



Submission in response to
Domestic Transmission Capacity Service
Final Access Determination

Draft Decision

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Section 1. EXECUTIVE SUMMARY

- 1.1 Establishing efficient cost based prices for the Domestic Transmission Capacity Service (DTCS) has proved to be an elusive goal for the ACCC. Whilst the service has been declared since 1997, regulated pricing was only established in 2012. Initially the ACCC left it to the market to set rates through the negotiate/arbitrate regime. An attempt was made to develop cost based pricing but the modelling was never finalised. More recently the ACCC has adopted a domestic market benchmarking approach as the basis to set prices in the 2012 FAD.
- 1.2 The use of domestic market benchmarking is unique to Australia and has been subject to specific criticism by industry. A number of the concerns cited have been realised in practice. Reflecting these concerns, Optus argued at the start of this Inquiry that if a regression approach was used again it is crucial that:
 - (a) Issues raised by access seekers are properly considered and addressed; and
 - (b) The output of the benchmarking model is not used as the sole source for setting the FAD. It is important for the ACCC to consider other data and evidence in its final pricing decision.¹
- 1.3 Unfortunately this advice has not been followed and the ACCC has continued to rely **solely** on the output of the regression model without further inquiry into whether the output is consistent with the long term interest of end-users, or the impact on actual specific products and markets. This has led to foreseeable competitive concerns and price increases for certain transmission types.
- 1.4 The issues with the ACCC's approach are compounded by the fact that the predictive capabilities of the regression model are poor, with the average 2 Mbps metro forecasts being 60% above observed prices. Such significant errors do not give confidence that the model can be used to estimate cost-reflective efficient prices. It is not reasonable to rely **solely** upon the outcomes of the regression model which displays such errors.
- 1.5 It is troubling that the ACCC's report supporting the Draft FAD Decisions makes no mention of price increases or the limitations of the modelling. Further, there appears to be no attempt to measure the impact of the decision on relevant markets.

There is no average transmission product or market

- 1.6 The Draft FAD Decision claims that "*on average*" pricing is "*22.2 per cent lower than that determined by the ACCC in 2012.*"² However, it does not follow that access seekers will realise such a saving. This is because there is no such thing as an "average" transmission product; and there is no "average" downstream market; as such there can be no "average" impact on the long term interest of end-users. The ACCC's claimed average price reduction is meaningless and potentially misleads interested parties on the impact of the Draft FAD Decision.
- 1.7 **[CiC]**
- 1.8 Specific classes of transmission links impact on specific downstream markets. It is incumbent on the ACCC to inquire how the Draft FAD Decision impacts on the different classes of

¹ Optus, 2014, Submission in response to DTCS primary price Discussion Paper, November, p.5

² ACCC, 2015, Public Inquiry to make a Final Access Determination for the Domestic Transmission Capacity Service, Draft Decision, 4 September, p.3

transmission products. To properly assess the impact of the Draft FAD Decision on the long term interest of end-users, the ACCC should identify different classes of transmission products; assess the impact on wholesale pricing; and measure the impact on related downstream markets.

Draft Decision increases access costs

- 1.9 The Draft FAD proposes significant price increases for 2 Mbps links, which comprise at least half of the dataset available to the ACCC. The Draft Decision does not discuss the impact or significance of the drastic price increases. In fact, the Draft Decision claims that the “*draft 2015 model generally predicts lower prices than the 2012 FAD model.*”³
- 1.10 **[CiC]**
- 1.11 Industry has long criticised the benchmarking method adopted by the ACCC. The ACCC acknowledged that while there are limitations to the benchmarking approach, prices on competitive routes provide a good benchmark for the efficient and cost-based prices on regulated routes.⁴
- 1.12 However, for many transmission types the Draft FAD Decision produces the opposite result. The DTCS benchmark approach results in 2 Mbps prices being significantly above the commercial rates that existed prior to the ACCC’s intervention in 2012.
- 1.13 The results of the regression analysis do not pass the common sense test – how does a method which is supposed to reflect commercial price trends result in an opposite price trend?
- 1.14 This is an issue the ACCC should address prior to making a final decision.
- 1.15 It is not reasonable, therefore, to propose such a large increase in access prices without reasons, and without any measurement of the impacts on end-users. **[CiC]** It is unclear how an increase in price reflects price declines on competitive routes.

Draft FAD does not assess impact on markets

- 1.16 The Draft FAD Decision also fails to assess the impact of the proposed pricing on related downstream markets or end-users in those markets. Optus notes the claim there is an ‘average’ price decline flows in part from a failure to identify specific impacts in specific markets.
- 1.17 Not every type of transmission type is used in all downstream markets or by all end-users. An assessment of the long term interest of end-users should identify the downstream markets and end-users impacted by the proposed price changes.
- 1.18 Optus reiterates that 2 Mbps services account for at least one half of the total dataset and the ACCC is proposing to increase the price of these services. These links are used predominantly for access network connection, which are a wholesale input in the corporate and government market. Corporate and government end-users will face increased prices, greater inefficiency and reduced competition. None of which promotes the long term interest of end-users.

³ ACCC, 2015, Public Inquiry to make a Final Access Determination for the Domestic Transmission Capacity Service, Draft Decision, 4 September, p.31

⁴ ACCC, 2014, Position statement regarding DTCS FAD domestic benchmarking approach, November, p.22-3

- 1.19 Importantly, competition impacts cannot be ‘averaged’ across different related downstream markets. There is no supply side or demand side substitution between the transmission inputs, or across the downstream markets. Competition impacts in one market do not offset impacts in another.

DTCS regression

- 1.20 The ACCC has noted the limitations of regression analysis but has nonetheless concluded the observations on competitive routes “*provide a good benchmark*” for cost-reflective prices on non-competitive routes.⁵
- 1.21 Evidence, however, would suggest otherwise. The regression analysis is particularly poor in its ability to estimate the pricing of 2 Mbps services on competitive routes. The regression model has a clear upwards bias in the cost of 2 Mbps, with a mean absolute percentage error of around **[CiC]**
- 1.22 Optus submits that it is not reasonable to conclude that the predictive capabilities of the regression model are sufficiently reliable for the ACCC to use as the **sole** input into its pricing decision.
- 1.23 A key focus needs to be on the regression analysis undertaken by Economic Insights (EI), and whether there are improvements that could be made to improve its predictive ability.
- 1.24 Optus and its expert advisors have identified many flaws in the EI regression analysis, which includes:
- (a) Fundamental data integrity issues, including misapplication of GST;
 - (b) Failure to consider alternative functional forms; and
 - (c) Incorrect interpretations of regression results.
- 1.25 Further, Optus notes that the role of EI is to provide expert advice on the technical aspects of the regression analysis – including technical assessment of other approaches suggested by the other experts. However, on several occasions, EI rejects suggestions based on subjective non-analytical reasons that could be interpreted as exercising decision-making discretion. It is the role of the ACCC to assess the legislative criteria based on the objective analysis conducted by EI.
- 1.26 In conclusion, Optus has little confidence that the EI regression analysis is a reasonable assessment of the data or that it is a reasonable regression analysis based on an assessment of the full range of available econometric techniques. As a result, the ACCC is not in a position to make an assessment of reasonable alternative model functions and variables. At a minimum, EI must undertake a proper analysis of the suggestions put by other experts before the ACCC has suitable material before it to make a reasonable assessment against the legislative criteria.

Proposed way forward for 2 Mbps services

- 1.27 It would appear that the regression does not accurately reflect the competitive market at the highest speed services and it does not reflect the non-competitive prices at the low speed services. This might be due to the functional form of the regression; or it may be that the variables driving 2 Mbps pricing have not been properly identified.

⁵ ACCC, 2014, DTCS Position Statement on Pricing Methodology, November, p.23

- 1.28 Optus' expert advisor has identified that EI has erred in its assessment of the impact of a 2 Mbps dummy, noting that EI's interpretation is "*nonsensical*". Optus' advisor has further demonstrated that inclusion of a 2 Mbps dummy variable has a "*highly significant*" impact and indicates that prices should be around 15% lower for 2 Mbps less than 5km distance.⁶ Removal of 2 Mbps from the regression also results in significant changes for predictors such as the route category dummies, distance and ESA throughput for observations greater than 2 Mbps.
- 1.29 Whatever the technical reason behind the regression's failure to predict accurately 2 Mbps pricing in the dataset; it is clear that the regression is not able to reasonably predict 2 Mbps pricing. As such, Optus supports the removal of all 2 Mbps services from the regression dataset. The regression should be re-run, taking into account the expert views put to EI.
- 1.30 The ACCC should use a range of inputs to set 2 Mbps prices that promote the long term interest of end-users, including:
- (a) A regression for just 2 Mbps services, including adjustments provided by expert advisors.
 - (b) Recognition that existing commercial prices for 2 Mbps represent the ceiling for future FAD prices. It is reasonable to conclude that commercial prices agreed between Telstra and access seekers represent a reasonable balance between the legitimate interests of the access provider and low prices to promote competition.
 - (c) Recognition that Ethernet 2 Mbps should be priced below existing SDH prices, consistent with observations across the whole dataset.
 - (d) Recognition that there is a year-on-year price decline on competitive routes. A similar price decline should apply to existing historical commercial agreements used for 2 Mbps ceiling prices.

⁶ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.61

Section 2. IMPACT OF DRAFT FAD PRICING

- 2.1 The Draft FAD claims that “on average” pricing is “22.2 per cent lower than that determined by the ACCC in 2012.”⁷ However, there is no such thing as an “average” transmission product; and there is no “average” downstream market; and there is no “average” impact on the long term interest of end-users. Further, the Draft FAD will lead to higher transmission prices in the real world. The Draft FAD would increase Optus’ transmission costs by [CiC], but there is not a single mention of price increase in the Draft FAD Decision.
- 2.2 Optus finds that:
- (a) Claims that the Draft FAD Decision would ‘on average’ reduce transmission prices, or that it ‘generally predicts lower prices’ are factually incorrect; and
 - (b) Claims that the Draft FAD Decision will lower access prices are potentially misleading.
- 2.3 The Draft FAD Decision has made no attempt to identify the real world impacts of the new pricing. There is no discussion of the significant price increases imposed on 2 Mbps links; no reference to the fact that 2 Mbps links makes up a significant proportion of the total dataset; and no assessment of the impact on downstream market that rely on these links for connectivity.
- 2.4 In this section, Optus outlines the actual impacts of the Draft FAD Decision. It will show that the ACCC’s reliance on ‘average’ impacts is largely meaningless. There is no ‘average’ transmission product, and there is no ‘average’ downstream transmission retail market. The prices in the Draft FAD Decision will not lead to a 17% average decline in access costs; and it will not lead to the promotion of the LTIE in all relevant downstream markets.
- 2.5 Finally, Optus notes that the ACCC has been aware of these issues since 2010 but has yet to properly address them. Optus requests that the ACCC consider these issues prior to making a final decision.

