



DOMESTIC TRANSMISSION CAPACITY SERVICE

***An ACCC Draft Report on reviewing the declaration of
the domestic transmission capacity service***

February 2009

Table of Contents

1	Introduction.....	3
1.1	The declared service	3
1.2	Background to the DTCS declaration	3
1.3	Review of the DTCS declaration	4
1.4	The Commission’s final exemption decision.....	4
2	Timetable and Inquiry Process.....	6
2.1	Declaration review process	6
2.2	Timetable for the Inquiry	6
2.3	Making submissions.....	6
3	Summary findings of the inquiry.....	8
4	Will extending declaration promote competition?.....	10
4.1	The Commission’s approach to defining markets	10
4.2	Defining the market in which the eligible services are supplied	10
4.3	Market Structure	15
4.4	Price movements.....	20
5	Assessment of state of competition	22
5.1	Structural characteristics	22
5.2	Dynamic characteristics	22
5.3	Final exemption decision	23
5.4	Conclusion on state of competition.....	24
6	Will varying the declaration promote competition?.....	25
7	Any-to-any connectivity.....	26
7.1	Views of interested parties.....	26
7.2	The Commission’s view	26
8	Will declaration encourage economically efficient use of and investment in infrastructure?	27
8.1	Views of interested parties.....	27
8.2	The Commission’s view	29
9	The Commission’s overall view	30
10	Pricing principles for the DTCS	31
10.1	Consultation on the pricing principles determination.....	31
10.2	Views of interested parties.....	32
10.3	The Commission’s view	32
	Appendix 1. Proposed service description for the DTCS.....	34
	Appendix 2. Draft pricing principles determination	38
	Appendix 3. Legislative background.....	40

1 Introduction

1.1 The declared service

The domestic transmission capacity service (DTCS) is a generic service that can be used for the carriage of voice, data or other communications using wideband or broadband carriage (the minimum bandwidth in the current declaration is 2 Mbps). Carriers/CSPs can use transmission capacity to set up their own networks for aggregated voice or data channels, or for integrated data traffic (such as voice, video and data).

There are a number of types of transmission capacity services, including:

- inter-capital transmission
- ‘other’ transmission (e.g. capital-regional routes)
- inter-exchange local transmission
- tail-end transmission.

1.2 Background to the DTCS declaration

The Australian Competition and Consumer Commission (Commission) deemed various types of transmission capacity as a declared service in June 1997.¹ The declaration was subsequently varied in November 1998 and May 2001. In September 2003, the Commission commenced a public inquiry to determine whether the declaration of the DTCS should be extended, varied, revoked, replaced or allowed to expire. As a consequence of that inquiry, in April 2004 the Commission released a final report² (DTCS 2004 Final Report) outlining its decision to declare the DTCS, and setting out a new service description. In the DTCS 2004 Final Report the Commission decided that, in addition to inter-capital transmission,³ 14 nominated capital-regional routes should be excluded from the declaration.⁴ The reasons for this decision are detailed in the Commission’s DTCS 2004 Final Report.⁵ The current declaration took effect on 1 April 2004 and is due to expire on 31 March 2009.

In accordance with its obligations under the *Trade Practices Act 1974* (Act), the Commission is required to conduct a public inquiry pursuant to section 152ALA of the Act and Part 25 of the *Telecommunications Act 1997* (Telecommunications Act) to consider whether the existing declaration should be remade, extended, revoked, varied or allowed to expire. This inquiry must be finalised before the declaration

¹ ACCC, *Deeming of Telecommunications Services*, June 1997.

² ACCC, *Transmission Capacity Service - Review of the declaration for the domestic transmission capacity service – Final Report*, April 2004, (DTCS 2004 Final Report).

³ Transmission between transmission points of interconnection which are located in exempt capital cities.

⁴ DTCS 2004 Final Report, p. 48 & 49.

⁵ DTCS 2004 Final Report.

expires on 31 March 2009. Appendix 3 provides detailed background about how the Commission applies the relevant legislation in its review of each declaration.

1.3 Review of the DTCS declaration

In November 2008, the Commission announced that it would conduct a review of the declaration for the DTCS. In addition to considering whether the existing declaration should continue in some form or be allowed to expire, the Commission indicated that the review would also consider what form of pricing principles would be most appropriate for the service (should it find that continued or varied declaration of the DTCS is appropriate).

In order to advance and inform this review, and in accordance with Division 3 of Part 25 of the Telecommunications Act, the Commission released a discussion paper in November 2008 (Discussion Paper).⁶

During December 2008, the Commission received submissions from the following interested parties:

- AAPT Limited (AAPT)
- Vodafone Australia Limited (Vodafone)
- Telstra Corporation Ltd (Telstra)
- Singtel Optus Pty Ltd (Optus)

1.4 The Commission's final exemption decision

On 25 November 2008, the Commission released its final decision on Telstra's transmission exemption applications: *Telstra's domestic transmission capacity service exemption applications – Final decision*, November 2008 (Final Exemption Decision). In the Final Exemption Decision, the Commission concluded that where there is effective competition or contestability in a transmission market, granting an exemption from the standard access obligations (SAOs) relating to the supply of the DTCS in that market would not be detrimental to the objective of promotion of competition.⁷ However, where no evidence exists, it is likely that a bottleneck remains and that a declared DTCS should remain available to access seekers. Routes are considered competitive or contestable according to the '1 km criterion' established in the DTCS 2004 Final Report.⁸

Exemptions were also granted to inter-exchange markets in which there was evidence of two optical-fibre networks in addition to Telstra. The competitor networks are required to have a point of interconnect at a Telstra exchange, and for metropolitan areas connect to each other ESA and to a CBD.

⁶ ACCC, *Domestic Transmission Capacity Service – a discussion paper reviewing the declaration for the domestic transmission capacity service*, November 2008.

⁷ ACCC, *Telstra's domestic transmission capacity service exemption applications – Final Decision*, November 2008 (Final Exemption Decision), p. 4.

⁸ DTCS 2004 Final Report, p. 27.

In the Final Exemption Decision, the Commission decided to:

- exempt capital-regional transmission on 9 of 20 capital regional routes
- exempt inter-exchange transmission in 16 of 17 capital city areas
- exempt inter-exchange transmission for 72 of 115 metropolitan areas
- refuse Telstra's exemption application for tail-end transmission in metropolitan and capital city areas, and
- issue a determination for a class exemption of the same scope.

The Commission decided that a transition phase of 12 months should apply to allow access seekers time to adjust their business plans and make alternative arrangements.

The Commission decided that a 12 month transition period will provide an opportunity for:

- users of the DTCS in areas which are proposed to be exempted to make any necessary alterations to their current business plans and negotiate supply arrangements with Telstra or a third party on a commercial basis
- owners of fibre infrastructure to have sufficient time to expand the capacity of existing fibre networks or invest in other infrastructure that is required to supply capital-regional or inter-exchange services.⁹

In the Final Exemption Decision the Commission decided that the exemptions should be granted for a limited period and should expire on 21 December 2012 or on the expiry or revocation of the DTCS declaration, whichever occurs first.

The routes and exchange service areas (ESAs) that the Commission has previously determined should be exempt from the declaration are set out in the proposed declaration variation in Appendix 1.

For full details of the Commission's Final Exemption Decision visit the Commission's website at www.accc.gov.au.

⁹ Final Exemption Decision, p. 103 & 104.

2 Timetable and Inquiry Process

2.1 Declaration review process

Under section 152ALA of the Act, the Commission is required to hold a public inquiry during the 12-month period ending on the expiry date of a declaration. The Commission is also required to publish a report under section 505 of the Telecommunications Act during the 180-day period ending on the expiry date of a declaration.

2.2 Timetable for the Inquiry

Under Part 25 of the Telecommunications Act, the Commission must provide a reasonable opportunity for any member of the public to make a written submission to a public inquiry.

In November 2008, the Commission released the Discussion Paper and interested parties were given four weeks to make submissions in response. The submissions that were lodged are available from the Commission's website at www.accc.gov.au. In some instances confidential submissions were made, however, public versions of the submissions are available from the Commission's website.

After reviewing interested parties' submissions the Commission sets out its findings in this Draft Report for public comment. Interested parties must make submissions in response to the Commission's findings in this Draft Report by **5 pm, on 4 March 2009**.

Further information on the Commission's approach to declaration inquiries is outlined in its publication *Telecommunications services – Declaration provisions – a guide to the declaration provisions of Part XIC of the Trade Practices Act, July 1999*, available on the Commission's website at www.accc.gov.au.

2.3 Making submissions

The Commission encourages industry participants, other stakeholders and the public more generally to consider the matters set out in this Draft Report.

All submissions will be considered as public submissions and will be posted on the Commission's website. If interested parties wish to submit commercial-in-confidence material as part of their submission to the Commission, parties should submit both a public and commercial-in-confidence version of their submission. The public version of the submission should clearly identify the commercial-in-confidence material by replacing the confidential material with an appropriate symbol or 'c-i-c'. Interested parties submitting a c-i-c version of their submission must also provide details of a contact person to whom enquiries regarding the c-i-c material can be directed.

Submissions are to be sent by email, in Microsoft word or other text searchable document form to:

Contact Officer:

Chris Ratchford
Communications Group
Australian Competition & Consumer
Commission
GPO Box 3648
Sydney NSW 2001

Phone: (02) 9230 9110
Facsimile: (02) 9231 5652
Email: chris.ratchford@acc.gov.au

Please copy correspondence to:

Alison Russell
Communications Group
Australian Competition & Consumer
Commission
GPO Box 3648
Sydney NSW 2001

Phone: (02) 9230 9184
Facsimile: (02) 9231 5652
Email: alison.russell@acc.gov.au

3 Summary findings of the inquiry

The Commission's preliminary view is that the declaration of the DTCS should be varied to take into account services that were found to be competitive in the Final Exemption Decision. The Commission proposes to vary the current declaration to exclude the routes and ESAs due to be exempted (in accordance with the Final Exemption Decision). Further, the Commission proposes that this carve out should take effect in accordance with the timeline set out by the Commission in the Final Exemption Decision. That is to say, the routes and ESAs that were decided to be exempt in the Final Exemption Decision should be excluded from the declaration with effect from 25 November 2009, when the Commission's exemption orders were due to take effect. This is consistent with the Commission's earlier decision in the exemption process and maintains the 12 months phase in time which the Commission decided was necessary to allow access seekers time to time to adjust their business plans and make alternative arrangements.¹⁰ The Commission proposes that this varied declaration should expire in 5 years.

