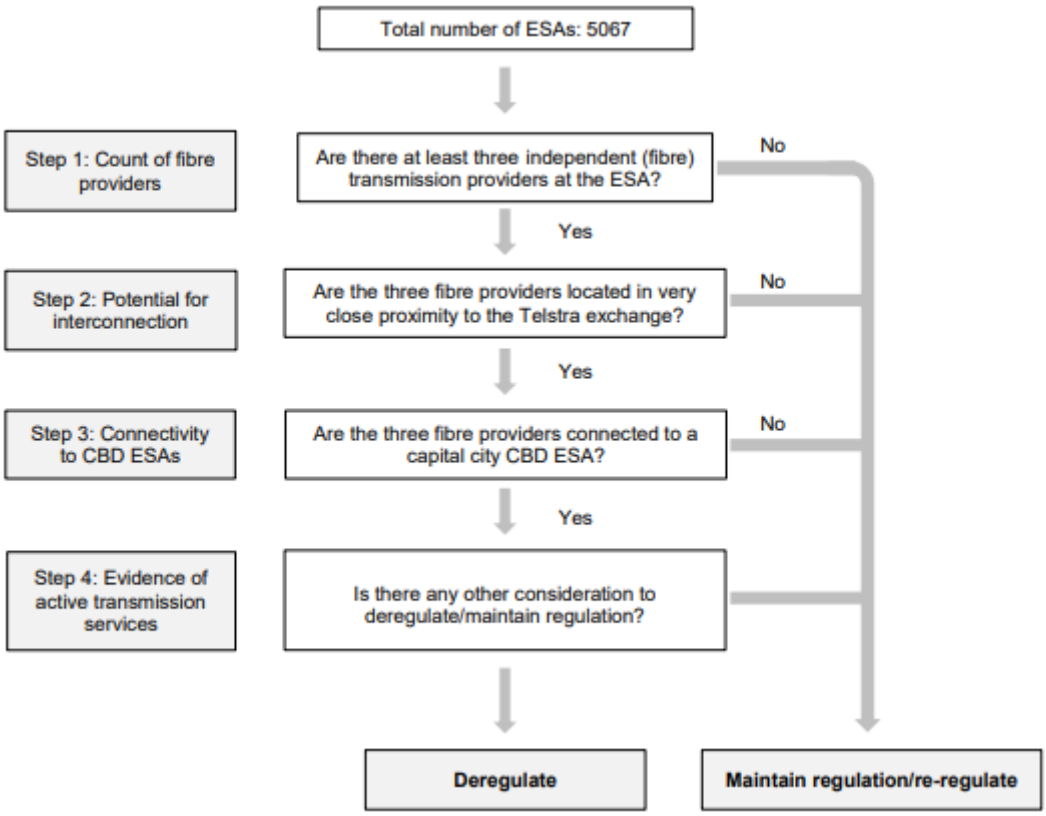
Competition criteria

The ACCC adopts what it refers to as the 'competition criteria' to assess the state of competition for transmission capacity services in different geographic areas. A 'competition criteria' based approach has been adopted since the 2013-14 declaration inquiry.

The competition criteria are used to determine which exchange service areas are subject to DTCS regulation. The criteria consider the presence of optical fibre, other than NBN optical fibre. It does not consider the availability of other technologies such as microwave or satellite. The ACCC considers the use of the competition criteria is an effective approach to identify areas where there is an insufficient level of competitive constraint on access providers by competing providers.

In the 2019 DTCS declaration inquiry, the ACCC identified exchange service areas based on the following flow chart:

Figure 5.1: 2019 DTCS Competition criteria flow chart



In summary, the 2019 competition criteria intended to regulate exchange service areas where there are fewer than 3 independent transmission capacity providers. Whether exchange service areas are regulated or not then feeds into which routes are regulated or not.

Stakeholders focused on monopoly routes as areas where there is limited competition

Preliminary view

Our 2019 competition assessment method considered the competitive strength of competing transmission capacity service providers at each exchange service area. Under the 2019 method, exchange service areas where there are 3 or more active providers of transmission networks are considered competitive and are consequently deregulated. Exchange service areas that do not meet this requirement remain regulated.

Information provided to us during the inquiry focused on a need to regulate transmission capacity routes where there is only one access provider. [269]

Stakeholders were generally in favour on continue using the competition criteria and an exchange service area-based approach to identify areas where regulation of the DTCS should be maintained or removed. [270]

Telstra supported the ongoing application of a criteria-based approach to assessing areas for deregulation although it considered that the 2018 competition criteria methodology should be modified to insert an initial criterion assessing whether there are NBN-based alternative products .[271]

In contrast, Commpete submitted that the geographic areas should be redefined to reflect the transition from Telstra's legacy network (i.e., exchange service areas) to NBN POI locations, taking account also of the location or potential location of new mobile infrastructure and small cells.

Commpete also considered that DTCS services to NBN POIs should be declared unless there is a properly competitive wholesale market at that point and that the ACCC should also ensure that declared transmission services are available to new mobile cell sites unless a competitive wholesale market already exists.[272]

Having identified that retail mobile services are most likely impacted by continued declaration, the ACCC's preliminary view was that a less restrictive set of criteria to determine whether an exchange service area can be deregulated would be sufficient to target these downstream services. Further, submissions and information presented to us during the Inquiry focussed on the need for continued regulation in areas where there was only one access provider.

Our preliminary view in the Draft Report was that extending the declaration of the DTCS is likely to promote competition in areas where there is monopoly infrastructure. This would mean regulating exchange service areas where there is only one provider of transmission capacity services. Our initial view was that this is likely to promote competition in pure-monopoly areas, whereas we consider it is currently less clear to what extent competition would be promoted in areas where there are at least 2 providers of transmission capacity services.

Specifically, the Draft Report noted that ACCC's inclination to regard exchange service areas with *2 providers* of transmission services as sufficiently competitive as to be 'deregulated

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269 Information provided by stakeholders.

270 Virtutel, *Submission to ACCC Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 2; Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, pp 6-7; ACCAN, *Submission to Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service discussion paper*, 12 July 2023, p 2.

271 Telstra, *Submission to the Public Inquiry into the declaration of the domestic transmission capacity services, fixed line services and domestic mobile terminating access service Discussion Paper*, July 2023, p 7.

272 Commpete, *Submission on Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 26 July 2023, p 3.

exchange service areas' for the purposes of the DTCS. Appendix C below shows the proposed competition criterion.

However, given that stakeholders particularly highlighted the importance of transmission capacity service connectivity to NBN POIs, we proposed to continue to regulate the exchange service areas with the 5 NBN POIs that currently only have 2 providers of transmission capacity services.