DTCS pricing needs to reflect real world services

- 2.6 The Draft FAD Decision proposes significant price declines for transmission links greater than 100 Mbps, and proposes significant increases for low-bandwidth 2 Mbps links. But Draft FAD Decision does not reference the significant price increase – the ACCC claims that the “draft 2015 model generally predicts lower prices than the 2012 FAD model.”⁸
- 2.7 This claim is incorrect. No such general price decline occurs. For instance, the Draft FAD results in a price **increase** for almost [CiC] of DTCS services acquired by Optus. It is not clear how such an outcome justifies the claim of a general price decline.
- 2.8 Optus raised this issue during the 2014 DTCS Declaration Inquiry. Optus foresaw that repeating the 2012 FAD method would risk repeating the same issues that arose with the 2012 FAD. Optus submitted that:

The current approach to the regulation and pricing of the DTCS has failed to adequately promote the LTIE. In particular, the pricing of DTCS has not sufficiently focused on

⁷ ACCC, 2015, Public Inquiry to make a Final Access Determination for the Domestic Transmission Capacity Service, Draft Decision, 4 September, p.3

⁸ ACCC, 2015, Public Inquiry to make a Final Access Determination for the Domestic Transmission Capacity Service, Draft Decision, 4 September, p.31

*promoting competition in all related downstream markets ... The view that on average there is competition, and on average access seekers are better off does not promote the LTIE.*⁹

- 2.9 Optus' criticism of this average approach is not new. It was raised as far back as 2010, when Optus submitted that *"one-size-fits-all based on average cost approach to pricing may fail to properly account for variations along transmission routes."*¹⁰
- 2.10 To address this, Optus submitted during the 2014 DTCS Declaration Inquiry that, at the minimum, two different DTCS service types, sold and purchased in the wholesale market, should be recognised:
- (a) POI-to-POI service that provides dedicated transmission capacity between Access Seekers' Points-of-Interconnection (POI) in different locations. These services are also called inter-exchange links.
 - (b) POI-to-End-User service that provides dedicated transmission capacity connections between an Access Seeker's POI and end-user premise. These services are also called access links.¹¹
- 2.11 Optus submitted that recognising these two different DTCS service types in the Declaration would help address the wholesale network bottleneck that has resulted in less competition in the related downstream Corporate & Government market, and assist the ACCC to adopt efficient pricing.
- 2.12 Optus further noted that the ACCC decision to include bundled tail-ends (POP-to-end-user services) within its definition of POI-to-POI transmission links *"does not recognise the fact that these are separate wholesale services utilised by separate downstream markets."*¹²
- 2.13 Optus foresaw that *"failure to recognise this will lead to detrimental outcomes in downstream markets that rely upon access to wholesale POI-to-end-user transmission links"*.¹³
- 2.14 The ACCC rejected this approach and expressed its view that the existing service definition adequately dealt with these two different services. Notwithstanding this comment, the 2015 Draft FAD Decision repeats the same errors made in the 2012 DTCS FAD. The ACCC has provided no reasons for this approach; and has provided no reasons how the significant price increase for 2 Mbps service promotes the long term interest of end-users.
- 2.15 It would appear that in its assessment of the 'average' DTCS product, the 'average transmission market', and the 'average' DTCS downstream markets, the ACCC may have had in mind inter-exchange transmission links which provide transmission between two network locations in a communications network – the POI-to-POI service noted above. These links range in speed from 10 Mbps up to 10 Gbps services. Many of these transmission routes are serviced by many operators and are thus de-regulated. It may well be that the prices of POI-to-POI links at medium to high bandwidths fall under the Draft FAD Decision. But this in and of itself does not mean that the Draft FAD Decision promotes the LTIE. There are other downstream markets that use other types of transmission products.

⁹ Optus, 2014, Submission in response to the ACCC Draft Declaration Report on DTCS, p.3

¹⁰ Optus, 2010, Submission in response to the Review of the DTCS Pricing Principles, July, p.25

¹¹ Optus, 2014, Submission in response to the ACCC Draft Declaration Report on DTCS, p.4

¹² Optus, 2014, Submission in response to the ACCC Draft Declaration Report on DTCS, p.4

¹³ Optus, 2014, Submission in response to the ACCC Draft Declaration Report on DTCS, p.4

Identifying different transmission types

- 2.16 Optus warned the ACCC that “*failure to recognise [separate services] will lead to detrimental outcomes in downstream markets that rely upon access to wholesale [tail-end] transmission links*”.¹⁴ Unfortunately, Optus has been proven correct.
- 2.17 [CiC]
- 2.18 It may be instructive for the ACCC to understand the make-up of Optus’ transmission expenditure from Telstra. This shows there are three clear distinct products, all at distinct different bandwidths.
- 2.19 Optus acquires three types of transmission services from Telstra:
- (a) Access network leases;
 - (b) BTS leases; and
 - (c) Inter-exchange leases.
- 2.20 Importantly, these different leases have different and distinct characteristics and provide transmission to three different and distinct downstream markets:
- (a) Access network leases are used to provide business connectivity. [CiC]
 - (b) BTS network leases provide backhaul to Optus’ mobile sites. [CiC]
 - (c) Inter-exchange leases provide trunk backhaul to Optus’ network. [CiC]
- 2.21 The different wholesale transmission types are not interchangeable with one another. There is little, if any, demand side substitution following wholesale price changes. For instance, corporate customers require low bandwidth SDH links to support multi-office PABX connectivity. No matter the savings in medium (10+ Mbps) or high (100+ Mbps) services, these corporate end-users will not move to the higher speed service. Moreover, there is limited supply side substitution. Access leases are primarily provided over 2 Mbps copper lines. There is a limit to the bandwidth that copper lines can support. Without access to fibre connections higher bandwidth DTCS services cannot be supplied even if requested.
- 2.22 However, the Draft FAD Decision does not mention any of these differences. There is no mention of different transmission types; and no mention of different uses of the different transmission types.
- 2.23 A brief summary of Optus’ use of wholesale transmission inputs is provided below. [CiC]

Access Network Links

- 2.24 [CiC]
- 2.25 [CiC]
- 2.26 [CiC]
- 2.27 [CiC]

¹⁴ Optus, 2014, Submission in response to the ACCC Draft Declaration Report on DTCS, p.4

Base station links

2.28 [CiC]

2.29 [CiC]

2.30 [CiC]

Inter-exchange leases

2.31 [CiC]

2.32 [CiC]

2.33 [CiC]

2.34 [CiC]

Section 3. PROMOTING THE LTIE

- 3.1 The Draft FAD Decision must promote the long term interest of end-users (LTIE). The Draft Decision claims to do this ‘on average’. That is, the ACCC has estimated a hypothetical ‘average’ access price decline and assumes universal application. Then, the ACCC assumes an ‘average’ downstream market and assumes that an ‘average’ price decline promotes the LTIE. Optus notes that this analysis would only hold if such a hypothetical ‘average’ transmission product and downstream market actually existed. But it does not. An assessment of the LTIE should be based on the actual price impacts of the Draft FAD Decision and the actual impacts in related downstream markets. The ACCC has failed to make reasonable inquiries into this.
- 3.2 Section 2 has demonstrated that real-world transmission products vary markedly from that assumed in the Draft FAD Decision. For instance, it is shown that a large proportion of the transmission links in the ACCC dataset would face a price increase; and **[CiC]**. The Draft FAD Decision makes no reference to this fact.
- 3.3 This section analyses the extent to which the real world prices imposed by the Draft FAD Decision will promote or undermine the LTIE in actual downstream markets that utilise the regulated wholesale transmission products. This section will demonstrate that the:
- (a) LTIE may be promoted in markets that rely on medium to high-speed transmission inputs up to 1 Gbps;
 - (b) LTIE may not be promoted in markets that rely on very high-speed transmission inputs above 1 Gbps, and typically 10 Gbps; and
 - (c) LTIE is not promoted in the corporate and government market which primarily relies upon low-bandwidth 2 Mbps SDH transmission links.
- 3.4 This analysis again shows that a one-size-fits-all approach is not appropriate for the DTCS – as first raised by Optus in 2010 when it submitted “*one-size-fits-all based on average cost approach to pricing may fail to properly account for variations*” in the DTCS market.¹⁵

Identifying related downstream markets

- 3.5 The Draft Decision makes several claims about the impact price changes will have on related downstream markets:
- (a) First, the regulation of transmission network plays an important role in promoting competition in the telecommunication market.¹⁶
 - (b) Second, lower prices will have positive impacts, namely:
 - (i) FAD prices will mimic the cost efficiency achieved on competitive routes;
 - (ii) FAD prices will improve access to cheaper wholesale transmission services;

¹⁵ Optus, 2010, Optus submission to ACCC in response to the Review of the Domestic Transmission Capacity Service Pricing Principles, July, p.25

¹⁶ ACCC, 2015, Public Inquiry to make a Final Access Determination for the Domestic Transmission Capacity Service, Draft Decision, 4 September, p.3

(iii) It will enable access seeker to access transmission services at efficient costs; and the

(iv) FAD prices reflect more closely the cost of supply.¹⁷

- 3.6 As a result of these impacts the ACCC concludes that the Draft DTCS FAD Decision will promote competition in the regulated markets. The ACCC specifically states that lower DTCS FAD pricing will promote competition in regulated areas to the benefit of both wholesale transmission markets and downstream markets which rely on transmission services to deliver services to end-users.¹⁸ The ACCC states that the cost savings in the DTCS FAD can be used to innovate and reduce production costs for downstream customers.¹⁹
- 3.7 The ACCC expects that the benefits flowing from increased competition in the deregulated routes will emerge in uncompetitive/regulated routes where access to regulated transmission services is available. Access seekers will be able to use regulated access to increase extend their core and access networks to provide services and to ensure access seekers can compete with incumbent service providers.²⁰
- 3.8 These statements may well be correct for downstream markets that rely upon the DTCS transmission links that face lower prices. However, the Draft FAD Decision fails to identify specific affected downstream telecommunications markets – and fails to assess the real world impacts of the decision.
- 3.9 Optus reiterates that there is no “average transmission” retail market and reliance on an “average” price decline is meaningless. The ACCC should identify the downstream markets impacted by the Draft FAD Decision; assess whether the wholesale DTCS inputs face a price increase or decrease; and assess whether the LTIE and competition is promoted in each market.
- 3.10 To assist the ACCC, Optus has identified three downstream markets where the DTCS is an important wholesale input – and in some circumstances represents a wholesale bottleneck input. These markets are:
- (a) Carrier transmission market;
 - (b) Mobile backhaul market; and
 - (c) Corporate and government market.

