



Australian
Competition &
Consumer
Commission

DOMESTIC TRANSMISSION CAPACITY SERVICE

Public inquiry into making a
final access determination

Position statement on pricing methodology

November 2014

© Commonwealth of Australia 2014

This work is copyright. In addition to any use permitted under the Copyright Act 1968, all material contained within this work is provided under a Creative Commons Attribution 3.0 Australia licence, with the exception of:

- the Commonwealth Coat of Arms
- the ACCC and AER logo
- any illustration, diagram, photograph or graphic over which the Australian Competition and Consumer Commission does not hold copyright, but which may be part of or contained within this publication.

The details of the relevant licence conditions are available on the Creative Commons website, as is the full legal code for the CC BY 3.0 AU licence.

Requests and inquiries concerning reproduction and rights should be addressed to the Director, Corporate Communications, ACCC, GPO Box 3131, Canberra ACT 2601, or publishing.unit@acc.gov.au.

www.accc.gov.au

Table of contents

List of abbreviations and acronyms	4
Executive summary	5
1. Introduction	6
1.1. Background	6
1.2. 2015 DTCS FAD inquiry	7
1.3. Assessment framework	8
2. Summary of submissions on the pricing methodology.....	9
2.1. Overview	9
2.2. Telstra	9
2.3. Optus.....	10
2.4. VHA	11
2.5. Nextgen.....	12
2.6. NBN Co.....	12
2.7. Competitive Carriers' Coalition.....	12
3. The domestic benchmarking approach.....	14
3.1. Overview of the domestic benchmarking approach	14
3.2. Identifying effectively competitive routes.....	14
3.3. Theoretical and practical support for the ACCC's domestic benchmarking approach.....	15
3.4. The state of competition in Australian transmission markets.....	17
3.5. Limitations of other pricing approaches.....	22
3.6. Conclusions	22
4. Next steps	24

List of abbreviations and acronyms

ACCC	Australian Competition and Consumer Commission
BBM	building block model
CCA	Competition and Consumer Act 2010
CSP	carriage service provider
DSLAM	digital subscriber line access multiplexer
DTCS	Domestic Transmission Capacity Service
ESA	exchange service area
FAC	fully allocated costs
FAD	final access determination
FLSM	Fixed Line Services Model
Gbps	Gigabit per second
LTIE	long-term interests of end-users
Mbps	Megabit per second
MLL	Managed Lease Line
NBN Co	National Broadband Network Corporation Ltd
POI	point of interconnection
POP	point of presence
SIO	service in operation

Executive summary

The Australian Competition and Consumer Commission (ACCC) is currently undertaking an inquiry into making a final access determination (FAD) for the Domestic Transmission Capacity Service (DTCS).

On 24 July 2014, the ACCC released a discussion paper and commenced its consultation on the primary price terms and conditions for the 2015 DTCS FAD. While the ACCC noted that its preliminary view was that a domestic benchmarking approach continues to be appropriate for setting primary price terms, it sought submissions on whether the domestic benchmarking approach or an alternative pricing approach might result in more efficient regulated prices. The ACCC also sought submissions regarding refining and improving the domestic benchmarking and regression analysis, if adopted.

Submissions to the July discussion paper broadly concluded that the ACCC should continue to use domestic benchmarking in setting regulated DTCS prices for the FAD, provided appropriate refinements and improvements were incorporated with stakeholder consultation. While some submitters stated a preference for using a cost-based approach, if a suitable model could be developed in a timely manner, submissions noted the complexity and time and resource intensive nature of cost-based approaches. Some submitters proposed that the ACCC should use a range of other pricing approaches in addition to the domestic benchmarking approach to inform the setting of regulated DTCS prices.

The ACCC has reached the position that continuing to use a domestic benchmarking approach (with appropriate refinements and improvements) is appropriate for setting regulated DTCS prices for the next FAD period. It will shortly issue a request to transmission providers for pricing information for use in its regression analysis. This will begin the process of extensive stakeholder engagement that will assist the ACCC in developing the 2015 domestic benchmarking approach.

The ACCC agrees with submissions that there is scope for refining and improving the regression analysis upon which domestic benchmarking is based. This will provide greater confidence that the domestic benchmarking approach produces cost-reflective prices. The ACCC's extensive consultation on refining its benchmarking methodology will also provide for increased transparency and scrutiny of the regression results. Further details on the ACCC's proposed consultation process will be released shortly.

Several submissions to the July discussion paper stated that the ACCC should better explain the underlying rationale for adopting a domestic benchmarking approach. Some submissions advocated closer consideration of the assumptions underpinning the view that prices in competitive areas provide a good benchmark for determining cost-reflective prices in non-competitive areas.

The ACCC has decided to release this position statement setting out the reasoning behind its position on continuing with a domestic benchmarking approach.

When the ACCC has completed its initial analysis, the ACCC will release a more comprehensive draft decision that includes the results of its regression analysis using the pricing data collected through its request for pricing information. The draft decision will also set out the ACCC's views on non-price terms and conditions and supplementary prices for the DTCS.

The ACCC expects to release its draft decision on the FAD for the DTCS in early 2015, before making a final decision in mid-2015.

1. Introduction

The ACCC has reached the position that using the domestic benchmarking approach is appropriate for determining regulated prices for the 2015 DTCS FAD. The domestic benchmarking approach uses commercially-determined DTCS prices on competitive (non-regulated) routes to determine the prices for the DTCS on non-competitive (regulated) routes.

1.1. Background

1.1.1. Transmission services

The term 'transmission' refers to high capacity data links that are used to carry large volumes of communications traffic. Types of traffic which may be carried via transmission networks include voice, data or video communications.

