

Optus Submission to

Australian Competition and Consumer Commission

on

**Telstra's Access Undertaking for the Unconditioned Local Loop
Service: Response to Draft Decision (Public Version)**

December 2008

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1. Introduction and Executive Summary

Introduction

- 1.1 Telstra lodged the current ULLS undertaking with the ACCC on 3 March 2008. The undertaking specifies a monthly charge of \$30 for the ULLS in Band 2 Exchange Service Areas (ESAs). Telstra submitted in support of its undertaking a network cost model it calls the Telstra Efficient Access (TEA) model, which produces a cost estimate of approximately \$47.86 for the ULLS in Band 2.
- 1.2 After consulting with the industry, the ACCC delivered a draft decision in November 2008 to reject Telstra's undertaking. The ACCC's preliminary view was that the TEA model cost assumptions would lead to an over-estimation of the costs of providing the ULLS and that the proposed charge of \$30 falls outside what could be considered to be a reasonable price range.

Executive summary

- 1.3 Optus welcomes the ACCC's proposed rejection of Telstra's ULLS undertaking. Telstra is seeking an inflated monthly charge which is based on a flawed cost model, is out of proportion with comparable prices internationally and which would over-compensate Telstra for costs it never incurred. The ACCC has carried out a thorough review of the undertaking and the cost model on which it was based, and its decision is the correct one.
- 1.4 In the remainder of this paper and its appendices Optus presents further data relevant to the assessment of the undertaking as well as submissions responsive to the draft decision.
- 1.5 Optus welcomes the ACCC's apparent willingness to review its pricing approach for the ULLS in response to the changing circumstances of the Australian telecommunications market. In Section 2 some further observations on the need for pricing reform are set out, focussing on the natural monopoly characteristics of the National Broadband Network (NBN) and the fact that Telstra has already recovered (many times over) a substantial proportion of the costs incurred historically on network construction.
- 1.6 The ACCC has correctly recognised that reliance on Telstra's TEA model would over-compensate Telstra for the costs of providing the ULLS. In Section 3 Optus sets out further evidence to demonstrate that the TEA model cannot be relied upon to support Telstra's proposed access price since it systematically overestimates the efficient cost of the copper network (according to Optus' calculation, by at least \$ **CiC** billion). Reasons for this overcompensation include the following factors:

- The model is supposed to be based on an efficient network design – yet its actual design is practically identical to that of Telstra’s own network with a minimum of adjustments for efficiency.
 - Telstra’s average vendor prices for equipment used in the TEA model are substantially higher than market prices available to Optus (at least **CiC** per cent higher).
 - The model would ‘compensate’ Telstra for trenching costs in new estates that are actually borne by developers (not Telstra) and costs relating to “breakout, placement and reinstatement” of footpaths and driveways that in most cases, according to the ACCC, Telstra “*never incurred and is not likely to incur*”.
- 1.7 Optus endorses the ACCC’s finding that Telstra’s proposed charge of \$30 is significantly above the equivalent charges that apply in comparable overseas jurisdictions. In Section 4 Optus provides further benchmarking evidence which supports this conclusion, and makes the point that Telstra’s own previous cost model (PIE II), even when populated with parameters of Telstra’s own choosing, calculated a cost for Band 2 that was less than half the value of the equivalent estimates produced by the TEA model – a fact that casts doubt on the credibility of the TEA model’s cost estimates.
- 1.8 The ACCC has recognised that Telstra’s proposed rate increase would adversely impact on infrastructure investment by access seekers and potential new entrants. In Section 5 Optus will provide additional material to establish that access seeker investment is indeed highly responsive to changes in the ULLS price.
- 1.9 Optus agrees with the ACCC’s finding that a monthly access charge of \$30 would not promote competition. In Section 6 Optus will argue that Telstra’s proposed price increase risks reversing the significant advances in competition which have been brought about in recent years via the ACCC’s regulated unbundling regime. The anticompetitive effects of Telstra’s proposed undertaking would only be exacerbated by the fact that the ACCC has recently decided to grant exemptions from regulation of the WLR and LCS and PSTN OA services – decisions intended to discourage access seekers from reliance on alternative sources of supply to the ULLS.

2. Approach to Assessing Access Prices

TSLRIC and alternative approaches

- 2.1 In its draft decision the ACCC appears to have signalled a potential shift away from its previous commitment to the TSLRIC+ pricing methodology,¹ for example:

“... the ACCC acknowledges that the past rationale of promoting efficient build/buy decisions through the application of TSLRIC+ may be less relevant in a regulatory environment where the competitive state of telecommunications markets is changing and there may be fewer prospects for efficient by-pass. If the rolling out of fibre closer to the customer makes the prospects of efficient duplication more remote, then some of the key rationales for a TSLRIC+ approach to pricing will be less relevant.

*The ACCC has always been open to considering other approaches of pricing regulated services. Whilst the concept of TSLRIC+ can be consistent with the legislative criteria the ACCC must consider, there are other pricing approaches which are also likely to be consistent with the criteria...”*²

*The ACCC is also aware of the limitations in the application of TSLRIC+ outside its original focus for PSTN assets in that the TSLRIC+ concept revalues the network assets in each regulatory period such that it does not take account of depreciation in the value of the assets. This limitation is particularly apparent in the case of enduring assets such as trenches which are likely to be less susceptible to bypass.*³

- 2.2 Optus welcomes the ACCC’s apparent willingness to review its pricing approach for the ULLS in response to the changing circumstances of the Australian telecommunications market. Consistent with its submission in response to the discussion paper,⁴ Optus submits that whilst the ULLS price should reflect Telstra’s efficient cost of providing the service, the efficient cost should not be based upon the cost of constructing a copper network “anew”. An access price floor for the ULLS based upon TSLRIC+ principles is not reasonable,⁵ and this is brought into more acute focus by the

¹ ACCC, *Assessment of Telstra’s Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.34-37

² ACCC, *Assessment of Telstra’s Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.34

³ ACCC, *Assessment of Telstra’s Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.35

⁴ Optus, *Telstra’s Access Undertaking for the Unconditioned Local Loop Service: Response to Discussion*, August 2008

⁵ Whilst in this chapter Optus submits that an access price for the ULLS based upon TSLRIC principles is no longer reasonable, for the purposes of the remainder of this submission, Optus has assumed that the TSLRIC+ pricing principles will continue to apply.

imminent rollout of the National Broadband Network (NBN). On this basis, Optus submits that the monthly price for the ULLS proposed by Telstra in its undertaking is unreasonable since it exceeds Telstra's efficient cost of providing the service.

- 2.3 Accordingly, even in the unlikely event that the TEA model was found to accurately estimate the cost of service provision of a hypothetical efficient operator (based on constructing a copper network "anew"), it would nevertheless not be reasonable or in the LTIE to set ULLS prices based on the TEA model's cost estimates.
- 2.4 The inappropriateness of pricing principles such as TSLRIC+ in contexts where build-buy incentives are less relevant (such as the current Australian context) has also been recognised in other jurisdictions. The specialist applied economics consultancy Europe Economics has recognised that in circumstances where the provision of local copper based access is expected to remain a monopoly for the foreseeable future, the priorities that ought to drive regulation are different and pricing methodologies such as TSLRIC+ (or LRAIC) are less appropriate.⁶ For example, in a 2004 paper on pricing approaches to unbundled local loops in the EU, Europe Economics stated:

In circumstances in which there is no policy objective to encourage efficient competition in the provision of the local-loop network or when the assets are not replicable (analogous to the situation accepted by authorities regulating other local distribution networks such as those for electricity, gas and water), the key constraint upon regulation is that the network operator should be able to finance its activities and should have an incentive to do so efficiently (including an appropriate structure of charges). This has several consequences.

- *First, the incumbent should be allowed to recover the projected necessary operating, maintenance and renewal expenditure requirements of the network.*
- *Second, for any investment that is required to enhance or expand the network, the operator must be allowed a reasonable opportunity to earn a competitive return on that investment.*
- *Third, the operator should be able to earn a reasonable return on past investments appropriately valued (which for a privatised business is not necessarily the replacement cost).*
- *Any historic assets not fully depreciated would enter into the calculation through their depreciation. And if they needed renewing that would be covered under the second point above.*

⁶ Europe Economics, 2004, *Pricing Methodologies for Unbundled Access to the Local Loop*, Final Report, p.50

- 2.5 Optus submits that the circumstances noted in the quotation above apply to Telstra's local loop, and accordingly the pricing principles described in the quotation should be adopted in the Australian context for pricing the ULLS.
- 2.6 Two key factors underpinning Optus' judgment that TSLRIC+ is not the appropriate pricing principle for the ULLS are that:
- there is no realistic potential for infrastructure-based competition to the NBN; and
 - Telstra has already recovered a substantial proportion of the costs incurred historically on network construction.
- 2.7 These factors are examined in more detail below.

Potential for infrastructure-based competition to the NBN

- 2.8 In its draft decision the ACCC appears to have implicitly recognised the natural monopoly characteristics of the NBN, noting the possibility that the rolling out of fibre closer to the customer might make the prospects of efficient duplication more remote.⁷
- 2.9 However, Telstra has suggested (for example, in the context of Telstra's HFC exemption) that cable networks, in particular Optus' cable network, will be capable of providing infrastructure competition to the NBN.
- 2.10 Optus considers that the NBN will be a natural monopoly and that cable networks, in particular Optus' cable network, will not be capable of providing infrastructure competition to the NBN.
- 2.11 The near-monopoly position of the NBN is well recognised by industry experts. For example David Kennedy of Ovum said recently:⁸

It doesn't matter who builds FTTN. Fixed broadband access will soon be a monopoly. Okay, maybe not quite a monopoly. We'll have a little cable competition here and there, and some wireless competition at the low end of the market. But it is clear that FTTN will be the dominant access infrastructure.

- 2.12 The consultancy CEG recently carried out a review of the performance of HFC cable infrastructure compared with DSL infrastructure in overseas jurisdictions (at Optus' request, in the

⁷ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.34

⁸ Comment by Ovum analyst David Kennedy, *In praise of boredom: utility broadband and its consequences*, Communications Day, 10 December 2008, p.6. David Kennedy is a research director responsible for broadband and wireline research for Ovum, a leading consultancy on telecoms, software and IT services. Prior to joining Ovum in January 2006, David worked in both private sector and government roles including Senior Policy Adviser to the Communications Minister during the 1997 telecommunications reform process.

context of Telstra's HFC exemption application). CEG found that cable is losing market share to DSL internationally:⁹

“The overall picture that emerges from the international evidence is that while cable was initially strong in a number of markets, it has been losing ground in recent years in both the key revenue sources of pay TV and broadband.”

2.13 Optus submits that CEG's review casts doubt on the ability of HFC to provide infrastructure competition to the NBN (which will be government-subsidised and also more a technologically advanced infrastructure than the current network used to deliver DSL).

2.14 The ACCC considered the potential for Optus' HFC network to provide infrastructure-based competition to Telstra's copper access network in the course of its consultation on Telstra's 'HFC exemption' application. In the final decision on that matter the ACCC noted the significance of “high content costs” which, it noted, could create “barriers to expansion” of HFC infrastructure.¹⁰ For example, the ACCC stated in its final decision:¹¹

“The ACCC considers that Telstra's ownership of its 50 per cent interest in Foxtel is a crucial consideration affecting this investment case. In particular, the high content costs faced by Optus are a significant barrier to expansion that limits Optus' ability to achieve potential economies of scope on its HFC network and to recover the costs of expanding or infilling the network by, for example, connecting up MDUs. This in turn affects the competitiveness of the Optus HFC network and makes the economic viability of such investments in Optus' HFC network clearly questionable.”

2.15 Whilst this quotation was made in the specific context of Telstra's 'HFC exemption', Optus submits that the factors identified by the ACCC in this quotation apply more broadly. In particular, Telstra's ownership of its 50 per cent interest in Foxtel and the high content

⁹ CEG, *Assessing the Likely Effects of Asymmetric Access Regulation in Australia: Telstra's Proposed HFC Exemption*, October 2008, p.24

¹⁰ ACCC, *Telstra's exemption application in respect of the Optus HFC network*, Final Decision, November 2008, p.135. NB: this page reference relates to the public version, however the confidential version of this document are also relevant since they contain specific information on issues relevant in the current context, including information relating to high content costs faced by Optus: ACCC, *Telstra's exemption application in respect of the Optus HFC network*, Final decision, Confidential version (excludes confidential Foxtel information) November 2008. Also relevant for the same reason are Optus' submissions on this matter, including: Optus, *Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Confidential version)*, March 2008; Optus, *Supplementary Submission to Australian Competition and Consumer Commission on Telstra's December 2007 Exemption Application for Fixed Line Services in the Optus HFC Area (Confidential version)*, May 2008; and Optus, *Confidential Submission to the Australian Competition and Consumer Commission in response to its Draft Decision on Telstra's Exemption Application in respect of the Optus HFC Network*, October 2008.

¹¹ ACCC, *Telstra's exemption application in respect of the Optus HFC network*, Final Decision, November 2008, p.11

costs faced by Optus are a significant barrier to expansion that limits the potential for Optus' HFC network (or indeed any HFC network not owned by Telstra) to deliver viable infrastructure-based competition to the NBN.

Historical context

- 2.16 The ACCC appears to have implicitly recognised in its draft decision that Telstra is likely to have already recovered much of its historic capital expenditure on the CAN. For example, it found that one limitation of the TSLRIC+ concept is that it does not take account of depreciation in the value of assets, particularly long-lived assets such as trenches,¹² and stated that:

*“The ACCC is also aware of the limitations in the application of the TSLRIC+ outside its original focus for PSTN assets in that the TSLRIC+ concept revalues the network assets in each regulatory period and that **it does not take account of depreciation in the value of the assets.**”*¹³ [emphasis added]

- 2.17 Optus submits that Telstra has already received compensation for much of its historic capital expenditure on construction of the CAN. Evidence for this proposition may be deduced via an examination of the age and economic lifetimes of the relevant CAN assets.
- 2.18 Whilst a proportion of the CAN was constructed inside the last two decades, it is clear from historical records that a very high proportion of the CAN is much older. This view of the age of the network is supported by public statements from Telstra. For example, in 2001 Telstra reported the following information on the age of the CAN:

*“...more than 50 per cent of the copper pairs in the Australian CAN are over 20 years old, more than 30 per cent are over 30 years old and nearly 10 per cent predate 1950”.*¹⁴

- 2.19 This means that conservatively, at least 50 per cent of Telstra's current CAN was built before 1980 and 30 per cent before 1970. A significant proportion of the CAN was in place by 1960.¹⁵
- 2.20 The age of assets in the CAN is important as it affects the validity of applying a 'pure' TSLRIC approach to pricing assets on a MEA replacement cost basis – an approach which does not take account of depreciation in the value of assets. If an asset has an economic life

¹² ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.35

¹³ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.35

¹⁴ Telstra, *Productivity Commission's draft report on Telecommunications Competition Regulation – Final Submission*, July 2001, p.21

¹⁵ By 1960 the network owner (at that time the Postmaster General) had provided copper lines to the majority of serviceable addresses. After 1960, growth in the network was mainly for the purpose of servicing new addresses (in response to population growth).

of (for example) 15 years, the company's systems of accounts will allow for the asset to be depreciated over a 15 year lifespan such that it will be assigned 'zero' value in the accounts at the end of 15 years. Further, the regulatory depreciation (or recovery of capital) allowed for in regulated prices (including the ACCC's current pricing methodology for the ULLS¹⁶) will allow for the capital investment in that asset to be recovered in total by the end of the 15 year economic life of the asset. Despite this, the ACCC's current pricing principle continues to price the asset on a MEA replacement cost basis which values the asset according to its current (modern equivalent, forward looking) value, year after year. This has the effect of compensating Telstra for the cost of that asset many times over and well beyond the asset's economic life.