Final position

In response to the ACCC's draft report, two stakeholders expressly commented on the competition criteria. Pivotel submitted that it supports the retention of the exchange service area ('ESA') based methodology.[273] However, Pivotel raised concerns about the amendment to the competition criteria to deregulate exchange service areas where there are 2 or more transmission providers, except if that exchange service area has an NBN POI. Pivotel acknowledged that submissions to the inquiry have focused on monopoly routes, but considers that regulation where there is only one provider 'does not guard against potential oligopolistic pricing behaviour'.[274] Pivotel submits that this is of particular concern to small mobile network operators.[275]

In comparison, Telstra supported the proposed changes to the DTCS competition assessment criteria so that areas where only one transmission capacity provider is operating are regulated.[276] However, Telstra submitted that the updated competition criteria should apply nationwide with no exception.[277] Telstra submits that having 2 transmission providers in an area is often the result of high investment costs, which means that it is not economically feasible for additional providers to enter.[278] Where there are 2 providers, Telstra submits that the second provider imposes a significant competitive constraint such that there is no need for exceptions for NBN POIs.[279]

Additionally, Telstra submitted, as it did in response to the ACCC's discussion paper, that the presence of the NBN 'has become a crucial 'backstop' in commercial negotiations.'[280] Telstra submits that NBN Co is a 'significant competitor in the market' which is 'capable of offering price and non-price terms that often cannot be matched by Telstra.'[281] Telstra submits that

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273 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access servic*e, 16 February 2024, p 11.

274 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 11.

275 Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 11.

276 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4.

277 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4.

278 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4.

279 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4.

280 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4.

281 Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4.

the presence of the NBN on a route should be considered a 'regulated fallback', rendering declaration unnecessary'.[282]

On balance, the ACCC's final position is to retain the revised methodology of the draft report's competition assessment methodology, that is:

- tail-end routes that are outside capital cities, including a route that is bundled with or incorporates a tail-end where the tail-end is outside a capital city, is regulated
- any route where one or both of the transmission points are located in an exchange service area where there is fewer than 2 transmission capacity providers, is regulated.

We are of the view that the migration of services from local exchanges to NBN POIs highlights the importance of connectivity to NBN POIs. In other exchange service areas, we consider that the previous competition criteria may no longer provide an appropriate assessment of areas where there is a lack of actual competition. The criteria we proposed in the draft report focusses on areas where there is monopoly infrastructure. We consider that these criteria will promote competition in pure-monopoly areas.

We acknowledge Pivotel's concerns, however we consider that there are adequate safety nets remaining. These include the retention of regulation for all tail-end services outside of capital cities, including routes that are bundled with or incorporate a tail-end service. Our final position is also to retain a higher threshold for NBN POIs, such that there is a higher safety net for any routes to NBN POIs.

In relation to Telstra's position that the presence of the NBN in an exchange service area should mean that exchange service area is deregulated, we consider that the NBN is not a fallback for services in all downstream markets. While the NBN can be a fallback for the residential voice and home broadband market, and the corporate and government services market, as previously discussed it is not currently a fallback for the mobile market. Consequently, we are not convinced that the presence of the NBN should be considered in the manner Telstra proposes.

Length of declaration

Preliminary view

In response to the ACCC's discussion paper, the majority of stakeholders supported the declaration being for 5 years, with the remainder opting not to comment on the length of declaration.

The ACCC's preference in the draft report was to extend the declaration of the DTCS as varied for a further 5 years. This is to promote certainty in regulation and for future investment.

Final position

Telstra, Commpete and Pivotel each expressly stated that they were supportive of a 5-year declaration period.[283] Other stakeholders did not expressly comment on the length of declaration.

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[282] Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 4.

[283] Telstra, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service – Domestic Transmission Capacity Service and Fixed Line Services*, 16 February 2024, p 3; Commpete, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed*

We recognise that the telecommunications industry is dynamic and changing. However, we consider that areas that fall within DTCS regulation are unlikely to experience considerable transformation in the medium term. We consider that extending the expiry date of the DTCS declaration for 5 years will ensure that declaration is retained in pure-monopoly areas, NBN POIs with less than 3 transmission capacity providers and for tail-end services outside of capital cities, where competition is not effective. We also consider a 5-year declaration period will promote certainty in regulation and for future investment.

Our final position is to amend and extend the DTCS declaration for a further 5-year period.

Transitional arrangements

The ACCC has decided that a transitional period will apply before the changes to the scope of the DTCS service description take effect. There are significant variations to the DTCS service description, we consider that stakeholders should have time to adjust. This transitional period is to allow stakeholders time to accommodate to the changes in scope, make any necessary adjustments to their commercial arrangements and align it with the anticipated commencement of any new DTCS final access determination.

The transition period means that the existing DTCS declaration service description will remain in place until 30 November 2025. From 1 December 2025, the new service description will take effect. This will also enable the new service description to align with a new final access determination.

5.2.6. Issues raised relevant to access determination

Some stakeholders raised issues in addition to those the ACCC sought views on in the discussion paper.

Vocus submitted that the regulation of DTCS and the market price regression model lead to pricing for regional routes that is under cost, providing significant incentives for network builders to bypass them.[284]

Pivotel submitted that the ACCC should consider imposing service level assurances (SLAs) on response and repair times in order to avoid long-term outages on rural and remote transmission links.[285]

The ACCC acknowledged these submissions in the Draft Report but considered that they fall outside the scope of the current inquiry. The ACCC will consider submissions in relation to price and non-price terms of access to the DTCS as part of any access determination inquiry, which the ACCC will be required to hold in the first half of 2024, assuming the DTCS declaration is extended.

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line services and domestic mobile terminating access service, 16 February 2024, p 5; Pivotel, *Submission in response to ACCC draft report - Public inquiry into the declaration of the DTCS, fixed line services and domestic mobile terminating access service*, 16 February 2024, p 10.

284 Vocus, *Submission in response to ACCC discussion paper - Public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, July 2023, p 3.

285 Pivotel, *Submission on the public inquiry into the declaration of the domestic transmission capacity service, fixed line services and domestic mobile terminating access service*, 28 July 2023, p 9.

Appendix A – fixed line services descriptions

Unconditioned Local Loop Service

The Unconditioned Local Loop Service is the use of unconditioned communications wire between the boundary of a telecommunications network at an end-user's premises and a point on a telecommunications network that is a potential point of interconnection located at or associated with a customer access module and located on the end-user side of the customer access module.

Definitions

Where words or phrases used in this declaration are defined in the Act or the Telecommunications Act 1997, they have the meaning given in the relevant Act.