Wholesale transmission services are supplied by transmission network owners (transmission providers) to access seekers (carriers and CSPs) to carry traffic between two locations. Access seekers purchase transmission services where they do not own their own transmission infrastructure. These services enable carriers and CSPs to connect their core networks with points of service delivery (such as exchanges or end-user premises) around Australia and to provide downstream wholesale and retail services to end-users.

The DTCS is the regulated part of wholesale transmission services and is defined by the DTCS service description. The DTCS is a high capacity (above 2Mbps), symmetric, permanent, and uncontended service. Prices set by the FAD only apply to the DTCS.

1.1.2. Use of a domestic benchmarking approach for the 2012 DTCS FAD

The current DTCS FAD, which was made on 21 June 2012, uses a domestic benchmarking approach to price transmission services covered under the declared service. Prior to the 2012 DTCS FAD, there was no regulated price for the DTCS and no agreed methodology for setting prices. The ACCC's 2012 decision to adopt a domestic benchmarking approach reflected its conclusion that:

- prices in competitive areas and on competitive routes will reflect the costs of supplying efficient services
- there were a sufficient number of routes or areas within Australia supplied in competitive markets
- these prices can be used as a benchmark to determine the prices that would apply in the non-competitive (regulated) routes and areas, if those routes and areas were competitive.

For the 2012 DTCS FAD, the ACCC relied on pricing information and data obtained from transmission providers to form the basis for prices and price structures on non-competitive routes. The pricing information was used as the basis for developing a regression model that informed the benchmarking approach for the 2012 DTCS FAD.¹

¹ Regression analysis is a statistical process for estimating the relationships among variables. Regression modelling is used to estimate the relationship between a dependent variable and one or more independent variables, that is, how the typical value of the dependent variable changes when any one of the independent variables is varied.

1.1.3. 2014 DTCS declaration decision

The DTCS was deemed to be a declared service in June 1997 and the declaration was subsequently extended or varied, most recently in March 2014 (until 31 March 2019).² The ACCC has progressively removed regulation in areas that have been found to be competitive.

In the 2014 DTCS declaration inquiry, the ACCC assessed the level of competition for DTCS services on all DTCS routes, both deregulated and regulated, using a revised competition methodology. This assessment found that in addition to the existing 88 deregulated metropolitan Exchange Serving Areas (ESAs), a further 112 ESAs could be deregulated because they met the competition methodology. It also found that of the existing 23 capital-regional routes, three regional routes failed to meet the revised methodology and were re-regulated. Eight additional regional routes that were found to be sufficiently competitive were deregulated.

The DTCS service description including the list of routes that are not subject to regulation is available on the [Regulated Infrastructure area of the ACCC website](#).

During the declaration inquiry, several submitters raised concerns that transmission pricing, particularly in regional areas, was limiting competition in the provision of broadband and mobile services.

1.2. 2015 DTCS FAD inquiry

On 23 May 2014 the ACCC commenced a public inquiry under Part 25 of the *Telecommunications Act 1997* into making a FAD for the declared DTCS under section 152BC of the *Competition and Consumer Act 2010* (CCA).

On 24 July 2014, the ACCC commenced its consultation on the primary price terms and conditions for the 2015 DTCS FAD with the release of a discussion paper. Submissions were due by 26 September 2014.

In the discussion paper, the ACCC stated its preliminary view that a domestic benchmarking approach to set primary price terms for the DTCS continues to be appropriate for the next FAD period. The ACCC sought submissions from stakeholders on whether the domestic benchmarking approach or an alternative pricing approach might result in more efficient regulated prices.

1.2.1. Submissions on the domestic benchmarking approach

Submissions to the July 2014 DTCS discussion paper were received from Basslink, the Competitive Carriers Coalition (CCC), NBN Co, Nextgen, Optus, Telstra, and Vodafone Hutchison Australia (VHA).

A summary of submissions on the appropriate pricing methodology for determining regulated DTCS prices for the next regulatory period is provided in the next chapter. Submissions on other aspects of the pricing methodology, including proposed refinements and improvements to the regression analysis, will be discussed in the ACCC's draft decision. Submissions are available on the ACCC's website.

² ACCC, *Final Report on the review of the declaration for the Domestic Transmission Capacity Service*, March 2014.

1.2.2. Consultation on non-price terms and conditions and supplementary prices

On 23 May 2014, the ACCC released a consultation paper seeking views on non-price terms and conditions and supplementary pricing issues for a number of declared services, including the DTCS.

Submissions on DTCS non-price terms and supplementary prices will be discussed in the ACCC's draft decision.

1.3. Assessment framework

The legislative framework that applies to the making of FADs is set out in Division 4 of Part XIC of the CCA. Section 152BCA of the CCA specifies the matters the ACCC must take into account in making an access determination. The ACCC considers the following matters to be particularly relevant to determining an appropriate pricing methodology for setting regulated prices for the DTCS:

- whether the FAD will promote the long-term interests of end-users of carriage services or of services supplied by means of carriage services, in particular in relation to the promotion of competition, the economically efficient operation of a carriage service or network, and the efficient use of and investment in infrastructure
- the legitimate business interests of transmission providers
- the interests of all persons who have rights to use the declared service (access seekers)
- the direct costs of providing access to the declared service.

The ACCC considers that continued use of the domestic benchmarking approach is appropriate, having regard to these matters and the ACCC's intention to refine and improve the regression analysis on which the domestic benchmarking approach is based. In the draft decision, the ACCC will set out its assessment against the relevant matters specified in section 152BCA when it is able to undertake a full assessment against these matters, taking into account the ACCC's proposed refinements and improvements to the approach.

2. Summary of submissions on the pricing methodology

This chapter summarises submissions to the ACCC's July 2014 DTCS discussion paper only in relation to the appropriate pricing methodology for determining regulated DTCS prices for the next regulatory period.

Submissions on other aspects of the pricing methodology, including proposed refinements and improvements to the regression analysis, will be discussed in the ACCC's draft decision. Submissions are available on the ACCC's website.