2.21 This issue of overcompensation can be illustrated using a simple example. The main assets that account for approximately 90% of the costs in the CAN are main cabling and ducting.¹⁷ The table below lists the asset lives for these key assets and their contribution to the total annual cost.

Table 1 – Significant assets in the CAN and contribution to the total annual cost in the TEA model¹⁸

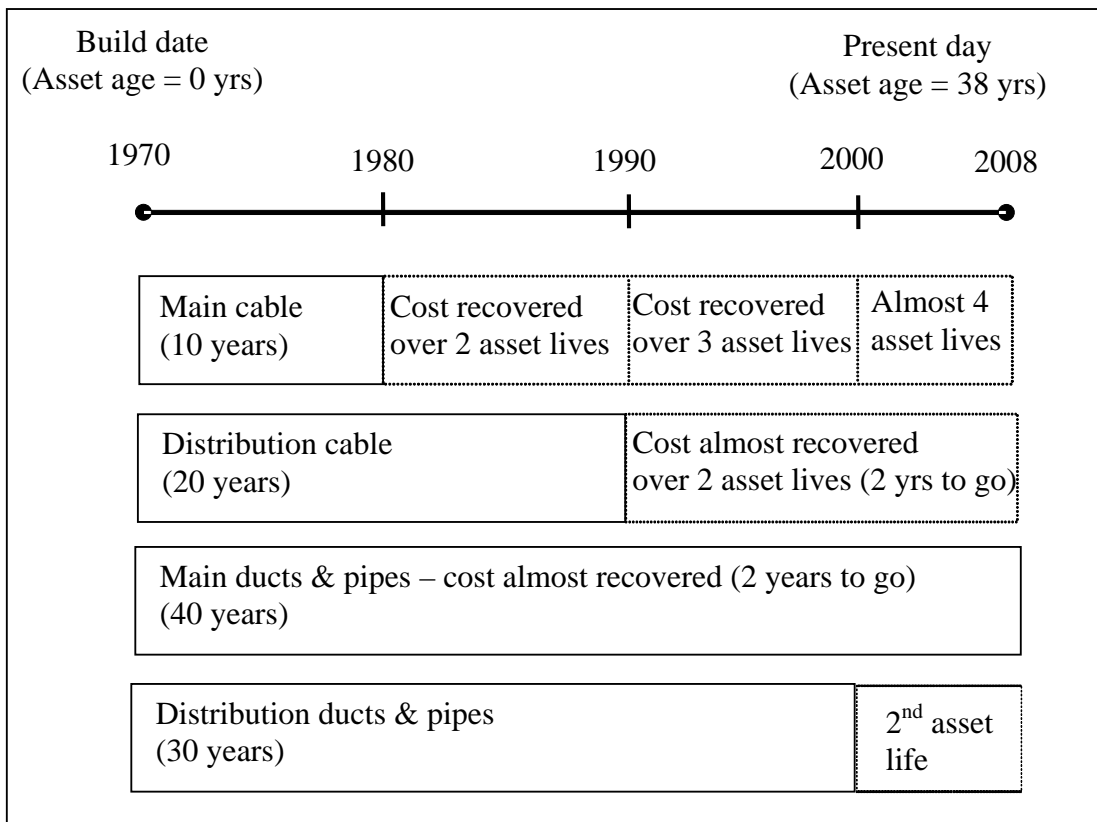
Asset category	Asset life	% contribution to total annual cost
Main cable	10 years	20.27%
Distribution cable	20 years	15.10%
Main ducts and pipes	40 years	11.78%
Distribution ducts and pipes	30 years	43.19%
Total		90.34%

¹⁶ While the cost recovery aspects of other regulated services (such as the wholesale line rental service) address cost recovery in different ways to ULLS pricing, it is nevertheless clear that the price-setting methodology applied to these services is also intended to allow for the capital investment in an asset to be recovered in total by the end of its economic life.

¹⁷ ACCC, *Telstra's Access Undertaking for the Unconditioned Local Loop Service - Discussion Paper*, June 2008 p.24

¹⁸ Asset lives sourced from TEA model version 1.2.1

Figure 1 – Relationship between build date, asset lives and Telstra’s capital cost recovery



2.22 The diagram above (Figure 1) shows that the approach historically applied by the Commission has allowed Telstra to recover its capital costs many times over. Making the very conservative assumption that only 30 per cent of the cabling and ducting was built by the end of 1970 and still exists in the current CAN, this means that for at least 30 per cent of this asset (which represents 90 per cent of the CAN cost), Telstra has recovered the capital cost almost 2 times over. It is foreseeable that for the (approximately) 10 per cent of the CAN that was built before 1950, Telstra has recovered its initial capital outlay over 5 times. Even in regards to an asset with a longer life (e.g. ducting), Telstra has been able to recover its cost approximately twice.

2.23 The current approach thus provides Telstra with a windfall gain in that it ‘recovers’ costs that have already fully recovered, in respect of assets that were already fully depreciated. The double recovery issue which arises with TSLRIC+ and with similar pricing approaches (also termed LRAIC)¹⁹ has also been recognised in other jurisdictions. For example, in its 2004 paper on pricing

¹⁹ TSLRIC has been called LRAIC (Long Run Average Incremental Cost) by the European Commission however both terms have exactly the same meanings.

approaches to unbundled local loops in the EU, Europe Economics stated:²⁰

Indeed, where LRAIC is applied to networks whose assets include an important element — such as duct — that was installed long ago and may have been fully depreciated, and charges are calculated so as to recover the LRAIC, this amounts to asking customers to “pay twice” for the assets, which may be very unlikely to be — or to need to be — replaced.

This is quite likely to be the case for ULL when a LRAIC methodology is used. As shown in the case study on Italy in Chapter 5, the relative weight of trench and duct costs in access networks — and the positive price trend of those assets — means that a ULL charge based on LRAIC will be expected to exceed a charge based on historic costs.

- 2.24 Optus submits that by allowing double recovery of capital expenditure the TSLRIC+ approach to pricing the ULLS systematically over-compensates Telstra and the TEA model systematically overestimates Telstra’s costs. Consequently it would not be reasonable or in the LTIE for the ACCC to accept Telstra’s undertaking, given that Telstra purports to justify the price terms in that undertaking by reference to the TEA model’s cost estimates.

²⁰ Europe Economics, 2004, *Pricing Methodologies for Unbundled Access to the Local Loop*, Final Report, p.48

3. Reasonableness of TEA Model Assumptions

Network design - optimisation

3.1 A central issue in these proceedings is whether the network design adopted by Telstra in making cost estimates using the TEA model is optimised sufficiently to meet the ACCC's required standard: the costs of supply for an efficient forward-looking operator.

3.2 In its draft decision the ACCC found that the TEA model's network design was not sufficiently optimised; for example, it stated:²¹

"The ACCC agrees with commissioned reports, including from Ovum and MJA that as the TEA model reflects Telstra's actual network, this suggests that the model has not been implemented using the most efficient network build..."

"... the object of promoting efficient investment is not achieved when costs of Telstra's existing network, without taking account of efficiency savings, are used to determine costs of providing the ULLS."

"... design and implementation issues mean the extent of the efficiencies in the model is not as extensive as claimed by Telstra."

3.3 Optus submits that the ACCC's finding is correct; the TEA model has not been demonstrated to be optimised sufficiently. There are two separate aspects to this issue:

- First, Optus submits that in many respects, the network design is not optimal and has been demonstrated to be non-optimal.
- Second, Optus submits that for certain key aspects of the network design it is impossible for any party other than Telstra to know whether or not that aspect of network design has been optimised sufficiently, since these aspects are not transparent.

Non-optimal aspects of network design

3.4 In many respects, the network design employed in the TEA model is not optimal and has been demonstrated to be non-optimal. For example, in its September review of the TEA model, Network Strategies found that:²²

"The underground conduit and pit construction for both main and distribution cables costed in the model is likely to be the

²¹ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.71-72

²² Network Strategies, *Review of Telstra TEA model version 1.1, Confidential (redacted) version*, September 2008, Section 2.3

most expensive design a telecoms operator could choose when building a copper access.”

- 3.5 Attached to this submission at Attachment 2 is a Network Strategies report containing additional comments on the TEA model.²³ It contains additional material relating to the key points made in the original Network Strategies report and should be read in conjunction with that original paper. In this new report, Network Strategies states that:²⁴

The underground conduit and pit construction proposed by Telstra is expensive mainly because there appears to be little or no optimisation of cable layout to avoid trenching and re-instatement of expensive surface types and the TEA model uses relatively high cost trenching/duct technologies, instead of the more cost-effective technologies that are available, such as shallow trenching and micro-trenching or direct buried cables.

- 3.6 After discussing these more cost-effective technologies, Network Strategies states that: “None of these alternative approaches to network deployment are considered in the TEA model” and concludes that:²⁵

In its current form, the conduit and pit design used in the TEA model does not accurately model the network that an efficient operator would build in practice to provide ULLS in Band 2 areas.

- 3.7 Further, in its original report Network Strategies states that:²⁶ “In using a non-tapered architecture, Telstra is passing on the costs of over-building its network to its ULLS customers.” In its new report, Network Strategies discusses this issue in more detail and states that:²⁷ “In our experience, we have never encountered copper access network models which do not use tapering in the design of the distribution networks.” The authors discuss potential justifications for the use of non-tapered architecture in the TEA model, before concluding that “there is no justification.”

- 3.8 Perhaps the most important single failing of the TEA model is its lack of optimisation through the modelling of hypothetical routes. As Network Strategies have stated, “hypothetical routes are an essential component in any cost model that attempts to build an

²³ Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008

²⁴ Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008, p.5

²⁵ Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008, p.6

²⁶ Network Strategies, *Review of Telstra TEA model version 1.1, Confidential (redacted) version*, September 2008, Section 7.3

²⁷ Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008, p.16

efficient access network.”²⁸ In their Dec 2008 report, Network Strategies explain why Telstra’s criticisms of models which, unlike the TEA model, can determine new efficient cable routes (based on physical obstructions and other arguments) are not generally valid. The authors conclude that:²⁹

“It is our conclusion that the fact that the Telstra model does not permit re-clustering and hypothetical cable routes is evidence that TEA is not fully optimised and therefore is not capable of estimating the efficient cost of supply of the ULLS.”

3.9 Telstra has attempted to refute Optus’ criticisms of the lack of optimisation in the TEA model. For example, Telstra states that Optus’ criticism that there is little if any network optimisation in the TEA model is based in a large part on the assumption that the TEA model retains the actual location of all network structures or nodes, including the pits and manholes.”³⁰

3.10 However, Telstra’s statement is incorrect. Optus’ criticism that there is little if any network optimisation in the TEA model is not based on the assumption that Telstra notes. In its Dec 2008 report, Network Strategies explains why Telstra’s attempted rebuttals (including this specific point) are incorrect, and notes that:³¹

The claim that there is little or no optimisation in the TEA model is based on the observation that it does not attempt to re-define distribution areas based on today’s rather than historical demand. This means that inefficient pillar locations and main cable routes are retained. It is also means that inefficient distribution cable routing, based on historical demand growth, is retained. Telstra claims that some of this inefficiency has been removed from the database through its own internal analysis, but we are unable to confirm this. We realise that manhole and pit numbers are re-dimensioned by the model, and this point is irrelevant to the distribution area efficiency and optimisation argument.

Non-transparent aspects of network design

3.11 For certain key aspects of the network design employed in the TEA model it is impossible for any party other than Telstra to know whether or not that aspect of network design has been optimised sufficiently, since these aspects are not transparent.

²⁸ Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008, p.17

²⁹ Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008, p.18

³⁰ Telstra, *Telstra’s Ordinary Access Undertaking for the Unconditioned Local Loop Service: Response to Access Seeker Submissions*, November 2008, p.41

³¹ Telstra, *Telstra’s Ordinary Access Undertaking for the Unconditioned Local Loop Service: Response to Access Seeker Submissions*, November 2008, p.18-21 [quotation taken from p.20]

- 3.12 For example, if the ACCC is to test whether the TEA model's cost estimates are consistent with the costs of supply for an efficient forward-looking operator, it must be able to test whether the network routes used in the model are reasonable and whether these routes are likely to be consistent with those adopted by an efficient operator. However, the ACCC cannot test this aspect of the model because to do so it would need to be able to identify the actual locations of modelled customers and structure points (pillars, manholes, pits etc), which is impossible because the network database within the model does not allow this functionality.³²
- 3.13 It follows that it is impossible for the ACCC to test whether the TEA model's cost estimates are consistent with the costs of supply for an efficient forward-looking operator. Consequently, it is impossible for the ACCC to be satisfied of the reasonableness of Telstra's undertaking.
- 3.14 Network Strategies took issue with this non-transparent aspect of the TEA model, noting that it is not possible to vary the network architecture, and that inputs and assumptions in the TEA model are not visible and cannot be checked because of the way pre-modelling data has been incorporated into the TEA model network database. The ACCC noted in its Draft Decision that Network Strategies did not provide evidence to substantiate this view. However, Network Strategies stands by its original conclusions. An information paper produced by Network Strategies responding to this point in the Draft Decision is attached to this submission at Attachment 1.³³ Network Strategies notes that:³⁴
- “we are not easily able to see customer locations, network topology and the cable routes, because these are not included in the TEA model. We consider this data is crucial to the correct implementation of a model such as the TEA model. Furthermore a significant level of data is stored in the network database and is not easily viewed or able to be modified.”*
- 3.15 Further, attached to this submission at Attachment 2 is a Network Strategies report containing additional comments on the TEA model.³⁵ In this new report, Network Strategies illustrates the non-transparency of this key aspect of the TEA model by reference to a selection of data from the BLBN ESA (sourced from the TEA model version 1.1 database),³⁶ and sets out the calculation steps that

³² Refer to Network Strategies, *Review of Telstra TEA model version 1.1, Confidential (redacted) version*, September 2008, p.15

³³ Network Strategies, *Issues from ACCC Draft*, Information Paper, December 2008

³⁴ Network Strategies, *Issues from ACCC Draft*, Information Paper, December 2008, p.2

³⁵ Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008

³⁶ Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008, p.6-9

would need to be visible in order to test the efficiency of the TEA model's network design. The authors conclude:³⁷

To properly form a view upon whether the TEA model results in an estimate that reflects the efficient forward-looking costs of providing the ULL in Band 2, we would need to have the ability to review the above calculations steps. Because none of the above steps have been included in the TEA model, we are unable to check them for accuracy and efficiency. It follows that it is impossible for us (or for any party other than Telstra) to test whether the TEA model's cost estimates are consistent with the costs of supply for an efficient forward-looking operator.