In summary, the Commission has reached this view for the following reasons:

- Promotion of competition – the Commission considers that competition will be promoted by varying the declaration so that it incorporates the intent of the Final Exemption Decision. That is, where routes were considered to be competitive or contestable in the Final Exemption Decision, they should not remain under the scope of the declaration. Extending the declaration for services not considered competitive for a period of 5 years will ensure continued availability of access for access seekers.
- Any-to-any connectivity – the Commission considers that any-to-any connectivity will not be affected by variation of the declaration.
- Economically efficient investment in infrastructure – the Commission considers that varying the declaration to reflect the Final Exemption Decision and the transition period it prescribed will encourage the economically efficient investment in infrastructure to provide further substitutability in exempted areas during an appropriate transition period. For areas that remain under the scope of the declaration, the 5 year declaration period will provide certainty for access seekers in their investment decisions.

The Commission considers that incorporating the Final Exemption Decision in the varied declaration promotes consistency and regulatory certainty for both access seekers and access providers. The 12 month transition period that was applied to the exemptions remains in place and will be reflected in the varied declaration.

The Commission is cognisant that a new 5 year declaration that encompasses exempted services extends beyond the timeframe of the exemption orders, which were to apply for 3 years from 25 November 2009. By incorporating the exemptions into the varied declaration, which has a 5 year term expiring on 31 March 2014, the expiry

¹⁰ ACCC, *Final Exemption Decision*, p. 107.

of the exemptions is effectively extended by a period of 15 months. The Commission considers that this is consistent with the exemption decision, which granted exemptions on the basis that the services were currently competitive and anticipated that contestability would increase. The Commission is of the opinion that this extension does not materially differ from the intention of the Final Exemption Decision and only serves to reinforce regulatory certainty for access seekers and access providers. Further, the Commission is of the view that incorporating the exemption decision in the declaration is in the long term interests of end-users, and facilitates the objectives of promoting competition and encouraging economically efficient investment in infrastructure. The Commission has previously stated that where there is effective competition or contestability in a transmission market, granting an exemption from the DTCS in that market will not be detrimental to the objective of promotion of competition. The ACCC considers that future demand for transmission services is likely to increase and that the removal of the regulated DTCS in markets which are competitive and/or contestable may provide an incentive for owners of optical fibre networks to make such an investment.¹¹

¹¹ ACCC, *Final Exemption Decision*, p. 4 & 5.

4 Will extending declaration promote competition?

4.1 The Commission's approach to defining markets

As stated in the Discussion Paper, defining the markets relevant to the DTCS will allow the Commission to meaningfully analyse the effectiveness of competition and the likely effect of remaking, extending, revoking, varying or allowing the existing service declaration to expire.

The market definition process begins by identifying the service under consideration, then defining it in terms of the product, geographic and functional areas of supply. The temporal dimension of the market(s) and any relevant downstream markets are also considered. For related markets (ie the downstream market, where the access provider might compete with the access seeker), the market definition process starts with the access seekers and providers and the related services that they would supply using the eligible service.

Once the relevant service and source(s) of supply have been identified, the market boundaries are extended to include all other sources and potential sources of close substitutes in which the firm supplying the service should compete. In terms of section 4E of the Act:

... 'market' means a market in Australia and, when used in relation to any goods or services, includes a market for those goods or services and other goods or services that are substitutes for or otherwise competitive with, the first-mentioned goods or services.

As noted by the High Court:

This process of defining a market by substitution involves both including products which compete with the defendant's and excluding those which because of differentiating characteristics do not compete.¹²

The availability of close substitutes (on both demand and supply sides) constrains the ability of suppliers to profitably divert prices or quality of service from competitive levels.

4.2 Defining the market in which the eligible services are supplied

In its DTCS 2004 Final Report and in the Final Exemption Decision, the Commission identified the relevant downstream markets for DTCS as the range of retail services (that can be supplied using transmission services) delivered over optical fibre. This includes national long distance, international call, data and IP-related markets.

In the Discussion Paper, the Commission specifically sought comment from interested parties on whether the markets identified in its DTCS 2004 Final Report and Final Exemption Decision are still the relevant markets in respect of the DTCS for the purposes of this inquiry.

¹² *Queensland Wire Industries Pty Ltd v BHP Ltd* [1989] ATPR 40-925, 50008 (Mason CJ and Wilson CJ).

4.2.1 Views of interested parties on the relevant markets

AAPT submits that it agrees with the Final Exemption Decision's definition of the relevant downstream markets, however, AAPT considers that mobile services should also be included as a relevant downstream market.¹³

The consideration of mobile voice and data as downstream markets for transmission was also raised in Vodafone's submission.¹⁴ Vodafone submits that access to the declared DTCS is a critical input into the supply of a broad range of telecommunications services, including mobile voice and mobile broadband services delivered by mobile operators.¹⁵

Optus submits that it agrees with the Commission's view in the Final Exemption Decision, noting that the defined transmission service must be delivered over optical fibre.¹⁶

Telstra submits that the definition of the relevant downstream market as stated in the Final Exemption Decision was too narrow as it is limited to retail services delivered over optical fibre. Telstra submits that the definition should be expanded to include transmission services delivered over ULLS, microwave radio and satellite. Further, Telstra submits that self-supply is also occurring for this service.¹⁷

4.2.2 Commission's views on the relevant markets

The Commission has previously stated its view that Part XIC of the Act does not require the Commission to precisely define the scope of relevant markets for the purpose of a declaration inquiry. In certain declaration inquiries, it may be sufficient to broadly identify the scope of the relevant markets likely to be affected by declaration. Accordingly, a market definition analysis under Part XIC of the Act should be seen in the context of shedding light on how declaration would promote competition rather than in the context of developing 'all purpose' market definitions.¹⁸ Following consideration of interested parties' submissions, the Commission is of the view that the markets identified in its DTCS 2004 Final Report, and reiterated in the Final Exemption Decision are still the relevant markets for DTCS, for the purposes of evaluating whether declaration would promote competition. In addition, the Commission considers that mobile services, including voice and data, are relevant

¹³ AAPT Limited, *Submission by AAPT Limited to the Australian Competition and Consumer Commission in response to Domestic Transmission Capacity Service – a discussion paper reviewing the declaration for the domestic transmission capacity service, November 2008*, 19 December 2008, (AAPT submission), p. 3.

¹⁴ Vodafone Australia Limited, *Submission to the ACCC Discussion paper reviewing the declaration for the domestic transmission capacity service (DTCS)*, 23 December 2008, (Vodafone submission), p. 7 & 8.

¹⁵ Vodafone submission, p. 3.

¹⁶ Singtel Optus Pty Ltd, *Optus Submission to Australian Competition and Consumer Commission on Reviewing the declaration of the Domestic Transmission Capacity Service*, 24 December 2008, (Optus submission), p. 7.

¹⁷ Telstra Corporation Limited, *Telstra Corporation Limited Domestic Transmission Capacity Service Review*, 23 December 2008 (revised 6 January 2009), (Telstra submission), Schedule 1, p. 1.

¹⁸ ACCC, *Fixed Services Review, A second position paper – Public version, April 2007* (Fixed Services Review Paper), p. 33.

downstream markets, as submissions have indicated that continuing growth in mobile data use will drive increasing use of transmission capacity.

4.2.3 Geographic dimensions of the market

In establishing the geographic dimensions of the market the Commission will have regard to factors including any limitations on the ability of access to alternative sources of supply in alternative regions; the costs of switching to alternative sources of supply; and the relative price levels and price movements of different geographic sources of supply.¹⁹

In previous inquiries, the Commission has noted that geographic markets include inter-capital transmission, capital-regional routes, inter-regional routes and local exchange and tail-end transmission in regional, metropolitan and CBD areas. When considering inter-capital transmission, the Commission has viewed each inter-capital transmission route as a distinct geographical market with distinct characteristics. The Commission considers that access seekers are likely to purchase the DTCS based on routes, i.e. a point to point route which is not likely to be demand substitutable for another route.

4.2.4 Views of interested parties on the geographic dimension of the relevant markets

AAPT agreed with the Commission's previous assessment of the geographic markets for transmission services. AAPT submits that each of these markets is sufficiently distinct and should be considered separately.²⁰

Optus submits that each market must be limited to a single route between two points on the network, assessing each transmission route on its merits. Optus submits that this narrow 'point to point' definition of a market is equally relevant for describing all transmission services including capital-regional, inter-exchange and tail-end. Optus submits that this definition is supported by the terms of the current DTCS service declaration, the terms of Optus's agreements with Telstra for transmission services and by decisions of the Australian Competition Tribunal (Tribunal) for similar services.²¹ Optus further submits that although they believe the 1 km rule for establishing the presence of potential competition on a capital-regional route is reasonable, it should be regarded as an upper limit, and a shorter distance should be considered based on the individual circumstances of the route. Optus notes that a carrier must make a significant and irreversible investment in infrastructure to construct a spur line – even a 1 km spur line.²²

Telstra submits that the service can include the geographic markets that the Commission has previously used. However, Telstra submits that it is not necessary to specify exactly the nature of the relevant geographic markets for the purposes of a re-declaration, and it is difficult to do so given the complexity of the DTCS service.²³

¹⁹ Mergers Guidelines Draft 2008, p. 15.