2.1. Overview

Submissions to the July 2014 discussion paper were received from Basslink, the Competitive Carriers' Coalition (CCC), NBN Co, Nextgen, Optus, Telstra, and Vodafone Hutchison Australia (VHA). Basslink did not submit specifically on whether the ACCC should continue to adopt a domestic benchmarking approach but submitted on the uplift factor for transmission prices to Tasmania.

In general, submissions concluded that the ACCC should continue to use domestic benchmarking in setting regulated DTCS prices for the FAD. Most submissions considered domestic benchmarking was appropriate, noting the complexity and time and resource intensive nature of alternative cost-based approaches.

The degree of support for domestic benchmarking differed across submitters. A number of submitters (Optus, VHA, and the CCC) proposed that the ACCC should use a range of other pricing approaches in addition to the domestic benchmarking approach to inform the setting of regulated DTCS prices.

The majority of submitters stated that the regression analysis upon which domestic benchmarking is based requires significant improvements to ensure it produces cost- and demand-reflective prices. The ACCC will consider the proposed improvements further in undertaking its analysis and will consult extensively with stakeholders during this process.

Most submitters also proposed that the ACCC should explain better, or consider further, the underlying rationale for adopting a domestic benchmarking approach. In particular, several submissions (Optus, VHA, Nextgen, and NBN Co) advocated closer consideration of the assumptions underpinning the view that prices in competitive areas provide a good benchmark for determining cost-reflective prices in non-competitive areas.

2.2. Telstra

Telstra submitted that "a domestic benchmarking approach continues to be the most efficient and appropriate methodology for setting regulated DTCS prices".³ Telstra stated that the transmission market has become more competitive since the 2012 DTCS FAD, with innovation and broad price reductions occurring in competitive and non-competitive areas.

³ [Telstra, Domestic Transmission Capacity Service Final Access Determination Inquiry – Primary Prices: Response to ACCC Discussion Paper](#), 26 September 2014, p. 12.

Telstra submitted that the DTCS is 'unique' in that the ACCC can use observable pricing data from competitive routes to set prices for DTCS services in uncompetitive (declared) areas or routes as if they were competitive. It stated that: 'Prices on competitive routes are broadly reflective of costs (inclusive of a normal return on investment) and provide an appropriate estimate of efficient prices that would prevail in competitive markets.'⁴

Telstra considered that using competitive prices in comparable areas as a benchmark 'is clearly a superior approach' to estimating cost-based prices through cost-modelling as a proxy for competitive prices in the uncompetitive areas.⁵ It submitted that cost-based approaches are likely to be more complex, time-consuming, costly to implement and prone to outcomes involving regulatory error.

In addition, Telstra stated that domestic benchmarking ensures that the pricing of regulated transmission services captures demand-side developments, which is not the case with cost-based approaches. Further, Telstra considered that domestic benchmarking allows access seekers in declared areas to benefit from price and service competition in competitive areas.

In regard to the use of a building block approach, such as that used for estimating prices for the declared fixed line services, Telstra considered that the Fixed Line Services Model (FLSM), and other BBM approaches, have significant limitations for estimating DTCS prices. Telstra noted that the DTCS is unlike other regulated services in that it comprises thousands of transmission service that vary according to factors such as capacity, distance and quality of service.

2.3. Optus

Optus submitted that the domestic benchmarking approach is 'a novel approach without international precedent and limited in theoretical justification'.⁶

It stated that the ACCC's approach is flawed because competition on the non-regulated DTCS routes is often 'far from effective', resulting in there being no guarantee that prices on competitive routes reflect efficient supply costs.⁷ Optus considers that the ACCC's benchmarking approach fails to recognise several factors:

- lack of complete substitutability of transmission services from different transmission providers, due to important differences in technology, quality of service, or geographic scope and location
- 'friction costs', such as switching costs, that limit effective choice by access seekers
- competition via non-headline rate attributes, such as free service upgrades, rebates and bonuses
- differences in the abilities of transmission providers to bundle services, compared to Telstra's 'unique' ability to offer broad service bundles
- self-supply in the competitive areas by the players with the most bargaining power.⁸

⁴ *Ibid.*, p. 12.

⁵ *Ibid.*, p. 13.

⁶ [Optus, Submission in response to Domestic Transmission Capacity Service Final Access Determination Inquiry – Primary Prices](#), September 2014, p. 3.

⁷ *Ibid.*

⁸ *Ibid.*, pp. 7-8.

Optus stated that the 2012 FAD has had a 'disruptive effect' on the market, including by putting upward pressure on prices, acting as a price floor for negotiations, and failing to align with commercial products such as Telstra's MLL services.

However, Optus 'acknowledges that developing a cost based model will be complex, time consuming and can be subject to significant regulatory error'.⁹ It proposes that the ACCC draw on multiple sources of information to inform the setting of regulated DTCS prices, rather than relying on a single pricing methodology. Optus proposes the following pricing approaches to supplement the use of domestic benchmarking to identify price trends:

- examination of retail price trends where DTCS is an upstream input, with a particular focus on tail-end services
- analysis of commercial agreements and use of commercial prices where they are lower than the regression outputs
- analysis of Telstra's internal data on its costs of meeting commercial contracts, to obtain a more realistic sense of the margins between prices and supply costs
- an international benchmarking review to determine a 'normal' price range for regulated prices
- development of a cost model based on the ACCC's FLSM.

2.4. VHA

VHA submitted that the 2012 DTCS FAD pricing is not cost-reflective and may have significantly overstated the costs of supplying these services. VHA states that high regulated prices have adversely affected competition and investment in regional areas and led to economically inefficient pricing practices, such as Telstra's zone-based classifications for MLL pricing.