Carrier transmission market

- 3.11 This market is characterised by high capacity long distance transmission links catering for the transportation of large volume of carrier data. Throughput speeds are large (100 Mbps plus) and increasing over time. It is increasingly common, for example, for transmission links to be large 1 Gbps or 10 Gbps capacity.
- 3.12 These large transmission links are often inter-capital routes and located between large data centres. Typically, the providers of these links also provide the POPs at each end – i.e., an

¹⁷ ACCC, 2015, Public Inquiry to make a Final Access Determination for the Domestic Transmission Capacity Service, Draft Decision, 4 September, p.13

¹⁸ ACCC, 2015, Public Inquiry to make a Final Access Determination for the Domestic Transmission Capacity Service, Draft Decision, 4 September, p.14

¹⁹ ACCC, 2015, Public Inquiry to make a Final Access Determination for the Domestic Transmission Capacity Service, Draft Decision, 4 September, p.14

²⁰ ACCC, 2015, Public Inquiry to make a Final Access Determination for the Domestic Transmission Capacity Service, Draft Decision, 4 September, p.14

Optus 10 Gbps Ethernet service begin and terminate at Optus exchange locations. This market is effectively competitive with several providers, including Telstra, Optus, Nextgen, Vocus, TPG and Macquarie Telecom.

- 3.13 While the majority of the market is competitive, the ACCC should also be aware that the nature of some carrier transmission architecture necessitates the provision of large capacity links across non-exempt areas. **[CiC]**
- 3.14 Optus submits that this is the market most often associated with ‘transmission’ services. Optus submits this may have been the market at the forefront of the Draft FAD Decision reasoning when it stated that ‘on average’ end-users are better off. But it is only one of several markets where DTCS is a key wholesale input.

Mobile backhaul market

- 3.15 Another downstream market where the DTCS is a key wholesale input is the mobile backhaul market. With the growth of mobile data usage, there is a growing demand for upgraded backhaul capacity at mobile base stations. For instance, sites that were able to use microwave backhaul now require high bandwidth fibre links; and sites that could cope with low bandwidth SDH links now require high bandwidth Ethernet links.
- 3.16 Mobile Network Operators (MNOs) acquire services in this market for the purpose of backhauling mobile traffic. Most of the MNOs have extensive fibre transmission networks and are able to self-supply the vast majority of backhaul requirements. Transmission is acquired from other providers outside of an MNO’s backhaul network footprint. For example, Optus acquires transmission from Telstra; and VHA acquires transmission from Optus and Telstra.
- 3.17 **[CiC]**
- 3.18 **[CiC]**
- 3.19 **[CiC]**
- 3.20 Finally, the competition in this market is further evidenced by the recent announcement that VHA will move from Optus supplied transmission links to TPG dark fibre backhaul. This demonstrates that backhaul agreements signed in this market can be effectively competitive.

Corporate and government market

- 3.21 The third downstream market identified is the corporate and government market. This market involves the provision of voice and data services to large enterprises and government departments. Optus is a significant provider of services in this market, with the second largest market share behind Telstra. Telstra, however, has significant market power in this market. **[CiC]**
- 3.22 It is this market that is most directly impacted by the pricing of low bandwidth links. The majority of links in this market are 2 Mbps SDH links, primarily for the purpose of providing multiline voice services across multiple sites through the use of PBX systems. **[CiC]**
- 3.23 Figure 1 shows an example Optus customer where the uses of 2 Mbps access lines are a vital element to deliver the service.

[CiC]

Source: Optus

3.24 [CiC].

3.25 [CiC].

3.26 [CiC].

3.27 The required wholesale inputs to this market can only be supplied by Telstra. Outside of Optus' network, Optus requires wholesale access to Telstra's copper network. Unlike the previous two markets above, there are no alternative wholesale providers. These access services are tail-end services under the DTCS Declaration, and can be either stand-alone or bundled.

3.28 The ACCC has identified a lack of effective competition in the provision of tail-end services in the DTCS Declaration Inquiry. All tail-end services (stand-alone or bundled) are regulated under the Declaration irrespective of whether they are provided across competitive routes.

3.29 Optus acquires a significant number of access links from Telstra for the purpose of providing connections to customers in the corporate and government market. [CiC].

3.30 [CiC]

Promoting LTIE in related downstream markets

3.31 The Draft FAD Decision states that the LTIE is promoted because it:

- (a) Results in lower prices;
- (b) Prices mimic the cost efficiency achieved on competitive routes;
- (c) Improves access to cheaper transmission services;
- (d) Enables access at efficient costs; and
- (e) Reflects more closely the cost of supply.

3.32 This sub-section examines whether these statement hold when examining specific downstream markets.

Carrier transmission market

3.33 As discussed above, this market generally utilises high bandwidth DTCS wholesale inputs greater than 100 Mbps and increasingly 1 Gbps and 10 Gbps interfaces.

3.34 The Draft FAD Decision results in a general price decrease for high bandwidth DTCS services. The Draft FAD ensures that price declines observed in 'competitive' routes are reflected in the prices on the regulated routes.

3.35 Optus agrees that the impact of the Draft FAD pricing on the carrier transmission market is consistent with the conclusion in the Draft FAD Decision that the LTIE is promoted; specifically it is consistent with observations (a) and (c) for high bandwidth services.

- 3.36 Optus, however, highlights there may be an issue with the application of the Draft FAD prices to 10 Gbps services. The Draft FAD pricing equation results in regulated prices that are significantly below prices offered by multiple providers on competitive routes. Optus welcomes the inclusion of 10 Gbps pricing to ensure competitive prices apply to non-competitive routes, but the current FAD pricing would appear to be below the efficient cost of supply and inconsistent with the legitimate interests of the access providers.
- 3.37 [CiC]
- 3.38 As such, pricing for 10 Gbps, at this stage, would appear not to be consistent with observations (b), (d) and (e). It is therefore, not clear that the proposed pricing of 10 Gbps would promote the LTIE. This impact will increase over time as demand for 10 Gbps wavelength services increase.

Mobile backhaul market

- 3.39 As discussed above, there are multiple providers of mobile backhaul capacity. Throughput demand has been increasing over time, and is expected to grow further. Many mobile base stations are in areas that are subject to competitive supply. The recent announcement by VHA regarding the use of TPG dark fibre is an example of this competition.
- 3.40 In saying that, however, the availability of competitive supply is location dependent. MNOs provide coverage to 98%+ of the population, thereby requiring links to base stations in areas outside the competitive footprint of the wholesale transmission market.
- 3.41 This market generally utilises medium to high bandwidth DTCS wholesale inputs greater than 10 Mbps and increasingly more common for 100 Mbps and above. [CiC] As also noted above, wholesale transmission inputs are generally acquired in regional areas outside an MNO's existing transmission footprint.
- 3.42 Demand, therefore, for wholesale transmission inputs are at a throughput level and location that results in the Draft FAD Decision lowering regulated access charges. Optus agrees that the impact of the Draft FAD pricing on the mobile backhaul market is consistent with the conclusion in the Draft FAD Decision that the LTIE is promoted; specifically it is consistent with observations (a) through (e) for regional medium to high bandwidth services.
- 3.43 However, these benefits may be more limited than the ACCC anticipates due to the impacts of the regulatory hierarchy in Part XIC and the delay of this FAD Inquiry. [CiC]

Corporate and Government market

- 3.44 As discussed above, wholesale transmission inputs used in this market are primarily 2 Mbps services to provide access links for basic data and multi-site voice solutions to enable a national presence. All access links are regulated services under the DTCS Declaration, reflecting the monopoly position of Telstra in the provision of wholesale access links.
- 3.45 Telstra has a dominant position in this market, with a revenue market share of almost [CiC] for voice and [CiC] for data & IP. Telstra is even more dominant in the provision of services to government departments and agencies. Given that 2 Mbps are primarily for voice products, efficient pricing of this service is vital to promote competition and the LTIE.
- 3.46 The claims made in the Draft FAD Decision that the LTIE is promoted do not apply to this downstream market.
- (a) The Draft FAD Decision results in **higher** wholesale access prices. [CiC]

- (b) Prices do **not** mimic the efficiency achieved on competitive routes. The ‘competitive’ wholesale transmission routes demonstrate a significant price decline, yet the Draft FAD Decision proposes a significant price increase for 2 Mbps services.
- (c) The Draft FAD Decision does **not** improve access to cheaper transmission services.
[CIC]
- 3.47 Finally, the proposed price increases for 2 Mbps services under the Draft FAD Decision does not result in access at efficient costs, nor does it reflect more closely the cost of supply. The price increase should be compared to existing commercial agreements Telstra has entered into for the supply of 2 Mbps access links.
- 3.48 The regulated price will be in excess of the market price agreed to by Telstra – where Telstra is the sole provider. There is no effective competition in this market. **[CIC]** However, Telstra did not, and does not, sell this product at a loss. It makes returns suitable for Telstra and given its dominant position on the supply of these services would include some element of monopoly rent. Further, we note the cost of these services has not declined over the last four years.
- 3.49 Existing commercial price observations reflect prices acceptable to an access provider with significant market power in the provision of access lease links. Optus submits that its existing commercial agreement with Telstra can be interpreted as being within a range of reasonable market outcomes in 2011 – promoting the LTIE as it balances interests of access provider (adequate return on investment) and access seekers (promotion of competition).
- 3.50 As such, it can be seen that price increases above the existing commercial rates (signed four years ago) does not reflect the efficient costs or reflect the cost of supply. As noted above, it is reasonable to state that existing commercial rates contain some element of monopoly rents – and at best can be interpreted as representing normal commercial returns – hence, any regulated rate above this level is greater than the efficient cost and actual cost of supply.
- 3.51 The pricing proposed in the Draft FAD Decision does not promote the LTIE in downstream markets that rely upon low bandwidth 2 Mbps links. The market most impacted is the corporate and government market – a market where Telstra has dominant market shares. The Draft FAD Decision errs in its statement that the LTIE is promoted for this market.
- 3.52 In fact, Optus submits that the Draft FAD Decision will likely damage competition. The dominant provider can self-supply these services at a cost far below those of its competitors. This is a market where at current commercial rates Telstra has a market share of **[CIC]** for voice – this is only likely to increase should the Draft FAD Decision apply.

Can benefits and costs be shared across the markets?

- 3.53 Optus has identified three downstream markets that are directly impacted by the Draft FAD Decision. The analysis above shows that for markets that rely upon regional medium and high bandwidth wholesale transmission inputs, the Draft FAD Decision could promote the LTIE. Markets that rely on low speed wholesale transmission inputs will face an increase in key wholesale input and competition and the LTIE will be undermined.
- 3.54 The ACCC may take the view that it is the ‘average’ downstream impact across these three markets that should be considered. Optus does not agree with such an approach. It would be akin to saying that fixed line access prices should remain high to the benefit of Telstra because mobile access regulation prices are declining – so on average fixed and mobile retail markets access seekers are not harmed.