²⁰ AAPT submission, p. 4.

²¹ Optus submission, p. 9.

²² Optus submission, p. 12 & 13.

²³ Telstra submission, Schedule 1, p. 1 & 2.

Telstra notes that bandwidth speed at which transmission is offered is also an important consideration, as market segments for high-speed transmission tails and low-speed tails (ie up to 2Mbps) are already competitive.

Telstra disagrees with criteria used in the Final Exemption Decision that requires competitors to have a point of interconnection (POI) at each Telstra exchange to be counted as a competitor. Telstra submits that competitor's inter-exchange networks may bypass some of Telstra's exchanges through the establishment of their own external POIs which can easily be connected to Telstra's exchanges.

Telstra further disagrees that a market for a capital-regional route is limited to within 1 km of the regional town's Post Office. Telstra submits that the scope of the market should be related to the overall distance of the route, and that installation of DTCS fibre is viable over much longer distances than 1 km.

Telstra further submits that the geographic market definition should also contemplate competition provided by providers utilising technologies other than optical fibre and the competitive constraints faced by the potential for additional competition in the marketplace.²⁴

4.2.5 Commission's views on the geographic dimension of the relevant markets

The Commission continues to hold the view that broad geographical categories for transmission services are useful in identifying particular transmission markets. It also considers that it is feasible to break these into particular routes where clear distinctions are apparent based on traffic volume and the loci of competing providers.

After considering the submissions, the Commission considers that it has not received any compelling information to justify a departure from the definition of the geographic markets used previously, namely: inter-capital transmission, capital-regional routes, inter-regional routes and local exchange and tail-end transmission in regional, metropolitan and CBD areas. Further, for capital-regional routes, the geographic market is also defined as that area within 1 km or less of the town's regional post office in a given regional area. This is consistent with the Commission's Final Exemption Decision in which the Commission rejected a definition of the market as a larger area than within 1 km of a town's post office.

4.2.6 Substitutes and potential substitutes to the DTCS

The product dimensions of a market refer to the good and/or service supplied in that market and the potential sources of substitutes. In establishing the relevant product dimensions of a market, the Commission will have regard to factors including but not limited to, the physical and technical characteristics of the product and potential substitutes, costs of switching purchases between the product and potential substitutes, costs of switching production to a substitute product and the relative price levels and price movements of the product compared to potential substitutes.²⁵

²⁴ Telstra submission, Schedule 1, p. 2.

²⁵ Merger Guidelines Draft 2008, p. 15.

In its DTCS 2004 Final Report, the Commission noted the following in relation to potential substitutes to the DTCS.

Potential substitutes to the DTCS

The services provided via DTCS may be provided via a number of other data delivery methods. These other delivery methods include:

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

In relation to tail-end transmission, the Commission considered both in the DTCS 2004 Final Report and the Final Exemption Decision, that substitutes may include ULLS, HFC, LMDS and MMDS. The Commission noted in both the DTCS 2004 Final Report, and the Final Exemption Decision that optical fibre remained the dominant technology for all transmission services. The Commission again explored and rejected the potential for ULLS as a close substitute for DTCS in the provision of tail-end transmission in the Final Exemption Decision.

The temporal characteristics of the market refer to the timeframe over which substitute services could potentially exert a competitive constraint on the pricing and output behaviour of a provider of the eligible service.

In the Discussion Paper, the Commission sought interested parties' views on whether the alternative technologies to the DTCS have become more or less viable in the provision of relevant services, and if the availability of these technologies is likely to increase or decrease in the foreseeable future.

4.2.7 Views of interested parties on substitutes to DTCS

AAPT submits that the only viable technology for high capacity transmission services is fibre optic technology. While current alternative technologies can compete with fibre up to certain limited bandwidths and distances, fibre becomes the dominant technology above these thresholds.²⁶

Vodafone submits that other technologies that can arguably be used to provide some competitive constraint on inter-exchange local transmission and tail-end transmission (such as microwave etc) increasingly cannot compete with optical fibre in terms of capacity. Vodafone submits that these alternative technologies will provide even less effective commercial constraint as capacity intensive services such as mobile broadband require an optical fibre solution.²⁷

Optus's submission details the limitations of satellite, microwave and ULLS technology as an alternative to fibre transmission. Optus submits that although alternative mediums to the declared DTCS are available (e.g. microwave, satellite) they are not direct substitutes for the DTCS. Optus considers that these alternate platforms were not built for the purpose of providing transmission capacity services,

²⁶ AAPT submission, p. 5.

²⁷ Vodafone submission, p. 7.

and they are not capable of meeting the typical requirements of Optus's customers (particularly its business customers). Optus therefore believes that these substitutes would not be able to provide a sufficient competitive constraint on the incumbent's conduct, and downstream services would suffer as a result.²⁸

Telstra submits that the Commission should consider the full range of substitute technologies in assessing the extent of current and potential competition in the provision of transmission services. Telstra considers that alternative technologies to fibre optic cable have become more viable since the DTCS 2004 Final Decision. For example, the widespread deployment by competitors of DSLAMs has increased the number of customers addressable by competitors using ULLS to deliver transmission services. Telstra also notes microwave and satellite as means of providing DTCS, and submits that these technologies have become more viable since 2004 due to a lowering of input costs.²⁹

4.2.8 Commission's views on substitutes to DTCS

In the DTCS 2004 Final Report and Final Exemption Decision, the Commission concluded that optical fibre remained the dominant technology for the provision of all transmission services. In light of information received during that inquiry, the Commission did not consider microwave services as a viable substitute on capital-regional routes given that it cannot be utilised effectively across the entire range of downstream demands. Further, the Commission considered that alternative tail-end transmission technologies such as ULLS, HFC, LMDS and MMDS cannot match optical fibre in terms of capacity or customer acceptance for the full range of transmission requirements at this stage.

In light of the submissions received in relation to this review, no compelling information has been provided that would suggest alternative technologies for transmission services have become more viable since the 2004 Final Decision or the recent Final Exemption Decision. The Commission maintains the view that optical fibre remains the dominant technology for the provision of all transmission services.

4.3 Market Structure

Market structure is an important determinant of a competitive market. The Fixed Services Review Second Position Paper states that in examining market structure, the Commission considers that competition is promoted when market structures are altered such that the exercise of market power becomes more difficult; for example, because barriers to entry have been lowered (permitting more efficient competitors to enter a market and thereby constrain the pricing behaviour of the incumbents) or because the ability of firms to raise rivals' costs is restricted.³⁰

In its Discussion Paper, the Commission sought interested parties views on whether the DTCS, with respect to inter-exchange and tail-end transmission services, should be considered as enduring bottlenecks. More specifically, the Discussion Paper sought views on whether:

²⁸ Optus submission, p. 17 & 18.

²⁹ Telstra submission, Schedule 1, p. 3.

³⁰ Fixed Services Review Paper, p. 73.

- any barriers to entry or expansion exist in transmission markets
- alternative infrastructure was used to provide inter-exchange and tail-end transmission services
- new investments were planned by alternative providers to enable the provision of inter-exchange or tail-end transmission services, and
- the potential competitive constraint that would be provided by new DTCS infrastructure in the provision of inter-exchange and tail-end services.

4.3.1 Views of interested parties on market structure

Inter-exchange and tail end transmission services as bottlenecks

AAPT submits that it considers inter-exchange and tail-end transmission to be enduring bottlenecks as it is dependent on being able to secure access to these services as a critical input to the supply of its own services. AAPT is not able to duplicate Telstra's extensive transmission network infrastructure and to do so would amount to inefficient duplication.³¹

Optus supports and repeats the Commission's conclusion in the Final Exemption Decision in regard to inter-exchange transmission. Optus submits that due to high sunk costs and obtaining access to Telstra's exchange buildings only 'existing optical fibre networks with a POI at a particular Telstra exchange can reasonably be considered to be able to contest the market for inter-exchange transmission' in a particular ESA.³² For tail-end transmission, Optus submits that the high cost of building access fibre infrastructure is a significant barrier to entry and in metropolitan areas the barriers to entry are even greater due to greater distances and lower expected revenues compared to CBD areas.³³

Telstra submits that inter-exchange and tail-end DTCS are not enduring bottlenecks. Telstra notes that the Final Exemption Decision recognised the development of competition in inter-exchange transmission markets since 2004. Moreover, Telstra submits that the level of competition is broader than the Final Exemption Decision suggests. Telstra notes that the exemptions granted were limited in scope to those sought in Telstra's application and alternative transmission technologies were not considered in assessing competition for DTCS supply. Furthermore, Telstra submits that the Commission used a conservative threshold in exempting markets on a 'Telstra plus two other optical fibre competitors' basis without considering the use of a lower threshold or the competitive threat of potential competition.³⁴

³¹ AAPT submission, p. 6.

³² Optus submission, p. 24.

³³ Optus submission, p. 22.

³⁴ Telstra submission, Schedule 1, p. 5.