VHA identified a number of reasons why the domestic benchmarking approach has not led to regulated prices that reflect efficient, forward-looking costs, including:

- Domestic benchmarking is inherently backward-looking and the rate of technological change was not taken into account in the 2012 FAD.
- The pricing observations in the data set used for the regression analyses are not independent because they reflect transmission providers' application of their own particular pricing methodology.
- 'Competitive prices' may not reflect effective competition due to vertical integration, 'frictions' (such as long-term contracts, imperfect information and differences in bargaining power), and errors in identifying competitive markets.
- Volume-based discounts and self-supply were not accounted for.

VHA submitted that it:

remains of the view that a regression model ought to complement a cost-based pricing methodology for the DTCS (rather than being the sole determinant of price), with a building block model preferred. A building block model will anchor the efficient costs of supplying the

⁹ *Ibid.*, p. 5.

DTCS in a manner that domestic benchmarking cannot replicate. It will also ensure self-supply of the DTCS by vertically integrated operators is properly accounted for'.¹⁰

2.5. Nextgen

Nextgen submitted that the use of a benchmarking framework is an efficient way of setting prices for regulated DTCS services, noting the time and resource intensive nature of cost-based approaches. Domestic benchmarking may also be the most appropriate approach for the setting of regulated transmission prices to apply over the course of the next FAD, provided the regression analysis is improved.¹¹

Nextgen also submitted, however, it is 'an overly simplistic view of the relationship between prices and costs' to simply adopt a view that because prices in competitive areas reflect costs, these prices must also be reflective of costs in non-competitive areas.¹² Nextgen submitted that application of the benchmarking approach requires caution because:

- the level of price competition in a market is typically correlated with number of participants in that market
- demand side considerations influence the prices in a given market, as well as the number of market participants and the pace of cost recovery by transmission providers in regard to their infrastructure investments, and
- benchmarking does not take into account profit margins and rates of return.

2.6. NBN Co

NBN Co submitted that it supports the continued use of a domestic benchmarking approach for the 2015 FAD.¹³ It stated that alternative pricing approaches, such as cost-based approaches, are likely to be much more complex and resource-intensive, without necessarily leading to more appropriate outcomes.

NBN Co stated, however, the underlying principles of the benchmarking approach should be fully explained and its implementation consulted upon and made transparent at each stage (including explaining what changes needed to be made in moving from a principled to a practical approach that accounts for any data or analytical limitations).

2.7. Competitive Carriers' Coalition

The CCC submitted that the DTCS domestic benchmarking approach used for setting the 2012 FAD prices 'has clearly failed to result in regulated prices that approximate efficient costs'.¹⁴ It stated that the 'flawed FAD prices have caused disruption and dislocation in transmission markets', and the ACCC must adopt a much more rigorous and detailed analysis for the next FAD.

¹⁰ [Vodafone Hutchison Australia \(VHA\), Domestic Transmission Capacity Service Final Access Determination Inquiry – Primary Prices: Response to the Australian Competition and Consumer Commission](#), 26 September 2014, p. 3.

¹¹ [Nextgen, Submission to the DTCS Final Access Determination Inquiry – Primary Prices](#), September 2014.

¹² *Ibid.*, p. 4.

¹³ [NBN Co, Submission to the ACCC's DTCS Final Access Determination Inquiry – Primary Prices](#), September 2014.

¹⁴ [Competitive Carriers Coalition, Response to Domestic Transmission Capacity Service FAD Primary Prices](#), October 2014

The CCC submitted that the ACCC should adopt a cost-based building block approach to DTCS pricing. However, if the ACCC decides to proceed with a domestic benchmarking methodology to provide a timely response to making a new FAD, the CCC recommends a 'roundly revised and improved approach'.

The CCC submitted that the ACCC should use a number of other sources of information to develop a more reliable benchmark, including:

- international comparisons of leased line charges published by the OECD in its Communications Outlook
- internal Telstra cost data, such as that used to establish contract prices
- analysis of the impact of competitive entry in the form of new fibre builds on the level of prices on specific routes, to establish the types of margins by which prices can be expected to fall once monopoly rents are stripped back
- comparisons of retail price levels and trends for high capacity data services (such as tail-end services for corporate customers) with wholesale transmission service prices.

The CCC also submitted that the ACCC should apply a more critical analysis to identifying the routes determined to be competitive.

3. The domestic benchmarking approach

This chapter explains the reasoning behind the ACCC's view that commercial prices on competitive routes provide a good benchmark for setting regulated prices on non-competitive routes, and that domestic benchmarking remains the most appropriate approach for setting regulated DTCS prices.

3.1. Overview of the domestic benchmarking approach

The underlying rationale of the domestic benchmarking approach is that those routes (or exchange service areas (ESAs)) for which there is effective competition will have commercially-determined prices for transmission services that reflect their supply costs (including a reasonable commercial rate of return). Further, competition on these routes will promote efficiency in supplying transmission services and provide incentives for dynamic efficiency improvements over time.

In using the pricing information on those effectively competitive routes to determine the prices on non-competitive routes, the benchmarking approach is designed to eliminate the possibility of monopoly profits being earned on non-competitive routes and to mimic the cost efficiency achieved on competitive routes.

3.2. Identifying effectively competitive routes

In the [ACCC's 2014 DTCS declaration final decision](#), it set out a revised methodology for determining whether domestic transmission routes are competitive or non-competitive. The revised methodology is more comprehensive and robust than the ACCC's previous methodology. The ACCC applied the revised methodology to identify which routes exhibit effective competition and would therefore be excluded from the service declaration.¹⁵

The revised methodology takes the presence of three or more providers as a starting point for assessing whether there is effective competition. Once this initial threshold was met, the ACCC applied a number of additional quantitative and qualitative assessments. For a route (or ESA) to be effectively competitive, the following criteria must be met:

- There must be at least two fibre providers in addition to Telstra at, or within close proximity (within 50m), to a Telstra exchange.
- The fibre providers must be independent entities.
- The fibre providers should include at least three of the four largest transmission providers (Telstra, Optus, Nextgen and TPG Telecom).
- The fibre competitors at the exchange must all be directly connected from that exchange to major transmission hubs in, or close to, the central business districts (CBD) of the major capital cities.
- There should be sufficient demand in that area to indicate the likelihood of new investment and the potential for competition to develop, with a minimum level of demand indicated by at least 5,000 fixed line services in operation (SIOs) and two DSLAM-based service providers in the relevant ESA.