In this Appendix:

boundary of a telecommunications network is the point ascertained in accordance with section 22 of the Telecommunications Act 1997;

communications wire is a copper or aluminium based wire forming part of a public switched telephone network;

customer access module is a device that provides ring tone, ring current and battery feed to customers' equipment. Examples are Remote Subscriber Stages, Remote Subscriber Units, Integrated Remote Integrated Multiplexers, Non-integrated Remote Integrated Multiplexers and the customer line module of a Local Access Switch;

public switched telephone network is a telephone network accessible by the public providing switching and transmission facilities utilising analogue and digital technologies.

Line Sharing Service

The Line Sharing Service is the use of the non-voiceband frequency spectrum of unconditioned communications wire (over which wire an underlying voiceband PSTN service is operating) between the boundary of a telecommunications network at an end-user's premises and a point on a telecommunications network that is a potential point of interconnection located at, or associated with, a customer access module and located on the end-user side of the customer access module.

Definitions

Where words or phrases used in this declaration are defined in the Act or the Telecommunications Act 1997, they have the same meaning given in the relevant Act.

In this Appendix:

boundary of a telecommunications network is the point ascertained in accordance with section 22 of the Telecommunications Act 1997;

communications wire is a copper or aluminium based wire forming part of a public switched telephone network;

customer access module is a device that provides ring tone, ring current and battery feed to customers' equipment. Examples are Remote Subscriber Stages, Remote Subscriber Units, Integrated Remote Integrated Multiplexers, Non-integrated Remote Integrated Multiplexers and the customer line module of a Local Switch;

public switched telephone network is a telephone network accessible by the public providing switching and transmission facilities utilising analogue and digital technologies;

voiceband PSTN service is a service provided by use of a public switched telephone network and delivered by means of the voiceband portion of the frequency spectrum available over a metallic line.

Wholesale Line Rental

The Wholesale Line Rental service is a line rental telephone service which allows an end-user to connect to a carrier or carriage service provider's public switched telephone network, and provides the end-user with:

(a) an ability to make and receive any 3.1khz bandwidth calls (subject to any conditions that might apply to particular types of calls), including, but not limited to, local calls, national and international long distance calls; and

(b) a telephone number

however, the wholesale line rental service does not include services where the connectivity between the end-user and the carrier or carriage service provider's network is provided in whole or in part by means of a Layer 2 bitstream service that is supplied by an NBN corporation.

Definitions

Where words or phrases used in this declaration are defined in the Act or the Telecommunications Act 1997, they have the same meaning given in the relevant Act.

In this Appendix:

Layer 2 bitstream service has the same meaning as in the Telecommunications Act 1997;

NBN corporation has the same meaning as in the National Broadband Network Companies Act 2011;

public switched telephone network is a telephone network accessible by the public providing switching and transmission facilities utilising analogue and digital technologies.

Local Carriage Service

The Local Carriage Service is a service for the carriage of telephone calls from customer equipment at an end-user's premises to separately located customer equipment of an end-user in the same standard zone, however, the local carriage service does not include services where the connectivity between the end-user and the carrier or carriage service provider's network is provided in whole or in part by means of a Layer 2 bitstream service that is supplied by an NBN corporation.

Definitions

Where words or phrases used in this declaration are defined in the Act or the Telecommunications Act 1997, they have the same meaning given in the relevant Act.

In this Appendix:

Layer 2 bitstream service has the same meaning as in the Telecommunications Act 1997;

NBN corporation has the same meaning as in the National Broadband Network Companies Act 2011;

public switched telephone network is a telephone network accessible by the public providing switching and transmission facilities utilising analogue and digital technologies;

standard zone has the same meaning as in Part 4 of the Telecommunications (Consumer Protection and Service Standards) Act 1999;

telephone calls are calls for the carriage of communications at 3.1kHz bandwidth solely by means of a public switched telephone network.

Wholesale Asymmetric Digital Subscriber Line

The wholesale asymmetric digital subscriber line service (wholesale ADSL service) is an internet-grade, best efforts point to point service for the carriage of communications in digital form between a **point of interconnection** and an **end-user network boundary** that:

a) is supplied by means of Asymmetric Digital Subscriber Line (ADSL) technology over a twisted metallic pair that runs from the end-user network boundary to the nearest upstream exchange or RIM or CMUX; and

b) uses a static **Layer 2** tunnelling protocol (L2TP) over a transport layer to aggregate communications to the point of interconnection.

Definitions
Where words or phrases used in this declaration are defined in the *Competition and Consumer Act 2010* or the *Telecommunications Act 1997*, they have the meaning given in the relevant Act.

In this Appendix:

Asymmetric Digital Subscriber Line technology or **ADSL** means the protocols, recommendations and standards set out in the ITU-TG.992 Recommendations.

Layer 2 has the same meaning as in the Open System Interconnection (OSI) Reference Model for data exchange.

a **point of interconnection** means an interface that is:

(a) a physical point of interconnection which allows the interconnection of facilities in accordance with subsection 152AR(5) of the Competition and Consumer Act 2010; and

(b) located in the same state/territory that the access provider associates with the exchange service area in which the **end-user network boundary** is located.

an **end-user network boundary** means the boundary point of the telecommunications network that is:

(i) associated with the end-user premise; and

(ii) ascertained in accordance with section 22 of the *Telecommunications Act*.

Fixed originating access service (2018 version)

An access service for the carriage of telephone calls (i.e. voice, data over the voice band) to a POI from end-customers assigned numbers from the geographic number ranges of the Australian Numbering Plan and directly connected to the access provider's network.

For the avoidance of doubt, the service also includes a service for the carriage of telephone calls from customer equipment at an end-user's premises to a POI, or potential POI, located at or associated with a local switch (being the switch closest to the end-user making the telephone call) and located on the outgoing trunk side of the switch.

Channel Capacity
The service will establish a connection for the purposes of voice communication with the standard bandwidth of 3.1kHz.

Services
The service is provided on a call that is made with:

- pre-selection, or
- an access seeker specific code including Special Services codes and number ranges, or
- a long distance, international or shared operator codes dialled with an over-ride/access code in accordance with the Australian Numbering Plan.

Pre-selection and code override services are not declared where connectivity between the enduser directly connected to the access provider's network and a POI is provided in whole or in part by means of a Layer 2 bitstream service that is supplied by an NBN corporation.

Signalling

Signals for this service will use CCS#7 signalling. Unless otherwise agreed, this CCS#7 signalling will be in accordance with the NIIF/ACIF Interconnection-ISUP specification.

Nature of switchports

At POIs the calls will be delivered to the AS at 2.048Mbit/sec Switchports. The switchports will operate at 2.048Mbit/sec in accordance with the ITU Recommendations G.703, G. 704 and G.732 (Blue Book).