- 3.55 However, even if the ACCC took the 'average' view, it is not clear that on average the LTIE is promoted. The potential benefits accruing to end-users in the carrier backhaul and mobile backhaul markets are limited due to the prevalence of competitive supply and the ability of self-supply by most access seekers. That is, the application of the Draft FAD rates would be limited as most routes have alternatives to regulated access through Telstra. Optus has also identified issues with 10 Gbps pricing. Further, the mobile backhaul transmission requirements of **[CiC]** are under commercial contract during the proposed period the FAD – under the regulatory hierarchy rules of Part XIC, the regulated rate does not apply. Obviously, Telstra self-supplies and this is not impacted by regulated access.
- 3.56 While the benefits may be limited, the costs accruing from the corporate and government market would be large. Telstra is already the dominant provider in this market – with a market share substantially greater than in retail consumer fixed line and retail mobile markets. The price increases are significant, and all of the access links acquired are regulated. There is no competitive alternative. **[CiC]**
- 3.57 It is therefore likely, that on average, that the LTIE will not be promoted by the Draft FAD Decision.

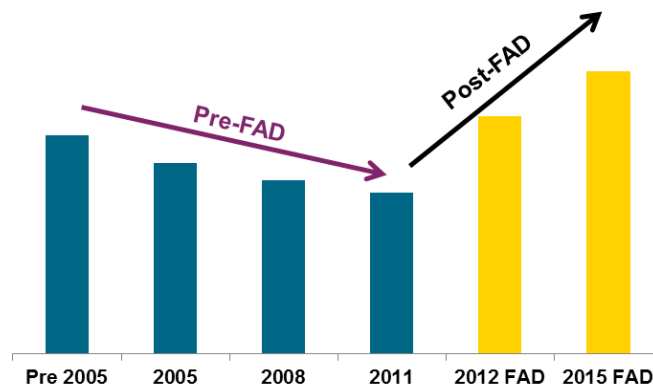
Section 4. LOW BANDWIDTH 2 MBPS SERVICES

- 4.1 Optus has identified the low bandwidth 2 Mbps transmission service as the transmission type most adversely impacted by the Draft FAD Decision. It is also the largest type of DTCS service acquired by Optus, and is the largest single transmission type in the dataset. 2 Mbps services comprises more than **[CiC]**
- 4.2 Optus notes that **all** of the 2 Mbps DTCS services acquired from Telstra are POI-to-end-user services. Optus also notes that these services continue to be solely provided by Telstra and there is no alternative supplier.
- 4.3 This, however, should not be a surprise for the ACCC. Industry has consistently raised concerns about the treatment of these services. For example, Optus has long been of the view that domestic benchmarks are unlikely to provide an appropriate reflection of the actual costs incurred in order to provide transmission services. Therefore, while information about existing domestic conditions could be a useful source to inform pricing, domestic benchmarking should not be the sole input in setting prices for the DTCS.²¹

FAD results in significant price increases

- 4.4 While the DTCS has been declared since 1997, pricing was only introduced in 2012. However, the introduction of regulated pricing has not had the intended impact – nor has it had the impact the ACCC has claimed.
- 4.5 Prior to the 2012 FAD, there was a consistent price decline for access link prices – including 2 Mbps services. **[CiC]**

Figure 2 Price index 2 Mbps service



Source: Optus; ACCC

- 4.6 Yet once the ACCC issued a FAD these price declines stopped. The 2012 FAD imposed a significant price increase. And the 2015 Draft FAD Decision has imposed a further price increase. The result of these two price increases is that the regulated price of a 2 Mbps 2km link is now 75% greater than the commercial price in 2011. This is inconsistent with all other price points in the communications markets.
- 4.7 This history is important because the purpose of the domestic benchmarking regression approach is to measure the price trend of competitive markets and apply the trend to the

²¹ Optus, 2014, Submission in response to DTCS primary price Discussion Paper, November, p.5

regulated non-competitive routes. The ACCC recognises this: *“Using information from competitive routes would provide a useful guide for prices and price structures to apply to non-competitive routes.”*²²

- 4.8 The results of the regression analysis do not pass the common sense test – how does a method which is supposed to reflect commercial price trends result in an opposite price trend?
- 4.9 Optus submits it is reasonable to inquire as to the reasons for this inconsistent outcome. The 2012 FAD Inquiry did not adequately address this – and nor does the Draft FAD Decision. This flaw must be addressed.

2 Mbps problems identified in last FAD

- 4.10 The pricing of 2 Mbps services has been an ongoing issue. During the last DTCS FAD decision, the ACCC received submissions from access seekers highlighting adverse outcomes for the pricing of 2 Mbps services:
- (a) A number of access seekers *“claimed the Draft DTCS FAD prices for 2 Mbps, 0-30km distances in metropolitan areas were significantly higher (depending on individual service and access seeker) than current market rates. This is claimed to be because the Final Regression Model uses historic data that does not reflect current commercially negotiated rates. AAPT also claims prices are falling by around 20 per cent each year.”*²³
 - (b) Macquarie submitted that the Final Regression Model results in a number of DTCS pricing anomalies. In particular, while price decreases of 50 per cent can be observed for 2 Mbps services on longer distance regional routes; these decreases are offset by price increases of 20 to 50 per cent on short distances routes (0-10km) in metropolitan areas.²⁴
 - (c) AAPT submitted that for 2 Mbps services in shorter metro routes, which comprise a large part of the transmission services it acquires from Telstra, the Draft DTCS FAD resulted in prices above its commercial rates with Telstra.²⁵
 - (d) Primus offered similar observations that a significant proportion of services included in the benchmark pricing appear to be E1 services, but notes that the implementation of the benchmarking methodology has led to prices higher than should be expected.²⁶
- 4.11 More importantly, 2 Mbps short distance metropolitan routes appeared representative of the ‘standard’ DTCS sought by access seekers and which accounts for the majority of the services provided in the market. The ACCC further confirmed that:

²² ACCC, 2010, Domestic Transmission Capacity Service: An ACCC Discussion Paper reviewing pricing of the domestic transmission capacity service, April, p.23

²³ ACCC, 2012, Final Access Determination for the Domestic Transmission Capacity Service, Explanatory Statement, June, p.14

²⁴ Macquarie Telecom, 2012, Response to Draft Final Access Determination for the Domestic Transmission Capacity Service, 29 February, p.2

²⁵ AAPT, 2012, Response to Draft Final Access Determination for the Domestic Transmission Capacity Service, 9 March, p.3

²⁶ Primus, 2012, Primus comments on ACCC’s Draft Final Access Determination for the DTCS, 16 March, p.3

During the data gathering exercise for the 2012 DTCS FAD the ACCC found that the majority of services (over 90 per cent) were provided at the 2 Mbps capacity.²⁷

- 4.12 The fact that the market was already observing regression outputs from the 2012 DTCS FAD that were significantly higher than the market rates for a significant share of the ‘standard’ DTCS sought by access seekers should have triggered alarm bells for the ACCC to ensure that similar DTCS pricing anomalies do not arise in the 2015 DTCS FAD regression.
- 4.13 As a result, it is not reasonable for the ACCC to rely on the DTCS FAD prices without inquiring into the regression output for 2 Mbps links. Optus submits that if the same significant price uplifts can be observed as per the 2012 FAD decision, then the pricing of 2 Mbps services must be further investigated.

These problems continue in the Draft FAD Decision

- 4.14 Optus’ analysis of its current 2 Mbps services clearly demonstrates that the problems identified during the last FAD continue to persist in this Draft FAD. The DTCS regression fails to be a good predictor of 2 Mbps prices.
- 4.15 Figure 3 below shows price points for Optus 2 Mbps links, at current commercial prices and the price predicted by the Draft FAD Decision equation. There are three key observations:
- (a) The Draft FAD consistently overstates the efficient cost to provide 2 Mbps services;
 - (b) There is no clear linear or logarithmic relationship between distance and price; and
 - (c) There is no price difference between links provided on exempt and declared routes.
- 4.16 These three observations undermine the justifications put forward for the benchmarking method adopted in the Draft FAD Decision. Optus strongly recommends that methods other than benchmarking be used to set the regulated price for 2 Mbps links.

Figure 3 [CiC]

[CiC]

Source: Optus

Draft FAD does not predict 2 Mbps pricing

- 4.17 The purpose of the regression method is to produce a model that accurately predicts competitive pricing on non-competitive routes. A key test before the model outputs can be used is whether the model can predict the values on which the model is based. That is, the regression model includes 2 Mbps observations in the exempt dataset. It is instructive to examine how well the model estimates these values.
- 4.18 The ACCC recognised in the 2011 Draft FAD Decision that the level of accuracy of the regression model will be a key guide to its use:

The ACCC will be guided by the level of accuracy in the predictive capabilities of the regression model taking into account prediction intervals around the model’s point

²⁷ ACCC, 2014, Domestic Transmission Capacity Service, Final Access Determination Discussion Paper – primary Prices, July, p.25

*predictions. Where these are reliable the ACCC proposes to use the model to predict prices for as high a range of capacities as possible.*²⁸

- 4.19 Optus supports these principles. Unfortunately, this approach has not yet been adopted.
- 4.20 Figure 3 illustrates that in almost all cases, the FAD regression will result in price uplift **[CiC]**.
- 4.21 **[CiC]**
- 4.22 This cannot be the intended outcome. If the ACCC applies its on standard, it would be clear that the regression should not be used to price 2 Mbps services. Optus submits that it is not reasonable to conclude that the predictive capabilities of the regression model are sufficiently reliable for the ACCC to use as the **sole** input into its pricing decision.