Barriers to entry or expansion in transmission markets and alternative infrastructure used to provide transmission services

AAPT submits that there are considerable barriers to entry in transmission markets due to high sunk costs. For the inter-capital market, these costs are for ploughing fibre into the ground.³⁵

Vodafone submits that the declared DTCS markets exhibit natural monopoly characteristics due to the small number of customers located over a significant area requiring infrastructure at significant cost. In many cases an incumbent enjoys economies of scale and is vertically integrated with a significant share of downstream markets for the supply of mobile services, presenting further barriers to entry.³⁶

Optus submits that there are significant high sunk costs in the construction of transmission networks and therefore a firm that cannot currently serve the market without making significant, irreversible new investments should be defined as being outside the boundaries of the market.³⁷

Telstra submits that barriers to entry are insufficient to deter significant competition. Telstra disagrees with the Commission's view in the Final Exemption Decision that high sunk costs on capital-regional routes could serve as a barrier to entry for distances over 1 km. Telstra notes that current infrastructure investment by a broad range of owners in the transmission market demonstrates that barriers to entry are low. Furthermore, utilising alternative transmission technologies permits competitive entry at considerably less upfront cost.³⁸ Telstra submits that there are now at least 17 fibre network owners who utilise their assets to offer a DTCS equivalent service. In addition, there are also currently at least 28 long haul microwave owners, 65 fixed wireless base station owners, and 26 fixed wireless broadband access networks. Furthermore, satellite and copper are also used by a number of carriers to deliver data transport services.³⁹

AAPT submit that alternative wholesale providers use fibre in the provision of inter-exchange transmission. For tail-end transmission, AAPT submit that services are supplied over optical fibre or ULLS for lower speeds and shorter distances.⁴⁰ AAPT further submit a caveat that the Commission should not make the assumption that the presence of an additional fibre owner in a given market means that the owner will replicate DTCS services.⁴¹

New investments planned

AAPT submits that it is not aware of any significant new investments planned to enable the provision of inter-exchange or tail-end transmission services.

³⁵ AAPT submission, p. 7.

³⁶ Vodafone submission, p. 6 & 7.

³⁷ Optus submission, p. 23 & 24.

³⁸ Telstra submission, Schedule 1, p. 7.

³⁹ Telstra submission, p. 6.

⁴⁰ AAPT submission, p. 6.

⁴¹ AAPT submission, p. 4.

Telstra submits that there is evidence of large scale investment from alternative providers which will increase as demand for new services and applications requiring bandwidth and high speeds increases. Telstra highlights the September 2007 announcement from Primus Australia that it is boosting its fibre optic transmission capacity by ten fold in response to customer demand for broadband capacity as an example that increased investment is occurring.⁴² Telstra further submits that the increasing availability of new services requiring more bandwidth and higher speeds will create greater incentives to deploy transmission services as the viability of doing so increases.⁴³

The potential competitive constraint that would be provided by new DTCS infrastructure

AAPT submits that the competitive constraint provided by new DTCS infrastructure in the provision of tail-end and inter-exchange transmission would depend on the specific nature of the DTCS infrastructure involved. For example, whether spare capacity has been provisioned, whether the infrastructure follows a diverse route to existing DTCS infrastructure, whether it is single path or has geographic redundancy and whether it is suitable for various speeds and distances.

Optus submits that the Tribunal's recent WLR decision points out that the existence of entry, on its own, is not sufficient to show the existing supplier will be constrained. The Tribunal considers that it is the impact of entry that is important in competition assessment – has entry had, or is entry likely to have, a competitive impact on Telstra's behaviour.⁴⁴

Optus further submits that the Commission should consider whether the entrant has the capacity to satisfy demand in the short and long-run and whether the entrant(s) have the financial strength to ride out responses by other player(s) in the market.⁴⁵

Telstra submits that the deployment of new DTCS infrastructure will provide competitive constraints on existing suppliers for inter-exchange and tail-end transmission services. Further, Telstra submits that the threshold that two optical fibres providers other than Telstra are required to establish sufficient constraint on Telstra is too conservative. Competitive outcomes may also occur where Telstra faces competition from any source in the supply of the DTCS, as suppliers will be vying to supply the demand that exists within the relevant market.⁴⁶

4.3.2 Commission's views on market structure

In the DTCS 2004 Final Report, the Commission found that:

- the presence of non-vertically integrated providers and access seekers suggested that there were not overwhelming efficiencies from vertical integration, and thus, there appeared to be a separate wholesale market for transmission services

⁴² Telstra submission, p. 6.

⁴³ Telstra submission, Schedule 1, p. 6.

⁴⁴ Optus submission, p. 23.

⁴⁵ Optus submission, p. 23.

⁴⁶ Telstra submission, Schedule 1, p. 6 & 7.

- in CBD areas there did not appear to be a discrete inter-exchange local transmission service, such a service is most commonly purchased from a supplier of a transmission tail-end service, in conjunction with that service, and
- with respect to capital-regional transmission services, a route that had at least three optical fibre competitors present or in very close proximity (within 1 km or less from the GPO of a regional centre for a given capital-regional route), could be considered to have sufficient competition/contestability to warrant removal of that route from declaration.

In the Final Exemption Decision the Commission found that due to the high sunk cost of building fibre networks in metropolitan areas and obtaining access to Telstra's exchange buildings, only existing optical fibre networks with a POI at a particular Telstra exchange can reasonably be considered to be able to contest the market for inter-exchange transmission in that ESA.

In the Final Exemption Decision the Commission did not consider that tail-end transmission provided using ULLS is a close substitute for the provision of DTCS. As such, the Commission considered that in the metropolitan and CBD tail-end transmission market barriers to entry are dependent on the costs of deploying fibre infrastructure and that these sunk costs remain high.

The Commission considered in the Final Exemption Decision that an existing capital-regional or inter-capital fibre network which is a distance of at most 1 km from a town's regional post office does not face a barrier to entry that is so high as to make the market for capital regional transmission services in that market incontestable. The Commission is still of the view that a competitor that meets this criterion could be considered a constraint on the behaviour and pricing of the incumbent.

Following consideration of the submissions received in response to the Discussion Paper, the Commission is still of the view that effective competition has not been established in the tail-end transmission market. Further, the relevant markets for many inter-exchange transmission services exhibit limited contestability. Significant sunk costs in the transmission market represent significant barriers to entry and make it economically inefficient to duplicate existing network infrastructure, and yet, to supply downstream services, access to a transmission network is vital. However, as noted in the Final Exemption Decision, the Commission is cognisant that markets for a significant number of inter-exchange transmission services are exhibiting increasing contestability.

Submissions have indicated that increased use of downstream services, particularly data will consume increasing amounts of bandwidth on transmission routes. It is an encouraging sign that new transmission services are being deployed by competitors in response to increased demand. The Commission considers that this increased demand for transmission services will facilitate further investment and entry into all transmission service markets. However, as discussed earlier, although alternative technologies can have a role to play in satisfying increased transmission demand, for example in niche markets, optical fibre is likely to remain the dominant technology across all services. It has been established that high barriers to entry exist in many

DTCS markets, particularly where optical fibre remains the only feasible option for transmission.

For these reasons, the Commission considers that barriers to entry exist which limit the actual or potential threat of competition that would constrain the behaviour of the incumbent in all of the DTCS markets.

4.4 Price movements

One element of effective competition and of competitive rivalry is the rate of reduction in prices towards the costs of production. Competitive markets are usually characterised by declining prices over time as competitors attempt to gain an advantage over their rivals through the price-product-service packages they offer to customers.

The Commission is therefore interested in assessing the trend in the price of the DTCS both at the wholesale and the retail level. In particular, the Commission sought comment on whether:

- prices have continued to fall since the previous inquiry
- some markets are exhibiting greater price falls than others, and
- whether wholesale prices for transmission reflected underlying costs.

4.4.1 Views of interested parties on price movements

Have prices continued to fall since the previous inquiry

AAPT submits that there has been very little movement in prices since the previous inquiry in relation to metropolitan tail-end transmission. AAPT notes that for inter-capital transmission a price trend is more difficult to discern as the service tends to be purchased on terms spanning several years.⁴⁷

Telstra submits that prices have continued to fall since the previous inquiry.⁴⁸ Telstra submits that effective competition in downstream markets that rely on transmission as an input, such as fixed and mobile retail services, has led to price declines – a trend that has been observed by the Commission. Telstra quotes a Commission observation⁴⁹ that notes declining prices in fixed and mobile retail markets to conclude that pricing and availability of transmission services is in no way inhibiting competition among providers of these downstream services.⁵⁰

Markets that are exhibiting greater price falls than others

AAPT submits that the presence of multiple players on a particular inter-capital route does tend to provide competitive tensions leading to a better price than would otherwise be the case. AAPT note that inner metro and CBD areas are also open to

⁴⁷ AAPT submission, p. 8.

⁴⁸ Telstra submission, Schedule 1, p. 8.

⁴⁹ ACCC, *Telecommunications Competitive Safeguards: Changes in the Prices Paid for Telecommunications Services in Australia 2006-2007*, page 71.

⁵⁰ Telstra submission, Schedule 1, p. 6.

greater competition and therefore prices tend to be lower than outer metro and regional areas when Telstra remains the dominant player.⁵¹

Telstra submits that prices will continue to fall as demand for higher speed and bandwidth services increases and as technology continues to improve to deliver new and alternative means of providing the DTCS.⁵²

Whether wholesale prices for transmission reflect underlying costs

AAPT submits that due to the greater level of competition for inter-capital transmission, wholesale prices are more likely to reflect costs than non-inter-capital transmission. AAPT believe that wholesale prices for non-inter-capital transmission, particularly in outer metro and regional areas continue to be priced well in excess of costs.⁵³ Similarly, Vodafone submits that prices on contestable routes have declined significantly in comparison to those on regulated routes.⁵⁴

Telstra supports the AAPT submission that inter-capital transmission markets are competitive, and submit that prices reflect market conditions on these routes. Telstra submits that it prices non-inter-capital transmission according to market pressures and demands, and accordingly, price falls would reflect market conditions.⁵⁵

4.4.2 Commission's views on price movements

In the Final Exemption Decision, the Commission considered that it may be the case that average industry prices for inter-exchange and tail-end transmission had fallen to some extent in the period since the DTCS 2004 Final Report. However, the Commission noted that it did not have sufficiently detailed price or cost information, nor had such information been provided in any submissions to make further conclusions.

Submissions to this inquiry tend to reconfirm that markets with multiple providers tend to exhibit greater competition and lower prices than those dominated by a single provider. The Commission notes that no price data was received in response to this inquiry that would enable the Commission to identify price trends.

⁵¹ AAPT submission, p. 8.

⁵² Telstra submission, Schedule 1, p. 8.

⁵³ AAPT submission, p. 8.