Definitions

Where words or phrases used in this declaration are defined in the Act or the Telecommunications Act 1997, they have the meaning given in the relevant Act.
In this Appendix:

NBN corporation has the same meaning as in the National Broadband Network Companies Act 2011.

point of Interconnection or **POI** means an agreed location which:

- is a physical point of demarcation between the networks nominated by the access seeker and the access provider; and
- is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the access seeker and the access provider in respect of the POIs nominated by the access provider.

Fixed terminating access service (2018 version)

An access service for the carriage of telephone calls (i.e. voice, data over the voice band) from a POI to end-customer assigned numbers from the geographic number ranges of the Australian Numbering Plan and directly connected to the access provider's network.

For the avoidance of doubt, the service also includes a service for the carriage of telephone calls from a POI, or potential POI, located at or associated with a local switch and located on the incoming trunk side of the switch to customer equipment at an end-user's premises.

Channel Capacity

The service will establish a connection for the purposes of voice communication with the standard bandwidth of 3.1kHz.

Services

The service is provided on a call that is handed over for termination to a customer directly connected to the access provider's network with numbering in accordance with the Australian Numbering Plan.

Signalling

Signals for this service will use CCS#7 signalling. Unless otherwise agreed, this CCS#7 signalling will be in accordance with the NIIF/ACIF Interconnection-ISUP specification.

Nature of switchports

At POIs the calls will be delivered to the access seeker at 2.048Mbit/sec Switchports. The switchports will operate at 2.048Mbit/sec in accordance with the ITU Recommendations G.703, G. 704 and G.732 (Blue Book).

Definitions

Where words or phrases used in this declaration are defined in the Act or the Telecommunications Act 1997, they have the same meaning given in the relevant Act.

In this Appendix:

NBN corporation has the same meaning as in the National Broadband Network Companies Act 2011.

point of Interconnection or **POI** means an agreed location which:

- is a physical point of demarcation between the networks nominated by the access seeker and the access provider; and
- is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the access seeker and the access provider in respect of the POIs nominated by the access provider.

Appendix B – new fixed voice interconnection service descriptions

The new fixed originating access service description (commencing on 1 July 2024)

An access service for the carriage of voice calls to a POI from end-customers assigned numbers from the geographic number ranges of the Australian Numbering Plan and directly connected to the access provider's network.

Channel Capacity
In relation to pre-selection and override/access codes, the service will establish a connection for the purposes of voice communication with the standard bandwidth of 3.1kHz.

Services
The service is provided on a call that is made with:

- pre-selection, or
- an access seeker specific code including Special Services codes and number ranges, or
- a long distance, international or shared operator codes dialled with an over-ride/access code in accordance with the Australian Numbering Plan.

Pre-selection and code override services are not declared where connectivity between the end-user directly connected to the access provider's network and a POI is provided in whole or in part by means of a Layer 2 bitstream service that is supplied by an NBN corporation.

Signalling

In relation to pre-selection and override/access codes, signals for this service will use CCS#7 signalling. Unless otherwise agreed, this CCS#7 signalling will be in accordance with the Communications Alliance Interconnection-ISUP specification.

Nature of switchports

In relation to pre-selection and override/access codes, at POIs the calls will be delivered to the access seeker at 2.048Mbit/sec Switchports. The switchports will operate at 2.048Mbit/sec in accordance with the ITU Recommendations G.703, G. 704 and G.732 (Blue Book).

Definitions

Where words or phrases used in this declaration are defined in the Act or the Telecommunications Act 1997, they have the meaning given in the relevant Act.

In this Appendix:

NBN corporation has the same meaning as in the National Broadband Network Companies Act 2011.

point of Interconnection or **POI** means an agreed location which:

- is a physical point of demarcation between the networks nominated by the access seeker and the access provider; and
- is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the access seeker and the access provider in respect of the POIs nominated by the access provider.

The new fixed terminating access service description (commencing on 1 July 2024)

An access service for the carriage of voice calls from a POI to end-customer assigned numbers from the geographic number ranges of the Australian Numbering Plan and directly connected to the access provider's network.

Services

The service is provided on a call that is handed over for termination to a customer directly connected to the access provider's network with numbering in accordance with the Australian Numbering Plan.

Definitions

Where words or phrases used in this declaration are defined in the Act or the Telecommunications Act 1997, they have the same meaning given in the relevant Act.

In this Appendix:

point of Interconnection or **POI** means an agreed location which:

- is a physical point of demarcation between the networks nominated by the access seeker and the access provider; and
- is associated (but not necessarily co-located with) with one or more gateway exchanges of each of the networks nominated by the access seeker and the access provider in respect of the POIs nominated by the access provider.

Appendix C – DTCS service description and competition criteria

The 2019 DTCS service description will continue until 30 November 2025

The domestic transmission capacity service (DTCS) is a service for the carriage of certain communications from one transmission point to another transmission point via symmetric network interfaces on a permanent uncontended basis by means of guided and/or unguided electromagnetic energy.

The DTCS may be provided via an online ordering tool and with enhanced service monitoring where these services are available.

The DTCS is supplied at low, mid-range and high capacities on or over:

- inter-capital routes
- regional routes
- metropolitan routes
- tail-end routes, and
- routes to mobile base stations

except communications between:

(a) one customer transmission point directly to another customer transmission point

(b) one access seeker network location directly to another access seeker network location

(c) in the case of inter-capital routes, a transmission point located at an exchange in a deregulated exchange service area within one capital city boundary to a transmission point located at an exchange in a deregulated exchange service area within another capital city boundary

Note: Refer to Table 1 for the exchange serving areas (exchange service areas) which are deregulated in each capital city and Table 3 for the boundaries of each capital city.

(d) in the case of regional routes, a transmission point located at an exchange in a deregulated regional exchange service area to a transmission point located at an exchange in a deregulated exchange service area in Sydney, Melbourne, Brisbane or Adelaide

Note: Refer to Table 1 for the exchange service areas which are deregulated in Sydney, Melbourne, Brisbane and Adelaide. Refer to Table 2 for the list of deregulated regional exchange service areas.

or

(e) in the case of metropolitan routes, transmission points located at an exchange between:

1. any of the deregulated metropolitan exchange service areas in Sydney
2. any of the deregulated metropolitan exchange service areas in Brisbane
3. any of the deregulated metropolitan exchange service areas in Melbourne
4. any of the deregulated metropolitan exchange service areas in Perth, or
5. any of the deregulated metropolitan exchange service areas in Adelaide.

Note: Refer to Table 1 for the exchange service areas which are deregulated in each capital city.

The exceptions in paragraphs (c), (d) and (e) do not apply to any service that is comprised of an inter-capital, regional or metropolitan route that is bundled with or incorporates a tail-end route.