Common price points

- 4.23 It can also be observed that there is little, if any, relationship between monthly price and distance in the 2 Mbps observations. There is no clear linear or logarithmic relationship between distance and price. This can be most clearly observed by focusing on the common price points in the dataset.
- 4.24 The top four price points for 2 Mbps services acquired from Telstra are listed below **[CiC]**
- 4.25 **[CiC]** While the common price points are distributed across all route types (metro, metro tail, regional, regional tail), all of these common price points are for services less than 5 km distance.
- 4.26 This is consistent with the manner in which these services are priced – within specific distance bands. All services between 0km (tails) and 5km are priced at the same levels.
- 4.27 Consistent with this, links that are between 6km to 10km are priced at common price points – again reflecting the way in which these services are priced.
- 4.28 For each of these price points, there is little relationship between price and distance – and there is no relationship with distance for links that are 5km or less in distance. It is not surprising therefore that a regression which uses distance as a variable does not accurately predict actual prices. And is particularly poor in predicting the price of links less than 5km – **[CiC]**

No difference between exempt and regulated routes

- 4.29 There is also little difference in the pricing for links based on level of competition. **[CiC]**
- 4.30 To further illustrate this point, it is useful to compare the links that are less than 5km in distance (all of which are priced at the four common price points). **[CiC]**
- 4.31 It can be seen that there is no measurable difference between the pricing of 2 Mbps services on exempt or regulated routes. The vast majority are priced at the same four price points.
- 4.32 There is no relationship between competition and pricing for 2 Mbps services; and there is no relationship between distance and pricing. On this basis alone, there would appear to be little justification for using the domestic benchmarking method to set cost-based efficient pricing for 2 Mbps services.

²⁸ ACCC, 2011, DTCS Draft FAD Decision, December, p.21

2 Mbps links are regulated links and should not be included in exempt dataset

- 4.33 The inability of the experts and the ACCC to address the problems with 2 Mbps services may indicate there are fundamental problems with applying the benchmark approach to 2 Mbps.
- 4.34 Serious consideration must be given to setting price of 2 Mbps by a method other than regression. Technical issues with the regression, including misspecification of variables and inappropriate functional form, are addressed in more detail in Section 5. This indicates that the regression does not, on a technical basis, adequately deal with 2 Mbps pricing.
- 4.35 This section outlines why, in principle, 2 Mbps should not be included in the exempt dataset. First, it needs to be recognised all of Optus acquired links from Telstra are tail-end services – and 96% of these are 2 Mbps services. To this end, we use 2 Mbps and tail-end in the section as interchangeable.
- 4.36 In the 2012 FAD, the ACCC acknowledged that the vast majority of tail-end services provided by Telstra are bundled and typically less than 2km in length:

*With regard to pricing tail-end services, the ACCC notes that all tail-end services are declared. This means it is not possible to determine prices for tail-end services based on a benchmark of competitive tail-end services. The ACCC confirms that the dataset underpinning the FAD prices did not include prices for services that originate and terminate within the same ESA on the assumption that these services meet the definition of a tail-end service (wholly within a single ESA). **However, analysis of the prices of tail-end services indicates that tail-end services share some of the same price drivers as other DTCS services.**²⁹*

- 4.37 The ACCC has repeated this view in the Draft FAD Decision, stating that it still holds the view that *“tail-end services are likely to exhibit similar cost drivers to other transmission services.”*
- 4.38 It is shown above that distance play no role in pricing for links less than 5km [CIC] It is not clear that the ACCC’s observation that **tail-end services share some of the same price drivers as other DTCS services** is correct.
- 4.39 The ACCC has also declined to exclude tail-ends that are supplied over ‘competitive routes’ from the dataset. Optus advised the ACCC that all of the 2 Mbps services acquired from Telstra [CIC] are tail-end services. Optus has consistently advised the ACCC that its nomenclature bears no commercial reality – that is, the concept of a bundled tail-end and of ‘unbundling’ does not exist in the market. The ACCC continues to include tail-end services in the dataset on the basis that if *“bundled services were to be removed from the dataset, this would mean that an important element (the otherwise competitive inter-exchange service) would be removed.”*³⁰
- 4.40 It is not clear what ‘important element’ would be excluded. It is unclear on what basis the ACCC can justify its position to exclude observations based on the ACCC’s definition of a standalone tail-end service from a larger suite of observations for the same type of service, from the same commercial construct, and charged at the same rate. The dataset excludes observations that are ‘standalone’ tail-end service – in commercial language a x163 service with 0km distance; while it includes tail-end services that have a distance greater than zero – even though it is priced at the same level and part of the same agreement.

²⁹ ACCC, 2012, Final Access Determination for the Domestic Transmission Capacity Service, Explanatory Statement, June, p.30

³⁰ ACCC, 2015, Draft FAD Decision, p.39

- 4.41 Moreover, the pricing of x163 products (tail-end products) is higher than the equivalent x162 (inter-exchange products). Telstra noted:

As regards to the higher prices for inter-exchange services connecting to end-users, Telstra acknowledges that the price for an x163 service (which is provided all the way to the end-user) will be, on average, higher than x162 pricing (which is provided only so far as an access seeker's POP).³¹

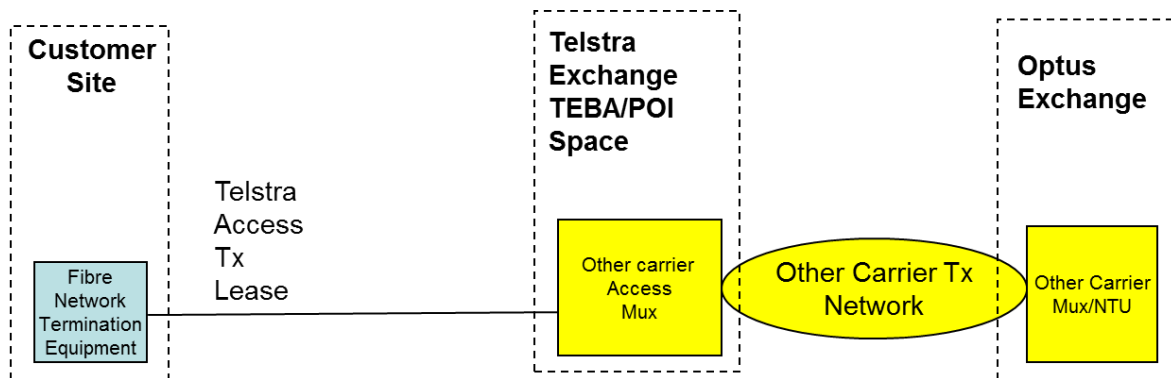
- 4.42 The ACCC would be correct to place x162 product in the exempt dataset if acquired over competitive routes – as presumably it could be argued the prices should reflect the competitive cost of supply or else access seekers would acquire from another provider. But the x162 and x163 products are different and cannot be combined. There is no competitive alternative to the x163 product. Therefore no x163 product can be included in the regression dataset, yet at least **[CiC]** links are included.
- 4.43 If it is accepted that all 0km observations are excluded from the regression, then all >0km observations purchased under the x163 construct should also be considered non-exempt as they are priced on exactly the same basis.

POI-to-end-user services cannot be unbundled

- 4.44 The ACCC repeats in the Draft FAD Decision the concept that its treatment of tail-ends – even though inconsistent with commercial constructs – may encourage unbundling of inter-exchange and tail-end services. The ACCC has been advised on many occasions that such a view is neither technically or commercially possible.
- 4.45 Optus advised the ACCC in its submission in response to the Draft DTCS Declaration Report that unbundling of tail-ends and IEN components is not possible. Further, it is specifically counter to TEBA rules to allow such a service. This advice is repeated below. We note that the ACCC appears to have had no regard to this advice. Nonetheless, Optus notes the ACCC's welcoming of further comments regarding the practical difficulties in acquiring and connecting standalone tails.
- 4.46 In theory, access seekers could receive the benefit of competitive charges for the inter-exchange component and regulated access to the monopoly tail-end component. This would be achieved by purchasing a monopoly tail-end from Telstra at the regulated rate, and then cross-connect it with a third party inter-exchange link on commercial rates. However, it is not possible (contractually or commercially) to unbundle the inter-exchange and tail-end components in such a manner.
- 4.47 Current access agreements do not allow access seekers to order a service from Telstra that directly cross-connects to a third party backhaul link, even though the backhaul is provided through that third party access provider (Figure 4).

³¹ Telstra, Response to submission in relation to the Commission's draft final access determination for the Domestic Transmission Capacity Service, 4 May 2013, p.11

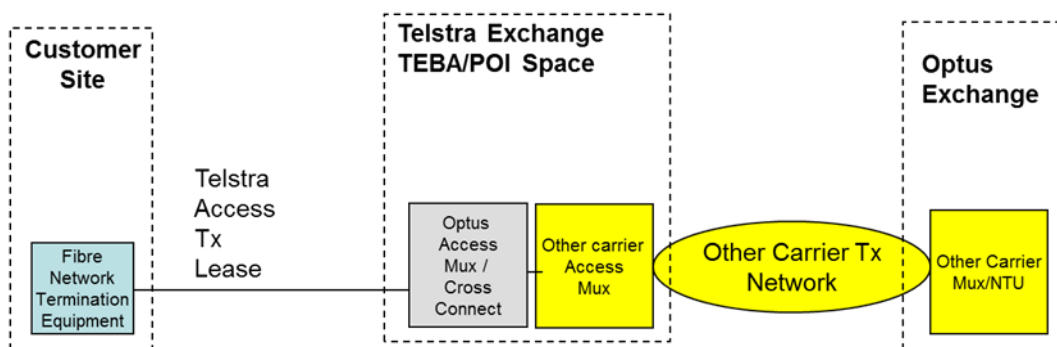
Figure 4 Connection method – not available under current market arrangements



Source: Optus

4.48 The alternative would be to establish an Optus POI at the Telstra local exchange (i.e. enter into an additional Telstra Exchange Building Access (TEBA) agreement), and then a separate link to the third party POI (e.g. in the form of an Acquirer’s Cable) to connect to the third party backhaul link back to the Optus exchange (Figure 5). However the supplier is not liable for any faults, damage or act which affects any service operating on the Acquirer’s cable.

Figure 5 Possible connection method – requires separate arrangement for cross-connect



Source: Optus

4.49 As highlighted by iiNet, there is a requirement in the Telecommunications Act for carriers to provide other carriers with access to facilities related to access for a declared service, and in many cases, this still requires access to TEBA services.

The ordering and provisioning process for TEBA are particularly cumbersome. As a result of Telstra’s requirements relating to queuing and the design and construction process, it often takes an access seeker up to 90 days to access and install equipment in a Telstra exchange. Though it is important for Telstra to ensure proper care is taken of its facilities and exchanges, iiNet is concerned that this process provides an opportunity for Telstra to unnecessarily drag its feet and delay its competitors. This process is likely to be particularly pertinent when RSPs are connecting to the NBN, as all RSPs are likely to be seeking NBN connections builds at the same time.