⁵⁴ Vodafone submission, p. 8.

⁵⁵ Telstra submission, Schedule 1, p. 8.

5 Assessment of state of competition

5.1 Structural characteristics

The submissions from interested parties provide conflicting views between the access provider and access seekers in relation to the state of competition, barriers to entry and actual and potential substitutes in relation to the supply of the DTCS. It is apparent however, from the information provided by all parties that access to the services in the declaration will become increasingly important as the demand for downstream services experiences rapid growth.

The Commission considers that distinct transmission markets exist, and in most cases, are not substitutable for each other. These geographic markets are inter-capital (which was removed from the declaration in 2001), capital-regional, inter-regional, local exchange and tail-end transmission.

Optical fibre remains the dominant technology for the provision of DTCS. Although other technologies can have a role to play, the Commission does not consider they possess the technological attributes or customer acceptance to exert a competitive constraint on an incumbent utilising optical fibre.

The Commission considers that generally, barriers to entry remain high with significant sunk costs incurred with the risk of uneconomic returns although the Commission notes that contestability is increasingly evident in some inter-exchange transmission markets as ascertained in the Final Exemption Decision.

Downstream markets can be defined as the range of retail services (that can be supplied using transmission services) delivered over optical fibre. The growth in mobile data services identified in submissions has prompted the Commission to give this market greater consideration than in previous declaration reviews.

5.2 Dynamic characteristics

The Commission notes submissions from parties relating to the recent significant rise in mobile data use. Submissions indicate that demand for transmission capacity is likely to grow commensurably with mobile data. Given the correct incentives, steadily increasing demand for transmission capacity should encourage market entry particularly when barriers to entry are lowered through the increasing substitutability of alternative technologies, the security of customer numbers and a non-predatory reaction from incumbent providers.

The Commission does not consider that these characteristics are evident across the broad DTCS market as yet. However, in individual transmission services where it is apparent, the Commission is inclined to rollback regulation to further stimulate contestability as shown in the Final Exemption Decision.

Anecdotal evidence provided indicates that planned investment in DTCS is increasing using both fibre and other technologies. The Commission however, does not consider

these investments are currently capable of exerting a competitive constraint on incumbent providers.

5.3 Final exemption decision

The Final Exemption Decision reflected the dynamic nature of the DTCS service and the progress made in certain transmission markets to a contestable market that precludes the need for further regulation. The Commission considered granting the exemptions in a limited number of markets which met the criteria established in the 2004 Final Decision would be in the LTIE.

It is noted that shortly after the Commission made its Final Exemption Decision for the DTCS, the Tribunal considered an earlier Commission decision to grant Telstra limited exemptions from the SAOs for the local carriage service (LCS) and wholesale line rental (WLR).⁵⁶ The Commission had used a ‘rule of thumb’ approach to analysing the relevant matters, including the LTIE, in determining that Telstra should be exempt from complying with the SAOs for the supply of LCS and WLR in 248 exchanges. These were exchanges that had: (a) 14,000 or more addressable services in operation connected to a Telstra exchange via an uninterrupted wire through which an end-user might be provided with a ULLS-based service; or (b) 4 or more ULLS-based competitors (including Telstra) within the exchange.⁵⁷

The Tribunal was critical of the ‘rule of thumb’ adopted by the Commission and a different ‘rule of thumb’ proposed by Telstra in relation to the LCS and WLR exemptions and stated that ‘...determining the competitive state of the market should be largely an empirical exercise.’⁵⁸ In the Tribunal’s view this involves examining observable market behaviour for indicators such as the number of new entrants, the growth of the entrants’ market share, an increase in the range and quality of services provided and a reduction in the price of services.⁵⁹ The Tribunal suggested that inquiry of such matters ‘...would at least provide a basis for drawing inferences on whether deregulation is likely to result in the achievement of the objective of promoting competition.’⁶⁰

In its submission to this inquiry Telstra has submitted that an additional [c-i-c] band 2 ESAs in Victoria and [c-i-c] ESAs in Queensland meet the criteria for exemption yet remain regulated. Telstra has not identified the individual ESAs in its submission and suggests that the Commission should review its infrastructure record-keeping rule data to remove competitive routes from the new declaration and continue to review market developments on an annual basis.

Given the Tribunal’s comments in relation to the factors relevant to determining whether there should be deregulation, the Commission is not currently satisfied that the additional ESAs which Telstra claims meet the Commission’s criteria for exemption in the Final Exemption Decision for DTCS should be excluded from the

⁵⁶ *Application by Chime Communications Pty Ltd [2008] ACompT 4 (22 December 2008)*. Note this decision is currently on appeal to the Full Federal Court.

⁵⁷ *ibid* at [37].

⁵⁸ *ibid* at [56].

⁵⁹ *ibid*.

⁶⁰ *Ibid* at [72].

declaration. The Commission is of the view that it, in the absence of empirical information about the additional ESAs, it would be inappropriate to ‘carve out’ the additional ESAs at this point. Further, the Commission notes that it is subject to a statutory timeframe to conclude its review and issue a report before 31 March 2009.

The Commission remains committed to removing regulation from competitive transmission routes, where it can be demonstrated that doing so is in the long-term interests of end-users. The statutory framework primarily provides for achieving this object through applications for exemption. As such, while the Commission has not reached a concluded view it does not consider that a monitoring programme to review the declaration on an annual basis would be appropriate in relation to the DTCS.

5.4 Conclusion on state of competition

The Commission’s overall conclusion on the state of competition for the DTCS is that, with the exception of the services identified in the Final Exemption Decision, the assessment of competition in the 2004 Final Decision remains pertinent. There are not yet the conditions conducive to effective competition in the remaining transmission markets to warrant the removal of these services from the scope of the declaration. The declared DTCS is largely characterised by significant barriers to entry, limited supply or demand side substitutability and a dominant incumbent.

It is critical that access seekers are able to gain access to the DTCS and at a reasonable price to ensure continued innovation and vigorous competition in downstream services. This access must be balanced against providing the correct incentives for efficient investment in the market to ensure the long-term interests of end users are also addressed.

6 Will varying the declaration promote competition?

The Commission considers that varying the declaration will promote competition by ensuring that access seekers continue to be provided with the DTCS where it is in the LTIE. Incorporating the transition period of the Final Exemption Decision into the varied declaration provides access seekers on exempted routes a sufficient period to enter into supply arrangements for continued provision of the service, or invest in the required infrastructure to provide the transmission in the exempt inter-exchange and capital-regional services.

Retaining non-excluded routes under the scope of the declaration ensures access seekers can access the DTCS on reasonable terms to compete effectively in downstream markets. Access seekers and other parties will also be able to build a customer base should they decide to undertake their own efficient infrastructure investment to supply transmission services to themselves.

The Commission considers that varying the declaration to encompass the Final Exemption Decision ensures that the intention of the Final Exemption Decision will be implemented. This approach will provide certainty for access providers and access seekers during the transition period and be consistent with the findings of the Final Exemption Decision, namely, that where routes are not considered competitive or contestable, they should remain under the scope of the declaration.

7 Any-to-any connectivity

In determining whether a service should be declared the Commission must have regard to whether declaration will promote the long-term interests of end-users (LTIE) of the service.⁶¹ This second limb of the LTIE requires the Commission to make an assessment as to whether maintaining, varying or revoking the service declaration would be likely to achieve any-to-any connectivity in relation to carriage services that involve communication between end users.

Subsection 152AB(8) of the Act 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 service, or a similar service, with each other whether or not they are connected to the same network.

The reference to a “similar” service in the Act enables this criterion to apply to services with analogous, but not identical, functional characteristics, such as fixed and mobile voice telephony services.

The concept of any-to-any connectivity relates to the objective whereby end-users on different networks have the ability to communicate with each other. The Commission is required to consider whether maintaining or changing the declarations is likely to affect any-to-any connectivity in relation to carriage services that involve communications between end-users.

7.1 Views of interested parties

The Commission did not receive any submissions which commented on the issue of any-to-any connectivity.

7.2 The Commission’s view

The Commission does not believe that the variation to the declaration as set out in this Draft Report will have an impact on the achievement of any-to-any connectivity between end-users.

⁶¹ Section 152AB *Trade Practices Act 1974* (Cth).

8 Will declaration encourage economically efficient use of and investment in infrastructure?

The Commission was interested to know whether:

- declaration of the DTCS had discouraged efficient investment in alternative infrastructure by access seekers, and
- re-making, extending, revoking or varying the declarations would have an effect on the investment decisions of new entrants or existing suppliers in the DTCS.

8.1 Views of interested parties

Has declaration discouraged efficient investment in alternative infrastructure

Access seeker's submissions have generally viewed declaration as encouraging efficient investment, particularly in downstream services. AAPT submits that access seeker's investments in DSLAMs and MSANs is an example of this efficient investment which has positive effects in the downstream voice and data markets.⁶²

Vodafone submits that declaration has enabled Vodafone to use the DTCS to offer competitive and innovative offerings in the mobile market, and removal of declaration would be deleterious to competition in the downstream mobile market.⁶³

Optus submits that declaration of the DTCS has created significant benefits for consumers of downstream services and has encouraged economically efficient investment in transmission infrastructure by acting as a stepping stone for access seekers on the path to infrastructure-based competition.⁶⁴

Telstra submits that it is widely acknowledged that regulation of competitive services causes harm as it creates a disincentive for investment in that service. Telstra notes that de-regulation of inter-capital routes in 2004 precipitated large scale investment upgrades by competitors on these routes. Telstra believes the removal of risk from regulatory intervention in the setting of price and non price terms and conditions attracted the capital for these investments. Telstra urges the Commission to ensure rollback of regulation occurs as competition develops.⁶⁵

Would remaking, extending, revoking or varying the declaration effect the investment decisions of new entrants or existing suppliers

AAPT submits that it acknowledges that facilities based competition generally leads to better competition. However, AAPT considers that the expiry of the DTCS declaration at this time would lead to a significant reduction in competition in

⁶² AAPT submission, p. 9.

