



TELSTRA CORPORATION LIMITED

Review of the declaration for the Domestic Transmission Capacity Service (DTCS)

Telstra's response to the ACCC's discussion paper

Public version

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[CIC begins] = information not to be released without a confidentiality undertaking



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EXECUTIVE SUMMARY

This submission is in response to the Australian Competition and Consumer Commission (**ACCC**) discussion paper on the review of the declaration of the Domestic Transmission Capacity Service (**DTCS**), released on 5 March 2018 (**Discussion Paper**).

The DTCS competitive environment has evolved since the previous declaration review. Most significantly, the National Broadband Network (**NBN**) is causing a fundamental shift in Australia's underlying network architecture. This is driving a concentration of data traffic through NBN Points of Interconnect (**POIs**) and providing a substitute for tail-end services, resulting in increased competition in transmission markets. In time this shift will necessitate a first-principles reassessment of the ongoing requirement for regulation of transmission services, as a regulatory structure based on legacy networks will become progressively less relevant. At the completion of the NBN rollout, the ACCC should consider whether ongoing regulation is required and what form that should take.

Broadly speaking, there are two typical scenarios in which Telstra Wholesale tenders for transmission business:

- Services for long-haul traffic (often referred to as 'backhaul'), for example from NBN POIs or mobile network infrastructure; or
- Short-haul services connecting end user premises to a core network, which includes tail-end services.

In respect to long-haul services, increased demand, a concentration of traffic through NBN POIs and industry consolidation has led to heightened infrastructure-based competition on most routes. This is detailed further in **section 1**. In respect to short-haul services, the rollout of NBN-based substitute products places competitive constraint on Telstra across a broad footprint. This is detailed further in **section 2**. Both of these effects impact the market structure and competitive environment of the DTCS and justify deregulation of additional transmission routes.

Telstra considers that during the remaining NBN rollout period the long term interests of end users (**LTIE**) are best served by retaining the current DTCS service description on substantially the same terms. This is detailed further in **section 3**. These settings have promoted supply competition, price competition, investment and innovation to deliver efficient market provision of transmission services. To the greatest extent possible, further deregulation should be pursued where competitive alternatives are available.



01 Infrastructure-based competition has intensified in DTCS markets

The ACCC has sought feedback on the state of competition in the markets for the DTCS and whether the current regulatory settings and competition criteria remain appropriate. This section focuses on the market for long-haul transmission services and competitive developments that justify further deregulation.

1.1. There is an increasingly competitive environment for the supply of transmission services

In the time since the last review of the DTCS declaration, the growth in the demand for data has been unprecedented. Between 2016 and 2017, year-on-year growth in the volume of data downloads was 38.6% for broadband connections and 39.1% for mobile handsets¹. While average data consumption is increasing at pace, average retail prices for fixed internet services and mobile services have decreased by 4.5% and 7.1% respectively over the past three financial years.²

Correspondingly, demand for the carriage of data is increasing and with it demand for transmission capacity. In the past year Telstra has observed an increase in the average bandwidth per service in operation (SIO) across wholesale transmission services of [CIC begins] [CIC ends]. The accelerating rollout of the NBN is contributing to this trend. The growth in demand has fuelled an increasingly dynamic and competitive market for the supply of transmission services, including in regional and rural areas. In this environment, access seekers benefit from competitive prices as well as ongoing investment and innovation in the services provided.

Examples of recent and forthcoming investments by access providers extending the breadth and depth of competitor representation on transmission routes include:

- TPG's \$300-400m investment to extend its fibre transmission network by 4,000km to VHA³ cell sites to enable mobile backhaul⁴;
- Vocus Group acquisitions of Nextgen Networks (2016), M2 Group (2016) and Amcom (2015) have transformed the national footprint and competitiveness of the merged entity;
- In its H1 FY18 results announcement, Vocus Group announced it would upgrade its core domestic infrastructure (which includes over 21,000km of fibre) to support customer demand on the Australia Singapore Cable which is nearing completion⁵;
- On 26 February 2018 Superloop detailed its new "Red" national backbone network including a 180km+ fibre extension in capital cities and national coverage including all NBN POIs⁶;

¹ Australian Bureau of Statistics, '8153.0 - Internet Activity, Australia, December 2017', viewed at <http://www.abs.gov.au/ausstats/abs@.nsf/mf/8153.0> on 9 April 2018.