Schedule 1 of the Telco Act requires carriers to provide other carriers with access to facilities. This obligation includes the provision of access to facilities that relate to the

*DTCS, such as underground ducts and TEBA. The main barriers to entry are the extremely high access charges imposed by Telstra on competitors using its facilities.*³²

- 4.50 Notwithstanding, there is no obligation on access providers to allow for the direct cross-connect of one service provided to an access seeker to a third party's backhaul component for the purposes of connecting the access seeker's service.
- 4.51 Should Telstra voluntarily allow such arrangement, then significant costs would be incurred which make such an arrangement uneconomic. For instance, Optus would be required to purchase and install its own POI in the TEBA space at the local exchange. Optus would then also need to purchase the acquirers cable to the third-party's TEBA space. As a consequence, Optus would incur several one-off installation fees and monthly charges for multiple services in addition to the DTCS service required.
- 4.52 Finally, the ACCC should not discount the market reality that such unbundling has not occurred in the market. If the ACCC's view on unbundling was correct, and the FAD reflected competitive prices, it is logical to assume that unbundling would have occurred over the period of the last FAD. It has not. The ACCC cannot continue to state that unbundling is possible or likely absent evidence of such activity.

Proposed way forward for 2 Mbps services

- 4.53 It would appear that the regression does not accurately reflect the competitive market at the highest speed services and it does not reflect the non-competitive prices at the low speed services. This might be due to the functional form of the regression; or it may be that the variables driving 2 Mbps pricing have not been properly identified.
- 4.54 Optus' expert advisor has identified that EI has erred in its assessment of the impact of a 2 Mbps dummy, noting that EI's interpretation is "*nonsensical*". Optus' advisor has further demonstrated that inclusion of a 2 Mbps dummy variable has a "*highly significant*" impact and indicates that prices should be around 15% lower for 2 Mbps less than 5km distance.³³ Removal of 2 Mbps from the regression also results in significant changes for predictors such as the route category dummies, distance and ESA throughput for observations greater than 2 Mbps. This is discussed in more detail in section 5.
- 4.55 Whatever the technical reason behind the regression's failure to predict accurately 2 Mbps pricing in the dataset; it is clear that the regression is not able to reasonably predict 2 Mbps pricing. As such, Optus supports the removal of all 2 Mbps services from the regression dataset. The regression should be re-run, taking into account the expert views put to EI.
- 4.56 The ACCC should use a range of inputs to set 2 Mbps prices that promote the long term interest of end-users, including:
- (a) A regression for just 2 Mbps services, including adjustments provided by expert advisors.
 - (b) Recognition that existing commercial prices for 2 Mbps represent the ceiling for future FAD prices. It is reasonable to conclude that commercial prices agreed between Telstra and access seekers represent a reasonable balance between the legitimate interests of the access provider and low prices to promote competition.

³² Herbert Geer, ACCC Discussion Paper reviewing the declaration for the Domestic Transmission Capacity Service, Submission by Herbert Geer Lawyers on behalf of iiNet Limited, 30 August 2013, p.8

³³ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.61

- (c) Recognition that Ethernet 2 Mbps should be priced below existing SDH prices, consistent with observations across the whole dataset.
- (d) Recognition that there is a year-on-year price decline on competitive routes. A similar price decline should apply to existing historical commercial agreements used for 2 Mbps ceiling prices.

Section 5. DTCS REGRESSION ANALYSIS FLAWED

- 5.1 The domestic benchmarking approach is a novel approach without international precedent and limited in theoretical justification. This approach was heavily criticised by the industry when the ACCC proposed to adopt it. Regrettably these criticisms have been proven in practice.
- 5.2 Theory indicates that competitive forces, where they exist, are likely to drive prices towards efficient cost. Regulation is applied to non-competitive markets to achieve the efficient price levels that would be likely to arise from competition. In the context of DTCS regulation the rationale for the benchmarking approach is to take price observations from the competitive component of the market and to apply these to the non-competitive component of the market.

Support for use of domestic benchmarking continues to be mixed

- 5.3 Ever since benchmarking was first flagged, there has been a history of mixed and underwhelming support by industry and experts, including:
- (a) The ACCC's advisor, Frontier Economics, concluded that it was not convinced that benchmarking of international or domestic routes would be accurate enough, readily implemented, or would really address the issue that prices were well in excess of cost.³⁴ In particular, it highlighted two key issues that may limit the establishment of robust benchmarks:
- *matching route lengths – as distance is a key driver of costs, it might be necessary to compare routes with similar distance if these costs are subject to economies of scale; and*
 - *matching route usage – usage affects the average costs of a route, so that routes with higher usage will tend to have lower unit costs and prices.*³⁵
- (b) Telstra submitted that *“Benchmarking has serious limitations, especially due to utilisation differences for Australia... [In particular] Domestic benchmarking may be more informative, but only where appropriately calculated and based on competitive routes in like circumstances, not other regulated routes.”*³⁶ Telstra also expressed that caution must be exercised to ensure compatibility of observations in the data set, noting that there may be routes which *“would not be comparable and are not helpful to benchmark as they do not represent a market price, but a price arrived at through a regulatory construct.”*³⁷
- (c) VHA similarly rejected the use of benchmarking outright, and submitted it was unlikely to withstand proper regulatory scrutiny.³⁸ This position was upheld in 2012, with VHA submitting that *“the potential for an inefficient regulated pricing structure to emerge under the domestic benchmarking approach is very high. The domestic benchmarking approach is simply not conducive to setting economically efficient*

³⁴ Frontier Economics, 2009, Economics of transmission capacity services, A report prepared for the ACCC, June, p.3

³⁵ Frontier Economics, 2009, Economics of transmission capacity services, A report prepared for the ACCC, June, p.46

³⁶ Telstra, 2010, Response to the 2010 Domestic Transmission Capacity Service Pricing Review, 9 July, p.3

³⁷ Telstra, 2010, Response to the 2010 Domestic Transmission Capacity Service Pricing Review, 9 July, p.31

³⁸ VHA, 2010, Domestic Transmission capacity Service: Pricing Review, Submission to the ACCC, July, p.14

*prices. At best, it will lead to regulated prices for the DTCS which are conservative, static and backward-looking. At worst, it will lead to regulated prices well above the economically efficient level.*³⁹

- 5.4 Despite these concerns, the ACCC concluded in its November 2010 Position Paper that it *“would be appropriate to base regulated transmission prices on a benchmarking approach using the prices charged on competitive (i.e. non-declared) domestic transmission routes. The ACCC would seek to confirm that such pricing on competitive routes is consistent with estimates of costs and prices from other sources.”*⁴⁰
- 5.5 Optus concedes that we have remained at this stalemate ever since.
- 5.6 In fact, the ACCC reached a similar position in its November 2014 Position Paper, supporting the use of domestic benchmarking for pricing non-competitive routes based on prices for competitive transmission services. Despite limitations in the methodology, the ACCC considers that the increase in competitive observations help to alleviate the concerns raised during the last DTCS FAD inquiry.⁴¹

Economic Insight’s preferred regression should not be relied upon

- 5.7 Section 4 above demonstrates the draft regression model is unable to accurately forecast prices for specific types of transmission services – at the low and high end of the dataset. This is particularly troublesome for 2 Mbps services, which represent more than 50% of the dataset.
- 5.8 Optus has requested its expert advisors, CEG, to investigate the possible reasons for the large forecasting errors present in the draft model and to recommend improvements. CEG’s analysis shows that:
- (a) Much of the predictive errors can be largely explained by undue influence of outlier observations;
 - (b) The proposed structural form of the draft regression is unable to deal appropriately with these outliers;
 - (c) Other structural forms are to be preferred than that used in the draft model;
 - (d) EI’s reasons for rejecting other forms are incorrect or inappropriate; and
 - (e) Clear evidence that 2 Mbps links are priced differently to higher speed links.
- 5.9 These issues are discussed in more detail below.

Outlier data drives much of the prediction errors

- 5.10 Outliers have been acknowledged to be a material issue in the dataset, with EI stating in its final report that:

³⁹ VHA, 2012, Domestic Transmission Capacity Services, Submission to the ACCC, February, p.2

⁴⁰ ACCC, 2010, Domestic Transmission Capacity Service Pricing: An ACCC Position Paper on pricing the domestic transmission capacity service, November, p.7

⁴¹ ACCC, 2014, Domestic Transmission Capacity Service: Public inquiry into making a final access determination, Position statement on pricing methodology, November, p.23

A feature of the data sample is the presence of severe outliers and the possibility (or likelihood) of resulting bias in coefficient estimates obtained using ordinary least squares (OLS) regression.⁴²

- 5.11 However, EI has seemingly been unable to adequately address this problem. The EI report recommends the use of random effects model. CEG agrees that the use of this model is a sensible approach (subject to tests and improvements), but a random effects model, like OLS, is sensitive to outliers.⁴³
- 5.12 CEG has identified several outliers which appear problematic and have undue influences over the regression line, comprising 3.72% of total observations.⁴⁴ Further, CEG rebut the claims of EI that its provider-specific fixed effect dummy addresses these concerns. CEG observe that at best the fixed-effects dummies could capture only some of the outlier effects from specific providers.
- 5.13 Importantly, CEG demonstrates that removing the identified 3.72% outlier observations has a material impact of the estimated coefficients. CEG conclude that it is evident – even in the presence of fixed effect dummies – that these outliers have a material impact on the regression model.⁴⁵
- 5.14 CEG highlight that removing these outliers improves the R squares of the random effects model by 4.37% and that *“proper treatment to outliers could significantly improve the fit of the model.”*⁴⁶
- 5.15 CEG have suggested the use of robust regression techniques to adequately address the issues of outliers. EI rejected this approach due to *“poorer performance than the quantile (median) regression in out of sample testing.”*
- 5.16 However, CEG has highlighted that the validation method adopted by EI gives unreliable results and would be significantly improved through the use of a 10-fold cross-validation technique.⁴⁷ CEG has also observed that the criteria used by EI are not robust to outliers, nor is the model selection process iterative. As a result:

It is highly suspicious whether the current ‘preferred’ model, after significant alternations including the drop of interaction terms and the introduction of the Provider dummies, would still achieve the best econometric criteria as compared with other alternatives.⁴⁸

- 5.17 CEG advises that EI should conduct the proper statistical test before ruling out a robust regression method.⁴⁹ Optus supports this advice.

