



DOMESTIC TRANSMISSION CAPACITY SERVICE

SUBMISSION TO THE
AUSTRALIAN COMPETITION AND
CONSUMER COMMISSION

August 2011



Contents

1. Introduction	2
2. Regression issues	3
3. Distance issues	5
4. Capacity issues	7
5. Protected and unprotected services	7
6. Ethernet and SDH pricing	8
7. Tail-end charges	8
8. Connection and non-recurring charges	9
9. Non-price terms and conditions	9
10. Commencement and expiry	10



1. Introduction

Vodafone Hutchison Australia Pty Limited (**VHA**) welcomes the opportunity to participate in the Australian Competition and Consumer Commission's (**ACCC**) public inquiry into making a Final Access Determination (**FAD**) for the Domestic Transmission Capacity Service (**DTCS**). Since the release of the ACCC's discussion paper on making an FAD, it has released a draft regression model for pricing the DTCS over various links and Telstra has made a public submission on the need to consider further geographic exemptions as part of the FAD process.

While a detailed cost assessment is the best long term solution for appropriate DTCS pricing, VHA supports the ACCC's proposed use of a regression model to set an appropriate price level for transmission routes covered by the DTCS declaration. The regression model is an important step toward ensuring prices for the supply of the DTCS being set at the efficient level. The move toward more efficient pricing for the DTCS, particularly on regional routes, will permit mobile and fixed network operators to provide telecommunications services to more parts of Australia than is currently possible or to improve the quality of services provided.

The ACCC's proposed approach will have the effect of promoting the long-term interest of end-users by:

- > promoting telecommunications competition in more geographic areas;
- > improving the economically efficient use of infrastructure; and
- > more efficiently achieving any-to-any connectivity.

The combination of competitive (that is, unregulated) and uncompetitive (that is, regulated) transmission links provides the ACCC with an opportunity, unique among declared telecommunications, to directly compare prices between competitive and uncompetitive domestic transmission routes. Competitive markets typically provide the best indication as to the efficient cost of supplying a service. A sophisticated statistical analysis should permit regulated prices to be set with reference to the efficient prices observed in competitive markets, and provided cost drivers are identified for the competitive markets, it will enable the price of regulated DTCS routes to be set with reference to their underlying costs.

The ACCC has not released its methodology for the draft regression model. VHA understands a methodology paper will be released with the draft Final Access Determination but that the underlying data set will remain confidential. For these reasons, VHA is not able to comment on the draft regression model in any significant detail. Even after the methodology paper is released, analysis of the regression will be difficult without access to the confidential data.

The scope of the DTCS declaration is a separate issue to the FAD. Issues relating to scope should not delay the FAD process. VHA notes Telstra has lodged a submission requesting the ACCC to consider further geographic exemptions as part of the FAD process.¹ Telstra argues the ACCC should apply its existing competition threshold test, based on having Telstra plus two other suppliers of fibre transmission capacity services on a route (**T+2 test**), to update its route exemptions to the DTCS declaration. Telstra has proposed that information from the Infrastructure Record-Keeping Rule (**RKR**) is used to assess the T+2 test.

¹ Telstra Corporation (2011), *Submission on the need to consider further geographic exemptions as part of the final access determination process*, 5 August.



The ACCC should conduct a separate investigation to assess whether the information provided in the Infrastructure RKR is indicative of effective competition or contestability in a transmission market. The use of the Infrastructure RKR provides a necessary, but not sufficient, condition for the ACCC to consider exemptions for DTCS routes under the T+2 test. However, the ACCC needs to undertake a detailed investigation of the information within the Infrastructure RKR for each of the individual exchanges to assess whether the reported information does in fact in the presence of at least two other competing (or potentially) competing fibre infrastructure providers in addition to Telstra.

VHA does not consider that there is any sound basis for re-evaluating the “one km rule” given how transmission capacity services are acquired. If access seekers require transmission capacity services to a Telstra exchange, there is little competitive pressure exerted on Telstra by transmission service providers with fibre infrastructure several kilometres away.

While there is merit in attempting to coordinate timing for the release of the FAD with a review of the scope of the DTCS declaration, the ACCC should not unnecessarily hasten an investigation on the scope of the DTCS simply to align with the FAD process. In its final decision on Telstra’s previous applications for route exemptions, the ACCC only granted exemptions for 9 of the 20 capital-regional transmission routes Telstra had sought exemptions for and 72 of the 115 inter-exchange transmission ESAs that Telstra had sought exemptions for.² The ACCC’s final decision was made 14 months after Telstra lodged its first application for an exemption from the Standard Access Obligations.³ Past experience demonstrates that the assessment of competition or contestability is complex. Access seekers require a timely decision on the FAD to make future business decisions. By contrast, given that FAD prices are based on pricing from competitive transmission routes, there are limited costs to access providers from the FAD being released ahead of the ACCC’s review of the scope of the DTCS declaration.