⁶³ Vodafone submission, p. 8.

⁶⁴ Optus submission, p. 3.

⁶⁵ Telstra submission, Schedule 1, p. 9.

downstream markets and possibly also lead to inefficient duplicative investment in transmission infrastructure.⁶⁶

Vodafone submits that due to high barriers to entry it is unlikely that there will be any new entry in the supply of the declared DTCS in the foreseeable future.⁶⁷ Vodafone states that if the declaration is revoked or allowed to expire, a vertically integrated supplier of declared DTCS may take advantage of its monopoly over the supply of access to the declared service on one or more routes by refusing access or charging unreasonable prices to customers who compete with it in downstream markets.⁶⁸

Optus submits that the removal of the declaration would significantly reduce investment in infrastructure. Optus notes that it is often the case that after it secures a customer using a leased transmission service, it will subsequently become feasible to build access fibre – for example if a second customer in the same building is acquired. Alternatively, in a case where capacity is exhausted in a particular building, Optus may find it necessary to use the DTCS on a temporary basis until it can build the necessary infrastructure. Optus believes that these opportunities for access seekers to build scale before investing in infrastructure will be lost if declaration is removed, with severe implications for investment and competition.⁶⁹

Telstra submits that revoking the declaration where there is actual and potential competition will encourage efficient investment in alternative infrastructure. Inter-exchange and tail-end transmission services are competitively supplied in most of the locations where competitors are interested in selling services. Telstra submits that it is imperative that regulatory rollback occurs, to ensure investment in infrastructure is encouraged. Regulatory rollback does not remove the supply of the declared DTCS, but encourages the right build or buy decisions.⁷⁰ Telstra submits that rollback of regulation would best promote the LTIE by encouraging efficient investment in facilities that supply the DTCS and thereby promoting the most vigorous and enduring form of competition in the markets in which those services are offered.⁷¹

Telstra cites a decision by the Hong Kong regulator and a US study to illustrate how removal of regulation in certain circumstances can successfully stimulate investment.⁷² Telstra submits that an anticipatory approach recognises that de-regulation can attract the investment required to achieve the desired competitive outcomes and this is particularly true where rapid growth in demand and the development of competing infrastructure constrain existing providers – factors that are present for the declared DTCS. Therefore Telstra urges the Commission to place more consideration on potential competition, as well as its assessment of actual competition.⁷³

⁶⁶ AAPT submission, p. 9.

⁶⁷ Vodafone submission, p. 7.

⁶⁸ Vodafone submission, p. 8.

⁶⁹ Optus submission, p. 24 & 25.

⁷⁰ Telstra submission, Schedule 1, p. 9.

⁷¹ Telstra submission, p. 2.

⁷² Telstra submission, p. 7 & 8.

⁷³ Telstra submission, p. 9.

8.2 The Commission's view

Efficient use of infrastructure

In its DTCS 2004 Final Report, the Commission considered that where removal from declaration of aspects of the transmission capacity service could affect the technical feasibility by which access seekers are able to obtain transmission services and provide retail services to end-users, this may not be in the LTIE. The Commission noted however, that the legitimate commercial interests of access providers includes a commercial return on its investments, its interests in maintaining contractual commitments and its interests in using the network for future requirements. The legitimate commercial interests of access providers also include their ability to exploit economies of scale and scope.

Efficient investment in infrastructure

In the DTCS 2004 Final Report, the Commission considered that where a service remains declared when there is effective competition in the provision of that service declaration can reduce efficient investment more broadly in the market. This is on the basis that it can maintain reliance on the main supplier in the market, thus reducing efficient investment by access seekers in utilising alternative suppliers or services and hence the ongoing investment in infrastructure by these alternative suppliers. This in turn can be deleterious to maintaining competition and in delivering service diversity to end users in the longer term.

However, as the Commission noted in the past, where there is not effective competition to ensure the competitive supply of particular services, continued declaration should promote efficient investment in alternative infrastructure. For example, in relation CBD transmission services the Commission considers that allowing entrants guaranteed access to both inter-exchange and tail-end transmission allows the opportunity for a carrier/carriage service provider (CSP) to build a customer base. At some point in the future, when that carrier/CSP has secured a customer or its retail customer base reaches a certain threshold, it may be encouraged to invest in its own infrastructure due to the greater certainty of a return on investment. The Commission is of the view that this process is valuable for helping to encourage more sustainable competition in the longer term, and therefore, is in the LTIE.

The Commission considers that varying the declaration to reflect the exemptions that were granted for the determined markets, ensures that services that are not effectively competitive, or exhibit only nascent contestability, continue to be declared and remain available to access seekers. In markets that exhibit competition or contestability, exclusion of relevant routes from declaration, consistent with the Final Exemption Decision, would be consistent with the objective of promoting competition, and efficient investment will likely be stimulated. The Commission therefore considers that varying the declaration is in the LTIE and promotes both the efficient use of and efficient investment in infrastructure.

9 The Commission's overall view

The Commission's view remains that the DTCS is a vital input into a range of downstream services and its importance in ensuring competitive and vigorous competition in downstream markets is only likely to increase. DTCS over optical fibre is still the preferred transmission medium despite numerous alternate technologies that are sometimes utilised for a similar function.

The Commission considers that varying the declaration with an expiry in 5 years will ensure that the intention of the Final Exemption Decision is fully effected. As noted earlier the Commission considers that varying the declaration will promote competition by ensuring that access seekers continue to be provided with the DTCS where it is in the LTIE. Further, the variation provides access seekers on routes that are to be excluded a sufficient period to enter into supply arrangements for continued provision of the service, or invest in the required infrastructure to provide the transmission in the (exempt) inter-exchange and capital-regional services.

In accordance with its obligations under the Act, the Commission will, immediately prior to the expiration of this declaration period, review whether the declarations should be remade, extended, revoked, varied or allowed to expire

10 Pricing principles for the DTCS

Under Section 152AQA of the Act, the Commission must, by writing, determine principles relating to the price of access to a declared service (see Appendix 3 for a background on the legislative criteria for developing pricing principles). The determination may also contain price-related terms and conditions relating to access to the declared service.

In terms of timing, the Commission must make such a determination at the same time as or as soon as practicable after:

- the Commission declares a service to be a declared service; and
- if the Commission varies a declared service – that variation.

10.1 Consultation on the pricing principles determination

Before making such a determination the Commission must publish a draft of the determination and invite people to make submissions to the Commission on the draft determination. Subsequently, after considering the submissions received, the Commission must publish the determination in such manner as it considers appropriate.

If the Commission is required to arbitrate an access dispute under Division 8 in relation to the declared service, the Commission must have regard to the determination.

The Commission determined in its July 1997 access pricing principles paper that pricing based on total service long-run incremental cost (TSLRIC) to recover the efficient costs of a ‘forward-looking’ network would satisfy the broad criteria, detailed above.⁷⁴

In a practical sense, TSLRIC consists of the sum of the operating and maintenance costs, as well as the capital costs that the firm incurs in providing the service as a whole. *Operating costs* are the continuing operational costs of providing the service, including the labour and materials costs that are causally related to the provision of the service. *Capital costs* comprise the cost of capital (i.e. the opportunity cost of debt and equity used to finance the firm) and depreciation (i.e. the decline in economic value of assets) of capital that is specific to the production of the service. In practice TSLRIC is usually defined to include a contribution to indirect or organisation-level costs (‘TSLRIC+’).

However, the Commission considers that these broad access pricing criteria also have to be interpreted with respect to the peculiarities of different types of access services. Furthermore, the Commission is conscious of the evolving nature of the telecommunications industry, necessitating the consideration of other appropriate pricing approaches.

⁷⁴ ACCC, *Access Pricing Principles – Telecommunications – a guide*, 1997.

10.2 Views of interested parties

Telstra submits that there are many different types of transmission service and various forms of technology that can deliver transmission. Complex transmission structures and uncertain demand combine to make DTCS a multi-dimensional service. In addition, Telstra submits that industry developments are likely to impact on transmission services in the near future. These developments include growth in broadband, increased market entry, NBN construction and government subsidised rates.

Telstra states that these factors create difficulty in developing a simple pricing approach that can cover all dimensions of the service whilst addressing the significant changes that are likely to occur in the nature of investment in future. Telstra submits that applying strict pricing principles adds considerable risk and the incorrect approach could stifle investment. Further, Telstra states that the lack of disputes that have occurred since declaration of the DTCS illustrate that no price intervention is required.

Telstra considers that the Commission should retain all options in relation to pricing of the service.⁷⁵

10.3 The Commission's view

The Commission's preliminary view is that transmission prices can continue to be based on the TSLRIC of providing these services and that these pricing principles can also apply to a variation of the declared service. However, in the event of an access dispute the parties would make submissions on the appropriate pricing principles in any case. A draft pricing principles determination is attached at Appendix 2 for consultation.

The Commission considers, for this service, that prices based on the TSLRIC approach can be appropriate because it considers that prices set in this fashion are consistent with those that would prevail if the access provider faced effective competition. In achieving this, the Commission is of the view that the use of TSLRIC or another appropriate pricing approach for this service encourages competition in telecommunications markets by promoting efficient entry and exit in dependent markets as well as encouraging economically efficient investment in infrastructure. As TSLRIC can provide for a normal risk-adjusted commercial return on efficient investments in infrastructure in the long-term it can provide the appropriate incentives for future investment for services like the DTCS. Further, the Commission considers the appropriate use of TSLRIC can encourage the efficient use of existing infrastructure and provides incentives for access providers to minimise the costs of providing access over time through efficient investment. Finally TSLRIC can promote the legitimate business interests of the access provider by allowing them to fully recover the efficient costs of producing the service.

⁷⁵ Telstra submission, p. 17 – 19.