² ACCC, 'Competition and price changes in telecommunications services in Australia 2016-17', February 2018, p3.

³ Vodafone Hutchinson Australia.

⁴ TPG, 'Vodafone and TPG announce \$1 billion deals' (media release), viewed at https://www.tpg.com.au/about_pdfs/Vodafone%20and%20TPG%20announce%20strategic%20agreementsFINAL.pdf on 9 April 2018.

⁵ Vocus Group, 'FY18 Interim Result Presentation', 20 February 2018, p8, viewed at <http://vocusgroup.com.au/media/1312/asx-announcement-and-fy18-interim-result-presentation.pdf> on 9 April 2018.

⁶ Superloop, H1 FY18 Results Presentation, 26 February 2018, p. 29, viewed at <https://www.asx.com.au/asx/share-price-research/company/SLC> on 9 April 2018.



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- TPG is partnering with the City of Adelaide to implement 'Ten Gigabit Adelaide', a high capacity fibre network to deliver symmetrical and uncontended data services in the Adelaide CBD⁷;
 - Regional utilities providers continue to invest in telecommunications infrastructure; for example, TransGrid promotes 4,000kms of fibre for transmission services across Victoria, New South Wales and the ACT.⁸

The market for transmission services is characterised by four large competitors with national footprints, while further competitive tension is delivered by regional utilities providers.

The increase in competition for transmission services is reflected in changes to Telstra's customer base, price trends and in the 'win rate' for Telstra's tenders for transmission services. Between July 2015 and February 2018, Telstra's number of SIOs for wholesale transmission products⁹ dropped by [CIC begins] [CIC ends] and, over the same period, Telstra's average revenue per SIO for commercially-negotiated products declined by [CIC begins] [CIC ends]. Telstra reports 'win rates' for tenders in which we compete for the supply of transmission services, and from July 2017 to March 2018 this reporting reflects a successful outcome in [CIC begins] [CIC ends].

1.2. There is no requirement to add a specific NBN POI route classification

As noted by the ACCC, the NBN "has the potential to change the market dynamics in a way which is likely to promote further investment in transmission infrastructure to meet the volumes of traffic expected on the NBN"¹⁰. Telstra considers this potential is already being realised, and that by concentrating traffic through 121 POIs, the NBN has lowered barriers to entry in the supply of transmission services. This is especially the case for those services used to aggregate retail broadband data traffic. Increasingly, access providers are finding it economically efficient to build infrastructure for direct connection to NBN POIs (or to otherwise establish points of presence close to NBN POIs) and competition has intensified. Each of Optus, Vocus and TPG have direct transmission connection to a vast majority of the NBN POIs.¹¹ Given the expected increase in data traffic across transmission networks serving these locations over the next 3 years, access providers will continue to invest in NBN POI backhaul routes. Access providers will also increasingly have the ability and incentive to extend services beyond their current network location to the regions served by an NBN POI. Telstra has observed a general increase in commercial activity in and around NBN POIs, especially in regional areas. This observation was recently validated by research commissioned by nbn co which finds that in NBN connected regions, business growth has accelerated at five times the pace of regions without NBN since 2011.¹²

The number of access providers with presence at all POIs has increased from 2 as at 31 March 2016 to 5 as at 31 December 2017.¹³ Negotiated commercial agreements with access providers, for example

⁷ For more detail refer: <https://www.cityofadelaide.com.au/city-business/why-adelaide/adelaide-smart-city/ten-gigabit-adelaide/>.

⁸ TransGrid Telecommunications, 'Take a different path', p2, viewed at https://www.transgrid.com.au/what-we-do/business-services/telecommunications/Documents/TransGrid_Telecommunications%20Services.pdf on 9 April 2018.

⁹ Includes Data Carriage Services (DCS), Managed Lease Line (MLL), Wavelength and Carrier-Grade Ethernet products.

¹⁰ ACCC, 'Discussion Paper reviewing the declaration for the Domestic Transmission Capacity Service', March 2018, p32.

¹¹ ACCC, 'Communications Sector Market Study – Final Report', April 2018, p66.

¹² nbn co, 'Connecting Australia - How the nbn™ broadband access network is changing Australia. An economic study of the way we work, live and connect', April 2018, p8.