Over the longer term, the regression model may not be sufficient to ensure regulated prices for the DTCS reflect the underlying cost of supplying the services. Past depreciation of the assets used to provide transmission capacity services for Telstra in particular may mean the domestic benchmarking approach only yields a conservative upper bound to the efficient level of prices on non-exempt transmission links. For the next access determination, the ACCC should augment its regression model with a cost-based pricing approach. The building block model is appropriate for such purposes because it permits the ACCC to:

- > accommodate regulated and unregulated services;
- > collect asset information based on the access provider’s depreciated actual costs;
- > incorporate incentives for operational cost efficiency; and
- > set a demand-weighted price cap over the relevant determination period.

The following sections of the submission provide responses to the questions raised by the ACCC in its discussion paper.

2. Regression issues

1. Which variables should the regression analysis focus on? Which variables should the regression analysis place less emphasis on and which should it disregard?

² ACCC (2008), *Telstra’s domestic transmission capacity service exemption applications*, Final decision, November, p6.

³ *Ibid.*, p1.



The variables included in the draft regression model – distance, speed (i.e., capacity), interface (SDH or Ethernet) and whether the access seeker requests protection – are appropriate for the ACCC to focus on. These variables are likely to reflect the main factors that impact the underlying cost of supplying transmission capacity services.

The derivation of different regression equations for each of the four link types – inter-capital, metropolitan, regional and tail-end services – is consistent with the manner in which transmission services are acquired.

Other variables may be considered for inclusion in the regression model. For example, the ACCC may want to include a dummy variable in the metropolitan or regional draft regression models to indicate whether a tail-end service is sought by the access seeker.

The inclusion of additional variables should be based on a non-statistical assessment of whether the proposed variable is likely to have a causal impact on the underlying cost of supplying the DTCS. Once the ACCC is confident it has qualitative evidence of a causal relationship then it should proceed to test whether the additional predictor variable(s) leads to a statistical valid regression model. If the additional predictor variable(s) are valid then the ACCC should assess whether their inclusion leads to a parsimonious model. It is therefore difficult to be definitive about whether any further variables should be included without access to the underlying data set.

2. To what extent should the regression analysis focus on contract length and level of protection?

Since the ACCC's proposed approach would only deliver an upper bound assessment of cost reflective pricing, the regression analysis should be based on the 'best-in-market' annual charge on competitive transmission links. To that end, contract length should not be used as a predictor variable in the regression analysis. A longer contract term is not a factor that VHA would expect to have any significant causal relationship to the underlying cost of providing transmission capacity infrastructure. VHA acknowledges that there may be some moderate transaction cost savings for access providers who use long-term contracts (when compared to short-term contracts) however these are likely to represent a very small proportion of the total cost of supplying the DTCS.

Protection is an important part of acquiring transmission capacity services but it is not essential in all areas. The dummy variable for protection in the regression model should be based on the level of protection most commonly acquired by access seekers or be of a comparable standard to the level of protection the access provider supplies to itself.

3. What are the discounts which are currently being made available as part of commercial negotiations and should these be taken into account in the regression?

The data used by the ACCC in its regression model should be based on the 'best-in-market' price paid by access seekers on competitive links. VHA expects that, to the extent discounts are currently being made available as part of commercial negotiations, these should be reflected in the data the ACCC has collected from access providers and used to determine its regression model. This is because the assessment is meant to reflect cost based pricing as closely as possible. Any whole of business discounts would align pricing more closely to cost; noting that Telstra would be prohibited from pricing below a level that it would believe is below cost.

4. Should a regression analysis consider the level of demand (reflected by some measure such as a combination of population density and services in operation) as a variable in the analysis? How should demand be calculated?

The regression analysis should not consider the level of demand using explicit "demand-related" predictor variables. The purpose of the regression analysis is to set an appropriate level for the price of non-exempt DTCS links based on the underlying cost of supplying the service. Demand is only relevant to the underlying cost of supplying the DTCS if economies of scale are significant and the economies of scale are not captured through other predictor variables. There are several points to note regarding this issue:



- > if economies of scale effects had been particularly strong then it would not have been possible for competition for the supply of the DTCS to have emerged – the fixed cost of supplying the DTCS are more likely to resemble a stepwise functions, where economies of scale effects are limited by capacity constraints;
- > economies of scale effects, to the extent they exist, are likely to be captured through the use of the predictor variable for speed (that is, capacity); and
- > the access provider's own demand for transmission capacity services must be factored into the analysis. (This requirement should have a direct flow through to Telstra's interim equivalence and transparency arrangements).⁴

Demand factors such as population density or services in operation do not have a direct impact on the cost of supplying transmission capacity services. On this basis, VHA does not consider that the regression analysis requires a variable to analyse the level of the demand. However, if the ACCC elects to include predictor variables explicitly related to the level of demand it must check to ensure that the regression model does not exhibit multicollinearity.