¹⁵ The ACCC recognises that there are different definitions of 'effective competition' in the economic literature. For the purposes of this DTCS FAD inquiry, the ACCC considers that routes and areas are effectively competitive if they meet the competition criteria set out in the ACCC's 2014 DTCS declaration final report (and summarised in section 3.2 of this position statement).

- There is evidence of some pricing competition as reflected in access agreements and Telstra’s zoning structure for pricing transmission services.
- There is evidence of active transmission services in addition to Telstra’s being supplied at the exchange.

Where an ESA either marginally failed to meet some aspect of the revised competition assessment or only just met the revised methodology, the ACCC took into account additional relevant considerations to form a view on whether the route was competitive. Additional considerations included matters such as the level of urban development in an adjacent area, the likely level of demand, or fibre investment close to a particular route.¹⁶

The ACCC considers that the revised competition methodology assesses actual levels of service availability on a DTCS route or the potential for existing or new providers to offer a competing service, thereby providing a more comprehensive assessment of the state of competition. It also takes into account levels of demand and the potential for infrastructure investment to occur.

The ACCC’s domestic benchmarking approach uses commercial pricing information on those routes determined to be competitive for the DTCS declaration to set cost-reflective prices for services on routes deemed not to be competitive and therefore subject to the service declaration. This is achieved via the estimation of a regression equation using prices on the competitive routes. The regression analysis identifies the relevant cost and demand drivers, and their impact on prices, so that the estimated equation can be used to derive cost-reflective prices for the non-competitive routes.

Given that the ACCC has applied a comprehensive set of criteria to determine that the routes used for determining the benchmark prices are effectively competitive, this should provide confidence in the use of the prices, and the relationships between these prices and their cost and demand drivers that have been obtained from these routes. The ACCC notes that the revised competition criteria for determining competitive routes received widespread support in submissions to the 2014 declaration decision.¹⁷

3.3. Theoretical and practical support for the ACCC’s domestic benchmarking approach

The proposition that competition between firms will promote economic efficiency is a central tenet of economic theory. There is also extensive theoretical and empirical research to suggest a positive relationship between the degree of competition between firms and the level of economic efficiency in markets.¹⁸ Firms that face greater competition will tend to charge lower prices, have lower supply costs and make increased efforts to lower their costs over time.¹⁹

The Australian Competition Tribunal has detailed the process by which competition operates and helps to achieve economic efficiency:

¹⁶ [ACCC, Final Report on the review of the declaration for the Domestic Transmission Capacity Service](#), March 2014, pp. 14, 34-50.

¹⁷ *Ibid.* pp. 39-45.

¹⁸ K. Huschelrath, *Competition Policy Analysis – An Integrated Approach*, Centre for European Economic Research, 2009, p. 3.

¹⁹ M. Motta, *Competition Policy: Theory and Practice*, Cambridge University Press, 2004, chap. 2.

[97] ...Under traditional economic theories of the firm, firms are normally considered to operate with the objective of maximising profits. In general, it is assumed that firms with this objective will compete to win market share from each other. In turn, competition between firms in this way is desirable from a consumer perspective because it creates incentives for firms:

to lower their prices towards their costs of production in order to attract more consumers to their business so that they can expand their market share; and

to seek greater productive efficiencies (now and over time) so that they may lower their costs of production. In turn, this enables them profitably to lower prices for consumers in ways that will attract more consumers to their business in order to increase their share of the market.²⁰

The ACCC's adoption of the domestic benchmarking approach for transmission services reflects the above economic principles. This basis for the use of benchmarking is supported by regulators and policy advisors in other jurisdictions. For example, the European Commission's Directorate-General for Enterprise and Industry:

...understands benchmarking as a method and a tool that helps to set targets and guide improvements in the direction of greater effectiveness and quality of economic activities.²¹

3.3.1. Advantages of the domestic benchmarking approach

As the Australian transmission market has competitive routes (and areas) as well as non-competitive routes (and areas), the former offer a ready foundation for applying a benchmarking approach to set regulated prices for the non-competitive services.

In broad terms, the ACCC's benchmarking approach is not dissimilar to benchmarking methods employed in other jurisdictions to underpin incentive regulation in utility industries such as electricity.²²

In addition, the ACCC's domestic benchmarking approach avoids particular difficulties which apply to the use of international benchmarking, such as identification of comparable services, rates for currency conversions and input price differences across countries.²³ The domestic benchmarking approach has the advantage that the transmission services being benchmarked on the two sets of routes (competitive and non-competitive) are very similar to each other and so are the underlying cost and demand drivers.

²⁰ Australian Competition Tribunal, *Telstra Corporation Ltd (No 3)* [2007] ACompT 3.

²¹ ACCC/AER, 'Benchmarking Opex and Capex in energy networks', Working paper no. 6, May 2011; W. Wobbe, 'Benchmarking methods and their application', Enterprise DG, European Commission in *Transport Benchmarking – Methodologies, Applications and Data Needs*, Proceedings of the Paris Conference, November 1999, p. 12.

²² T. Jamasb and M. Pollitt, 'Benchmarking and regulation: international electricity experience' in *Utilities Policy*, Volume 9, Issue 3, 2001, pp. 109-113.

²³ *Ibid.* p. 110.