Reasons for rejecting random effects problematic

- 5.18 Optus is further concerned by EI’s response to these legitimate concerns and the recommendation to adopt random effects. EI has constantly relied upon the excuse that there does not appear to be a Stata routine that handles random effects robustly

⁴² Economic Insights, *Domestic Transmission Capacity Services Benchmarking Model*, 1 September 2015, pp. 39-40

⁴³ CEG, 2015, Review of the draft decision on DTCS FAD, October, section 2.2

⁴⁴ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.29

⁴⁵ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.34-5

⁴⁶ CEG, 2015, Review of the draft decision on DTCS FAD, October, para 35

⁴⁷ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.22-5

⁴⁸ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.24

⁴⁹ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.25

*Since the random effects quantile regression model cannot be implemented properly at present in Stata, it is not a preferred model in this analysis.*⁵⁰

- 5.19 This is not a valid reason for rejecting an alternative method or technique. This is problematic for two reasons:
- (a) First, even if EI is correct when stating the method cannot be implemented properly in Stata, it is still not reasonable to reject the approach. Essentially, the ACCC's consultant is rejecting a legitimate approach on the basis that it does not have the appropriate tools at hand. It is not reasonable to reject an approach because an expert advisor has failed to source adequate software for it to do its role properly. Optus submits that the ACCC should have inquired whether its consultant was capable of doing the task requested prior to engaging them.
 - (b) Second, the claim that it cannot be implemented in Stata is false. CEG have provided links on several occasions to free open source Stata packages that can be used. Indeed, CEG actually uses these packages to replicate all three of EI's preferred models using robust methods in its July 2015 report.⁵¹ Yet EI still maintain that it this cannot be done.
- 5.20 Optus does not find the reasons put by EI why it cannot undertake a random effects quantile regression or any other type of robust estimation technique to be convincing. The claims put forward appear to be false – and at best if true, would appear unreasonable.

Stochastic Frontier Analysis may be preferred

- 5.21 Optus supports the adoption of the SFA method. The SFA method has advantages beyond addressing the outlier problem – it also addresses the averaging problem inherent in the OLS method, which predicts an average line of best fit between data points. In the context of using regression to estimate **efficient cost based** prices, such averaging will not lead to efficient pricing.
- 5.22 This problem is especially relevant for DTCS, where Telstra is the dominant supplier and applies consistent pricing across regulated and exempt routes. In addition, Telstra sells the same transmission products to a number of access seekers with varying degrees of countervailing buying power. **[Cic]** Where Telstra sells the same product to numerous access seekers at different price points, the OLS methods results in a regulated price that reflects average market power of Telstra, rather than predicting prices that would exist in effectively competitive market.
- 5.23 Optus has raised this previously:

*ACCC's regression model produces average prices rather the lowest observed price. In effect, a price premium is added into the FAD to reflect differences in access seekers' bargaining powers. This premium takes the FAD prices a step further away from the efficient cost of supply.*⁵²

- 5.24 CEG also notes this limitation:

The use of OLS regression means that the prices for services provided on declared routes are essentially benchmarked based on the average characteristics of services in the

⁵⁰ Economic Insights, *Domestic Transmission Capacity Services Benchmarking Model*, 1 September 2015, p. 54

⁵¹ These results are shown in Appendix A of CEG Report on Draft Decision.

⁵² Optus, 2014, Submission in response for the DTCS FAD Discussion Paper, September, p.3

*exempt dataset, which may not be appropriate if the objective of the benchmarking is to estimate cost-based prices.*⁵³

- 5.25 The SFA method however can account for this impact. Optus notes this advantage has been recognised by Optus' and VHA's expert advisors. CEG note:

*Stochastic Frontier Analysis (SFA), on the other hand, is capable of capturing the lack of competitiveness on price observations by introducing a second (half normally distributed) error term.*⁵⁴

- 5.26 This advice is consistent with that put forward by Professor Bartels who suggested using a similar approach, namely the 'corrected least squares' regression, to obtain the frontier function such that the estimated line is shifted down to lie below all actual prices.

Reasons for rejection of SFA are not valid

- 5.27 EI, however, rejects the SFA approach in favour of its preferred method – notwithstanding the advice of CEG and Professor Bartels – on the basis that it “*would forecast lower prices based on an efficiency interpretation of the unexplained variation in the data*”, and as a result a premium would need to be added to ensure prices were sufficient to “*finance investment*”.⁵⁵
- 5.28 In making this criticism EI makes no attempt to estimate or predict results using the SFA method. EI has no evidence before it on which it could make the assertion that a premium would have to be added, nor any evidence to estimate the likely size of a premium. Absent such data, it is not possible for EI to make a reasonable decision on whether a premium adjustment would or would not be sufficient to “*finance investment*”. Moreover, EI's comment contradicts actual evidence supplied by Professor Bartels that a SFA prediction with 10% or 20% premium is much better at predicting actual prices than either of EI's preferred approaches.⁵⁶
- 5.29 In effect, EI is making a judgement call on the trade-off inherent between different legislative criteria that require prices to promote competition through lower prices while at the same time promoting legitimate business interests of access providers without any reference to ACCC or judicial guidance.
- 5.30 This is problematic on numerous fronts:
- (a) First, it is not the role of the expert advisor to refuse to advise the ACCC on a legitimate alternative approach. EI by making subjective judgements absent any evidence are acting as a de-facto decision maker. Optus notes this is an example of unreasonable delegation of decision making powers by the ACCC. It is the role of the ACCC to assess competing approaches against the legislative criteria and not the role of EI.
 - (b) Second, EI's assessment of legitimate business interests could be interpreted as being inconsistent with judicial guidance of 'legitimate' which allows a reasonable rate of return but precludes monopoly rents. As explained above, the nature of the preferred approach guarantees that the regression results contain the market average level of monopoly rents.

⁵³ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.44

⁵⁴ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.44

⁵⁵ Economic Insights, *Domestic Transmission Capacity Services Benchmarking Model*, 1 September 2015, p. 44

⁵⁶ Frontier Economics, *Review of draft DTCS benchmarking model*, July 2015, p. 20

- 5.31 Most importantly, the EI has failed to provide the ACCC with any objective fact-based reasons not to adopt the SFA method. As a result, there is no evidence on which the ACCC can reasonably rely upon to prefer EI’s method over reasonable alternatives. CEG note that:

*EI did not present any estimation or prediction result from SFA. Thus, their claim was not supported by any empirical evidence. In contrast, both CEG and Professor Bartels have presented results from the SFA model. EI’s claim is particularly inconsistent with estimates from Professor Bartels ... Therefore, we suggest EI provide similar estimation or prediction results for a like-with-like comparison.*⁵⁷

- 5.32 It is not reasonable for the ACCC, or its advisor, not to inquire about other reasonable approaches.
- 5.33 CEG concludes that absent the use of robust methods or the SFA then outliers should be excluded from the regression. Optus supports this conclusion.

Economic Insight’s preferred model variables need to be improved

- 5.34 CEG has identified further issues with the preferred model outside of its structural flaws. CEG has highlighted that:
- (a) EI’s analysis of the 2 Mbps structural break is incorrect;
 - (b) Use of provider dummy is the same as the discredited QoS variable;
 - (c) SDH dummy does not make commercial sense.
- 5.35 These issues are discussed below.

Structural break for 2 Mbps services

- 5.36 It has been discussed above that the proposed regression model does not adequately predict 2 Mbps pricing. With 2 Mbps services representing over 50% of the dataset it is doubtful whether the LTIE can be promoted through adoption of the preferred model as it stands.
- 5.37 It has also been shown above that the drivers of 2 Mbps pricing (especially those less than 5km in distance) are not those variables in the regression model. It has been shown that 2 Mbps services are priced at four common price points; and that there is no difference between prices charged on exempt and regulated routes.
- 5.38 While these two factors negate the justification of regression analysis, it may be possible to take into account the structural differences between 2 Mbps services and other services through the use of structural breaks in the regression analysis.
- 5.39 The EI report states that it has investigated whether inclusion of dummy variables would be warranted for 2 Mbps services, and concludes that the two variables “partly offset each other” and this there is “no indication that there are structural differences in pricing 2 Mbps services due to tail-end bundling.”⁵⁸
- 5.40 CEG, after reviewing the claim, has concluded that such a conclusion is not justified by the evidence relied upon:

The highlighted claim is, of course, nonsensical. The fact that the main effect and the interaction term were statistically significant but opposite in sign does not mean the two

⁵⁷ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.52-3

⁵⁸ Economic Insights, *Domestic Transmission Capacity Services Benchmarking Model*, 1 September 2015, p.89

*effects are offsetting each other. Instead, it suggests that the structural difference of 2 Mbps services is conditional on distance. Misinterpretation of this kind would have been avoided if EI had a closer read of our July 2015 report.*⁵⁹

- 5.41 This misinterpretation is extremely important, as it shows that 2 Mbps services are cheaper at small distances, but more expensive at larger distances. Optus notes that this interpretation is consistent with commercial reality.
- 5.42 CEG also confirms that the inclusion of the 2 Mbps dummy variable has a “*highly significant*” impact and indicates that prices should be around 15% lower for 2 Mbps less than 5km distance.⁶⁰
- 5.43 Optus reiterates that the evidence relied upon by EI in its final report does not justify EI’s conclusion. Rather, the evidence supports the hypothesis that there is a structural break for 2 Mbps services with small distances less than 5 km. The ACCC cannot rely on the incorrect advice of EI.

Provider dummy

- 5.44 The 2011 regression analysis included a variable named ‘QoS’ which was merely a number representing the different providers. In the 2012 FAD, a QoS value of one was adopted – a value of one represented Telstra. In other words, the FAD set ‘efficient’ competitive pricing, on the basis of the services provided by the dominant provider.
- 5.45 The ACCC stated that the QoS variable does not represent a specific measure (e.g. engineering or technical features) but a ranking of access provider transmission networks based on “*common and well recognised service features that differentiate the overall capabilities of different networks.*”⁶¹
- 5.46 The use of a ‘QoS’ variable, which bore no relationship to QoS was again highly criticised at the Stakeholder Meeting in 2014. For example, access seekers raised concerns that the name QoS was misleading, and there was “*general consensus that the variable was in fact a restricted proxy for provider and that an unrestricted set of provider variables would better capture firm specific heterogeneity.*”⁶²
- 5.47 Notwithstanding this, the preferred model in the EI Report adopts eight provider dummies – these have the same impact as the discredited QoS variables. In other words, after agreeing that it is not appropriate to use such a variable, EI has used such a variable.
- 5.48 CEG, however, does not agree with this conclusion. CEG notes the approach of EI that “*is not an appropriate measure of the ‘centre’ of the distribution given different providers have such different number of observations in the dataset*”.⁶³ As a result:

*... while the provider dummies is capturing the average difference in prices charged by different providers, this is a long way from being evidence in the dataset to rule out market power makes a significant contribution to these price differences.*⁶⁴

⁵⁹ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.57

⁶⁰ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.61

⁶¹ ACCC, 2012, Final Access Determination for the Domestic Transmission Capacity Service, Explanatory Statement, June, p.34

⁶² ACCC, 2015, DTCS Draft FAD, 4 September, p.25

⁶³ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.63

⁶⁴ CEG, 2015, Review of the draft decision on DTCS FAD, October, para.66

- 5.49 Irrespective of this, Optus objects to the use of Telstra as the provider on which to base ‘competitive’ benchmark observations. It must be remembered that Telstra is the dominant provider. It is the provider that is most responsible for the declaration of the DTCS. It is the only provider that is present across all regulated and exempt routes. Exempt routes are based on the presence of T+2 providers – that is, there is at least two other providers other than the dominant Telstra. It makes little sense to benchmark exempt routes because they are competitive (i.e. operators other than Telstra) and then base regulated prices on the price charged by Telstra.