3. Distance issues

5. Should specified regional route pricing extend to include surrounding CCAs? If so, how and on what basis? If not, how should pricing based on CCAs be incorporated in prices in the FAD?

Regional route pricing should not extend to surrounding Exchange Service Areas (**ESAs**) unless the ACCC has provided an exemption for the relevant exchanges. Past confusion over the DTCS exemptions should not be used as justification for the removal of regulation. If the main exchange in Albury has been deemed by the ACCC to be exempt from the DTCS declaration but adjacent ESAs in Albury are not exempt from the declaration then the DTCS regulated regional transmission route pricing should apply to the adjacent ESAs.

The ACCC should be explicit on capital regional routes exactly which ESAs at the regional location are exempt from declaration. If regulation of the DTCS is to be effective, the ACCC's emphasis must be on providing access seekers with as much information as possible so that they can make an informed decision regarding the acquisition of transmission capacity services.

6. Should the boundaries of capital cities be determined on an ESA basis? If so, which ESA's mark the outer boundaries of Sydney, Melbourne, Brisbane, Adelaide, Perth, Canberra, Darwin and Hobart?

VHA is broadly supportive of the ACCC's approach to define capital city boundaries through a combination of radial distance from a CBD exchange and Telstra's ESA. However, in some instances, the ACCC appears to have been overly conservative with its assessment of the radial distance used to determine metropolitan boundaries.

7. What other method should be used to determine the boundaries of capital cities for the purposes of the DTCS?

VHA supports the use of radial distances and Telstra's ESAs.

8. Should routes from exempt capital cities to Darwin and Hobart be considered inter-capital routes for the purposes of the DTCS FAD?

⁴ For more information see section 4(g) of the Telecommunications (Acceptance of Undertaking about Structural Separation—Matters) Instrument 2011.



Yes. Darwin and Hobart have not benefited from telecommunications competition to the same extent as other capital cities due to the high cost of transmission capacity services. Regulated prices for transmission capacity services are essential to promoting competition in these markets.

9. How should the ACCC treat routes with a major undersea component?

Routes with a major undersea component are likely to have a different cost structure to transmission routes over land. This may warrant a different pricing approach to other inter-capital routes. This should take the form of a substantially different pricing approach for such routes rather than tinkering with regression model to accommodate data points with obviously different underlying cost structures.

10. What should be the boundary for a CBD service? Can this be classified by a distance increment?

The CBD service definition should no longer be used for the purposes of services definitions (and pricing) for the DTCS. Inter-exchange metropolitan links should be based on the regression model for metropolitan areas. Services with the same, or similar, A-end and B-end locations should be based on a stand-alone tail-end price.

11. Is a 60km limit appropriate for metropolitan DTCS services?

As noted in question 6, VHA supports the use of a radial distance for metropolitan DTCS services. However, VHA believes the ACCC may have been too conservative in defining the metropolitan boundaries and that the ACCC's radial distances should be increased to ensure the outer metropolitan fringe is covered within the capital city definitions. The underlying cost drivers for supplying the DTCS in these areas are likely to be materially different from the cost drivers for the long transmission links required to reach regional areas.

12. What should define a regional DTCS transmission route?

Regional DTCS routes should include all routes with either an A-end or a B-end or both outside the designated Telstra ESAs for the eight capital cities.

13. Which ESAs mark the boundaries of the exempt centres on regional routes?

The exempt ESAs should be based on the existing boundary for the ESA. The ACCC should a list of all regional ESAs that are exempt from declaration as part of making the FAD.

14. What is an appropriate way to account for distance as a determinant of DTCS pricing?

VHA supports the regression model approach, where distance is used as a predictor variable for price. The distance variable should be based on a radial distance measure as this is likely to be the most direct and consistent distance. If the ACCC adopts similar radial distance bands in the FAD as it used in the Interim Access Determination (IAD), it should ensure it has a solid understanding of the major regional transmission points within the radial distance band. The distance used in the regression model to set the FAD price should reflect a demand-weighted average distance for the major transmission points within that band rather than simplistic measures such as the mid-point of the radial distance band.