Definitions

Where words or phrases used in this Annexure are defined in the *Competition and Consumer Act 2010* or the *Telecommunications Act 1997,* they have the meaning given in those Acts.

an **access seeker network location** is a point in a network operated by a service provider that is not a point of interconnection or a customer transmission point.

customer transmission point is a point at which a service provider delivers a service to its own customers (either wholesale or retail). For the avoidance of doubt, a customer in this context may be another service provider

exchange means a telecommunications exchange and includes the land, buildings and facilities (within the meaning of section 7 of the *Telecommunications Act 1997* (Cth)) that comprise or form part of the exchange

exchange serving area or **ESA** means the area served from a traditional local exchange building

high capacity is a transmission rate of 1 Gigabit per second (Gbps) and above

inter-capital route means a route from a transmission point within one capital city boundary to a transmission point within another capital city boundary in Adelaide, Brisbane, Canberra, Melbourne, Perth or Sydney. Capital city boundaries are listed in Table 3

low capacity is a transmission rate of and between 2 Megabits per second (Mbps) and 10 Mbps

mid-range capacity is a transmission rate between, but not including, 10 Mbps and 1 Gbps

metropolitan route means a route where both the transmission points for the beginning and end of the route are within the same capital city boundary. Capital city boundaries are listed in Table 3

Mobile base station means a mobile phone radiocommunications transmitter and its associated infrastructure including any antennas, housings and other equipment

network interfaces include, but are not limited to, Ethernet, Plesiochronous Digital Hierarchy (PDH) and Synchronous Digital Hierarchy (SDH) network interfaces used to provide a transmission rate of 2.048 Mbps or above which an access provider provides to itself or others

ongoing technical support means support by an expert technical team

a **point of interconnection** is the nearest designated physical point of interconnection in Australia between a network operated by a transmission service provider and another network operated by an access seeker (this includes a third carrier or carriage service provider where the third party supplies a transmission service directly to the access seeker)

regional route means a route where either one or both of the transmission points for the beginning and end of the route are outside a capital city boundary. Capital city boundaries are listed in Table 3

service monitoring means the monitoring of faults by an access provider

tail-end route means a route where both the transmission points for the beginning and end of the route are within the same exchange service area

a **transmission point** is any of the following:

(a) a point of interconnection

(b) a customer transmission point

(c) an access seeker network location

uncontended means dedicated and not shared

Table 1: Deregulated ESAs in each capital city

Deregulated Metropolitan Areas	ESA names
Sydney	Ashfield, Avalon Beach, Balgowlah, Balmain, Bankstown, Baulkham Hills, Blacktown, Blakehurst, Bondi, Botany, Burwood, Campbelltown, Campsie, Carlingford, Carramar, Castle Hill, Chatswood, City South, Coogee, Concord, Cremorne, Cronulla, Dalley, Dee Why, Drummoyne, East, Eastwood, Edensor Park, Edgecliff, Engadine, Epping, Erskine Park, Five Dock, Frenchs Forest, Glebe, Granville, Guildford, Harbord, Haymarket, Homebush, Hornsby, HorsleyPark, Hunters Hill, Hurstville, Ingleburn, Kellyville, Kensington, Kent, Killara, Kingsgrove, Kogarah, Lakemba, Lane Cove, Lidcombe, Lindfield, Liverpool, Manly, Maroubra, Mascot, Matraville, Menai, Miller, Minto, Miranda, Mona Vale, Mosman, Narellan, Newtown, Northbridge, North Parramatta, Penrith, North Ryde, North Sydney, Orchard Hills, Parramatta, Peakhurst, Pendle Hill, Pennant Hills, Petersham, Pitt, Pymble, Randwick, Redfern, Revesby, Rockdale, Rooty Hill, Rose Bay, Rydalmere, Ryde, Sefton,

	Seven Hills, Silverwater, South Strathfield, Sutherland, St Leonards, St Marys, Sylvania, Terrey Hills, Undercliffe, Vaucluse, Wahroonga, Waverley, Wetherill Park, Willoughby, Windsor
Brisbane	Acacia Ridge, Albion, Alexandra Hills, Ascot, Ashgrove, Aspley, Bald Hills, Brisbane Airport, Bulimba, Browns Plains, Camp Hill, Charlotte, Chermside, Chapel Hill, Capalaba, Coorparoo, Darra, Edisori, Eight Mile Plains, Everton Park, Goodna, lnala, Jamboree Heights, Kallangur, Lutwyche, Lytton, Mitchelton, Mount Gravatt, Nundah, New Farm, Newmarket, Nudgee, Paddington, Petrie, Pinkenba, Radcliffe, Salisbury, Sandgate, Sherwood, Slacks Creek, South Brisbane, Spring Hill, Strathpine, Sunnybank, Tingalpa, Toowong, Valley, Waco!, Woolloongabba, Wynnum, Yeronga, Zillmere
Melbourne	Ascot, Balaclava, Batman, Bayswater, Berwick, Blackburn, Box Hill, Broadmeadows, Brooklyn, Brunswick, Bulleen, Bundoora, Burwood, Campbellfield, Camberwell, Canterbury, Carlton, Caulfield, Cheltenham, Clayton, Coburg, Collingwood, Cranbourne, Cranbourne North, Croydon, Dandenong, Dandenong North, Dandenong South, Deepdene, Deer Park, Doncaster, East Kew, Elsternwick, Epping, Exhibition, Fawkner, Flemington, Footscray, Glen Iris, Glenroy, Hallam, Hartwell, Hawthorn, Heatherton, Heidelberg, Highett, Ivanhoe, Jordanville, Karingal, Kew, Keysborough, Kooyong, Lilydale, Lyndhurst, Lysterfield, Lonsdale, Maidstone, Malvern, Mitcham, Moreland, Mount Eliza, Newport, North Balwyn, Northcote, North Essendon, North Melbourne, Oakleigh, Port Melbourne, Preston, Reservoir, Richmond, Ringwood, Scoresby, Somerton, South Melbourne, South Morang, Springvale, St Albans, St Kilda, Sunshine, South Yarra, Tally Ho, Tarneit, Thomastown, Thornbury, Toorak, Tullamarine, Wheelers Hill, Werribee, West Essendon, Williamstown, Windsor, Wantirna
Perth	Applecross, Armadale, Ascot, Attadale, Balcatta, Ballajura, Bassendean, Bateman, Bulwer, Canning Vale, Cannington, Cottesloe, Doubleview, Freemantle, Hamersley, Hilton, Jandakot, Jandakot South, Joondalup, Kelmscott, Kewdale, Kingsley, Landsdale, MaddinQton, ManninQ, Maylands, Midland, Morley, Mount Hawthorn, Mullaloo, Munster, Nedlands, Palmyra, Pier, Riverton, Scarborough, South Coogee, South Perth, Spearwood, Subiaco, Tuart Hill, Victoria Park, Wanneroo, Wellington, Wembley
Adelaide	Blackwood, Brooklyn Park, Brighton, Coromandel Valley, Croydon, Gepps Cross, Edwardstown, Elizabeth, Flinders, Glenelg, Glenunga, Golden Grove, Hampstead, Henley Beach, Lonsdale, Madbury, North Adelaide, Norwood, Osborne, Paradise, Port Adelaide, Prospect, Reynella, Salisbury, Semaphore, Stirling, St Marys St Peters, Unley,