¹³ ACCC, 'NBN Wholesale Market Indicators Report 31 December 2017', 8 February 2018, Table 3.



Aussie Broadband's transmission agreement with Telstra for access to all 121 POIs¹⁴, are evidence that the market is working effectively and barriers to entry are low.

Given the contestability of supply to each of the 121 POIs, there is no need to add a specific NBN POI transmission route classification. There is no evidence that access to transmission services is a barrier to entry into downstream NBN markets. If transmission services to NBN POIs are to be considered separately from other DTCS services, this should only be to confirm that the level of competition on these routes justifies deregulation. Market evidence demonstrates that the rollout of the NBN will act as sufficient incentive to invest in backhaul at competitive prices. On this basis Telstra considers that the ACCC should move to exempt all transmission backhaul routes to NBN POIs, if not already exempt.

1.3. Increased competition warrants further deregulation

Telstra supports the application of competition criteria to assess competition on DTCS routes. The ACCC should undertake a comprehensive assessment of the state of competition on all routes and in all Exchange Service Areas (**ESAs**), including NBN-based alternative products. It is likely that incremental investments will have yielded additional regional DTCS routes which satisfy the competition criteria and should be deregulated. The ACCC can confirm increased infrastructure-based competition through the Infrastructure Record-Keeping Rule (**RKR**).

In respect of the specific competition criteria to apply, Telstra considers that:

- The criteria that the ACCC has historically applied when assessing the level of demand, which is based on DSLAM numbers and ULL SIOs, will need to be reviewed given the industry transition to the NBN; and
- It is inconsistent to define the data transmission market on a route basis but exclude route-based regional transmission providers (e.g. TransGrid) from consideration as competitors. These regional providers exert pricing constraints on Telstra and other providers and as such, should be taken into account in the competition assessment.

Telstra understands that the ACCC will separately consult with industry in relation to the assessment of routes and ESAs against the competition criteria.

02 The NBN is causing a fundamental shift in DTCS markets

The ACCC has sought feedback on the current and likely impact of the NBN on the market structure of the DTCS and how it affects competitiveness and investment. Telstra sees the following key impacts from the NBN:

- Increasing investment and competition in transmission markets, with a concentration of investment in transmission infrastructure to the NBN POIs (as detailed in **section 1.2** above);
- Increasing competition in downstream data markets;
- Requiring the disconnection of wholesale DTCS services provided over the copper networks;

¹⁴ Aussie Broadband, 'Aussie Broadband building to all nbn POIs', viewed at <https://www.aussiebroadband.com.au/blog/aussie-broadband-building-nbn-pois/> on 9 April 2018.



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- Increased substitutability of NBN access products for transmission services provided by Telstra and other wholesale providers.

This section provides further detail on the impact of the NBN rollout on the market for short haul transmission services and the implications this has for the declaration of the DTCS.

2.1. Mandatory disconnection obligations will remove many services from the scope of DTCS

On 31 May 2016 nbn co published a white paper¹⁵ on the development of a service on the NBN that is equivalent to wholesale DTCS services provided over the copper network (the TC-2 services). Consequently, Telstra notified its customers and the ACCC that it intends to cease providing the DTCS supplied over copper on a national basis (including where copper services are supplied outside the NBN fixed line footprint)¹⁶. These services are currently provided by Telstra as wholesale transmission services on metropolitan, regional and tail-end routes. Disconnection of DTCS copper services within the NBN footprint under the Migration Plan will commence on 31 May 2019 in regions that have passed their disconnection date. The sale of these services will cease 6 months prior on 30 November 2018. Once customers have been disconnected from the legacy copper network and migrated to an equivalent TC-2 service on the NBN, the relevant service will no longer be within the scope of the DTCS declaration.

2.2. NBN access products are emerging as substitutes for short-haul DTCS services which warrants further deregulation

The availability of NBN access products has intensified competition for DTCS services. The Migration Plan disconnection obligations only apply to DTCS services provided over the copper network, which in practical terms, are services less than 10Mbps. However, the replacement NBN TC-2 product is capable of far higher speeds and will be substitutable for a broader range of transmission services provided over other technologies (including fibre).¹⁷ There are currently 16 wholesale access providers offering services over NBN¹⁸, and Telstra understands that at least three of these wholesalers are offering services utilising the TC-2 product. Further, the soon to be released NBN Enterprise Ethernet product¹⁹ will be capable of symmetric speeds up to 1Gbps and will therefore be an effective substitute for a broader range of DTCS services used to supply Enterprise and Government customers. These products should be taken into account in the assessment of competition in the relevant geographic markets.