15. Would separate metropolitan and regional distance bands be in the long-term interests of end-users?

VHA supports separate metropolitan and regional distance bands as it will encourage the economically efficient use of transmission capacity infrastructure and will therefore be in the long-term interests of end-users.



16. *Should there be a separate band for transmission services delivered in CBD areas? If so, what CBD/metropolitan distance band would be in the long-term interests of end-users?*

VHA does not support a separate band for CBD areas. Such a distinction leads to unnecessary confusion and is no longer relevant given the approach to providing exemptions from the DTCS for various ESAs in metropolitan areas.

4. Capacity issues

17. *Which capacities should the FAD price?*

VHA generally supports the approach to capacities used in the IAD although higher capacity increments for Ethernet network interfaces may be justified in some cases. That is, for SDH network interface the FAD should price 2, 8, 34/45 and 155 Mbps capacities and for the Ethernet network interface the FAD should price 2, 10, 100 and 1000 Mbps capacities.

18. *Should the FAD price different capacities for each geographic route type?*

Generally, the same capacities should be priced for each geographic route type. The characteristics of the DTCS that make entry difficult on non-exempt routes are not related to capacity and therefore access seekers should be permitted to acquire high capacities on transmission routes where such services are available.

Many access seekers (including VHA) have already begun a transition process to prepare for next generation fixed and wireless technologies. Therefore, it is imperative that access seekers are able to acquire the full suite of transmission services in both metropolitan and regional areas during this period of transition and to have certainty over the price it will pay for these regulated services.

19. *Should the FAD price different capacities for services using Ethernet or SDH network interfaces?*

Yes. Regardless of whether Ethernet or SDH network interfaces are used, VHA has demand for a range of different transmission capacities. There is no reason for the ACCC to depart from pricing the full suite of capacities (or appropriate increments thereof) that can be acquired over both the Ethernet and SDH network interfaces.

5. Protected and unprotected services

20. *What levels of protection are available for services in the inter-exchange, inter-capital, regional and tail-end markets? When is protection provided in the form of geographically distinct redundant paths?*

There are various levels of protection available for transmission capacity services across inter-capital, metropolitan, regional and tail-end transmission routes. Protection options include geographical distinct redundant paths, dual lead-ins to premises and dual interface protection at the point of interconnection.

For the purposes of setting regulated prices for the DTCS, the minimum level of protection that should be provided is geographically distinct redundant paths. Access seekers should also have the option of providing

21. *What is the overall difference (percentage wise) between pricing on protected and unprotected services?*

The ACCC should determine this based on its data set and the use of a dummy variable for protected services.



22. *What level of protection should the DTCS FAD price?*

The ACCC should specify the level of protection most commonly acquired by access seekers or be of a comparable standard to the level of protection the access provider supplies to itself. It will be essential for the minimum protection level (for pricing purposes) to be clearly defined in the non-price terms and conditions. If the access provider commonly supplies to itself with a higher level of protection than it supplier to other access seekers then the ACCC should consider specifying a higher level of protection in the non-price terms and conditions for the DTCS.

23. *Is there an appropriate premium for unprotected services?*

As noted in question 21, the ACCC should determine this based on its data set and the use of a dummy variable for protected services.

24. *Should unprotected service pricing be included in any regression type analysis?*

Yes. Unprotected services may be acquired in circumstances where the risks associated with a particular transmission route do not warrant the additional cost of acquiring protected services. Access seekers should have the flexibility to choose between protected and unprotected services.

6. Ethernet and SDH pricing

25. *Should the FAD differentiate between Ethernet and SDH services?*

Yes. The underlying cost drivers for Ethernet and SDH services are likely to be different and this warrants separate pricing for the two interfaces. However, in the future VHA expects most access seekers will move to Ethernet interfaces. Ethernet services will be particular relevant for NBN backhaul and, in the case of mobile services, for LTE backhaul.

26. *Should the FAD contain separate pricing for Ethernet services?*

Yes, based on the response to question 25.

27. *How are the levels of protection available for Ethernet services and SDH services different?*

There are technical differences in how protection is provided for Ethernet and SDH services. SDH services tend to use 1+1 Multiplex Section Protection (MSP). Ethernet services tend require an “extension” of the access provider’s network into the access seekers premises. On this basis there may be some difference in the underlying cost of supplying protection between Ethernet and SDH services.

7. Tail-end charges

28. *Should tail-end prices be differentiated according to the geographic route type for its location? For example, inter-exchange prices if the tail-end is in a capital city and a regional price if it is in a regional centre?*

Tail-end services should not be differentiated based on their geographic location. VHA does not believe the underlying cost of providing tail end services would be different between metropolitan and regional areas.