- 3.16 In the same report, the authors explain why determination of distribution area size and line densities are further important aspects of the cost modelling process which are not transparent within the TEA model.³⁸
- 3.17 Finally, Optus notes that its access to the TEA model has been inadequate. Optus refers the ACCC to its letter to Telstra dated 7 October 2008, attached as Attachment 5, which makes clear that its access to the TEA model has been inadequate despite Telstra's offer of limited access to a single employee.
- 3.18 Optus submits that due to the restrictions placed on the confidential information relied upon by Telstra in support of its proposed access price, access seekers have not had adequate opportunity to assess and interrogate the accuracy of that information, as well as to provide comments. Accordingly, the ACCC should place limited reliance upon the confidential information relied upon by Telstra, consistent with its approach in assessing the DTCS exemption applications.³⁹

Specific parameters and methodologies

Input costs

- 3.19 An important issue in the ACCC's assessment of the TEA model is whether the input costs used in the model are efficient and forward looking.
- 3.20 The ACCC's external consultant Ovum has stated that the costs of cable used in the TEA model are broadly in line with international benchmarks.⁴⁰

³⁷ Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008, p.9

³⁸ Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008, p.10

³⁹ ACCC, *Telstra's domestic transmission capacity service exemption applications*, Final Decision, November 2008, p.61

⁴⁰ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.75

3.21 However, in its review of the TEA model, in the section on main network cable costs, Network Strategies found that: ⁴¹

“the per-metre installed cable costs (including jointing and Telstra’s loading factor) appear to be around 30% higher than what we would have expected, based on our experience of similar costs calculated in 2007.”

3.22 Attached to this submission at Attachment 2 is a Network Strategies report containing additional comments on the TEA model. ⁴² It contains additional material relating to the key points made in the original Network Strategies report and should be read in conjunction with that original paper. In this new report, Network Strategies states that:

- *2400 pair main cable fully loaded costs in the TEA model are about 50% to 60% higher (per metre) than the efficient cost that we estimated.*
- *100 pair distribution cable fully loaded costs in the TEA model are about 10% higher (per metre) than the efficient cost that we estimated. This is significant because, under the non-tapering assumption, 100 pair cable is used exclusively for many thousands of kilometres of distribution networking.*

We conclude that as a result of analysis of cable costs, Telstra’s application of the TEA model is likely to result in an overall cost estimate that exceeds efficient costs.

3.23 Further, Optus submits that many of the costs of cable (as well as the costs of other equipment) included in the TEA model are significantly higher than prices available in the market. As evidence of this point Optus submits the statement of **CiC**, attached as Attachment 3, which compares TEA model input costs (provided to Optus by Telstra) with pricing available to Optus in the market (based on offers by vendors).

3.24 **CiC**

3.25 Optus submits that on average, and for the costs it has made comment on above, Telstra’s vendor prices for equipment used in the TEA model are substantially higher than market prices available to Optus (at least **CiC** per cent higher).

3.26 This detailed comparison using Optus’ actual vendor prices illustrates that the cost inputs used by Telstra as input parameters for the TEA model are excessive, not in line with international benchmarks and not efficient and forward looking. It follows that the TEA model’s cost estimates are significantly above what could

⁴¹ Network Strategies, *Review of Telstra TEA model version 1.1, Confidential (redacted) version*, September 2008, Section 2.1.2, p.5 1.1

⁴² Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008

be considered reasonable. As a result the Commission should continue to reject Telstra's Undertaking in its final decision.

Surface barrier costs

- 3.27 Telstra has made a number of assumptions that determine the magnitude of trenching costs generated by the TEA model. One of the most significant of these is the assumption(s) relating to surface barriers.
- 3.28 In its August submission, Telstra indicated that its trenching costs were derived from the multiplication of (i) the competitive contractor rates that Telstra is charged for breakout, placement and reinstatement in different ground surface types; by (ii) the length of trenches which require such activities.⁴³ Further, Telstra proposed that the TEA estimate should include the breakout, placement and reinstatement costs of trenches in Band 2 areas, regardless of whether or not such costs were incurred historically at the time of network construction.⁴⁴ However, the magnitude of these costs will vary accordingly to the type of ground surface affected and the extent to which these costs were incurred historically remains largely unsubstantiated.
- 3.29 The ACCC in its discussion paper has noted the significance of this cost, in relation to total ducts and pipes, to be in the range of 24 per cent of the total annual cost. That is, if the surface barrier assumptions are set with the trenching of turf only surfaces, this would amount to a 24 per cent reduction in overall costs of the network, about a 51 per cent reduction in the annual costs for ducts and pipes in the main network and about a 42 per cent reduction in the distribution network.⁴⁵
- 3.30 The ACCC in its draft decision considered it was unreasonable for Telstra to include surface barrier costs as a component of the asset value for determining network costs.⁴⁶ The ACCC noted that its reason for taking this approach to surface barrier costs was that:⁴⁷

“By allowing Telstra to include these costs as part of the TEA model would result in Telstra being compensated for costs that it (in most cases) never incurred and is not likely to incur within the economic life of the existing copper pairs.”

⁴³ Telstra, *Telstra's Ordinary Access Undertaking for the Unconditioned Local Loop Service: Response to the ACCC's Discussion Paper dated June 2008*, August 2008, p.18

⁴⁴ The ACCC already notes that “in a substantial majority of cases, local copper pairs were installed in turf and only subsequently paved over.” ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.53

⁴⁵ ACCC, *Telstra's Access Undertaking for the Unconditioned Local Loop Service – Discussion Paper*, June 2008, p.30

⁴⁶ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.53

⁴⁷ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.80

- 3.31 Optus considers that the ACCC has taken the correct approach to this issue in its draft decision. Consistent with its submission in response to the ACCC’s discussion paper, Optus considers that in estimating the cost of the ULLS, “assumptions about surface barriers should be based upon the surface barriers faced by Telstra historically in building its copper access network.”⁴⁸
- 3.32 A key element of the High Court’s 2008 decision in *Telstra Corporation Limited v The Commonwealth* was to recognise the importance of history in the context of assessments of the regulatory regime.⁴⁹ In assessing the current issue, it is also important to consider the history of the matter. In particular, it is relevant to consider the history of network construction in Australia in determining the extent to which Telstra in fact incurred surface barrier costs in the construction of its copper Customer Access Network (CAN).
- 3.33 Optus submits that Telstra did not incur significant surface barrier costs in the construction of its CAN, since the CAN was mostly constructed in ‘greenfield’ developments, in which the predominant surface is turf, rather than hard surfaces.
- 3.34 The CAN was constructed in a gradual manner, and most construction occurred in the second half of the 20th century. In 2001 Telstra reported that “more than 50 per cent of the copper pairs in the Australian CAN are over 20 years old, more than 30 per cent are over 30 years old and nearly 10 per cent predate 1950.”⁵⁰
- 3.35 During the early period of telephone services in Australia, metropolitan networks were physically limited in coverage, only reaching to a radius of 15 miles (24.1 km) from the General Post Office in Sydney and Melbourne, and 10 miles (16.1 km) in the other State capital cities by the late 1930s.⁵¹ By 1987, all areas in Australia had basic telephone services, no matter how remote.⁵²
- 3.36 Most CAN construction took place in the intervening period, particularly from the 1950s to the 1980s. During this period, the post-war baby boom and increased immigration brought rapid growth to Australia’s towns and cities. Construction of the CAN coincided with the massive post-war expansion of metropolitan sprawl, as new suburbs replaced farmland around all the major metropolitan centres. This pattern of urban growth in Australian capital cities is illustrated in

⁴⁸ Optus, *Telstra’s Access Undertaking for the Unconditioned Local Loop Service: Response to Discussion*, August 2008, p.45

⁴⁹ The court found that “what is now important is that the rights in the assets vested in Telstra were rights to use the assets in conjunction with the provision of telecommunications services but those rights were always subject to a statutory access regime which permitted other carriers to use the assets in question.” *Telstra Corporation Limited v The Commonwealth* [2008] HCA 7 (6 March 2008) at 53

⁵⁰ Telstra, *Productivity Commission’s draft report on Telecommunications Competition Regulation – Final Submission*, July 2001, p.21. This was supported in 2007, when Telstra cited that some of its long copper runs “may last up to 25 years.” Telstra, *Universal service: providing telecommunications services to Australians*, November 2007, p.5

⁵¹ ABS, 1301.0 – Year Book Australia, 1935

⁵² ABS, 1301.0 – Year Book Australia, 2001

Appendix C, which includes population distribution maps showing the development of Sydney and Adelaide since 1945.

- 3.37 Given that the bulk of CAN construction occurred as new suburbs were planned and constructed in farmland adjacent to metropolitan areas, the CAN was predominantly constructed in ‘greenfield’ developments in which the predominant surface is turf. As noted in the statement of **CiC**, attached as Attachment 4, “most new deployments generally occur in greenfield developments; that is, areas with no housing or associated road and footpath infrastructure nor any utilities and telecommunications infrastructure. In greenfield developments, surfaces are in their natural, undeveloped, state free of hard surface barriers such as concrete or asphalt etc.”
- 3.38 As a result, it was not necessary to incur significant surface barrier costs in the construction of the CAN. Typical industry practice in planning and constructing telecommunications infrastructure in greenfield developments is described in more detail in the statement of **CiC**, attached as Attachment 4. The conclusion of this affidavit is that “in the deployment of fixed line telecommunications access infrastructure in new estates, costs relating to the breakout, placement and reinstatement of ‘surface barriers’ including roads, footpaths, driveways and other asphalt or concrete surfaces will typically not be incurred”.
- 3.39 It follows that it is reasonable to infer that Telstra did not historically incur surface barrier costs to the extent assumed in the TEA model, and that the ACCC’s proposed approach to the issue is correct.

Trench sharing

- 3.40 An important issue in assessing whether the TEA model’s cost estimates represent the efficient cost of provision of the ULLS is whether an appropriate level of trench sharing has been adopted, given that the initial costs of digging trenches are likely shared to be able to be shared amongst entities other than the ULLS service provider.
- 3.41 Trench sharing is an important variable as it has the effect of reducing the cost of trenching that is required when constructing the network. Sharing occurs in three main ways:
- Sharing the costs with other stakeholders (e.g. other utilities or developers) that are rolling out to new estates at a similar time;
 - Sharing entrance facility costs between the inter-exchange and distribution networks; and
 - Sharing between copper and fibre cable.
- 3.42 The most critical value in terms of modelling Telstra’s network costs is the level of sharing in new estates and it is this variable that has been the focus of the most contention in regulatory proceedings.

3.43 The ACCC in its draft decision adopted the position that the input parameter adopted by Telstra for trench sharing in new estates (1 percent) was unreasonable. It found that:⁵³

“the 13 per cent figure [currently considered appropriate by the ACCC] might now itself understate the historical trench sharing and that the use of a high trench sharing value will tend to decrease estimates of network costs.”

and that:⁵⁴

...the best available proxy for trench sharing in new estates is the cumulative (historic) trench sharing measure. In this regard the ACCC considers that a trenching sharing value of between 13-17 per cent approximates cumulative trench sharing potential in new estates.

3.44 Optus considers that the ACCC’s proposed position is broadly correct. Optus and other parties (MJA and Ovum) made detailed submissions on this issue in response to the discussion paper. Optus submits that Telstra has significantly understated the level of trench sharing that occurs in new estates; and in some cases Telstra has included trenching costs that it never legitimately incurred when the CAN was originally constructed.

3.45 Optus is pleased that the ACCC has acknowledged these issues in its draft decision, in which it stated:

“The ACCC view is that network construction would generally be planned a significant time in advance and would most likely occur in conjunction with other operators and utility providers resulting in the use of open trenches at no cost to Telstra...In this regard the ACCC considers a trench sharing value of between 13 – 17 per cent approximates cumulative sharing potential in new estates.”⁵⁵

and

“The ACCC also notes Telstra’s statement that in Greenfield estate the developer provides trenches for the laying of a new network, which are shared with other utility providers, and that these costs are not included in the TEA model. This leads the ACCC to question where trenching costs have been legitimately incurred by Telstra in the provision of new networks.”⁵⁶

3.46 Optus supports the Commission's draft position to be critical of the 1 per cent trench sharing variable currently applied in the TEA model.

⁵³ ACCC, *Unconditioned Local Loop Service pricing principles and indicative prices*, June 2008, p.19

⁵⁴ ACCC, *Assessment of Telstra’s Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.87

⁵⁵ ACCC, *Assessment of Telstra’s Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.87

⁵⁶ ACCC, *Assessment of Telstra’s Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.80

However Optus submits that the Commission should apply a value of at least 17 per cent and that a value of up to 19 per cent would not be unreasonable.

- 3.47 Optus submits that the TEA model significantly underestimates the level of trench sharing in new estates (as the model assumes a new entrant replicating the entire CAN within 1 year) and this is inconsistent with Telstra's prudent past ability to share trenches and its future ability to share trenches.
- 3.48 The ACCC appears to have arrived at the 13 per cent "base" value for trench sharing based on evidence including "the conservative estimates of the accumulative stock of new estates in the last 10 years". Importantly, the Commission came to this view in 2003.⁵⁷
- 3.49 However in each regulatory proceeding since, the Commission has taken a highly conservative view and not updated the estimate to reflect new builds in each future year. For example in its Final Determination on the recent ULLS access dispute between Optus and Telstra the ACCC came the following familiar conclusion:
- "The ACCC acknowledges the submissions of access seeker parties that 13 per cent may understate historical trench sharing...however...would be the appropriate figure to use"*⁵⁸
- 3.50 Optus considers that for the ACCC to continue to use a figure of 13% would be highly conservative since the CAN has continued to expand into new estates since 2003 and thus there have been many further opportunities for Telstra to share trenches. A more appropriate approach would be to update the estimate to reflect new builds in each subsequent year.
- 3.51 Optus considers that using a value of 13 per cent regardless of expansion in the CAN into new estates (and hence further opportunities for Telstra to share trenches) has resulted in Telstra being significantly over-compensated for trenching costs. In reality Telstra would have been able to share trenches in much more than 13 per cent of the network.
- 3.52 This view is supported by international benchmarking. For example in America the Federal Communications Commission (FCC) found that telecommunications companies could share at least 55 per cent of their trenching costs.⁵⁹
- 3.53 A higher value is supported by current industry practice in utility trenches are typically borne entirely by the developer of the new estate. The contribution of developers to the cost of trenching has

⁵⁷ ACCC, *Final Determination for model price terms and conditions of the PSTN, ULLS and LCS services*, October 2003, p.37

⁵⁸ ACCC, *ULLS Access Dispute between Telstra and Optus, Final Determination*, March 2008, p.94.