Once deployed, services supplied by NBN will be available on a level playing field and increasingly provide a competitive alternative to traditional DTCS services. Regulation of DTCS transmission services to premises that can be served by the NBN is therefore not required. As such, the ACCC should progressively roll back regulation of tail-end transmission services for which a substitutable NBN product is available as the NBN becomes ready for service (**RFS**) in those service areas.

¹⁵ Refer https://www.nbnco.com.au/content/dam/nbnco2/documents/TSS%20Whitepaper%203%20-%20Megalink_TWx.pdf.

¹⁶ Refer <https://www.accc.gov.au/system/files/Required%20Measure%205%28E%29%20-%20Final.pdf>.

¹⁷ Refer <https://www.nbnco.com.au/content/dam/nbnco2/documents/nbn-business-fact-sheets/nbn-business-fact-sheet-tc2.pdf>.

¹⁸ Refer <https://www.nbnco.com.au/sell-nbn-services/wholesale-providers.html> as viewed on 9 April 2018.

¹⁹ Refer <https://www.nbnco.com.au/corporate-information/media-centre/media-statements/enterprise-grade-enhancements.html>.



03 The current DTCS service description should carry over unchanged for certainty and stability in a period of transition

The ACCC seeks views on whether the DTCS service description adequately captures the service that is provided in the transmission market. The current service description defines a high quality (i.e. uncontended, symmetric) baseline service. These regulatory settings have allowed the market to operate efficiently and innovatively to develop and price transmission products, while at the same time offering the regulated service and prices as a fall-back where commercial agreement cannot be reached. This approach is well established, well understood and has promoted positive customer outcomes that are in the LTIE. The current service description continues to accurately reflect high quality transmission services in the market and there is a strong case for the service description to be carried over unchanged. This would provide certainty and stability as the industry continues to transition to next generation networks. Specifically, the DTCS service description should:

- Retain the key definitional terms 'symmetric' and 'uncontended';
- Not be expanded to include additional value add services;
- Not define 'protection';
- Retain the current geographic market definitions; and
- Not be amended to create a separate route classification for mobile backhaul.

The rationale for each of these recommendations is set out below.

3.1. The key definitional terms 'symmetric' and 'uncontended' should be retained

Inclusion of 'symmetric' and 'uncontended' in the service description ensures that the declaration is technology neutral, whilst capturing the highest quality offerings in the market. This definition also ensures that IP-based access services are not inadvertently captured by the declaration, which would result in regulation of products that serve quite different markets. Omitting these terms also risks unintentionally capturing nascent or emerging services and may have adverse effects on commercial incentives and investment, to the detriment of the LTIE.

3.2. The service description should not be expanded to managed transmission services

As stated above, the current service description is well established in the industry. Commercial pricing and product constructs for alternate transmission services (for example, with additional service features) have been built around the description. The current service description also provides a reference point from which access providers can cater to specific customer needs by pricing other more complex transmission products as well as lower quality contended and asymmetric services. [CIC begins] [CIC ends].

The scope of additional features that could be added to a transmission service is too broad for inclusion in any fixed service description. It is more appropriate that alternate transmission services remain available for commercial agreement with access seekers on a case-by-case basis. In the context of the current regulatory settings, Telstra notes that the market has been effective in setting competitive prices for the commercial constructs. Telstra's Managed Lease Line (MLL) service is one such example of a transmission product that was developed to address customer-specific requirements and satisfy



customer demand for a service with a flexible commercial pricing construct and additional value-added features. The development of alternate products which incorporate point to point, symmetric and uncontended data services demonstrates that the DTCS service description is flexible enough to accommodate new services within its terms.

3.3. The service description should not be expanded to define 'protection'

Protection is not uniformly defined in commercial contracts. There are various mechanisms that may be utilised to provide 'protection' which are determined with customers on a case-by-case basis. It would be a challenge to align on a clear and simple definition of protection. Further, it would be overly restrictive to define protection in the service description. Protection is better addressed as a commercial issue, with different premiums attaching to different types and classes of protection. This approach would best encourage ongoing investment in high quality network design.