3.3.2. Potential limitations of the domestic benchmarking approach

The ACCC is cognisant that increased competition and economic efficiency is not always achieved by increasing the number of firms in a market.²⁴ Several other factors can determine the level of competition, including particular cost and demand conditions. The ACCC took a number of these factors into account in developing its revised competition criteria for determining which routes were sufficiently competitive to remove from the DTCS declaration (see section 3.2 above).

Broadly the following market characteristics can undermine competition in a market:

- the existence of economies of scale or scope in production which mean that the lowest cost of production is best achieved by fewer firms or even a single firm
- a high degree of product differentiation and market segmentation, where the pricing and output decision of firms in a market only have minimal impact on the pricing and output decisions of each other
- the presence of vertical or horizontal relationships held by firms in related markets that give these firms a particular competitive advantage and leads to prices above or below efficient costs due to factors such as lock-in arrangements, cost shifting or bundling (which increase switching costs)
- some of the firms in the market only have minimal market share and are unable to constrain the pricing power of the dominant firm (or firms).

These features in the competitive and non-competitive domestic transmission markets as defined by the ACCC are discussed further in the next section following a general overview of the state of competition in these transmission markets.

3.4. The state of competition in Australian transmission markets

As noted above, two factors that increase the confidence that can be had in the appropriateness of the domestic benchmarking methodology are:

- evidence of effective competition on the competitive transmission routes (section 3.4.1)
- similar cost and demand drivers on the competitive and non-competitive routes (section 3.4.2).

3.4.1. Evidence of effective competition

As noted in section 3.2, the ACCC assessed the level of competition in Australian transmission markets in applying its methodology to determine deregulated (competitive) and regulated (non-competitive) transmission routes. As a result of this assessment, routes to 248 ESAs, out of a total of 5,067 ESAs, were found to be competitive. The number of competitive routes has increased by 117 (in net terms—112 in metropolitan areas and a net 5 in regional areas) since the 2009 declaration decision.

It is instructive to compare some of the features of the competitive and non-competitive routes by splitting these into metropolitan routes and regional routes.

Out of a total of 538 metropolitan ESAs, the ACCC found that 200 are being served by competitive transmission services and 338 did not meet the competition criteria. Most of the competitive metropolitan routes have at least three fibre competitors (including Telstra) per ESA, with the

²⁴ Motta, *op. cit.*, p. 51.

average for these ESAs being close to four. In contrast, the average number of fibre competitors per ESA for non-competitive routes is less than two and around 40 per cent of these routes only have one fibre supplier.

Out of a total of 4,529 regional ESAs, only 48 have been assessed as being served by competitive transmission services with the remaining 4,481 not meeting the ACCC's competition criteria.

Similar to the competitive metropolitan routes, on average there are close to four fibre competitors (including Telstra) per ESA for competitive regional routes. In contrast, the average number of fibre competitors per ESA exchange for non-competitive routes is less than one. More than 75 per cent of the non-competitive regional routes only have one fibre supplier while more than 15 per cent of the routes are not served by fibre, instead being supplied by microwave or satellite transmission technology.

On this evidence, the competitive metropolitan and regional routes have significantly more competitors present than the non-competitive routes. However, as the ACCC noted in section 3.3.2 above, increased competition and economic efficiency is not always achieved by increasing the number of competing firms in a market. While the ACCC addressed some of these factors in developing its revised competition criteria, the ACCC intends to investigate these factors further to identify any implications for the regression analysis. Several factors that may limit reliability of the regression results are discussed below.

3.4.2. Similarity of cost and demand drivers on competitive and non-competitive routes

The benchmarking approach used for the 2012 FAD is based on the assumption that for a given distance and service capacity, efficient supply costs on non-competitive routes are similar to those on the competitive routes. The ACCC recognises that the demand and supply conditions for transmission services differ across the two types of routes and may not be fully consistent with this assumption. These differences primarily concern lower demand levels and potentially less opportunity to achieve scale economies in supplying transmission services.

These demand and scale differences may be of particular significance for non-competitive regional routes compared to competitive regional routes. On the information available to the ACCC, prices on regional non-competitive routes do not appear to have fallen, over recent years, to the same extent as observed on other routes.

The rest of this section sets out the ACCC's analysis of whether demand and scale differences across different types of routes are likely to have a significant impact on the reliability of the regression analysis.

3.4.3. Demand levels and economies of scale—all routes

The ACCC's analysis of demand drivers on competitive and non-competitive routes found significant differences, as measured by the average number of DSLAM-based service providers and SIOs in an ESA.

On average, the non-competitive metropolitan routes have around one-third of the number of DSLAM-based service providers and less than half the number of SIOs per ESA than the competitive routes. These data suggest that the lower level of derived demand for transmission services on these routes is an explanation, at least in part, for the lower number of competitors on these routes.

For the regional areas, the differences between the competitive and non-competitive routes are far greater. The non-competitive regional routes have, on average, few DSLAM-based service providers and around one-twentieth of the number of SIOs per ESA compared to the competitive routes. The lower number of competitors on these routes is likely explained by the much lower level of derived demand for transmission services on these routes.

It may be that the higher number of end-customers and data volumes on competitive routes means that transmission services can be supplied at lower unit costs than on non-competitive routes, particularly routes to regional areas that have significantly fewer customers per exchange and lower data volumes.²⁵ This may reflect an absence of complete ‘scalability’ in cabling and other transmission equipment, which could result in scale diseconomies on routes with lower numbers of end-customers and lower volumes of data traffic. It may also reflect lower commercial incentives for transmission providers to invest in higher capacity (and significantly lower cost) Ethernet services in areas with fewer end-customers and less data traffic.

However, an offsetting factor is likely to be the ability of transmission providers to achieve scale economies by aggregating traffic across broad geographic areas within their networks by using transmission ‘rings’. These ring structures are likely to carry traffic over both competitive and non-competitive routes.