The Commission has consistently been open to considering other approaches to pricing regulated services. Accordingly, the Commission must consider other pricing approaches which are likely to be consistent with the legislative criteria. The Commission will generally rely on a broad range of available evidence when determining access prices which may include cost models, international benchmarking and other data reported to the Commission, depending on the nature of the declared service being considered.

Appendix 1. Proposed service description for the DTCS

The domestic transmission capacity service is a service for the carriage of certain communications from one transmission point to another transmission point via network interfaces at a designated rate on a permanent basis by means of guided and/or unguided electromagnetic energy, except communications between:

- (a) one customer transmission point and another customer transmission point
- (b) a transmission point in an exempt capital city and a transmission point in another exempt capital city
- (c) one access seeker network location and another access seeker network location

Capital-regional routes

- (d) a transmission point in Sydney and a transmission point in any of the following regional centres: Albury, Lismore, Newcastle, Grafton, Wollongong, Taree, Dubbo and, with effect from 25 November 2009, Campbelltown, Gosford, Coffs Harbour and Goulburn
- (e) a transmission point in Melbourne and a transmission point in any of the following regional centres: Ballarat, Bendigo, Geelong and Shepparton
- (f) a transmission point in Brisbane and a transmission point in any of the following regional centres: Toowoomba, Gold Coast and, with effect from 25 November 2009, Townsville, Rockhampton, Bundaberg and Maryborough
- (g) a transmission point in Adelaide and a transmission point in Murray Bridge and, with effect from 25 November 2009, Port Augusta

Inter-exchange transmission (metropolitan areas)

- (h) with effect from 25 November 2009, inter-exchange transmission for the following metropolitan ESAs:
 - (1) in Sydney between transmission points located at an Exchange in any of the following ESAs: Ashfield, Balgowlah, Bankstown, Blacktown, Burwood, Campsie, Carramar, Castle Hill, Chatswood, Coogee, Cremorne, East, Eastwood, Edgecliff, Epping, Glebe, Granville, Harbord, Homebush, Hornsby, Hurstville, Kensington, Kingsgrove, Kogarah, Lakemba, Lane Cove, Lidcombe, Liverpool, Mascot, Mosman, Newtown, North Parramatta, North Ryde, North Sydney, Parramatta, Pendle Hill, Pennant Hills, Petersham, Randwick, Redfern, Revesby, Rockdale Rydalmere, Ryde, Seven Hills, Silverwater, St Leonards, Undercliffe, Waverley.

- (2) in Brisbane between transmission points located at an Exchange in any of the following ESAs: Paddington, South Brisbane, Toowong, Valley, Woolloongabba.
- (3) in Melbourne between transmission points located at an Exchange in any of the following ESAs: Ascot, Brunswick, Caulfield, Coburg, Elsternwick, Footscray, Heidelberg, Malvern, Moreland, North Melbourne, Port Melbourne, Preston, Richmond, South Melbourne, St Kilda, Toorak
- (4) in Perth between transmission points located at an Exchange in the ESAs South Perth and Subiaco

Inter-exchange transmission (CBD areas)

- (i) with effect from 25 November 2009, inter-exchange transmission for the following CBD ESAs:
 - (5) in Sydney between transmission points located at an Exchange in any of the following ESAs: City South, Dalley, Haymarket, Kent and Pitt.
 - (6) in Brisbane between transmission points located at an Exchange in any of the following ESAs: Charlotte, Edison and Spring Hill.
 - (7) in Adelaide between transmission points located at an Exchange in any of the following ESAs: Flinders and Waymouth.
 - (8) in Melbourne between transmission points located at an Exchange in any of the following ESAs: Batman, Exhibition and Lonsdale.
 - (9) in Perth between transmission points located at an Exchange in the ESAs Bulwer, Pier and Wellington.
 - (10) in Sydney between transmission points located at an Exchange in
 - i. any of the following ESAs: City South, Dalley, Haymarket, Kent and Pitt; and
 - ii. any of the Sydney Metro Exemption ESAs
 - (11) in Brisbane between transmission points located at an Exchange in
 - iii. any of the following ESAs: Charlotte, Edison and Spring Hill; and
 - iv. any of the Brisbane Metro Exemption ESAs
 - (12) in Melbourne between transmission points located at an Exchange in
 - v. any of the following ESAs: Batman, Exhibition and Lonsdale; and

- vi. any of the Melbourne Metro Exemption ESAs.
- (13) in Perth between transmission points located at an Exchange in
- vii. any of the following ESAs: Bulwer, Pier and Wellington; and
 - viii. any of the Perth Metro Exemption ESAs.

Definitions

Where words or phrases used in this Annexure are defined in the *Trade Practices Act 1974* or the *Telecommunications Act 1997*, they have the meaning as given in the relevant Act.

In this appendix:

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

an **exempt capital city** means Adelaide, Brisbane, Canberra, Melbourne, Perth or Sydney

a **customer transmission point** is a point located at customer equipment at a service provider's customer's premises in Australia (for the avoidance of doubt, a customer in this context may be another service provider)

a **designated rate** is a transmission rate of 2.048 Megabits per second, 4.096 Megabits per second, 6.144 Megabits per second, 8.192 Megabits per second, 34 to 35 Megabits per second, 140/155 Megabits per second (or higher orders)

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 service area or **ESA** has the meaning given to that phrase by the Australian Communications Industry Forum Limited definition in ACIF C559:2006, Part 1.

a **point of interconnection** is a physical point of interconnection in Australia between a network operated by a carrier or a carriage service provider and another network operated by a service provider

a **transmission point** is any of the following:

- a) a point of interconnection
- b) a customer transmission point
- c) an access seeker network location.

Appendix 2. Draft pricing principles determination

TRADE PRACTICES ACT 1974

Determination under section 152AQA

Pricing principles for the Domestic Transmission Capacity Service

The Australian Competition and Consumer Commission (ACCC) determines, pursuant to section 152AQA of the *Trade Practices Act 1974* (the Act), that the principles specified in Schedule 1 are to apply to the Domestic Transmission Capacity Service (DTCS) declared by the ACCC under section 152AL of the Act.

Note: For the effect of this determination, see subsection 152AQA(6) of the Act.

Made by the Australian Competition and Consumer Commission on
[INSERT DATE]

.....

Graeme Julian Samuel
Chairman

SCHEDULE 1

Principles relating to the price of access to the DTCS

1. Wherever it is reasonably practicable to do so, the price of the DTCS should be set equal to the total service long run incremental cost, including a contribution to common costs, (i.e. TSLRIC+) of the service.
2. Where it is not reasonably practicable to set prices on the basis of TSLRIC+, the price of the DTCS should be set having regard to the price of an appropriate benchmark.
3. A service will be an appropriate benchmark where:
 - (a) it is supplied in a competitive market or it is subject to cost based regulation, and
 - (b) its physical attributes are comparable to the DTCS in question.

Appendix 3. Legislative background

Part XIC of the Act sets out a telecommunications access regime. This section of the discussion paper outlines the provisions of the access regime that are relevant to the declaration review.

A.1 Declaration and the SAOs

The Commission may determine that particular carriage services and related services are declared services under section 152AL of the Act. A carrier or carriage service provider that provides a declared service to itself or other persons is known as an access provider. Once a service is declared, access providers are subject to a number of SAOs pursuant to section 152AR of the Act. Terms of access can be governed by the terms of an undertaking or, in the absence of an accepted undertaking, by Commission determination in an access dispute.

In summary, the SAOs require that an access provider, if requested by a service provider, must:

- supply the declared service
- take all reasonable steps to ensure that the technical and operational quality of the service supplied to the service provider is equivalent to that which the access provider is supplying to itself
- take all reasonable steps to ensure that the fault detection, handling and rectification which the service provider receives in relation to the declared service is of equivalent technical and operational quality and timing as that provided by the access provider to itself
- permit interconnection of its facilities with the facilities of the service provider
- take all reasonable steps to ensure that the technical and operational quality and timing of the interconnection is equivalent to that which the access provider provides to itself
- take all reasonable steps to ensure that the service provider receives interconnection fault detection, handling and rectification of a technical and operational quality and timing that is equivalent to that which the access provider provides to itself
- if a standard is in force under section 384 of the Telecommunications Act, take all reasonable steps to ensure that the interconnection complies with the standard
- if requested by the service provider, provide billing information in connection with matters associated with, or incidental to, the supply of the declared service

- if an access provider supplies an active declared service by means of conditional-access customer equipment, the access provider must, if requested to do so by a service provider, supply any service that is necessary to enable the service provider to supply carriage services and/or content services by means of the declared service and using the equipment.

The Commission must only declare a service if, following a public inquiry, it considers that declaration would promote the LTIE.

A.2 Long-term interests of end-users

Section 152AB of the Act states that, in determining whether declaration promotes the LTIE, regard must be had to the extent to which declaration is likely to result in the achievement of the following objectives only:

- promoting competition in markets for listed services
- achieving any-to-any connectivity in relation to carriage services that involve communication between end-users
- encouraging the economically efficient use of, and the economically efficient investment in: (i) the infrastructure by which listed services are supplied; and (ii) any other infrastructure by which listed services are, or are likely to become, capable of being supplied.

These objectives are interrelated. In many cases, the LTIE may be promoted through the achievement of two or all three of these matters simultaneously. In other cases, the achievement of one of these matters may involve some trade-off in terms of another of the matters, and the Commission will need to weigh up the different effects to determine whether remaking, extending, revoking or varying the existing declaration, or allowing it to expire promotes the LTIE. In this regard, the Commission will interpret long-term to mean a balancing of the flow of costs and benefits to end-users over time in relation to the criteria. Thus, it may be in the LTIE to receive a benefit for even a short period of time if its effect is not outweighed by any longer term cost.

The following discussion provides an overview of what the Commission must consider in assessing each of these objectives.