⁵⁹ Bush C, *Computer modelling of the local telephone network*, October 1999 page 28. See also Hird T, *Role of TSLRIC in Telecommunications Regulation: A Report for Optus*, July 2003, page 16.

also been recognised in a Victorian Government-commissioned study, where it was noted that: ⁶⁰

*“For developers, the conventional approach, which deals with the provisioning of fixed telephony services, is to liaise with Telstra to facilitate construction of Telstra’s network during the course of developing an estate. Telstra in turn typically cooperates with other utilities to install its own ‘pit-and-pipe’ network, housing the copper wire, in a common utility services trench that is provided by the developer. **Other than providing the utility trench, the developer does not contribute financially to the supply of telephony services.**”*
[emphasis added]

- 3.54 It is important that the Commission consider the effect of understating the level of trench sharing in the network. An increase in the parameter for trench sharing in new estates would lead to a more efficient (and more realistic) cost estimate for ULLS service provision. This would be consistent with guidance from the Australian Competition Tribunal that it is only efficient costs incurred that are relevant to the pricing of the CAN:

“The price of a service would not exceed the minimum costs that an efficient firm will incur in the long-run in providing the service.” ⁶¹

- 3.55 However, Optus commends the ACCC for stating that it is now willing to consider updating its view. Moving forward from the ‘base’ of 13 per cent, Optus submits that an additional 1-2 per cent of sharing (i.e. above the 13 per cent) occurs in the network each year due to expansion of the CAN, and Optus has previously provided analysis to the Commission that illustrates this point.
- 3.56 Optus has used Telstra’s information regarding the expansion of the CAN to adjust the ACCC’s base-line 13 per cent figure for each future period. **CiC**
- 3.57 **CiC**
- 3.58 **CiC**
- 3.59 Optus submits that given this conservative estimate of the increase in the CAN, the Commission should apply 5 years of increases to bring its 2003 estimate in line with what would be expected in the CAN in 2008. Optus conservatively estimates that the total level of sharing afforded in the network would therefore be at least 19 per cent for 2008.

O&M costs

- 3.60 The ACCC has concluded that that the O&M costs in the TEA model do not reflect efficient forward-looking O&M costs. ⁶²

⁶⁰ Victorian Government, 2006, *Aurora Fibre-to-the-Home Case Study*, p.2

⁶¹ *Seven Network Limited (no 4)* [2004] ACompT 11 at [135].

- 3.61 Optus concurs with this assessment.
- 3.62 Further, Optus submits that in the TEA model the O&M mark-up is applied to the total capitalised investment costs which have already been marked up by the indirect overheads loading factor.
- 3.63 Further evidence to support the ACCC's draft decision is contained in the new report from Network Strategies, which discusses this issue and concludes that:⁶³

We believe that, due to this error, the network O&M costs are overstated and as a result, Telstra's application of the TEA model is likely to result in an overall cost estimate that exceeds efficient costs.

Methods of valuing assets over time

- 3.64 The cost recovery profile adopted by the TEA model is an important issue in these proceedings. Telstra has adopted a 'flat annuity' approach (or equivalently, a 'zero tilt' approach) to the return of capital in its costing of ULLS charges. Telstra has stated that its approach is reasonable and asserts that there is no over or under recovery of investment costs using this methodology.⁶⁴
- 3.65 However, in its draft decision, the ACCC took the position that the TEA model's use of a zero tilt was unreasonable and made the following comments:

*"...the application of a tilt to regulated cash flows under the TSLRIC regime is appropriate for fair compensation because assets are re-valued periodically by the regulator to reflect a current hypothetically efficient network in each regulatory period. The ACCC considers that if a zero tilt is applied then Telstra may receive an abnormal return when its assets are re-valued upwards in future regulatory periods in response to price trends. In particular, Telstra will receive ex-ante over compensation due to the expectation of this revaluation. This view is consistent with ACCC's approach in developing ULLS indicative prices"*⁶⁵

- 3.66 Optus supports the ACCC's draft decision to reject the application of a zero tilt in annual cash flows.
- 3.67 Some key evidence to support the ACCC's draft decision is contained in the new report from Network Strategies, which references by way of example at least six comparable international

⁶² ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.92

⁶³ Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008, pp.15

⁶⁴ Telstra, *Submission in response to Discussion Paper*, June 2008, p.37.

⁶⁵ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.123

jurisdictions in which a tilted annuity is considered appropriate, and concludes that:⁶⁶

In summary, to properly model the costs of supply for an efficient forward-looking operator, it would be more consistent to adopt a tilted annuity methodology. We conclude that as a result, Telstra's application of the TEA model is likely to result in an unconventional and potentially unreliable overall cost estimate.

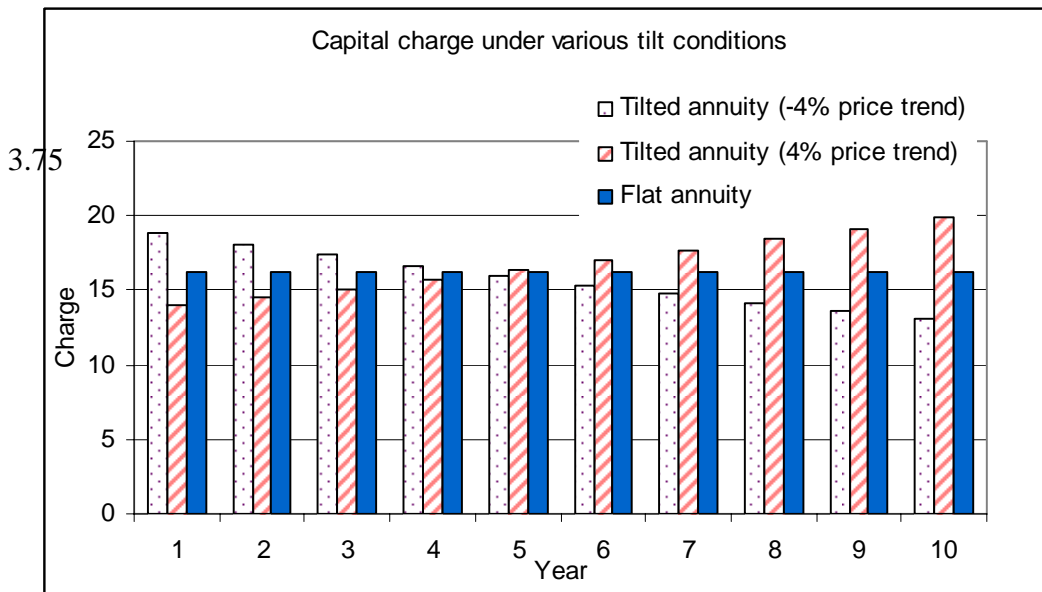
- 3.68 As the ACCC has correctly highlighted, a key reason for rejecting the zero tilt is that the economic lives of the assets which make up the CAN and which are being valued (and re-valued) are longer than the period of the undertaking.⁶⁷
- 3.69 The replacement cost of the assets may vary from year to year during the asset's life. In some instances, the replacement cost may fall due to technological advances (e.g. switches and processors). In others, it may increase (e.g. trenching costs may increase due to labour cost increases).
- 3.70 During the proposed 2 year period of Telstra's undertaking the value of these assets will change (the direction depending on the change in input prices). If Telstra is allowed to use a flat annuity then each time the network is re-valued (i.e. after 2 years), it will seek a return (annuity) based on the new value. Given the current upward movement of prices, this would mean Telstra is over-compensated in future years. Conversely, if prices were falling then Telstra may potentially be under-compensated.
- 3.71 To deal with this issue of under and over compensation, the approach adopted by the Commission has been to tilt the annuity in response to projected changes in the replacement value of particular assets. Applying the tilted annuity to the re-valued asset based ensures that the net present value of returns is equal to the initial investment. This means that the level of compensation will be the same regardless of changes in prices over the asset's life.
- 3.72 Optus has included a detailed review of the methodology and economic rationale for the inclusion of a 'tilt' in annuity calculations as Appendix A.
- 3.73 The effect of the tilt can be demonstrated using a simple example. Using an opening capital value (ORC, optimised replacement cost) of \$100, an asset life of 10 years and a WACC of 10 per cent, the example shows the profile of returns for different expected price trends (-4%, +4% and 0%). It highlights that the re-valuing the asset base and applying the same tilted annuity formula provides the same returns in NPV terms regardless of the tilt applied.

⁶⁶ Network Strategies, *Review of Telstra TEA model version 1.1 – additional comments*, December 2008, p.11-14

⁶⁷ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.123

Year	ORC (negative price trend)	ORC (positive price trend)	ORC (no price trend)	Tilted annuity (-4% price trend)	Tilted annuity (4% price trend)	Flat annuity (0% price trend)
1	100.00	100.00	100.00	18.83	13.98	16.27
2	96.00	104.00	100.00	18.07	14.54	16.27
3	92.16	108.16	100.00	17.35	15.12	16.27
4	88.47	112.49	100.00	16.66	15.72	16.27
5	84.93	116.99	100.00	15.99	16.35	16.27
6	81.54	121.67	100.00	15.35	17.00	16.27
7	78.28	126.53	100.00	14.74	17.68	16.27
8	75.14	131.59	100.00	14.15	18.39	16.27
9	72.14	136.86	100.00	13.58	19.13	16.27
10	69.25	142.33	100.00	13.04	19.89	16.27
NPV				\$100.00	\$100.00	\$100.00

3.74 Optus has also reproduced the table graphically to illustrate the capital charges applicable under different annuity tilts. It is important to note that regardless of the tilt applied (positive, negative or flat), the NPV of total charges is the same.



3.76 Consequently, Telstra will be adequately compensated by the ACCC's proposed approach to annuitisation.⁶⁸ The ACCC'S

⁶⁸ Issues of under and/or over compensation might only be posited to arise if forecast future prices (as derived by the price trends) are not equal to the actual future prices. It is correct that future price trends (and technological advancements) are extremely difficult to forecast. Inherent in the approach adopted by Telstra and the Commission is the potential for discontinuity in access prices as expectations change, but this is not inconsistent with what might be expected in a competitive market. Investors should not be concerned by the potential for forecasting error if prices are set based on the best unbiased estimate of future input price trends and technological development. Any residual uncertainty is fully diversifiable and is therefore factored into the equity betas used in the CAPM. Further, the review process minimises the potential for significant variation between actual and forecast price movements by revaluing the asset base each year.

proposed tilted profile for regulated cashflows is driven by the evidence on forecast input prices and is reasonable and appropriate for fair compensation. Optus therefore submits that the Commission should reject Telstra's proposal of a flat annuity and retain its tilted annuity approach.

Revised cost estimates

- 3.77 The ACCC found that when the TEA model is run with parameter values other than what Telstra has asserted, the resulting range of monthly charge estimates are significantly less than \$30 which left the ACCC with significant doubt as to whether the proposed charge of \$30 was reasonable.⁶⁹
- 3.78 Optus has conducted a similar exercise to the ACCC, including some additional changes in the costing module. Optus applied the following changes to the TEA Model (version 1.2.1):
- i) Including costs related to the trenching of turf only (i.e. no surface barriers);⁷⁰
 - ii) Applied a pre-tax WACC of 9.22 per cent;⁷¹
 - iii) Assigned a value of \$0 for lead-ins;⁷² and
 - iv) Altered costs relating to assets such as copper cabling and MDF blocks to the values provided by Optus.⁷³
- 3.79 After applying these costs Optus found that the resulting charge estimates are significantly less than \$30. The estimated monthly charge derived from the TEA model using these assumptions was **CiC**. Furthermore, the changes reduced the valuation of the network by around **CiC** per line, or approximately **CiC** in total network cost.
- 3.80 Whilst submitting this scenario Optus notes that it does not consider this represents the entire sum of changes that would be necessary to make the TEA model acceptable. Optus continues to consider that there are fundamental problems with many other aspects of the model such as the lack of optimisation along routes, which are non-transparent and thus impossible to rectify through the model parameters which are able to be controlled by the user. This alternative cost estimate is purely demonstrative and represents the impact of a number of changes that Optus was able to implement.

⁶⁹ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.41

⁷⁰ Consistent with the views of Optus and the ACCC as discussed in the earlier section on surface barriers.

⁷¹ Consistent with the views of the ACCC in its *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.41

⁷² Consistent with the ACCC's view that it does not consider that lead-in costs should be included in network costs ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.76

⁷³ Consistent with discussion in section on input costs and attached statement of **CiC begins** Terry Laws **CiC ends**.

- 3.81 Optus submits that the scenario analysis conducted by both itself and the Commission casts serious doubt on the validity and reasonableness of Telstra's proposed \$30 monthly access price.

Claimed benefits of the TEA Model

- 3.82 Telstra has claimed a number of benefits for the TEA model, which it has described as 'The Core Characteristics of the TEA Model'.⁷⁴ Optus considers that many of the benefits claimed by Telstra are overstated, misleading or irrelevant. Each of the claimed benefits is examined in turn below.

a. Flexibility

- 3.83 Telstra claims that the TEA model offers a wide range of user-generated input parameters.
- 3.84 Optus submits that critically, some of the most important aspects of the TEA model are inflexible and cannot be controlled by the user. For example, after a comprehensive review of the TEA model, Network Strategies found that:⁷⁵

It is not possible to vary network architecture (made up of the locations of pillars, manholes and pits) and distribution area sizes to test the level of efficiency in the design, as this information is not variable in the model.

b. Transparency

- 3.85 Telstra claims that the TEA model provides a clearly delineated methodology and readily discernable calculations, allowing for easy validation of results.
- 3.86 Optus submits that some of the most important aspects of the TEA model are non-transparent. For example, in its TEA model review report, Network Strategies stated that:⁷⁶

we believe that there are a number of steps in the modelling process that have been performed by Telstra external to the TEA model spreadsheets that have been made available for review. The results of the pre-modelling work have been incorporated into the TEA model network database in such a way that inputs and assumptions are not visible and cannot be checked.

⁷⁴ Telstra, *ULLS Undertaking, Telstra Efficient Access (TEA) Model Overview*, December 2007, p.2

⁷⁵ Network Strategies, *Review of Telstra TEA model version 1.1, Confidential (redacted) version*, September 2008, p.64

⁷⁶ Network Strategies, *Review of Telstra TEA model version 1.1, Confidential (redacted) version*, September 2008, p.ii-iii

c. Ease of Use

- 3.87 Telstra claims that the TEA model relies upon simple Excel spreadsheets and includes an easily operated user interface. It therefore accommodates a wide range of users from those who want to adjust key inputs and view results to those who wish to interrogate the detailed formulas underlying the individual modules of the model.
- 3.88 Optus submits that while those aspects of the model which are able to be used may meet the ‘ease of use’ criterion, some of the most important aspects of the TEA model cannot be ‘used’ at all. For example, as noted above, it is not possible to vary network architecture.⁷⁷

d. Fact-Based Calculations

- 3.89 Telstra claims that the TEA model incorporates actual data reflective of real demographic, geographic and topological characteristics of the relevant market including actual customer locations, actual pillar and exchange locations and actual cable routes.
- 3.90 In some respects this claim might appear to be accurate, since the TEA model does indeed appear to be based closely upon Telstra’s actual network. However, this view is subject to a number of caveats.
- 3.91 First, the model is not entirely based upon costs Telstra has actually incurred, and is in fact likely to generate costs in excess of costs Telstra has actually incurred. For example, as the ACCC has recognised in its draft decision, the TEA model’s treatment of surface barrier costs would have compensated Telstra for costs it never incurred.⁷⁸
- 3.92 Second, Telstra’s claim of being based upon ‘actual data’ is in many ways irrelevant to the central issue for the ACCC: whether the estimates produced by the model are consistent with the ACCC’s traditional TSLRIC+ ‘efficient operator’ standard. The TEA model does not meet this standard, as the ACCC has stated in its draft decision and various expert reviews have found.⁷⁹ In fact, if the TEA model is indeed based upon “actual cable routes”, this may make it *less likely* to meet the ‘efficient operator’ standard, since it may demonstrate that the model’s network design is not the design of an efficient operator, but instead is heavily influenced by the

⁷⁷ Network Strategies, *Review of Telstra TEA model version 1.1, Confidential (redacted) version*, September 2008, p.64

⁷⁸ ACCC, *Assessment of Telstra’s Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.80

⁷⁹ Network Strategies found that “the model is not capable of estimating the efficient cost of supply”: Network Strategies, *Review of Telstra TEA model version 1.1, Confidential (redacted) version*, September 2008, p.i

design of an inefficient legacy network (albeit that Telstra claims some cable routes have been removed).