In addition, rapid growth in transmission data volumes over recent years may have improved the ability of transmission providers, including in regional areas, to obtain scale economies. Thus, even if scale diseconomies might have been significant in the past, the rapid growth in data traffic over recent years might have reduced their significance. The ACCC will further consider the evidence on scale economies and any implications for pricing during the FAD inquiry.

3.4.4. Demand levels and economies of scale—routes between NBN POIs

Over time, as the NBN is rolled out, the expected aggregation of traffic to routes between NBN points of interconnection (POIs) may reduce the significance of differences in demand and scale economies between competitive and non-competitive areas.

Based on the ACCC’s analysis of the state of competition and demand drivers, there are greater similarities between competitive and non-competitive NBN routes, on average, than between competitive and non-competitive routes in total. In the competition assessment conducted for the 2014 declaration decision, 75 of the 121 NBN POIs were found to be located in ESAs with competitive transmission services.

For competitive areas, the average numbers of fibre competitors for routes serving ESAs containing NBN POIs are comparable with all routes, in both metropolitan and regional areas. For non-competitive metropolitan areas, the average number of fibre competitors was somewhat higher for routes to ESAs containing NBN POIs than for all routes. However, the greatest contrast is for non-competitive regional routes, where the average number of fibre competitors on routes serving ESAs containing NBN POIs was almost three times higher than for all non-competitive regional routes.

In terms of DSLAM-based service providers per ESA—which gives an indication of derived demand for transmission services—the average number for competitive routes to NBN POIs was somewhat higher than the average for all competitive routes, in both the metropolitan and regional areas. For the non-competitive routes, there were more DSLAM-based service providers, on average, on routes to NBN POIs compared to all non-competitive routes. While this is broadly similar to the situation for

²⁵ The highest data volumes are typically in the most competitive inter-capital routes.

all routes, the difference between the competitive and non-competitive routes to NBN POIs is much less pronounced than it is for all routes.

A comparison of average SIOs per ESA gives a consistent picture as gained from comparing average numbers of DSLAM-based service providers per ESA—that is, the difference in this measure of demand between competitive and non-competitive routes to NBN POIs is much less pronounced than it is for all routes. In particular, average SIOs per ESA for the non-competitive regional NBN POI routes are much higher than for all non-competitive regional routes and only one-third less than average SIOs per ESA for the competitive regional NBN POI routes.

The greater similarities between competitive and non-competitive NBN POI routes for these indicators of demand and scale economies suggest the domestic benchmarking approach is particularly suitable for determining the prices of NBN POI routes. To the extent that economies of scale are significant, their effects are less likely to affect the regression results for routes serving ESAs containing NBN POIs (which are expected to carry an increasing share of traffic over time as the NBN is rolled out).

3.4.5. Demand levels and economies of scale—further consideration

The ACCC intends to investigate further the impact on unit supply costs of demand differentials between competitive and non-competitive areas, and the significance of scale economies, when it undertakes the regression analysis. The ACCC will consult closely with stakeholders during this process.

3.4.6. Product differentiation

There are two product differentiation issues for the DTCS that have potential implications for the benchmarking approach.

The first issue is whether the transmission services supplied on competitive routes are sufficiently comparable so that the average prices do not reflect service quality differences or the exercise of pricing power by some or all carriers supplying transmission services on these routes. Optus submitted, for example, that lack of complete substitutability of transmission services from different transmission providers, due to important differences in technology, quality of service, or geographic scope and location, may reduce the reliability of the regression results.²⁶

Where average prices reflect service quality differences, the regression analysis can take account of these differences to estimate the relationship between price and service quality. For the 2012 DTCS FAD, the domestic benchmarking approach included protection as a variable in the regression equation (other than for tail-end services for which it does not apply). The ACCC also took service quality differences into account by adopting the highest quality of service in determining FAD prices.²⁷ As the FAD prices are maximum prices, this provides scope for—and signals the appropriateness of—lower prices for services offering lower levels of service quality.

In undertaking the regression analysis, the ACCC will consider whether product differentiation that does not reflect service quality differences is occurring in the market and whether it is significant for estimating prices. Stakeholder views will be sought during this process.

²⁶ [Optus, Submission in response to Domestic Transmission Capacity Service Final Access Determination Inquiry – Primary Prices](#), September 2014.

²⁷ [ACCC, Final Access Determination for the Domestic Transmission Capacity Service, Explanatory Statement, 2012](#), pp. 28, 32.

The second product differentiation issue is whether the transmission services supplied on the competitive routes are reasonably equivalent to the services supplied on non-competitive routes. There may, for example, be differences in the service quality of transmission services offered on some more remote routes (for example, absence of protection or higher error rates for microwave services). The regression analysis can take into account such service quality differences to identify their likely impact on prices. It is important to recognise, however, that while a lower quality of service may suggest a downward price adjustment, this may be offset by upwards pressure on prices for these routes from other factors such as distance and scale economies.

The ACCC considers that the significance of these factors can be investigated further when it undertakes its regression analysis. Stakeholder views will be sought during this process.

3.4.7. Vertical and horizontal relationships

VHA and Optus submitted that self-supply of transmission services by vertically integrated providers on the routes that the ACCC has deemed to be competitive leads to prices higher than would be observed in an effectively competitive market of non-integrated suppliers.²⁸ Optus stated that self-supply removes a source of buyer power that would be able to drive down observed market prices.²⁹ The ACCC considers that this may have some validity. However, the ACCC also considers that, if transmission prices on particular routes were to exceed supply costs, vertically integrated providers that currently only self-supply would have an incentive to compete with the existing transmission providers to supply access seeker demand for transmission services. This incentive would be greater if it improved scale economies in the provision of self-supplied services.