29. *To what extent should tail-end prices be based on distance?*



Stand alone tail-end prices should not be based on distance. It is appropriate for the ACCC to adopt geographic averaging for tail-end services and, on this basis, stand alone tail-end transmission prices should not be based on distance.

Where tail-end services are acquired as part of a bundle with a regional transmission link then the tail-end component should be reflected through the use of a dummy variable. This would mean a standard premium is applied that does not take into account distance but that may be differentiated between metropolitan and regional areas.

30. What distance increments are relevant for a tail-end route?

As stated in question 29, VHA does not believe that stand alone tail-end prices should be based on distance.

8. Connection and non-recurring charges

31. Do the IAD prices for connection charges reflect industry practice?

In VHA's experience there is significant variation in the price for connection charges. The ACCC must establish a clear, cost-based rationale for connection charges.

32. What should be included in the connection charge for DTCS services?

The connection charge should reflect the cost of connecting new DTCS services. These costs may include the provisioning of a new port, internal cabling and the back-end services used to support these direct costs.

VHA does not believe that the cost of connection would vary significantly based on the transmission capacity (that is, speed) acquired. There may be some variation to the cost of providing connection between SDH and Ethernet interfaces.

33. What should be excluded from the connection charge for DTCS services?

Costs relating to pre-installation assessments or the installation of additional infrastructure should be excluded from the connection charge for the DTCS. For example, Telstra's Special Linkage Charges or charges relating to feasibility studies should be excluded from the connection charge.

34. Should connection charges be included in the overall cost of the service in the FAD?

VHA does not believe that connection charges should be included in the overall cost of the service for the FAD.

9. Non-price terms and conditions

35. What are the common non-price terms and conditions applicable to DTCS services?

Given that section 152BEA of the *Competition and Consumer Act 2010* obligates carriers or carriage service providers who supply, or propose to supply, a declared service under an access agreement, or variation agreement, to lodge such agreements with the ACCC, it is probably better placed than VHA to assess the non-price terms and conditions that are common across access agreements between access providers and various access seekers.



As with the price terms and conditions, the ACCC should seek to determine general non-price terms and conditions based on the 'best-in-market' agreements.

36. Do these vary between types of DTCS services? For example between inter-exchange and regional services?

As per question 35, the ACCC should determine this based on the access agreements that have been lodged with it since 1 January 2011. VHA does not expect there would be any significant need for variations in the non-price terms and conditions based on the type of the DTCS service.

37. Do these vary between different types of DTCS network interfaces?

There may be some reasons to vary the non-price terms and conditions based on the type of DTCS network interface based on technical differences in the requirements for the interface technologies. For example, the IAD has references to the Institute of Electrical and Electronics Engineers (IEEE) standard for Ethernet services and the SDH services references the International Telecommunications Union Telecommunications Standardisation Sector (ITU-T).

38. Should the ACCC include terms and conditions relating to liability and risk allocation in the FAD? If so, should it apply to all access seekers equally, or should it be restricted to a particular class of access seekers?

In VHA's experience non-price terms and conditions relating to liability and risk allocation are often biased in favour of the access provider. Therefore, the ACCC should examine this issue in detail and draft general non-price terms and conditions relating to liability and risk allocation.

39. Which non-price terms and conditions of access should be included / not included in the DTCS FAD?

The non-price terms and conditions should provide an appropriate and balanced minimum safeguard for access seekers who are unable to reach a commercial access agreement with the access provider. The non-price terms and conditions will necessarily be general in nature although conditional statements based on particular network interfaces or transmission capacities may be useful in some circumstances.

10. Commencement and expiry

40. What is an appropriate time period for the FAD?

VHA believes that pricing in the FAD should be updated to reflect the latest pricing in competitive markets prior to expiration of the DTCS declaration. On this basis the appropriate time period for the FAD is 15 months.

41. Are there any circumstances that warrant a difference in the expiry dates of the FAD and the DTCS declaration?

The regression model adopted by the ACCC is based on historic data and, given cost trends in transmission capacity services, there is a danger that its pricing structures will become obsolescent prior to the expiry of the DTCS declaration. The FAD should therefore cover the period from 1 January 2012 to 31 March 2013. The ACCC should then refresh the regression model based on updated competitive market pricing during the relevant 15 month period and develop a new regression model for the final year of the DTCS declaration.

The ACCC should also augment the regression model with a cost-based pricing approach based on the 'building block model prior to its next pricing review.