- 3.93 Third, an estimate of the cost of building the network anew today – even one based upon ‘actual data’ – is likely to be an overestimate of what is reasonable for Telstra to recover given that Telstra is likely to have recovered much of the costs of construction in the past (and the TEA model does not take account of depreciation in the value of assets, particularly long-lived assets such as trenches). This point is covered in more detail the section on historical context in Chapter 2 of this submission and has also been recognised by the ACCC.⁸⁰
- 3.94 Optus submits that Telstra’s claims that the TEA model incorporates actual data are at best irrelevant and in fact demonstrate one of the reasons that the TEA model should be rejected.

e. Forward-looking

- 3.95 Telstra claims that the TEA model creates a network designed with perfect foresight, meaning that it does not include cost additions associated with legacy networks, such as the costs of capacity reinforcements and stranded network facilities.
- 3.96 Optus submits that there is absolutely no evidence to support this claim and it should be dismissed as mere assertion. The model is non-transparent in this area and it has been impossible for reviewers to verify Telstra’s claims. After its extensive review of the model Network Strategies noted that:⁸¹

Telstra submits that the model optimises cables dimensioning between the structure points, and that this is sufficient to meet the requirement that the model implements an efficient network. However this position implicitly assumes that Telstra’s historical node layout is efficient. There is no evidence in the model that it is indeed the case...

We are unable to determine whether these ‘waypoints’ are in efficient locations (if required at all), or whether they are inefficient, legacy from the historical network.

f. Efficiency

- 3.97 Telstra claims that the TEA model incorporates forward-looking, best-in-use technology and efficient route designs that minimize distances of ULLS facilities.

⁸⁰ ACCC, *Assessment of Telstra’s Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.35

⁸¹ Network Strategies, *Review of Telstra TEA model version 1.1, Confidential (redacted) version*, September 2008, p.18

- 3.98 Optus submits that there is absolutely no evidence to support the claim that the TEA model incorporates efficient route designs and it should be dismissed as mere assertion. Network Strategies stated that:⁸²

During our analysis, we have found that the network database within the model does not provide us with the ability to determine the actual locations of modelled customers and structure points (pillars, manholes, pits etc). Without this ability we are unable to determine whether network routes are reasonable (based on ESA geography and road distances) or whether these are likely to be the routes and distances adopted by an efficient new entrant.

g. Scope and Scale

- 3.99 Telstra claims that the TEA model accounts for the advantages of scope and scale that a universal service provider enjoys.
- 3.100 However, Optus submits that the TEA model does not consistently account for scale advantages. This is particularly clear in the area of input costs. It would be reasonable to expect a universal service provider to be able to secure scale discounts in purchasing inputs. However, Optus' evidence in the section above on input costs has demonstrated that on average, and for the costs Optus has made comment on, Telstra's vendor prices for equipment used in the TEA model are substantially higher than market prices available to Optus (at least CiC per cent higher).

h. Disaggregated results

- 3.101 Telstra claims that the TEA model possesses the capability to view results for discrete geographic regions down to the level of individual exchanges.
- 3.102 However, as the ACCC has recognised, Telstra has curtailed the capability to view results for discrete geographic regions for access seekers. In the discussion of Telstra's confidentiality regime in its discussion paper, the ACCC notes under the heading "Material that may be accessed": "Redacted version of the TEA model - allows for **one simulated exchange** and does not contain commercially sensitive information".⁸³ [emphasis added] A full version of the TEA model is not available to access seeker employees – even to regulatory and legal employees.⁸⁴ Optus refers the ACCC to its letter to Telstra dated 7 October 2008, attached as Attachment 5,

⁸² Network Strategies, *Review of Telstra TEA model version 1.1, Confidential (redacted) version*, September 2008, p.15

⁸³ ACCC, *Telstra's access undertaking for Unconditioned Local Loop Service – Discussion Paper*, June 2008, p.10, Table 2.1

⁸⁴ While a full version of the TEA model is stated by Telstra to be available to "Access seekers' employees with a non-commercial role", this statement is misleading. Telstra has applied an Orwellian definition of the term 'commercial role' to exclude, in practice, all access seeker employees.

which makes clear that its access to the TEA model has been inadequate despite Telstra's offer of limited access to a single employee.

i. TSLRIC+ Methodology

3.103 Telstra claims that the TEA model embodies sound economic theory and is consistent with the Commission's pricing principles for ULLS.

3.104 Optus submits that the TEA model is inconsistent with the Commission's pricing principles for ULLS. Network Strategies stated that:⁸⁵

We do not believe the model can produce reasonable TSLRIC cost estimates because its implementation of the TSLRIC methodology is incorrect.

j. Accuracy

3.105 Telstra claims that the TEA model uses actual data for every exchange and therefore does not need to rely upon sampling techniques.

3.106 Optus submits that there is absolutely no evidence to support the claim that data used in the TEA model is accurate, since it is not possible to independently verify the source of the data and this claim should be dismissed as mere assertion. Network Strategies stated that:⁸⁶

Derivation of network structure costs: how the structure input costs have been derived has not been fully explained. Many of the costs appear high relative to our experience of comparable cost drivers in other networks and as we are unable to see their source we are unable to account for this.

3.107 Overall, Optus concludes that the TEA model does not bring the benefits Telstra has claimed for it and it would not be in the LTIE for any cost estimate produced by the TEA model to be accepted.

⁸⁵ Network Strategies, *Review of Telstra TEA model version 1.1, Confidential (redacted) version*, September 2008, p.i

⁸⁶ Network Strategies, *Review of Telstra TEA model version 1.1, Confidential (redacted) version*, September 2008, p.24

4. Benchmarking Evidence

International benchmarks

- 4.1 The ACCC has taken the position in its draft decision that benchmarking Telstra's proposed monthly charge of \$30 against rates in other countries is a useful input when assessing the reasonableness of Telstra's undertaking,⁸⁷ particularly given that Telstra's 2008 ULLS undertaking is restricted to Band 2.⁸⁸
- 4.2 The ACCC found that the average ULLS charge for all comparator countries in its sample was significantly below Telstra's proposed charge of \$30.⁸⁹

ACT approach to international benchmark evidence

- 4.3 Optus agrees with the ACCC that benchmarking is a useful input when assessing the reasonableness of Telstra's undertaking and considers that the ACCC's proposed countries would be appropriate comparators against which to benchmark Telstra's ULLS price.
- 4.4 However, whilst Optus has no doubt that the proposed countries are appropriate comparators for Australia, there may currently be insufficient evidence before the ACCC to demonstrate this, particularly if Telstra were to appeal the ACCC's rejection of its undertaking to the ACT. The ACT has considered international benchmark evidence in the past and set a high standard for how evidence should be taken into account. It has stated that:

“In order to place any reliance upon the international benchmarking analysis it would be necessary to know much more about the regulatory environment within which they were determined, the state of the relevant markets and the socio-economic environment in which the mobile services were operative.”⁹⁰

- 4.5 Given the ACT's statement, Optus considers that it is important to demonstrate the relevance of the benchmark countries as comparators to Australia. Optus has set out a discussion of some of the relevant factors below, although we believe it would be prudent for the ACCC to complete a more detailed review.

⁸⁷ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.42

⁸⁸ The ACCC notes that in the past it has generally placed less weight on the use of international benchmarks when comparing ULLS prices due to the difficulty of finding an appropriate comparator for the low population density area of Band 4.

⁸⁹ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.42-43

⁹⁰ Application by Optus Mobile Pty Limited & Optus Networks Pty Limited [2006] ACompT 8(22 November 2006) at [297]

Optus' evidence

- 4.6 Optus supports the ACCC's use of international benchmarking information to assess the reasonableness of Telstra's undertaking. Optus has assembled additional international benchmarking evidence and in doing so has taken into account the guidance provided by the Tribunal .
- 4.7 In Appendix B Optus provides a summary of international ULLS prices in the third quarter of 2008 based on benchmarking reports compiled by Ovum (Table B.1). The 13 comparator countries chosen are all members of the European Union.
- 4.8 Turning to the results of the benchmarking exercise, in summary for all countries in the sample from the Ovum benchmarking reports, the monthly charge for an unbundled loop is under A\$30.⁹¹ Some countries in the sample, for example the Netherlands, Sweden and Italy have ULLS rates more than 50% lower than Telstra's proposed charge of \$30.
- 4.9 Optus has taken the guidance provided by the ACT into account in assembling its international benchmarking evidence, in order to demonstrate the relevance of the benchmark countries as comparators to Australia. Optus refers the ACCC to Appendix B for a detailed comparison of the comparator countries; however in summary, Optus would make the following observations.
- 4.10 The countries in the sample are all comparable to Australia in terms of the state of the relevant markets, because in all sample countries (including Australia):
- i) incumbents still own the majority market share in the fixed line market;
 - ii) fixed line telephone penetration was high in 2008;
 - iii) internet user percentage of total population was high in 2007;
 - iv) fixed line calling costs (local) were in the range of 0.22 Euro to 0.49 Euro for a 10 minute call in 2005; and
 - v) fixed line calling costs (national) were in the range of 0.29 Euro to 1.15 Euro in 2005.
- 4.11 The countries in the sample are all comparable to Australia in terms of the socio-economic environment, because in all sample countries (including Australia):
- i) GDP per capita in 2000 prices was above US\$11,445 (millions) in 2008;

⁹¹ This applies to both the averaged AUD ULLS rate for the months of October 2008, July 2008, March 2008 and December 2007 and also the AUD ULLS rate for October 2008, July 2008, March 2008 and December 2007.

- ii) GDP PPP (Absolute) International Dollars was above \$18,590 (millions) international dollar in 2007;
- iii) Consumer price indices were in the range of 113 to 126 in 2007;
- iv) Gini index was in the range of 0.27 to 0.41 in 2008;
- v) Literacy rate was above 98% in 2008; and
- vi) Unemployment rate was lower than 10% of population in 2008.

4.12 The countries in the sample are all comparable to Australia in terms of the regulatory environment because in all sample countries:

- i) the local loop unbundling service was regulated around the late 1990s to early 2000;
- ii) regulatory practise followed the European Union unbundling regulation to review the tariffs and conditions offered by the incumbent in its reference unbundling offer (RUO);
- iii) tariff charges were set based on cost; and
- iv) tariff charges were informed by a LRIC model.

4.13 Optus submits that the evidence it has presented here supports the ACCC's benchmarking analysis, and provides further evidence that Telstra's undertaking is unreasonable and should be rejected.

4.14 Further, in using the nationally averaged ULLS rate of the countries in the sample as a benchmark for assessing the ULLS rate in Band 2 in Australia, the ACCC is taking a conservative approach, once population density is taken into account. Many of these comparator rates apply nationally, as opposed to being limited to metropolitan areas (such as Band 2 in Australia).⁹² The overall population density in the comparator countries is significantly lower than the urban population density in Band 2 metropolitan areas of Australia, as the ACCC has recognised in its draft decision.⁹³ Population density is an important determinant of network cost in the telecommunications industry.⁹⁴ This suggests that an efficient ULLS rate for Band 2 in Australia should in fact be lower than the sample countries' nationally averaged ULLS rates. Thus the

⁹² For example, in France the regulator ARCEP accepts no geographic discrimination.

⁹³ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.42, Figure 6.1 International comparison of ULLS Monthly charge in AUD for second quarter of 2008.

⁹⁴ One would expect a deaveraged rate for metropolitan areas directly comparable to Band 2 to be lower than a nationally averaged rate since metropolitan areas have a higher teledensity and accordingly are less costly to serve on a per-line basis compared to more sparsely populated areas.

benchmark rates provide even stronger evidence that Telstra's proposed Band 2 rate is unusually high.

Retail prices

- 4.15 The ACCC has noted that in assessing the reasonableness of the terms and conditions in Telstra's undertaking, it may rely on various information including comparing the proposed access price with the access provider's retail price.⁹⁵
- 4.16 Optus agrees that useful information may be obtained by comparing the proposed access price with Telstra's retail price.
- 4.17 Telstra's average rate for residential line rental is approximately \$30 and has been in the \$20 to \$30 range for a number of years.⁹⁶ For many years before the arrival of internet-related revenue, Telstra covered its costs largely through this basic revenue item, the line rental charge.
- 4.18 It follows that once certain costs are subtracted, including the cost for adding voice capability (to turn an 'unconditioned' line into a 'conditioned' line, and retail costs (Telstra's unit avoidable retail costs for line rental and local calls are \$4.84/mth⁹⁷), the remaining cost will be the nationally averaged cost of an 'unconditioned' line. It is thus clear that the nationally averaged cost of an 'unconditioned' line is likely to be well below \$25, and that the actual cost of an 'unconditioned' line in metropolitan areas such as Band 2 is likely to be lower again.
- 4.19 Optus submits that this must cast significant doubt upon the credibility of the TEA model's cost estimates, and provides further evidence that Telstra's undertaking is unreasonable and should be rejected.

PIE II model cost estimates

- 4.20 Further relevant benchmarks for the TEA model are provided by cost estimates for ULLS service provision in Band 2 derived from the PIE II model, including both those estimated by the ACCC, and those estimated by Telstra.
- 4.21 As the ACCC has noted in its draft decision, it has recently (in June 2008) made ULLS pricing principles and indicative prices based on the PIE II model, parameterised with its own preferred cost assumptions. In that pricing principles determination, the ACCC indicated that monthly access charges of \$12.30 for 2005/06; \$13.70

⁹⁵ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.36

⁹⁶ ACCC, *Local carriage service and wholesale line rental - final pricing principles and indicative prices for 2008-2009*, August 2008, p.17

⁹⁷ ACCC, *Local carriage service and wholesale line rental - final pricing principles and indicative prices for 2008-2009*, August 2008, p.17

for 2006/07; \$14.30 for 2007/08 and \$16.00 for 08/09 were appropriate.⁹⁸ Further, the ACCC has set prices in arbitration of a number of ULLS access disputes in March 2008 for Band 2, determining prices consistent with these.