3.4. The current geographic market definitions should be retained until the completion of the NBN rollout

As discussed in section 2, the NBN is driving the development of a new national telecommunications network architecture, and in the mid term there is a case for re-evaluating the geographic make up of any declared transmission service. However, to make any changes in the short term, while the industry is undertaking such a significant change, would risk unintended consequences. For practical purposes, the ESA remains the appropriate geographic unit of telecommunications networks, at least until the completion of the NBN rollout (and especially considering the majority of NBN POIs are co-located at Telstra exchanges). While a definition based on Telstra's legacy network architecture is of diminishing relevance in the market, there is value in certainty during the period of industry transition to next generation networks. The current geographic market definitions remain appropriate in that they reflect that transmission services are sold on a point-to-point route basis, and are based on route categories (metropolitan routes, regional routes, inter-capital routes and tail-end services) that still reflect the way the DTCS is sold and acquired in the market.

3.5. The service description should not be amended to create a separate route classification for mobile backhaul

The relevant functional market for the DTCS is as a wholesale input for the provision of various downstream communications services. The underlying wholesale transmission services have the same essential characteristics regardless of the end use case for which they are an input. As such, there is no logical rationale for distinguishing transmission services by end use case (e.g. mobile backhaul). The ACCC has agreed in the past that defining separate product markets as part of the DTCS declaration is unnecessary. In response to earlier advocacy by Optus that the DTCS declaration has insufficient regard to the impact of wholesale transmission services on the Corporate and Government (C&G) and mobile downstream markets, the ACCC considered that "transmission services used for the C&G market have similar characteristics to transmission services used in other residential and business service markets".²⁰

²⁰ ACCC, 'Final Report on the review of the declaration for the Domestic Transmission Capacity Service', March 2014, p26.



The logic flows that declaration of individual markets according to the types of customers they serve is “[not] likely to significantly contribute to the competition analysis for the purposes of the declaration”.²¹

Specifically with respect to mobile backhaul, this market is increasingly competitive, with wholesale providers competing to provide backhaul to mobile network operators (**MNOs**). This is reflected in TPG's recent successful bid to supply backhaul services to more than 3,000 Vodafone sites over a 15 year term, replacing Optus²². Residual routes not deemed to show sufficient competition are regulated under the existing DTCS service description. While Telstra did not support the introduction of nbn co's Cell Site Access Service (**CSAS**) because the market was already competitive, the level of competition in this market will further intensify with the entry of nbn co as a backhaul service provider. In February 2017²³ nbn co announced VHA as their first customer for the CSAS product which is designed for MNOs to connect cell towers to NBN POIs.

04 Facilities access is not a barrier to acquiring transmission services

The ACCC seeks to understand whether there are barriers to entry for access to facilities relating to the DTCS however facilities access is largely irrelevant for acquiring transmission services. Duct Access is not required for transmission services, and Telstra Exchange Building Access (**TEBA**) is only relevant to the extent that an access seeker elects to house their equipment in a Telstra exchange (as opposed to any other location, for example a 3rd party data centre, to which Telstra Wholesale will deliver a transmission service). To the extent that it is relevant, there is evidence that access to facilities is not a practical barrier to acquiring and utilising transmission services. [CIC begins] [CIC ends]. Telstra is not aware of any specific access issues faced by access seekers related to transmission services. Long established and well understood regulatory mechanisms are in place for facilities access, specifically:

- Parts 3 and 5 of Schedule 1 of the Telecommunications Act 1997 (Cth);
- The Facilities Access Code; and
- Telstra's Structural Separation Undertaking which imposes equivalence requirements.

Telstra understands that the ACCC will shortly commence a review of the Facilities Access Code to ensure that it remains relevant and practical for parties.

05 The declaration should extend for no more than 3 years

The ACCC has sought views on an appropriate length of the regulatory period in the event that the DTCS declaration is extended. Should the DTCS be re-declared, Telstra considers that this should be on substantially the same terms as the current declaration and for a period of no more than 3 years. This approach strikes an appropriate balance between certainty for access providers as well as access

²¹ ACCC, 'Final Report on the review of the declaration for the Domestic Transmission Capacity Service', March 2014, p26-27.