VHA submitted that vertically-integrated providers have the incentive to price squeeze downstream competitors by charging above-market rates for transmission services.³⁰ The ACCC considers that such behaviour would typically only be sustainable on non-competitive routes since on competitive routes, access seekers could purchase services from other providers, including non-vertically integrated providers. The ACCC also notes that persistent charging of above-market rates would increase contestability in the supply of transmission services by independent providers (encouraging new entry) and potentially diminish the realisation of any scale economies by the self-supplying providers. On non-competitive routes, the FAD prices provide an alternative to above-market rates for transmission services.

In the case of horizontal relationships, a firm that has pricing power in one market may use excess profits earned in that market to cross-subsidise services supplied in a second, more competitive market. This behaviour would enable the firm to capture or retain market share in the second market and cause a negative impact on economic efficiency.

The ACCC noted in its 2012 FAD decision that it received submissions that Telstra exercises market power by bundling lower prices on competitive routes with higher prices on non-competitive routes.³¹ As noted in chapter 2, Optus expressed concern in its submission about differences in the abilities of transmission providers to bundle services, compared to Telstra's 'unique' ability to offer broad service bundles.

²⁸ Optus submission, *op. cit.*; [Vodafone Hutchison Australia \(VHA\), Domestic Transmission Capacity Service Final Access Determination Inquiry – Primary Prices: Response to the Australian Competition and Consumer Commission](#), 26 September 2014, p. 3..

²⁹ Optus submission, *op. cit.*, p. 8.

³⁰ VHA submission, *op. cit.*, p. 12

³¹ ACCC, 2012 FAD decision, *op. cit.*, p. 41

The ACCC's domestic benchmarking approach has the advantage of giving transmission providers an incentive not to distort prices in the competitive transmission market by cross-subsidising from other products. This is because lower prices on the competitive routes would be used to determine regulated prices for non-competitive routes for the next FAD period.

3.4.8. Dominance of one or two transmission providers

The ACCC notes that, where there are several small providers in a market competing with one or two dominant transmission providers, this may not be sufficient to constrain the pricing power of the dominant provider(s). The ACCC has recognised this possibility in developing its competition criteria. A route is not assessed as effectively competitive (and classified as a deregulated route) unless the competing fibre providers include three of the top four fibre competitors.

3.5. Limitations of other pricing approaches

The use of alternative approaches for pricing the DTCS, such as a building block model (BBM), have previously been considered by the ACCC, but have found to be problematic due to the inherent complexities of the DTCS service. There are particular difficulties in isolating what network elements are used by a given point-to-point transmission service.³²

The ACCC also notes that most submissions highlighted that developing an alternative cost model for transmission services, such as a BBM, would take considerable time and expense.

International benchmarking has a number of problems as mentioned in section 3.3 above, and the ACCC considers it is less likely than domestic benchmarking to result in prices that reflect product, cost and demand conditions in the Australian transmission market.

The ACCC notes the submissions by Optus, VHA, and the CCC that the ACCC should use a range of other pricing approaches in addition to the domestic benchmarking approach to inform the setting of regulated DTCS prices. The ACCC sees merit in using other relevant sources of information as a cross-check on the reliability of the regression results.

As noted in the July discussion paper, the FLSM can provide an estimate of the total revenue requirement relating to the transmission assets that are included in the FLSM (but not estimates of prices for particular routes).

The ACCC acknowledges Telstra's submission on the limitations of the FLSM for use in estimating DTCS prices. Nevertheless, the ACCC considers that, subject to appropriate qualification, the FLSM could be used to provide an indication of whether the regression results (in aggregate) are broadly consistent with the aggregate cost estimates that can be obtained from the FLSM. Such a comparison could highlight the need for further investigation if there was a substantial disparity but would not be definitive in itself.

3.6. Conclusions

Use of a domestic benchmarking methodology for pricing non-competitive transmission services, based on prices for competitive transmission services, has a solid foundation in the economic theory of competition which states that a competitive market will promote cost efficiency and cost-reflective prices.

³² The ACCC canvassed these difficulties in its 2012 FAD decision, *op. cit.*, p. 13, and referred to them in its July discussion paper.

The ACCC has developed a comprehensive and more robust methodology to assess whether transmission routes are competitive and identify transmission prices that are suitable for use in calculating benchmark prices for non-competitive routes.

It notes that differences in demand and scale economies between competitive and non-competitive regional routes could limit the accuracy of the benchmarking methodology for these routes and this requires further investigation. The ACCC will endeavour to address demand and scale differences in its regression equation. The ACCC expects that these potential limitations of the domestic benchmarking approach have less significance to setting prices for non-competitive routes serving NBN POIs.

The ACCC has reached the position that although the domestic benchmarking model has limitations, prices on the competitive routes provide a good benchmark for the prices that would be cost-reflective on non-competitive (regulated) routes, given the number of competitive routes and areas in the DTCS market. The ACCC considers that domestic benchmarking will result in regulated prices that promote efficiency and competition in the transmission market.

4. Next steps

The ACCC will shortly issue a request to transmission providers for pricing information for use in its regression analysis.

As indicated in its July 2014 discussion paper, the ACCC intends to consult extensively with industry during its FAD inquiry to refine and improve its benchmarking methodology and to provide for increased transparency and scrutiny of the regression results.

After the ACCC has received the requested pricing information, the ACCC will consult further with stakeholders about refining and improving the regression model that will be used to benchmark prices for the next period. The ACCC will engage consultants for the analysis and development of the regression model and will actively engage with stakeholders during this process. Further details on the ACCC's proposed consultation process will be released shortly.

When the ACCC has completed its initial analysis, it will release a draft decision that includes the results of its regression analysis and proposed method for setting regulated prices. The draft decision will also set out the ACCC's views on non-price terms and conditions and supplementary prices for the DTCS.

The ACCC expects to release its draft decision on the FAD for the DTCS in early 2015, before making a final decision in mid-2015.