- 4.22 In its final determination of Optus' access dispute with Telstra, after more than two years of detailed analysis and consultation, the ACCC specified a ULLS monthly charge on a per service per month basis for Band 2 for the year to 30 June 2008 of \$14.30.⁹⁹ The ACCC stated that it was "*satisfied with its approach towards the interpretation of the criteria listed in subsection 152CR(1) of the TPA. Each of the criteria listed in that subsection has been taken into account in making this final determination.*"
- 4.23 Given that the criteria the ACCC must follow for setting price in the arbitration of an access dispute are substantially the same as those it must follow for considering the appropriate price in an undertaking, it follows that the price set by the ACCC in the access dispute must be a relevant benchmark for the TEA model. In particular, the considered view of the ACCC in the context of the access dispute that \$14.30 is the efficient cost of ULLS service provision must be given substantial weight in its assessment of the reasonableness of the TEA model (which estimates that \$47.86 the efficient cost of ULLS service provision).
- 4.24 Optus submits that the substantial discrepancy between the cost estimates produced by the PIE II model as noted above and the new cost estimates produced by the TEA model is a significant factor that bears upon the credibility of the TEA model's cost estimates – which at \$47.86 are almost three times the values estimated by the PIE II model.
- 4.25 Further doubt must be thrown upon the TEA model's estimates through a comparison with Band 2 cost estimates produced by the PIE II model and submitted by Telstra itself as efficient estimates of the cost of ULLS service provision in Band 2. Telstra's exact cost estimates for individual geographic bands using PIE II are confidential (and are likely to remain so, since they are acutely embarrassing for Telstra given its current ambit claim). However, it is possible to infer from publicly available data that the actual cost estimate for Band 2 must have been significantly lower than \$30.
- 4.26 Telstra requested a \$30 monthly access charge in its 2005 ULLS access undertaking, based upon cost estimates derived from PIE II. The geographically averaged network cost for the years 2007-08 was stated to be CiC. This is a weighted averaged value which was derived by averaging individual network cost estimates from all four geographic bands including Bands 3 and 4 (representing low teledensity regional, rural and remote areas with a relatively high

⁹⁸ ACCC, *Assessment of Telstra's Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.43

⁹⁹ ACCC, *Unconditioned local loop service access dispute between Telstra Corporation Ltd and Optus Networks Pty Ltd – Statement of Reasons for Final Determination*, April 2008, p.1
Commercial in Confidence

cost of service), weighted according to the number of SIOs in each band. The Band 2 component of the estimate, representing the cost of service provision in high teledensity metropolitan areas with a relatively low cost of service, must have been significantly below \$28 and likely at the low end of the \$20 to \$30 range.¹⁰⁰

- 4.27 It is instructive to recall that in 2003, Telstra claimed that PIE II was “highly advanced” and “the most sophisticated cost model ever developed” for the industry. In support of the robustness of the PIE II model’s cost estimates Telstra stated in 2005 that:

“The PIE II model is the best available model for estimating the TSLRIC of ULLS. PIE II has been reviewed by an international expert economist, Dr Bridger Mitchell, who concludes that the model is consistent with the principles of forward-looking efficient cost modelling and with the practices adopted in other jurisdictions.”

- 4.28 In summary, Telstra’s own previous cost model (PIE II), even when populated with parameters of Telstra’s own choosing, calculated a cost for Band 2 that was less than half the value of the equivalent estimates produced by the TEA model. Optus submits that this must cast doubt upon the credibility of the TEA model’s cost estimates.

Analysys model cost estimates

- 4.29 Further relevant benchmarks for the TEA model are provided by cost estimates for ULLS service provision in Band 2 derived from the Analysys cost model.¹⁰¹
- 4.30 The Analysys model is a bottom-up engineering-economic approach of estimating the long run efficient cost of providing services on the Australian fixed network over 2007-2012.¹⁰² It calculates a Band 2 network cost estimate of \$14.74 for 2008 (under the default assumptions used by Analysys).¹⁰³
- 4.31 Optus submits that this must cast significant doubt upon the credibility of the TEA model’s cost estimates.

¹⁰⁰ There are relatively few ULLS SIOs in Band 1 (compared to Band 2). According to the ACCC’s *Snapshot of Telstra’s customer access network as at 30 September 2007*, in Sept 2007 there were 20,911 Band 1 ULLS SIOs and 282,251 Band 2 SIOs. It follows that it is unlikely that the Band 1 cost would have had a significant impact upon the weighted average. That is, the fact that Band 1 costs are also low does not detract from the conclusion that the Band 2 component of the estimate must have been significantly below \$28. Band 3 and 4 costs, on the other hand, do have a significant impact on the average since they are (relative to Band 2) extremely high.

¹⁰¹ ACCC, *Analysys cost model for Australian fixed network services*, Discussion paper, December 2008

¹⁰² ACCC, *Analysys cost model for Australian fixed network services*, Discussion paper, December 2008, p.8

¹⁰³ ACCC, *Analysys cost model for Australian fixed network services*, Discussion paper, December 2008, p.48

5. Impact on Investment by Access Seekers

- 5.1 Telstra is proposing a substantial increase in the regulated price of the ULLS in Band 2 metropolitan areas, from \$14.30 (the regulated price at March 2008) to \$30.00 (the proposed undertaking price). In its draft decision the ACCC recognised that “*a significant, unanticipated rate increase may also reduce the incentive for access seekers and potential new entrants to make infrastructure-based investment such as in DSLAMs*”.¹⁰⁴
- 5.2 The ACCC has correctly identified the problem. Optus submits that the proposed substantial and rapid increase in the ULLS charge would significantly discourage investment in DSLAMs and associated infrastructure by access seekers.¹⁰⁵ Such investment is highly responsive to changes in the ULLS monthly charge and is very likely to be deterred by increases in that charge, particularly if pace of the increase is rapid rather than gradual.
- 5.3 Some of the key ‘prices’ relating to the ULLS monthly charge in Band 2 since declaration of the ULLS in 1999 are set out in the graph on the following page. These include the following prices:
- the price sought by Telstra in its undertakings;
 - the indicative price set by the ACCC through its pricing principles process; and
 - the arbitrated price set by the ACCC in resolving access disputes.
- 5.4 All three prices are represented on the vertical axis, with the timescale from declaration to present day on the horizontal axis. Figure 1 charts the trend in DSLAM investment by access seekers since declaration.¹⁰⁶ ¹⁰⁷ The number of DSLAMs installed during the period has been represented on the secondary axis along the same timescale where possible.

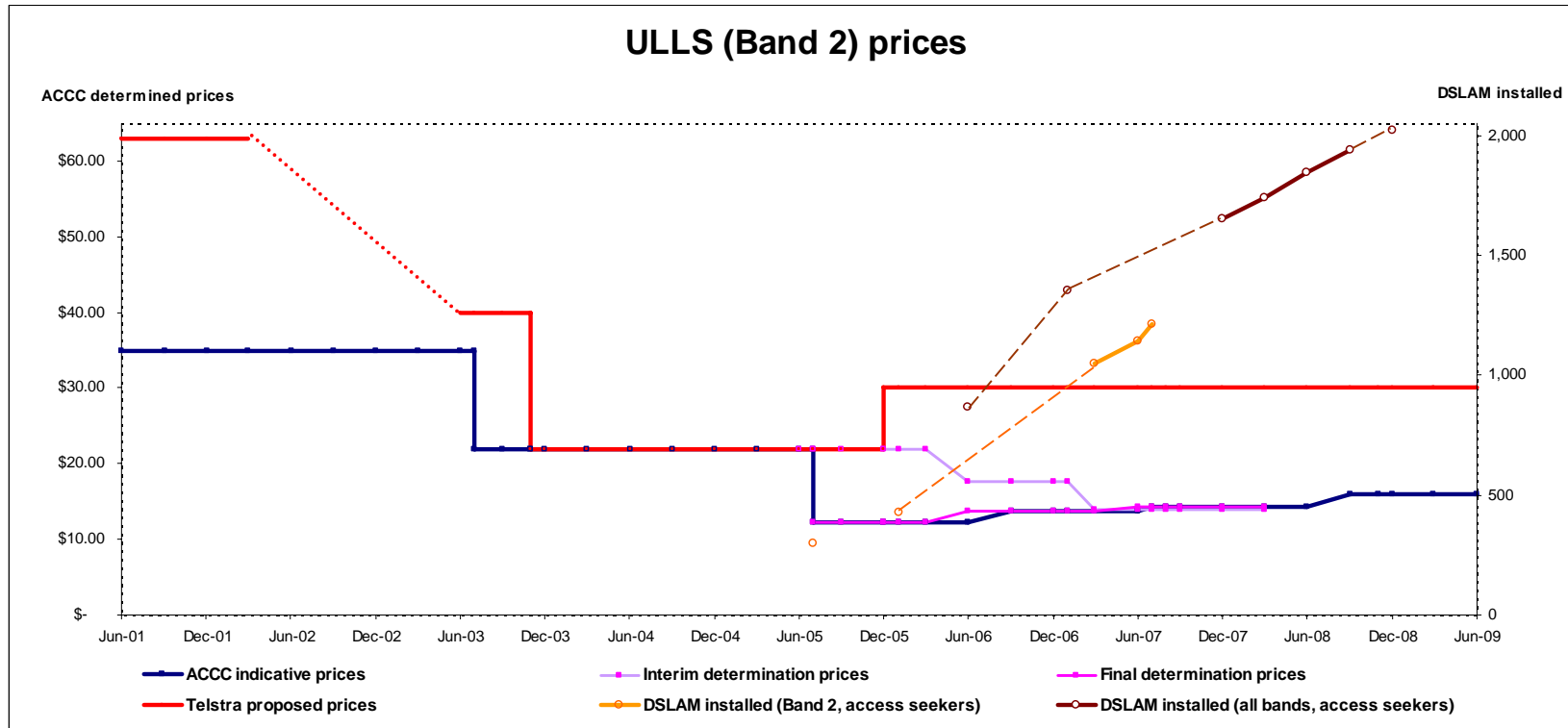
¹⁰⁴ ACCC, *Assessment of Telstra’s Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, November 2008, p.51

¹⁰⁵ Optus, *Telstra’s Access Undertaking for the Unconditioned Local Loop Service: Response to Discussion Paper*, August 2008, p.30

¹⁰⁶ ACCC, *Final Determination for model price terms and conditions of the PSTN, ULLS and LCS services*, October 2003, p.107

¹⁰⁷ ACCC, *Unconditional Local Loop Service pricing principles and indicative prices*, June 2008, p.44

Figure 1: DSLAM investment and trends in key ULLS prices since declaration ¹⁰⁸



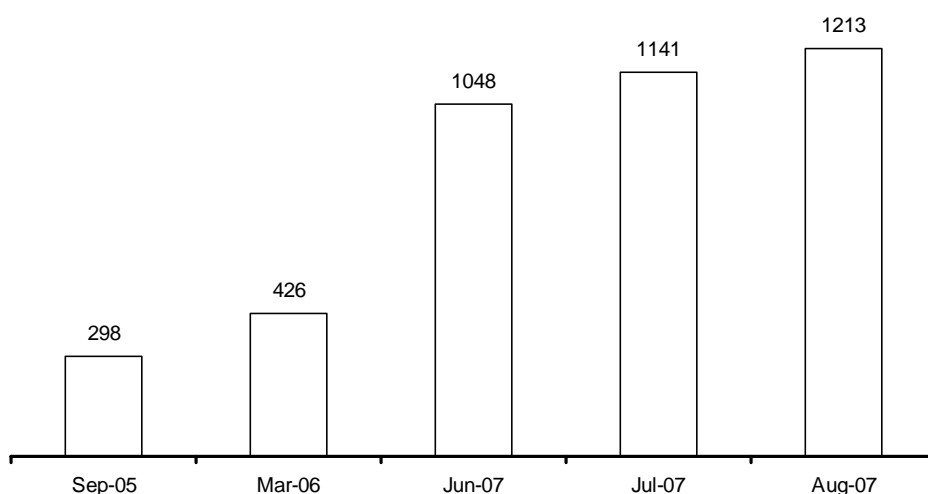
¹⁰⁸ Several assumptions have been made in producing this chart: (i) Prior to March 2002, Telstra’s proposed ULLS and the ACCC’s indicative prices are represented by the RSS/RSU prices indicated in the 2002 ULLS Pricing Principles; (ii) Dashed lines are linear extrapolations between two defined points where insufficient data has been found for the intervening time; (iii) Values for DSLAM installations are derived from several sources – total DSLAM installed by access seekers is derived from total number of non-Telstra DSL-enabled exchanges [ACMA, *Communications Infrastructure and Services Availability in Australia 2006-07*, 2007, p.5 and ACMA, *Communications Infrastructure and Services Availability in Australia 2008*, 2008, p.5]; and total DSLAM installed in Band 2 is derived from values publicly provided by Telstra [Telstra, *Telstra’s Local Carriage Service and Wholesale Line Rental Service Exemption Applications – Supporting Submission*, July 2007, p.22 and Telstra, *Supplementary material in support of Telstra’s Local Carriage Service and Wholesale Line Rental Service Exemption Applications*, August 2007, p.2].

5.5 The prices graphed above are likely to be amongst the main determinants of price expectations relating to the ULLS monthly charge in Band 2. From the graph, it is apparent that:

- Since December 2005, Telstra has consistently sought a price of \$30;
- The ACCC's indicative price decreased from \$35 to \$22 in 2003, then from \$22 to \$12.30 in 2005. However since June 2005, it has again gradually increased on an annual basis; and
- The arbitrated price set by the ACCC has tended to follow the indicative price fairly closely.

5.6 From the graph, it is also apparent that the roll-out of access seeker DSLAM networks commenced in 2005. By June 2007 some 1048 competitor DSLAMs have been deployed across metropolitan Australia in some 371 exchanges.¹⁰⁹ Figure 2 further illustrates the number of DSLAM installations deployed in metropolitan (Band 2) areas from September 2005 to August 2007. This indicates that during the initial two year period, the number of DSLAM installed by access seekers in Band 2 areas have increased by over 300 per cent.