	Waymouth, West Adelaide, Woodville
Canberra	Barton, Belconnen, Civic, Deakin, Fyshwick, Manuka, Mawson, Melba, Queanbeyan, Scullin

Table 2: Deregulated Regional ESAs

State	Deregulated Regional Areas/Routes	ESAs included
New South Wales	Albury	Albury, Lavington
	Beaudesert	Tweed Heads
	Bathurst	Bathurst
	Lismore	Lismore
	Newcastle	Maitland, Mayfield, Hamilton, Wolfe, New Lambton, Charlestown
	Grafton	Grafton
	Wollongong	Wollongong, Unanderra, Corrimal, Dapto
	Taree	Taree
	Dubbo	Dubbo
	Gosford	Gosford, Berkeley Vale, Erina, Wyong
	Coffs Harbour	Coffs Harbour
	Goulburn	Goulburn
	Orange	Orange
	WaggaWagga	Wagga Wagga
	Wauchope	Port Macquarie
Victoria	Ballarat	Ballarat, Horsham, Mount Clear
	Bendigo	Bendigo
	Geelong	Belmont, Geelong, North Geelong
	Shepparton	Shepparton
	Wangaratta	Wangaratta
	Warragul	Pakenham
Queensland	Beaudesert	Burleigh Heights, Currumbin
	Brisbane	Bundamba, Caboolture, Ormeau, Springfield, Waterford

	Caboolture	Wurtulla
	Ipswich	Ipswich
	Toowoomba	Toowoomba
	Gold Coast	Southport, Nerang, Merrimac, Arundel, Bundall, Surfers Paradise, Robina, Mudgeeraba, Oxenford
	Moreton Bay	Rothwell, Narangba
	Logan	Beenleigh, Loganholme
	Nambour	Nambour
	Sunshine Coast	Caloundra, Mooloolaba, Maroochydore
	Townsville	Townsville, Gulliver
South Australia	Adelaide	Seaford
	Gawler	Gawler
	Murray Bridge	Murray Bridge
	Port Augusta	Port Augusta
	Smithfield	Smithfield
Western Australia	Pinjarra	Baldivis, Medina, Pinjarra, Rockingham

Table 3: Capital City Boundaries

Adelaide	A 25 km radius from the Waymouth exchange service area including the exchange service areas of: Balhannah, Blackwood, Brighton, Brooklyn Park, Chain of Ponds, Clarendon, Coromandel Valley, Croydon, Edwardstown, Elizabeth, Flinders, Gepps Cross, Glenelg, Glenunga, Golden Grove, Greenwith, Hahndorf, Hampstead, Henley Beach, Inglewood, Lenswood, Lonsdale, Modbury, Montacute, Morphett Vale East, Mylor, North Adelaide, Norwood, Osborne, Paradise, Port Adelaide, Prospect, Reynella, Salisbury, Scott Creek, Semaphore, St Marys, St Peters, Stirling, Summertown, Unley, Waterloo Corner, Waymouth, West Adelaide, Woodville
Brisbane	A 25 km radius from the Edison exchange service area including the exchange service areas of: Acacia Ridge, Albany Creek, Albion, Alexandra Hills, Ascot, Ashgrove, Aspley, Bald Hills, Brisbane Airport, Brookfield, Browns Plains, Bulimba, Camp Hill, Capalaba, Cashmere, Chapel Hill, Charlotte, Chermside, Closeburn, Coorparoo, Darra, Edison, Eight Mile Plains, Everton Park, Ferny Hills, Goodna, Highvale, lnala, Jamboree Heights, Kallangur, Karalee, Lutwyche, Lytton, Mitchelton, Moggill, Mount Crosby, Mount Gravatt, Mount Nebo, New Farm, Newmarket, Nudgee, Nundah, Paddington, Petrie, Pinkenba, Radcliffe, Sali bury, Samford, Sandgate, Sherwood, Slacks Creek, South

	Brisbane, Spring Hill, Strathpine, Sunnybank, The Gap, Thornlands, Tingalpa, Toowong, Valley, Wacol, Warner, Wellington Point, Woolloongabba, Wynnum, Yeronga, Zillmere
Canberra	A 15 km radius from the Barton exchange service area including the exchange service areas of: Barton, Belconnen, Civic, Crace, Deakin, Fyshwick, Jerrabomberra, Kambah, Manuka, Mawson, Melba, Monash, Queanbeyan, Scullin, Tralee, Tuggeranong, Weston Creek
Darwin	A 10 km radius from the Nightcliff exchange service area including the exchange service areas of: Berrimah, Casuarina, Darwin, Nightcliff
Hobart	A 6 km radius from the Bathurst exchange service area including the exchange service areas of: Bathurst, Davey, Glenorchy, New Town, Sandy Bay
Melbourne	A 45 km radius from the Kooyong exchange service area including the exchange service areas of: Altona, Arthurs Creek, Ascot, Balaclava, Batman, Baxter, Bayswater, Bayswater North, Beaconsfield Upper, Beaumaris, Belgrave, Bentleigh, Berwick, Berwick South, Blackburn, Boronia, Box Hill, Brighton, Broadmeadows, Brooklyn, Brunswick, Bulla, Bulleen, Bundoora, Camberwell, Campbellfield, Canterbury, Carlton, Carrum Downs, Caulfield, Chelsea, Cheltenham, Clayton, Clyde, Coburg, Cockatoo, Coldstream, Collingwood, Craigieburn, Cranbourne, Cranbourne North, Croydon, Dandenong, Dandenong North, Dandenong South, Deepdene, Deer Park, Derrimut, Devon Meadows, Diamond Creek, Diggers Rest, Dixons Creek, Doncaster, Doncaster East, East Kew, Eden Park, Elsternwick, Eltham, Elwood, Emerald, Endeavour Hills, Epping, Exhibition, Fawkner, Ferntree Gully, Ferny Creek, Flemington, Footscray, Frankston, Gardenvale, Glen Iris, Glenroy, Greensborough, Greenvale, Gruyere, Hallam, Hartwell, Hawthorn, Heatherton, Heidelberg, Highett, Hurstbridge, Ivanhoe, Jordanville, Kalkallo, Kangaroo Ground, Karingal, Keilor, Kew, Keysborough, Kings Park, Kooyong, Laverton, Laverton South, Lilydale, Lonsdale, Lyndhurst, Lysterfield, Maidstone, Malvern, Melton, Mernda, Mitcham, Monbulk, Montrose, Mooroolbark, Mordialloc, Moreland, Mornington, Mount Cottrell, Mount Eliza, Mount Evelyn, Narre Warren, Narre Warren North, Newport, North Balwyn, North Essendon, North Melbourne, Northcote, Oakleigh, Officer, Olinda, Ormond, Pakenham Upper, Panton Hill, Pearcedale, Point Cook, Port Melbourne, Preston, Research, Reservoir, Richmond, Ringwood, Rockbank, Rowville, Sandringham, Scoresby, Seaford, Seaford North, Silvan, Somerton, Somerville, South Melbourne, South Morang, South Oakleigh, South Yarra, Springvale, St Albans, St Andrews, St Kilda, Sunbury, Sunshine, Sydenham, Tally Ho, Tarneit, Templestowe, Thomastown, Thornbury, Toorak, Tullamarine, Wandin, Wantirna, Warrandyte, Warranwood, Werribee, Werribee South, West Essendon, Wheelers Hill, Whittlesea, Williamstown, Windsor, Wollert, Wonga Park, Woori Yallock, Yarra Glen, Yarrambat, Yellingbo