²² TPG, 'Vodafone and TPG announce \$1 billion deals' (media release), viewed at <https://www.tpg.com.au/about/media.php> on 9 April 2018.

²³ nbn co, 'nbn network to connect first wholesale mobile site', 2 February 2017, p1, viewed at <https://www.nbnco.com.au/corporate-information/media-centre.htm> on 9 April 2018.



seekers, and providing the flexibility to reconsider the ongoing requirement for regulation of DTCS (and the nature of that regulation) after the completion of the NBN rollout.

Appendix 1: Responses to the ACCC's questions

#	Question	Telstra Response
1	Has there been any change to the state of competition in the market for the DTCS in the currently deregulated routes and ESAs? If so, what change has occurred?	<i>Yes. The market for the supply of transmission services is characterised by increasing dynamism and competitiveness. Refer to section 1.</i>
2	Are there any issues over access to DTCS type services in the deregulated areas?	<i>Telstra is not aware of any issues in acquiring access to DTCS type services in deregulated areas. Telstra continues to compete and supply services in deregulated areas, and faces strong competitive pressure from alternative transmission product offerings.</i>
3	The ACCC has previously identified that the relevant downstream markets for the DTCS include the markets for data services such as business grade services, residential broadband and local, national and international services, mobile voice and mobile data services. Are these the relevant downstream markets for which the DTCS continues to constitute an input?	<i>Telstra agrees with the ACCC that the product market should be defined as the market for data transmission services. However, it is unnecessary to define all relevant markets with absolute precision because the necessity of transmission as an input to the supply of a range of downstream services is well established.</i>
4	Have the DTCS geographic markets changed since 2014?	<i>The current geographic market definition remains appropriate in that it reflects that transmission products are sold on a point-to-point route basis.</i>
5	Should transmission services that are used for the supply of mobile services in remote and regional areas be distinguished from other transmission services?	<i>No. The relevant functional market for the DTCS is as a wholesale input for the provision of various downstream communications services. The underlying wholesale transmission services have the same essential characteristics regardless of their end use case. As such, there is no logical rationale for distinguishing transmission service by end use case (e.g. mobile backhaul). Moreover, the market for mobile backhaul is increasingly competitive – like transmission services that underpin other downstream markets – and where it is deemed insufficiently competitive, the existing service description will provide access to a regulated transmission service that can be used to deliver mobile backhaul.</i>
6	Are access seekers able to access the DTCS (and regulated pricing under the	<i>Yes. As an alternative, an access seeker can negotiate with an access provider for DTCS through</i>



	2016 DTCS FAD) for services to mobile towers in regional and remote areas?	<i>negotiated commercial product and pricing constructs.</i>
7	Should transmission services to NBN POIs be examined separately from other DTCS services?	<i>Growth in traffic demand through NBN POIs is driving increased breadth of investment in backhaul transmission infrastructure. Telstra considers that if transmission services to NBN POIs are to be considered separately from other DTCS services, this should only be to confirm that the level of competition on these routes justifies deregulation.</i>
8	Are there any substitutes for the DTCS in any of the geographic markets?	<i>Yes. Various NBN access products are substitutable for the DTCS for certain use cases – refer response to question 19. In addition, some access seekers are replacing traditional transmission services with IP-based access services (as a trade-off between cost and reliability), although they are not direct substitutes.</i>
9	Are the current classifications for the DTCS appropriate?	<i>The current geographic classifications (metropolitan routes, inter-capital routes, regional routes and tail-end services) remain appropriate as they reflect the architecture of the legacy network over which they are supplied, at least until the NBN rollout is complete.</i>
10	Does the service description adequately capture the DTCS markets while the NBN is being rolled out?	<i>Yes. The current service description continues to adequately capture the DTCS market while the NBN is being rolled out. As discussed in section 2, the NBN is causing a fundamental shift in the market and the current regulation should be allowed to run its course before being reconsidered after the completion of the NBN rollout.</i>
11	Should the DTCS service description continue to identify the geographic boundary of telecommunications networks using ESAs? If not, what alternative geographic unit should be used?	<i>Yes. For practical purposes, the ESA remains an appropriate geographic unit of telecommunications networks until the completion of the NBN rollout.</i>
12	Do the geographic route categories in the DTCS service description reflect the way the DTCS is sold and acquired in DTCS markets?	<i>Yes.</i>
13	Should transmission services to NBN POIs be added as a separate route category?	<i>No. Deregulation of transmission services to all NBN POIs is justified – refer response to question 7.</i>
14	Is it still appropriate to use 2 Mbps as the minimum capacity at which the DTCS is acquired? If not, what other capacity should it nominate?	<i>Yes. Access seekers still acquire 2Mbps services from Telstra – this remains an appropriate minimum capacity for the DTCS service description for the next regulatory period.</i>