Figure 2: DSLAM installed in Band 2 areas^{110 111}



5.7 There has been a strong positive trend in ULLS uptake since 2005. As indicated in Figure 3 there has been an increased take up of unconditioned local loop (ULL) and line sharing service (LSS), which

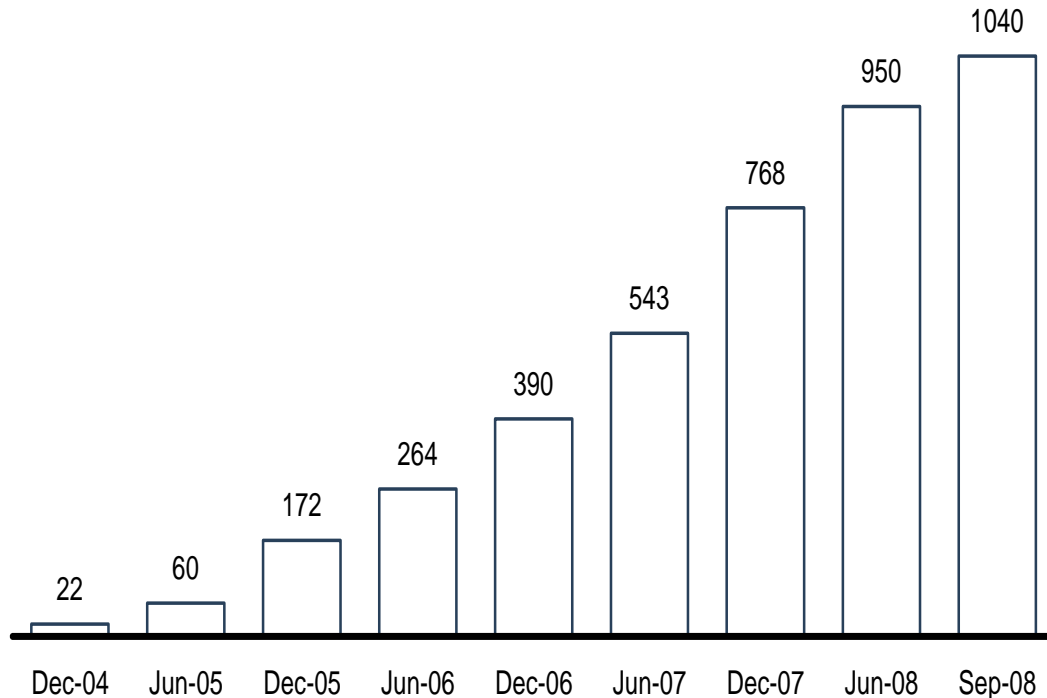
¹⁰⁹ Telstra, *Telstra's Local Carriage Service and Wholesale Line Rental Service Exemption Applications – Supporting Submission*, July 2007, p.22

¹¹⁰ Telstra, *Telstra's Local Carriage Service and Wholesale Line Rental Service Exemption Applications – Supporting Submission*, July 2007, p.22

¹¹¹ Telstra, *Supplementary material in support of Telstra's Local Carriage Service and Wholesale Line Rental Service Exemption Applications*, August 2007, p.2

grew in the order of 100 per cent in 2006.¹¹² There are now over a million unbundled services currently in operation.¹¹³

Figure 3: Australian unbundled lines - migrated customers (000s)^{114 115}



5.8 Overall investment in DSLAMs and associated infrastructure by access seekers has steadily increased in recent years. As at 30 June 2008, there were 2,757 DSL-enabled exchanges providing ADSL service coverage to 98 per cent of the Australian population.¹¹⁶

5.9 Table 1 below shows the number of DSLAM installed by ISPs in recent years. It shows that the DSLAM footprint of access seekers including Optus and TPG have almost tripled over a period of 2 years. As at January 2007, there was a total 3,768 DSLAMs installed.¹¹⁷ As at November 2008, there was a total 4,775 DSLAMs installed.

¹¹² ACCC, *Fixed Services Review – A second position paper*, April 2007, p.3

¹¹³ ACMA, *Communications Infrastructure and Services Availability in Australia 2008*, 2008, p.3

¹¹⁴ These customer migration figures represent ULL migration by both ULL and LSS unbundling methods. JP Morgan, *Australian broadband market in 2007*, 17 March 2008, p.14

¹¹⁵ ACMA, *Communications Infrastructure and Services Availability in Australia 2008*, 2008, p.5

¹¹⁶ ACMA, *Communications Infrastructure and Services Availability in Australia 2008*, 2008, p.5

¹¹⁷ ACMA, *Communications Infrastructure and Services Availability in Australia 2006-07*, 2007, p.5

Table 1: Number of DSL-enabled exchanges by carrier ^{118 119}

Service providers with own DSLAM infrastructure	DSL-enabled exchanges			
	Jun 2006	Jan 2007	Nov 2008	
AAPT	22	22	n/a	
Adam Internet	25	29	33	
Amcom	34	34	37	
EFTel	n/a	n/a	58	additional 29 listed as planned/in build
iiNet	245	266	308	additional 31 listed as proposed/in progress
Internode/Agile	47	73	115	additional 55 listed as planned/in build
MySoul	n/a	22	27	additional 1 listed as in build
Netspace Networks	n/a	20	413 ¹²⁰	additional 19 listed as proposed/soon
Nextep	n/a	95	n/a	
Onthenet	8	8	8	
Optus	100	304	366	additional 2 listed as soon
PowerTel	126	130	130 ¹²¹	
Primus	182	182	212	additional 26 listed as soon
Regional Internet Aust	6	6	n/a	
Telstra	2,109	2,432	2,754 ¹²²	
TPG	65	145	300	
TransACT	n/a	9	n/a	
TSN Internet	4	4	5	
Westvic Broadband	n/a	n/a	1	
Wideband Networks	1	2	5	
WidelineX	n/a	3	3 ¹²³	
TOTAL	2,974	3,786	4,775	
TOTAL (excl.Telstra)	865	1,354	2,021	

5.10 The graph below highlights the relationship between DSLAM investment and the ACCC's indicative prices.

¹¹⁸ ACMA, *Communications Infrastructure and Services Availability in Australia 2006-07*, 2007, p.5

¹¹⁹ These only include all active DSLAM enabled exchanges, as at 30 November 2008. [adsl2exchanges.com](http://www.adsl2exchanges.com), *ADSL2+ for Provider*, <http://www.adsl2exchanges.com.au> [accessed 4/12/08]

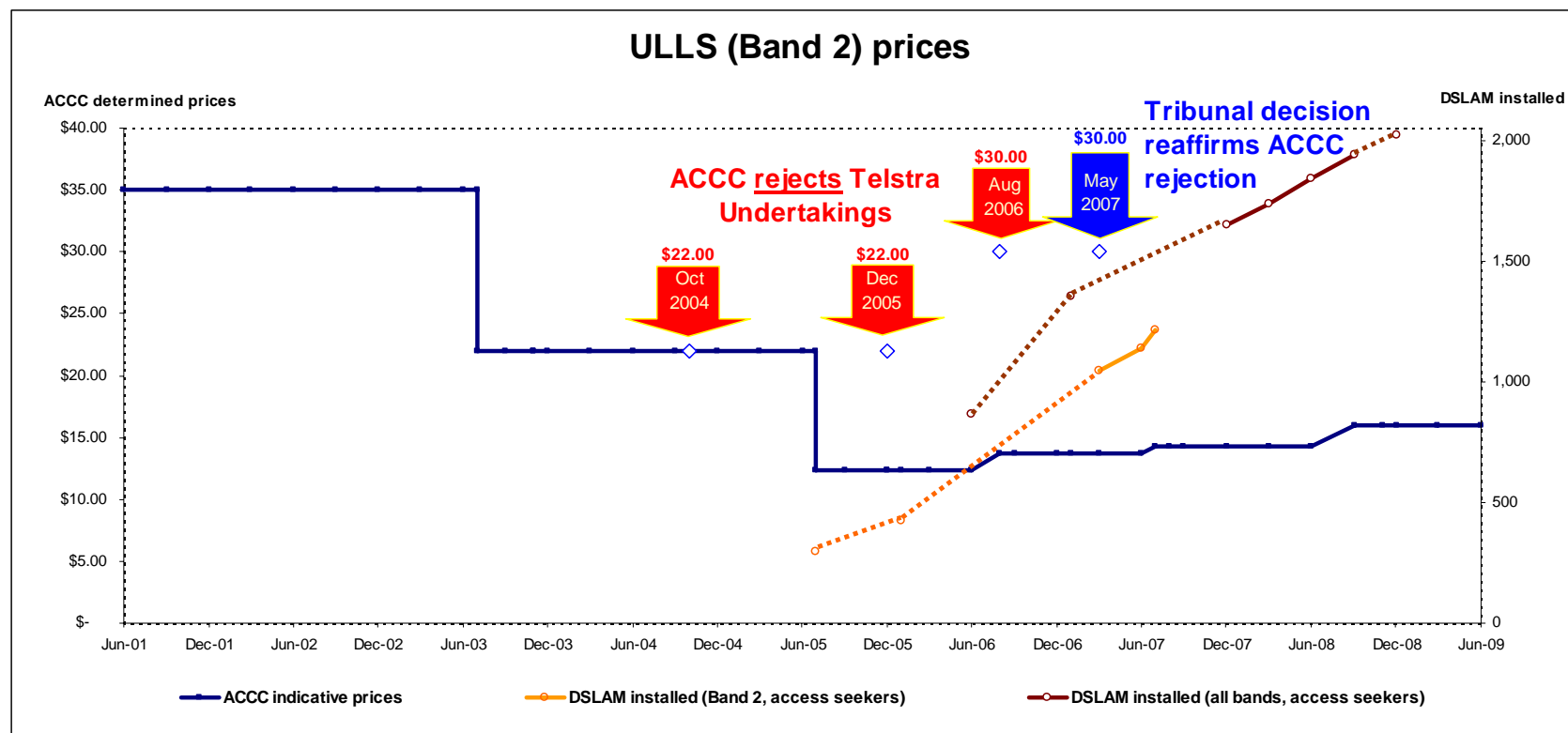
¹²⁰ This figure includes a mix of both Netspace's own DSLAMs and access via wholesale arrangements. Netspace Online Systems, "New plans and upgrades set Netspace apart," 11 August 2008, <http://www.netspace.net.au/pdfs/press/2008/netspace-press-20080811.pdf>

¹²¹ JP Morgan, *Australian broadband market 2007*, 17 March 2008, p.1

¹²² ACMA, *Communications Infrastructure and Services Availability in Australia 2008*, 2008, p.5

¹²³ WidelineX website, *ADSL2+*, http://www.widelineX.com.au/comm_serv_adsl2.html [accessed 4/12/08]

Figure 4: DSLAM investment and the ACCC indicative prices since declaration ¹²⁴



¹²⁴ The prices graphed include several assumptions: (i) During the period prior to March 2002, Telstra's proposed ULLS and the ACCC's indicative prices are representative of the RSS/RSU prices indicated in the 2002 ULLS Pricing Principles; (ii) All dashed lines are linear extrapolations where insufficient information has been found to provide a definitive trend between two defined points; and (iii) The values for DSLAM installations have been derived from several sources – total DSLAM installed by access seekers is derived from the total number of non-Telstra DSL-enabled exchanges [ACMA, *Communications Infrastructure and Services Availability in Australia 2006-07*, 2007, p.5 and ACMA, *Communications Infrastructure and Services Availability in Australia 2008*, 2008, p.5]; and total DSLAM installed in Band 2 is derived from values publicly provided by Telstra [Telstra, *Telstra's Local Carriage Service and Wholesale Line Rental Service Exemption Applications – Supporting Submission*, July 2007, p.22 and Telstra, *Supplementary material in support of Telstra's Local Carriage Service and Wholesale Line Rental Service Exemption Applications*, August 2007, p.2].

- 5.11 It is apparent from the charts and other data presented in this section that the total number of access seeker DSLAMs is strongly influenced by the indicative price set by the ACCC. The ACCC's indicative price has often been a key predictor of the arbitrated ULLS price and thus may be regarded as the key determinant of access seeker expectations of the ULLS price. Access seeker expectations of the ULLS price are a key determinant of DSLAM investment by access seekers. Allowing for a lag of a year or two for investment lead-time, it would appear likely that investment by access seekers in DSLAMs has been stimulated significantly by the ACCC's reductions in ULLS indicative prices in Band 2 first to \$22 and then later to \$14.30.
- 5.12 Further, investment has been significantly influenced by a number of key decisions. Since regulation, Telstra has submitted four undertakings with the ACCC with respect to the ULLS. Each undertaking was subsequently rejected on the grounds that Telstra's proposed method of recovering cost was not reasonable.¹²⁵ In May 2007, the Tribunal upheld the ACCC's decision to reject Telstra's 2005 undertaking. The figure above highlights the dates of the key ACCC and Tribunal decisions to reject each of Telstra's ULLS undertakings, and the Band 2 price level that was implicitly or explicitly rejected in each of these decisions.
- 5.13 The figure above shows that following each such decision there has been an increase in DSLAM investment by access seekers. Access seeker investment in ULLS infrastructure only started to become substantial after the ACCC indicated that a ULLS Band 2 price of lower than \$22 was likely (ie, when the ACCC rejected Telstra's \$22 undertakings in October 2004 and December 2005). This analysis provides further evidence that access seeker investment in infrastructure is strongly responsive to access seeker expectations of the price of the ULLS.
- 5.14 The message from this analysis should be clear: access seekers have made substantial investments in DSLAMs and associated infrastructure on the basis of a reasonable expectation that ULLS prices will remain close to the ACCC's indicative price, which is \$14.30 for the period 1 July 2007 to 30 June 2008 and \$16.00 for the period 1 July 2008 to 30 June 2009.¹²⁶ It follows that Telstra's proposed substantial and rapid increase in the ULLS charge from \$14.30 (the regulated price at March 2008) to \$30.00 (the proposed undertaking price) would indeed significantly discourage investment in DSLAMs and associated infrastructure by access seekers.

¹²⁵ ACCC, *Unconditioned local loop service (ULLS) – Final pricing principles*, November 2007, p.28. The ACCC also considered that geographically averaged pricing was unreasonable. ACCC, *Unconditioned local loop service (ULLS) – Final pricing principles*, November 2007, p.19

¹²⁶ ACCC, *Unconditioned Local Loop Service Pricing Principles and Indicative Prices*, June 2008, p.44

6. Impact on Competition

- 6.1 The ACCC has stated in its draft decision that it “does not presently consider that the Proposed Monthly Charge in the 2008 Undertaking would promote competition” since the TEA model is not “able to support a conclusion that the Proposed Monthly Charge reflects the efficient forward-looking costs of providing the ULLS”.¹²⁷
- 6.2 Optus agrees that the proposed increase in the monthly access charge to \$30 would not promote competition. Optus notes that Telstra retains a dominant position in fixed line telecommunications, however, reasonable pricing of the ULLS in recent years has improved competition. The proposed increase in the monthly access charge risks reversing these gains.

Telstra’s dominant position in fixed line telecommunications

- 6.3 Telstra retains a dominant position in fixed line telecommunications, as the Australian Competition Tribunal recognised in its December 2008 decision on Telstra’s WLR and LCS exemption application, in which the Tribunal observed that “on any view Telstra still has significant market power with 89% of all fixed voice lines being supplied over Telstra’s PSTN, of which approximately 80% are lines retained by Telstra”.¹²⁸
- 6.4 Competition in fixed line telecommunications has failed to develop to more than a limited extent since 1997. This was especially the case in the period up to 2005-06 when competitors relied heavily on a resale model to build scale and to compete with Telstra. This exposed competitors to the full impact of Telstra’s anti-competitive practices. The result was that Telstra’s rivals were not able to make significant in-roads into the incumbent’s dominance in the proportion of customers served, in revenue, or in profitability. In some areas Telstra’s dominance even increased over this period.
- 6.5 In 1998, Telstra had 99 per cent of basic access lines.¹²⁹ After 8 years of resale-based competition Telstra still retained over 79 per cent of end user access lines (2005-06 figures).
- 6.6 The following table, sourced from a 2007 ACCC report¹³⁰, sets out data on the revenues and profitability of selected industry participants for 2005-06. It indicates that by 2005-06, Telstra still had around 65% of the industry revenue and almost 80 per cent of

¹²⁷ ACCC, *Assessment of Telstra’s Unconditioned Local Loop Service Band 2 monthly charge undertaking*, Draft Decision, p.48-49

¹²⁸ Application by Chime Communications Pty Ltd, ACompT File No.2 of 2008, (22 December 2008) at [33]

¹²⁹ Productivity Commission, *Telecommunications Competition Regulation*, September 2001, p.107

¹³⁰ ACCC, *Fixed Services Review: A Second Position Paper*, April 2007

the total industry profit pool. Telstra's margins at 42% are well above those of any of its competitors.