Perth	A 30 km radius from the Wellington exchange service area including the exchange service areas of: Applecross, Armadale, Ascot, Attadale, Balcatta, Ballajura, Bassendean, Bateman, Beechboro, Bulwer, Burns, Canning Vale, Cannington, Carmel, City Beach, Cottesloe, Currambine, Darlington, Doubleview, Ellenbrook, Forrestdale, Forrestfield, Fremantle, Girrawheen, Glen Forrest, Gosnells, Greenmount, Hamersley, Herne Hill, Hilton, Jandakot, Jandakot South, Joondalup, Kalamunda, Kelmscott, Kewdale, Kingsley, Landsdale, Lesmurdie, Maddington, Maida Vale, Manning, Maylands, Midland, Morley, Mount Hawthorn, Mullaloo, Munster, Nedlands, Ocean Reef, Palmyra, Parkerville, Pickering Brook, Pier, Pinjar, Riverton, Roleystone, Scarborough, South Coogee, South Perth, Spearwood, Subiaco, Tuart Hill, Victoria Park, Wanneroo, Wellington, Wembley
Sydney	A 50 km radius from the City South exchange service area including the exchange service areas of: Ashfield, Austral, Avalon Beach, Avoca Beach, Balgowlah, Balmain, Bankstown, Baulkham Hills, Berkshire Park, Berowra, Berrilee, Blacktown, Blakehurst, Bondi, Botany, Bringelly, Brooklyn, Campbelltown, Campbelltown South, Campsie, Canoelands, Carlingford, Carramar, Castle Hill, Cattai, Chatswood, City South, Como, Concord, Coogee, Cranebrook, Cremorne, Cronulla, Dalley, Dee Why, Drummoyne, Dural, East, Eastwood, Ebenezer, Edensor Park, Edgecliff, Elderslie, Engadine, Epping, Erskine Park, Fiddletown, Five Dock, Frenchs Forest, Galston, Glebe, Glenorie, Granville, Guildford, Gunderman, Harbord, Haymarket, Helensburgh, Holsworthy, Homebush, Hornsby, Horsley Park, Hunters Hill, Hurstville, lngleburn, Kariong, Kellyville, Kemps Creek, Kensington, Kent, Kenthurst, Kenthurst North, Killara, Kincumber, Kingsgrove, Kogarah, Kurnell, Lakemba, Lane Cove, Leppington, Lidcombe, Lindfield, Liverpool, Llandilo, Luddenham, Manly, Maraylya, Maroota South, Maroubra, Mascot, Matraville, Menai, Miller, Minto, Miranda, Mona Vale, Mooney Mooney, Mosman, Mount Kuring-gai, Mount White, Narellan, Narrabeen, Newtown, North Parramatta, North Ryde, North Sydney, Northbridge, Orchard Hills, Palm Beach, Parramatta, Patonga Beach, Peakhurst, Pendle Hill, Pennant Hills, Penrith, Petersham, Pitt, Pitt Town, Pymble, Quakers Hill, Ramsgate, Randwick, Redfern, Revesby, Riverstone, Rockdale, Rooty Hill, Rose Bay, Rouse Hill, Rydalmere, Ryde, Saratoga, Sefton, Seven Hills, Shalvey, Silverwater, South Strathfield, Spencer, St Helens Park, St Leonards, St Marys, Sutherland, Sylvania, Terrey Hills, Undercliffe, Vaucluse, Wagstaffe Point, Wahroonga, Waverley, Wetherill Park, Wilberforce, Willoughby, Windsor, Woy Woy

The new DTCS service description will commence on 1 December 2025

The domestic transmission capacity service (DTCS) is a Layer-2 service for the carriage of communications in the digital form, from one transmission point to another transmission point, via a symmetric Ethernet network interface by means of guided and/or unguided electromagnetic energy.

The DTCS may be provided via an online ordering tool and with enhanced service monitoring where these services are available.

The DTCS is supplied at 10 Megabits per second or above, on or over:

(a) tail-end routes that are in a regulated tail-end ESA, including a route that is bundled with or incorporates a tail-end where the tail-end is in a regulated tail-end ESA

Note: Refer to Table 1 for the tail-end ESAs which are regulated in each State and Territory.

Table 1 is available on the ACCC website as an attachment to this final report.

(b) any route where one or both of the transmission points are located in a regulated route ESA

Note: Refer to Table 2 for the route ESAs which are regulated in each State and Territory.

Table 2 is available on the ACCC website as an attachment to this final report.

except communications between:

(c) one customer transmission point directly to another customer transmission point

(d) one access seeker network location directly to another access seeker network location.