SDH dummy

- 5.50 Optus is concerned that the SDH dummy is another element that is driving higher 2 Mbps regulated prices. We note that all 2 Mbps acquired by Optus are SDH services. Optus again notes that we acquire SDH services from Telstra because for some services there is no commercial agreement on Ethernet – in part due to the inefficient prices set in the 2012 FAD.
- 5.51 The observation by EI that Ethernet is considered more efficient and cost effective, while true when applied to inter-exchange transmission links (i.e. transmission provided to the carrier transmission and base station backhaul markets) it is not correct for all links provided in the corporate and government market (i.e. 2 Mbps links). For example, [CiC]
- 5.52 This is more problematic given the impact of the SDH dummy. CEG states that the SDH dummy on the preferred model 2 suggests a 25% uplift for SDH prices – which comprises 82% of the declared dataset.⁶⁵ So it may be that EI’s observation on efficiency is relevant for services in the exempt dataset; but it has negative implications for the regulated services and especially 2 Mbps links.
- 5.53 Optus requests the ACCC inquire as to whether imposing a 25% uplift on 2 Mbps services promotes the LTIE and competition in related downstream markets. For example, do end-users benefit by imposing of a 25% penalty on access seekers in markets where Telstra has more than 70% market share?
- 5.54 Optus recommends that the dummy be set at zero for the DTCS price calculator so that end-users of SDH technologies are not penalised and to avoid reducing competition in markets that are currently dominated by Telstra.

Identified errors in the dataset

- 5.55 Optus and CEG have identified several flaws in EI’s preferred regression model. These flaws provide a reasonable basis on which to conclude that further work is required before the ACCC can provide weight on the outputs of EI’s analysis.
- 5.56 In addition, Optus has identified three further flaws in the dataset which – irrespective of the functional form adopted – provide sufficient doubt over the reasonableness of the benchmark method. We note that there may be more errors but due to the confidentiality limitations placed on interested parties, Optus is not in a position to provide further advice. Optus is concerned that there may be more errors which would be identified by interested parties due to their knowledge of the market – but the ACCC has not provided an opportunity to review the dataset.
- 5.57 The presence of these errors raises further doubt on whether the results of the regression should be the **sole** factor considered by the ACCC in setting DTCS prices that promote the LTIE.

⁶⁵ CEG, 2015, Review of the draft decision on DTCS FAD, October, section 3.4

- 5.58 The three errors identified are:
- (a) Incorrect inclusion of regulated services in the exempt dataset;
 - (b) Incorrect exclusion of competitive observations from the dataset; and
 - (c) Incorrect application of GST to wholesale prices.

Dataset includes non-competitive services

- 5.59 The inclusion of Telstra-supplied access network leases in the exempt dataset is inconsistent with the requirement that the exempt dataset include competitive (i.e non-declared) observations. All 2 Mbps services acquired by Optus are either stand-alone or bundled tail-ends (using the ACCC nomenclature), and as such are all declared as per the DTCS Declaration definitions.
- 5.60 At a conceptual level, it is easy to understand why. The purpose of the regression approach is to observe and measure the competitive forces, where they exist, are likely to drive prices towards efficient cost. The impact of these forces can then be used to estimate a competitive price for non-competitive components of the market.
- 5.61 It is not clear that 2 Mbps services in the dataset are consistent with this reasoning: **[CiC]**
- 5.62 Moreover, all the 2 Mbps prices come from Telstra's x163 product, which is a tail-end product, and is priced higher than its corresponding inter-exchange product.
- 5.63 The inclusion of 2 Mbps links contradicts the reasons for the benchmark method, as only Telstra is able to provide this service. So in essence, the regression benchmarks monopoly prices in order to regulate the same monopoly prices. Obviously, no inferences on efficiency or cost can be observed from such benchmarking.
- 5.64 Optus notes the statement in the Draft Decision that the ACCC does not agree that bundled tail-ends should be removed from the exempt dataset because *"if all bundled services were to be removed from the dataset, this would mean that an important element (the otherwise competitive inter-exchange service) would be removed."*⁶⁶
- 5.65 However, this observation is based on incorrect information and misinterprets the manner in which Telstra sells its bundled tail-end product (x163). As explained above, all of Optus' 2 Mbps services are Telstra's SDH x163 product. These links are priced in excess of the alternative x162 inter-exchange (i.e. no tail-end) product. And all stand-alone tail-ends are priced the same as any bundled tail-end less than 5km.
- 5.66 In addition, the pricing of bundled tail-ends do not reflect any competitive efficiencies for links on exempt routes. As noted above, all 2 Mbps services have the same price across regulated and exempt routes. There is no competitive inter-exchange element in the pricing of x163 links, and the assertion that exclusion of these links removes competitive observations is incorrect.
- 5.67 Optus finds that the reasons put by the ACCC justifying the inclusion of regulated services in the exempt dataset are based on incorrect facts.

⁶⁶ ACCC, 2015, Draft FAD Decision, p.39

Dataset excludes competitive services

- 5.68 Optus has also supplied the ACCC with significant number of additional wholesale transmission data points from the competitive provision of backhaul Ethernet transmission products.
- 5.69 Optus notes this dataset contains [CiC] observations, representing [CiC] additional competitive observations from which the regression can be run. Optus welcomes the further consideration of these observations. We note that there has been some debate whether the ACCC could consider these observations to be competitive observations. We refer the ACCC to the recent announcement by TPG that it will replace Optus as the supplier of mobile backhaul to VHA sites. This clearly demonstrates that the market for backhaul capacity is competitive for these locations.
- 5.70 The EI preferred model included in the Draft Decision did not include this data. As such, it may not accurately reflect the total set of competitive transmission prices in the market.
- 5.71 Optus welcomes the further consideration of the additional data. Optus is of the view that the regression should not be finalised prior to a proper analysis and inclusion of the new data.

Unexplained adjustment to raw price data

- 5.72 Optus and CEG have identified an unexplained variation to the price input (monthly recurring charge) for data that Telstra supplied to the ACCC relating to Optus acquired services. This was only discovered on 8 October, and confirmed by the ACCC on 9 October. Optus is concerned over the lack of transparency and consultation on this issue.
- 5.73 Optus identified the four common price points for services Optus acquired from Telstra (paragraph 4.24). We were advised by CEG that none of these four price points existed in the regression dataset. These four price points relate to [CiC] observations. This is of concern to Optus and we question whether other price inputs have been altered. In effect, the prices for at least [CiC] services have been arbitrarily increased.
- 5.74 We understand that this may relate to a GST-related adjustment. This is concerning since the:
- (a) Draft FAD Instrument stating that the prices are exclusive of GST. It is not clear why GST would need to be added.
 - (b) ACCC did not advise Optus that these adjustments had been made.
 - (c) Data was provided to the ACCC on a GST exclusive basis.
- 5.75 We welcome ACCC clarification on the reasons for such adjustment and further clarification over how many observations have been adjusted.
- 5.76 Optus further notes that the ACCC should, at the minimum, advise all parties on whether any of their observations have been adjusted. It is also important that acquirers are advised whether the services they acquire have also been adjusted.
- 5.77 Optus suggests that procedural fairness requires the ACCC to exclude GST from all price points and re-run the regression analysis. Given that the incorrect GST mark-up was applied to, at the minimum, prices for Telstra service, it is likely this has a material impact which would alter the coefficients of variables – and potentially alter significance of the variables

Regression should not be the sole input in pricing

- 5.78 As highlighted by the ACCC, industry submissions in 2014 again highlighted concerns with the regression approach. In particular,
- (a) Proposals 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 price.
 - (b) Support for the continued use of regression analysis was largely caveated with the need for “*significant improvements to ensure it produces cost- and demand-reflective prices.*”⁶⁷ In general, there appears to be a widespread view that the domestic benchmarking approach used for setting the 2012 FAD prices had clearly failed to result in regulated prices that approximate efficient costs.
 - (c) Greater transparency and explanation around the use of data, descriptive statistics and the regression output should be provided. Namely, that “*the ACCC should explain better, or consider further, the underlying rationale for adopting a domestic benchmarking approach... [Including] 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.*”⁶⁸ The ACCC should also be required to explain what changes needed to be made in moving from a principled to a practical approach that accounts for any data or analytical limitations.
- 5.79 Despite the concerns raised above, the ACCC has continued to adopt the regression analysis based upon domestic benchmarking. It considered that its current approach has improved on the 2012 FAD, largely on the basis that:
- 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.***⁶⁹
- 5.80 However, the evidence presented above runs counter to these claims. The weight of evidence suggests that the regression analysis in the Draft FAD Decision predicts poorly the price of low bandwidth services. Further, it has been shown that the ACCC’s advisors have unreasonably refused to properly test alternative methods that would likely improve the model. The ACCC’s advisors have also incorrectly interpreted their own results with regard to the impact of a 2 Mbps dummy variable.
- 5.81 Furthermore, there is significant doubt over the veracity of the dataset used to produce the regression results. It is not clear that the data reflects the correct prices, or reflects the correct number of competitive observations.
- 5.82 As a result of this, Optus has little confidence that the regression used in the Draft FAD Decision is an appropriate guide for setting regulated prices. Consequently, Optus repeats its advice that the ACCC cannot rely **solely** on the regression. The ACCC should, at the minimum:

⁶⁷ ACCC, 2014, Domestic Transmission Capacity Service: Public inquiry into making a final access determination, Position statement on pricing methodology, November, p.9

⁶⁸ ACCC, 2014, Domestic Transmission Capacity Service: Public inquiry into making a final access determination, Position statement on pricing methodology, November, p.9

⁶⁹ ACCC, 2014, Domestic Transmission Capacity Service: Public inquiry into making a final access determination, Position statement on pricing methodology, November, p.15

- (a) Re-run the benchmarking and regression analysis to inform itself on the trend in prices on the non-regulated services, correcting errors identified above and excluding 2 Mbps services.
- (b) A regression for just 2 Mbps services, including adjustments provided by expert advisors.
- (c) Recognition that existing commercial prices for 2 Mbps represent the ceiling for future FAD prices. It is reasonable to conclude that commercial prices agreed between Telstra and access seekers represent a reasonable balance between the legitimate interests of the access provider and low prices to promote competition.
- (d) Recognition that Ethernet 2 Mbps should be priced below existing SDH prices, consistent with observations across the whole dataset.
- (e) Recognition that there is a year-on-year price decline on competitive routes. A similar price decline should apply to existing historical commercial agreements used for 2 Mbps ceiling prices.