15	Is it appropriate to continue to define the DTCS as 'symmetric' and 'uncontended'?	<i>Yes. The terms 'symmetrical' and 'uncontended' continue to be appropriate core defining terms for a transmission service. Omitting these could result in unintended regulation of services that serve quite different markets, are used for different purposes and which are sold under different contractual arrangements.</i>
16	Should the DTCS service description be updated to include a definition for protected DTCS services? If so, what is the appropriate form of protection?	<i>No. There are various mechanisms that may be utilised to provide 'protection' and these will continue to evolve. As such, it would be overly restrictive to define protection in the service description. Moreover, both protected and unprotected services are captured by the current scope of the service description.</i>
17	Does the DTCS service description adequately capture the service that is generally provided in the transmission market? If not, what service features should be changed and/or added?	<i>The DTCS service description allows for regulated pricing for a high quality baseline transmission service which then acts as a reference point from which access providers price other more complex transmission products and also lower quality contended services. The scope of additional service features that could be added to a transmission service are broad and not amenable to inclusion in any fixed service description. Rather, it is more appropriate that additional service features are for commercial agreement with access seekers on a case-by-case basis. The current regulatory settings have allowed the market to operate efficiently and innovatively to develop and price other transmission products, while at the same time offering regulated prices as a fall-back where commercial agreement can't be reached.</i>
18	What is the current and likely impact of the NBN on the market structure for the DTCS over the next few years?	<i>The NBN is causing a fundamental shift in the country's underlying backbone network infrastructure and is therefore having a significant effect on the market structure for DTCS. Refer section 2.</i>
19	Are there any NBN access services that are considered equivalent to the DTCS?	<i>Competition downstream of POIs is intensified by the availability of NBN access products that are substitutable for certain DTCS services. For example, the TC-2 product is an appropriate substitute for many short-haul services. The soon to be released NBN Enterprise Ethernet product will be capable of symmetric 1Gbps speeds and is therefore an effective substitute for a broader range of fibre transmission services. In addition, in September nbn co released its Cell Site Access Service (CSAS) product which is designed for mobile service providers to connect cell towers to NBN POIs.</i>
20	Can access seeker transmission requirements be met by the NBN access services that are currently available?	<i>Refer response to question 19.</i>



21	Do access seekers anticipate acquiring any of the services currently listed on nbn co's roadmap once they are released to provide transmission services?	<i>Yes. Telstra anticipates acquiring NBN access products to provide transmission services in some circumstances.</i>
22	Have changes to the DTCS market structure had an impact on the state of competition in DTCS markets?	<i>Both the rollout of the NBN and the consolidation of four large access providers are key structural changes that have had the effect of intensifying competition in DTCS markets to the benefit of wholesale customers and end users. Refer sections 1 and 2.</i>
23	How has the NBN affected competition and investment in DTCS markets?	<i>The NBN has concentrated and increased investment and intensified competition in DTCS markets. Refer section 2.</i>
24	Is there a choice of active suppliers of transmission services at all of the 121 NBN POIs?	<i>Yes. The ACCC can confirm this through the Infrastructure RKR.</i>
25	To what extent are dark fibre services available at the NBN POIs?	<i>The market for dark fibre services is in early stages of development but already characterised by increasing competition and the entry of new providers who have been successful in winning business from larger providers. However, dark fibre is not a direct substitute for a DTCS service because it is (1) restricted by distance and not intended to serve regional POIs or inter-capital routes, and (2) an unconditioned product which an access seeker must integrate into their own connecting equipment and systems.</i>
26	Are there any DTCS routes and ESAs which are competitive and could be removed from the scope of the DTCS declaration?	<p><i>Yes. There are likely to be additional routes and ESAs that satisfy the current competition criteria. For example, Telstra believes there is justification to deregulate transmission services to all NBN POIs on the basis that they are competitive.</i></p> <p><i>Telstra understands that the ACCC will separately consult with industry in relation to the assessment of routes and ESAs against the competition criteria.</i></p>
27	<p>Is it appropriate to continue to use criteria for assessing competition on DTCS routes? If so, is it appropriate for the criteria to require:</p> <ul style="list-style-type: none"> • a minimum of three independent fibre providers to be present • the presence at, or close proximity of, competing fibre providers to a Telstra exchange • the route to be serviced by at least three of the four largest transmission fibre providers • direct connectivity from that exchange to major transmission hubs 	<i>Conceptually, Telstra supports the application of competition criteria to assess competition on DTCS routes and determine if deregulation is appropriate.</i>