Definitions

Where words or phrases used in this Annexure are defined in *the Competition and Consumer Act 2010* or the *Telecommunications Act 1997*, they have the meaning given in those Acts.

exchange means a telecommunications exchange and includes the land, buildings and facilities (within the meaning of section 7 of the *Telecommunications Act 1997* (Cth)) that comprise or form part of the exchange

Other definitions

an **access seeker network location** is a point in a network operated by a service provider that is not a point of interconnection or a customer transmission point

a **customer transmission point** is a point at which a service provider delivers a service to its own customers (either wholesale or retail). For the avoidance of doubt, a customer in this context may be another service provider

ethernet means the standards defined by the Institute of Electrical and Electronics in the Institute of Electrical and Electronics 802.3 series of specifications

exchange serving area or **ESA** means the area served from a local exchange building

Layer-2 refers to the second layer of the Open Systems Interconnection (OSI) model

mobile base station means a mobile phone radiocommunications transmitter and its associated infrastructure including any antennas, housings and other equipment

a **point of interconnection** is the nearest designated physical point of interconnection in Australia between a network operated by a transmission service provider and another network operated by an access seeker (this includes a third carrier or carriage service provider where the third party supplies a transmission service directly to the access seeker)

service monitoring means the monitoring of faults by an access provider

a **tail-end route** means a route where both the transmission points for the beginning and end of the route are within the same ESA

a **transmission point** is any of the following:

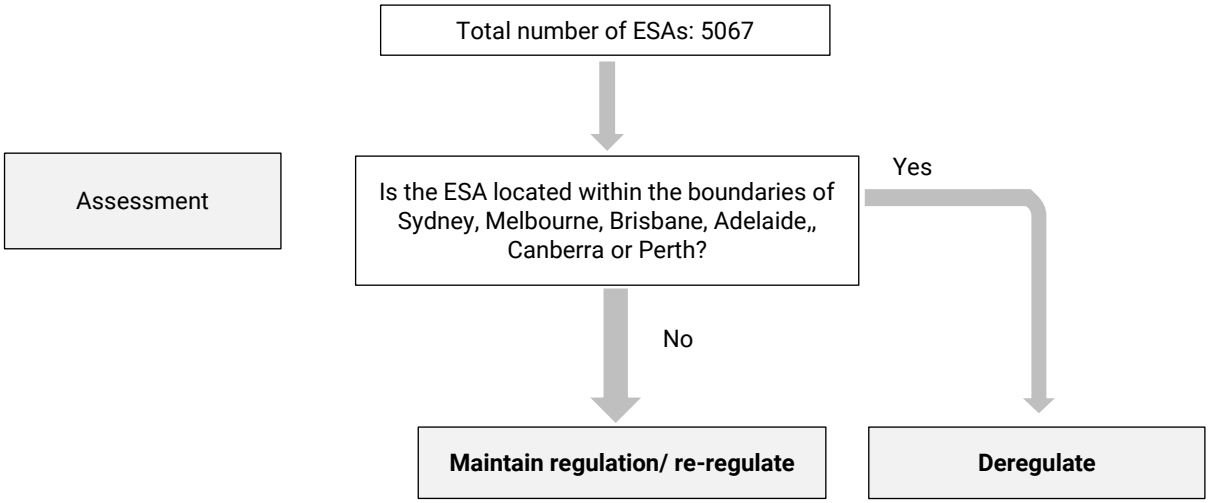
a) a point of interconnection

b) a customer transmission point

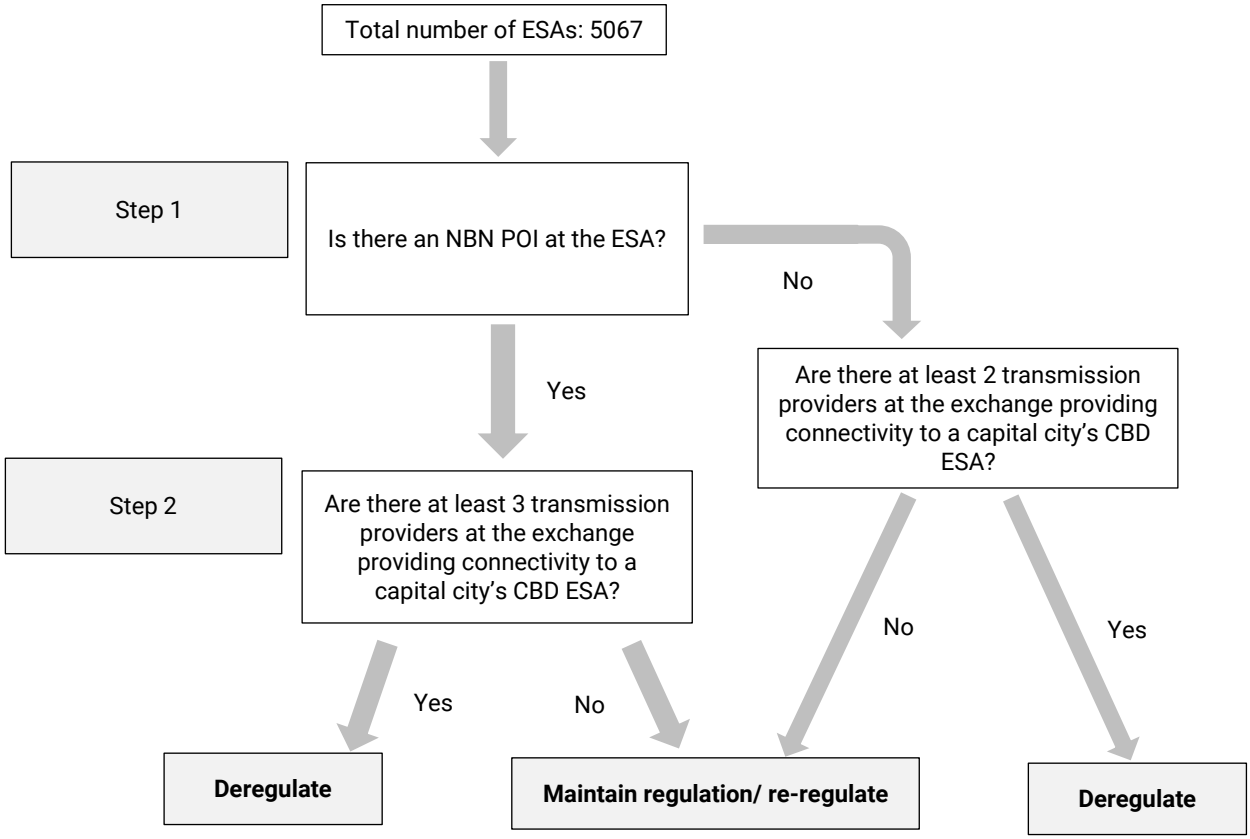
c) an access seeker network location

Competition criteria accompanying new service description

New competition criterion – tail-end routes or routes bundled with or incorporating a tail-end[286]



New competition criterion – Route ESAs[287]



[286] Refer to Table 1 – Regulated tail-end ESAs. Table 1 is available on the ACCC website as an attachment to this final report.

[287] Refer to Table 2 – Regulated route ESAs. Table 2 is available on the ACCC website as an attachment to this final report.