Promotion of competition

Subsections 152AB(4) and (5) of the Act provide that, in interpreting this objective, regard must be had to, but is not limited to, the extent to which the arrangements will remove obstacles to end-users gaining access to listed services. The explanatory memorandum to Part XIC of the Act states that:

...it is intended that particular regard be had to the extent to which the...[declaration]... would enable end-users to gain access to an increased range or choice of services.⁷⁶

The concept of competition is of fundamental importance to the Act and has been discussed many times in connection with the operation of Parts IIIA, IV, XIB and XIC of the Act.

In general terms, competition is the process of rivalry between firms, where each market participant is constrained in its price and output decisions by the activity of other market participants. The Trade Practices Tribunal (now the Australian Competition Tribunal) stated that:

In our view effective competition requires both that prices should be flexible, reflecting the forces of demand and supply, and that there should be independent rivalry in all dimensions of the price-product-service packages offered to consumers and customers. Competition is a process rather than a situation. Nevertheless, whether firms compete is very much a matter of the structure of the markets in which they operate.⁷⁷

Competition can provide benefits to end-users including lower prices, better quality and a better range of services over time. Competition may be inhibited where the structure of the market gives rise to market power. Market power is the ability of a firm or firms to constrain or manipulate the supply of products from the levels and quality that would be observed in a competitive market for a significant period of time.

The establishment of a right for third parties to negotiate access to certain services on reasonable terms and conditions can operate to constrain the use of market power that could be derived from the control of these services. Accordingly, an access regime such as Part IIIA or Part XIC addresses the structure of a market, to limit or reduce the sources of market power and consequent anti-competitive conduct, rather than directly regulating conduct which may flow from its use, which is the role of Part IV and Part XIB of the Act. Nonetheless, in any given challenge to competition, both Parts XIB (or IV) and XIC may be necessary to address anti-competitive behaviour.

To assist in determining the impact on markets of remaking, extending, revoking or varying the existing declaration or allowing its expiration, the Commission will first need to identify the relevant market(s) and then to assess the likely effect on competition in each market.

Section 4E of the Act provides that the term 'market' includes a market for the goods or services under consideration as well as any other goods or services that are substitutable for, or otherwise competitive with, those goods or services. The Commission's approach to market definition is discussed in its 2008 Draft Merger Guidelines, is canvassed in its information paper, *Anti-competitive conduct in telecommunications markets*, August 1999 and is also explored in the Commission's second *Fixed Services Review position paper*, April 2007.

⁷⁶ Trade Practices Amendment (Telecommunications) Act 1997 (Cth) explanatory memorandum.

⁷⁷ Re Queensland Co-operative Milling Association Ltd; Re Defiance Holdings Ltd, (1976) ATPR 40-012, 17,245.

The second step is to assess the likely effect of the proposal on competition in each relevant market. As noted above, subsection 152AB(4) requires that regard must be had to the extent to which a particular thing will remove obstacles to end-users gaining access to listed services.

The Commission considers that denial to service providers of access to necessary upstream services on reasonable terms is a significant obstacle to end users gaining access to services. In this regard, declaration can remove such obstacles by facilitating entry by service providers, thereby providing end-users with additional services from which to choose. For example, access to a mobile termination service may enable more service providers to provide fixed to mobile calls to end-users. This gives end-users more choice of service providers.

Where existing market conditions already provide for the competitive supply of services, the access regime should not impose regulated access. This recognises the costs of providing access, such as administration and compliance, as well as potential disincentives to investment. Regulation will only be desirable where it leads to benefits in terms of lower prices, better services or improved service quality for end-users that outweigh any costs of regulation.

In the context of considering whether remaking, extending, revoking or varying the declaration or allowing its expiration will promote competition, it is appropriate to examine the impact of the existing declaration on each relevant market, the likely effect of altered access obligations (due to the removal of the declaration) on the relevant market, and compare the likely competitive environment in that market before and after the proposed remaking, extension, revocation, variation, or expiration of the declaration. In examining the market structure, the Commission considers that competition is promoted when market structures are altered such that the exercise of market power becomes more difficult; for example, because barriers to entry have been lowered (permitting more efficient competitors to enter a market and thereby constraining the pricing behaviour of the incumbents) or because the ability of firms to raise rivals' costs is restricted.

Any-to-any connectivity

Subsection 152AB(8) of the Act 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 service, or a similar service, with other end-users whether or not they are connected to the same network. The reference to 'similar' services in the Act enables this objective to apply to services with analogous but not identical functional characteristics, such as fixed and mobile voice telephony services or Internet services which may have differing characteristics.

The any-to-any connectivity requirement is particularly relevant when considering services that involve communications between end-users. When considering other types of services (such as carriage services that are inputs to an end-to-end service or distribution services such as the carriage of pay television), the Commission generally considers that this matter will be given less weight compared to the other two matters.

Efficient use of, and investment in, infrastructure

Subsections 152AB(6) and (7A) of the Act provide that, in interpreting this objective, regard must be had to, but is not limited to, the following:

- whether it is, or is likely to become, technically feasible for the services to be supplied and charged for, having regard to:
 - the technology that is in use, available or likely to become available
 - whether the costs that would be involved in supplying, and charging for, the services are reasonable, or likely to become reasonable
 - 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.

In considering incentives for investment in infrastructure, the Commission must have regard to the risks involved in making the investment.

Economic efficiency has three components.

- Productive efficiency refers to the efficient use of resources within each firm such that all goods and services are produced using the least cost combination of inputs.
- Allocative efficiency refers to the efficient allocation of resources across the economy such that the goods and services that are produced in the economy are the ones most valued by consumers. It also refers to the distribution of production costs amongst firms within an industry to minimise industry-wide costs.
- Dynamic efficiency refers to the efficient deployment of resources between present and future uses such that the welfare of society is maximised over time. Dynamic efficiency incorporates efficiencies flowing from innovation leading to the development of new services, or improvements in production techniques.

The Commission will need to ensure that the access regime does not discourage investment in networks or network elements where such investment is efficient. The access regime also plays an important role in ensuring that existing infrastructure is used efficiently where it is inefficient to duplicate investment in existing networks or network elements.

The technical feasibility of supplying and charging for particular services

This incorporates a number of elements, including the technology that is in use or available, the costs of supplying, and charging for, the services and the effects on the operation of telecommunications networks.

In many cases, the technical feasibility of supplying and charging for particular services given the current state of technology may be clear, particularly where (as in the present case) the service is already declared and there is a history of providing access. The question may be more difficult where there is no prior access, or where conditions have changed. Experience in other jurisdictions, taking account of relevant differences in technology or network configuration, will be helpful. Generally the Commission will look to an access provider to demonstrate that supply is not technically feasible.

The legitimate commercial interests of the supplier, including the ability of the supplier to exploit economies of scale and scope

A supplier's legitimate commercial interests encompass its obligations to the owners of the firm, including the need to recover the cost of providing services and to earn a normal commercial return on the investment in infrastructure. The Commission considers that allowing for a normal commercial return on investment will provide an appropriate incentive for the access provider to maintain, improve and invest in the efficient provision of the service.

A significant issue relates to whether or not capacity should be made available to an access seeker. Where there is spare capacity within the network, not assigned to current or planned services, allocative efficiency would be promoted by obliging the owner to release capacity for competitors.

Section 152AB(6)(b) of the Act also requires the Commission to have regard to whether the access arrangement may affect the owner's ability to realise economies of scale or scope. Economies of scale arise from a production process in which the average (or per unit) cost of production decreases as the firm's output increases. Economies of scope arise from a production process in which it is less costly in total for one firm to produce two (or more) products than it is for two (or more) firms to each separately produce each of the products.

Potential effects from access on economies of scope are likely to be greater than on economies of scale. A limit in the capacity available to the owner may constrain the number of services that the owner is able to provide using the infrastructure and thus prevent the realisation of economies of scope associated with the production of multiple services. In contrast, economies of scale may simply result from the use of the capacity of the network and be able to be realised regardless of whether that

capacity is being used by the owner or by other carriers or carriage service providers. Nonetheless, the Commission will assess the effects on the supplier's ability to exploit both economies of scale and scope on a case-by-case basis.

The impact on incentives for investment in infrastructure

Firms should have the incentive to invest efficiently in infrastructure. Various aspects of efficiency have been discussed already. It is also important to note that while access regulation may have the potential to diminish incentives for some businesses to invest in infrastructure, it may also ensure that investment is efficient and reduce the barriers to entry for other (competing) businesses or the barriers to expansion by competing businesses.

There is also a need to consider the effects of any expected disincentive to investment from anticipated increases in competition to determine the overall effect on the LTIE. The Commission is careful to ensure that services are not declared where there is a risk that incentives to invest may be dampened, such that there is little subsequent benefit to end users from the access arrangements.

A.3 Criteria for developing pricing principles

The Commission's role in assessing price terms and conditions generally revolves around assessing access undertakings and arbitrating access disputes.⁷⁸ In assessing undertakings and arbitrating disputes, the Commission must have regard to the following matters:

- whether the terms and conditions promote the LTIE of carriage services or of services supplied by means of carriage services, which in turn are achieved by:
 - promoting competition in markets for telecommunications services;
 - achieving any-to-any connectivity in relation to carriage services that involve communication between end-users; and
 - encouraging the economically efficient use of, and the economically efficient investment in, the infrastructure by which telecommunications services are supplied.
- the legitimate business interests of the carrier or carriage service provider concerned, and the carrier's or provider's investment in facilities used to supply the declared service concerned;
- the interests of persons who have rights to use the declared service concerned;
- the direct costs of providing access to the declared service concerned;

⁷⁸ In assessing undertakings, the Act requires the terms and conditions of access to be reasonable. The Commission must also ensure that the terms and conditions in undertakings and any arbitration determination are consistent with any Ministerial pricing determination in place (see section 152CH of the Act).

- the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility;
and
- the economically efficient operation of a carriage service, a telecommunications network or a facility.

This does not, by implication, limit the matters to which regard may be had.