	<p>in, or close to, the CBD of the major capital cities</p> <ul style="list-style-type: none"> • sufficient demand in that area to indicate likelihood of new investment and the potential for competition to develop • a level of price competition in the area, and • evidence of transmission services being supplied from the ESA. 	
28	<p>If the above competition criteria should not be used to assess competition on declared routes, what should the competition criteria be?</p>	<p><i>Refer section 1.</i></p>
29	<p>Should the ACCC maintain regulation of tail-end services?</p>	<p><i>Various NBN access products are substitutable for tail-end DTCS services which justifies a dynamic rollback of regulation for tail-end services. Refer section 2.</i></p>
30	<p>Should a deregulated inter-capital/metropolitan/regional route be regulated if it is bundled with a regulated tail-end service?</p>	<p><i>The regulation of tail-end services is diminishing in relevance as the NBN rollout progresses and NBN products are made available which are substitutable for tail-end DTCS services. In this context, the ACCC should reconsider whether it is appropriate to maintain regulation of bundled services.</i></p>
31	<p>What substitutes are available for the tail-end DTCS?</p>	<p><i>Various NBN access products are substitutable for the DTCS for certain use cases – refer response to question 19. In addition, some access seekers are replacing traditional transmission services with IP-based access services (as a trade-off between cost and reliability), although they are not direct substitutes.</i></p>
32	<p>What competition criteria should the ACCC use when assessing levels of competition in tail-end markets?</p>	<p><i>Telstra considers that the same competition criteria should be applied to tail-end fibre based services as applies in relation to capital or regional transmission.</i></p>
33	<p>Are there any other matters that the ACCC should take into account?</p>	<p><i>The ACCC has sought views on how the migration of tail-end services on the copper network might affect regulation of the DTCS on these routes. Once customers have been disconnected from the legacy copper network and migrated to an equivalent TC-2 service on the NBN, the relevant service will no longer be within the scope of the DTCS declaration.</i></p>
34	<p>Are there barriers to entry for access to facilities relating to the DTCS? If so, what are they?</p>	<p><i>No. There is evidence that access to facilities is not a barrier to entry relating to the DTCS. Refer to section 4.</i></p>
35	<p>Have alternative technologies to fibre-optic cable become more or less viable in the provision of DTCS since the 2014 declaration report? Are they</p>	<p><i>Telstra notes that the DTCS service description is technology agnostic. The viability of alternative technologies is a factor of geography, distance and bandwidth. Fibre-optic cable remains typically the</i></p>



	likely to increase or decrease in importance in the future?	<i>most cost-effective and hence dominant technology for the provision of transmission services. To the extent that it is already in place, copper is still a relevant technology but will diminish in importance into the future as the rollout of the NBN progresses. Terrestrial wireless technology is a viable alternative for fibre-optic cable for DTCS services up to 1Gbps where it is available. Microwave and satellite technologies are utilised as 'last mile' solutions in various regional and remote locations.</i>
36	What are the substitutes for the DTCS?	<i>Refer response to question 8.</i>
37	What should be the length of the regulatory period in the event that the DTCS declaration is extended	<i>Should the DTCS be re-declared, Telstra is of the view that this should be for a period of no more than 3 years. This approach strikes an appropriate balance between certainty for access providers as well as access seekers, and providing the flexibility to reconsider the ongoing requirement for regulation of DTCS (and the nature of that regulation) after the completion of the NBN rollout.</i>