Exhibit: Selected financial data of telecommunication companies (2005-06)

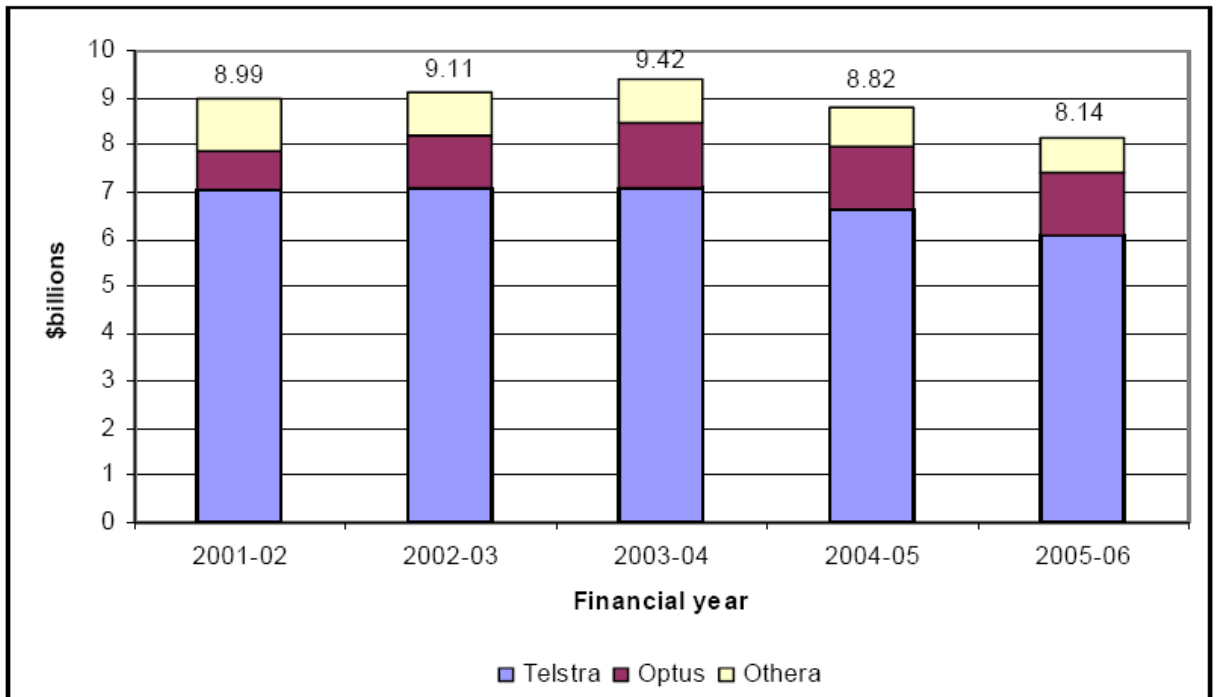
Company	Revenue		EBITDA ⁹		EBITDA Margin ¹⁰
	(\$M)	% of total	(\$M)	% of total	(%)
Telstra	22750	65.3%	9584	78.8%	42.1%
Optus	7192	20.6%	2038	16.8%	28.3%
Vodafone	1938	5.6%	366	3.0%	18.9%
Hutchison	925	2.7%	30	0.2%	3.3%
AAPT	1192	3.4%	75	0.6%	6.3%
PowerTel	199	0.6%	40	0.3%	20.0%
Macquarie Telecom	249	0.7%	5	0.0%	1.8%
iiNet	248	0.7%	25	0.2%	9.9%
People Telecom	111	0.3%	1	0.0%	0.5%
Unwired	23	0.1%	-17	-0.1%	-71.4%
Amcom	32	0.1%	11	0.1%	34.0%
Total	34860	100.0%	12156	100.0%	34.9%

Source: All data sourced from company financial reports. Time period is the financial year ended 30 June 2006, except PowerTel and Hutchison (December 2006) and Optus and Vodafone (March 2006). Revenue and EBITDA data have been rounded to the nearest whole number.

- 6.7 The above table does not present the full picture of Telstra's dominance since it includes revenues from other services, such as Mobile services, where Telstra's market share is lower. A better guide is to look at revenues from the provision of fixed line voice services. The following chart indicates whilst in 2000-01 Telstra took 78.7% of total industry revenues from all PSTN services, by 2005-06 it still accounted for 74.6% of those revenues.¹³¹

¹³¹ ACCC, *Telecommunications Market Indicator Report 2005-06*, August 2007, p.4

Exhibit: Total PSTN services revenue 2000-01 to 2005-06



6.8 Telstra’s margins on fixed line services are also much higher than its reported average margin of 42%. In a briefing paper Telstra released to the market in September 2005, it reported margins across fixed line services of between 55-88%.¹³²

6.9 By contrast under the resale model the margins available to Telstra’s competitors are tight and have been progressively squeezed by increases in resale wholesale prices with no corresponding change in retail prices. The ACCC has recognised that Telstra’s dominance continues in a number of recent decisions.¹³³ Reflecting the weak nature of resale based competition, in its “Telecommunications competitive safeguards for 2005-06” report, the ACCC noted that:

“While resellers have made some inroads to Telstra’s retail market share in the provision of basic access and local calls, this has been minimal, and there are significant barriers to new entrants obtaining sufficient scale to compete sustainably. Further, the overriding characteristic of the market is that there is still a large degree of reliance on Telstra’s network for the provision of local telecommunications services; hence there is very little infrastructure-

¹³² Telstra briefing paper “A digital compact and National Broadband plan”, released 7 September 2005

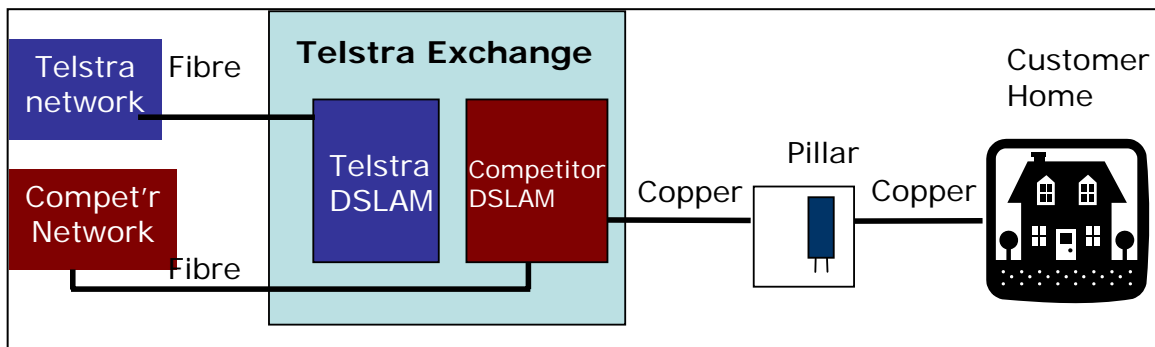
¹³³ Eg: ACCC, *Fixed services review – a second position paper*, April 2007; ACCC, *Telstra’s local carriage service and wholesale line rental exemption applications*, Final Decision

based competition. These factors combine to provide the major source of Telstra's profitability and market power."

ULLS-based competition has improved in recent years

- 6.10 There has been one recent stand-out regulatory policy success that is starting to deliver genuine competition. This is the requirement for Telstra to unbundle its local copper loop network.
- 6.11 The decision to require Telstra to unbundle its copper loop and provide competitors with direct access to the copper was taken as long ago as 1999 with the declaration of the Unbundled Local Loop Service (ULLS) and Linesharing Services (LSS). However, it is only recently with changes in equipment costs and clearer access price signals from the ACCC that use of this service for the mass consumer market has become viable.
- 6.12 This service has enabled competitors like Optus, Primus, Internode and iiNet to deploy their own electronic equipment in the Telstra exchange, known as a DSLAM, to provide both voice and high-speed data services in direct competition to Telstra. Customers are connected to the competitor's equipment by leasing Telstra's last mile copper loops (the ULLS or LSS service) between the Telstra exchange and the customer premise.

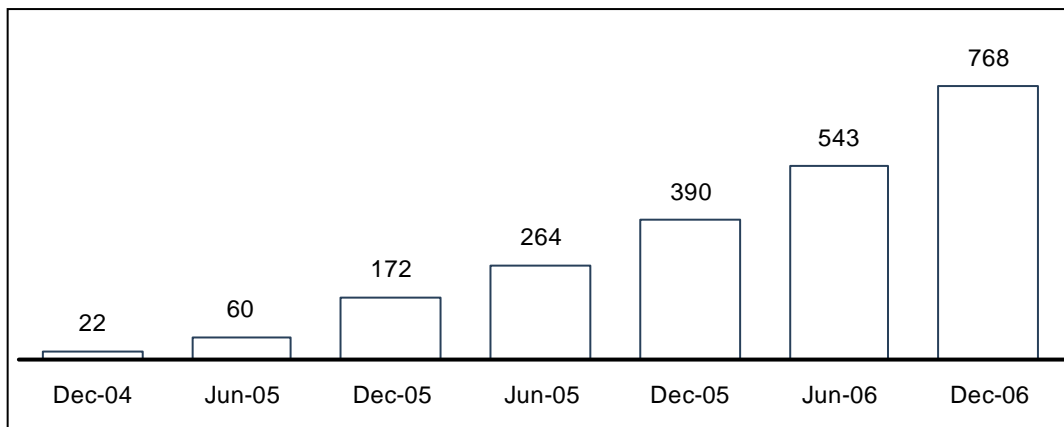
Exhibit: Today's network with unbundling



- 6.13 Roll-out out of these DSLAM networks commenced in 2005. By the start of 2008 some 1084 competitor DSLAMs have been deployed across metropolitan Australia¹³⁴ in some 387 exchanges. As indicated by the table below these are being used to by Telstra's competitors to serve a significant customer base.

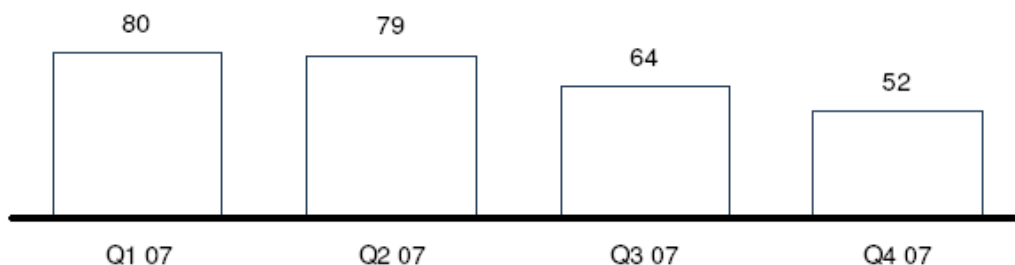
¹³⁴ Telstra, *Local Carriage Service and Wholesale Line Rental Exemption Applications – Supporting submission*, October 2007, p.2

Exhibit: Australian unbundled lines - migrated customers (000s)¹³⁵



- 6.14 This development has driven important benefits to consumers – through lower prices, improved quality of service and greater innovation.
- 6.15 Competitors are using their own infrastructure to deliver innovative services such as Optus’ Fusion product (\$79/month for broadband plus telephony with unlimited local, long distance and calls to Optus Mobile) and iiNet’s Naked DSL (\$49.95 for broadband – without the requirement to pay for line rental).
- 6.16 The improvements in pricing have been tangible and are demonstrated by the following chart, which shows how consumers have benefited from aggressive marketing of Broadband services, in particular through capped plans.

Exhibit: Average cost of data for standalone plans surveyed, if whole cap used (\$/GB)



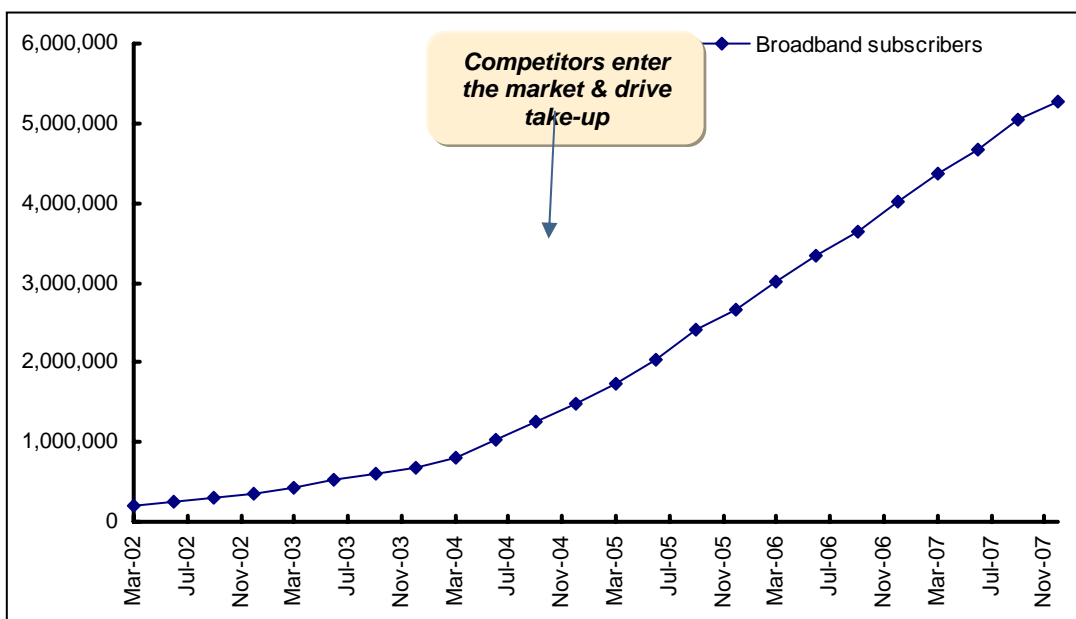
- 6.17 The above chart is taken from a report for the Internet Industry Association by Spectrum Value Partners. Spectrum conclude that:

¹³⁵ Spectrum Value Partners analysis, JP Morgan, *Australian broadband market 2007*, 17 March 2008

“As noted above, the other area where competition is manifesting itself is the cost of data. Operators are increasing data caps allowances without a corresponding increasing in price. For example, Optus has doubled the cap of their low end plans to 0.4GB and 2 GB without increasing the monthly charge.”¹³⁶

- 6.18 The strengthening of competition is helping Australia’s broadband market to catch up with the world, recovering from a delayed and sluggish start. The chart below shows how growth jumped sharply once competitors such as Optus entered the DSL market.

Exhibit: Australian broadband uptake¹³⁷



- 6.19 The clear competitive benefits of unbundling have been recognised by the Chairman of the ACCC, Graeme Samuel, in a recent speech to the Australian Telecommunications Users Group:

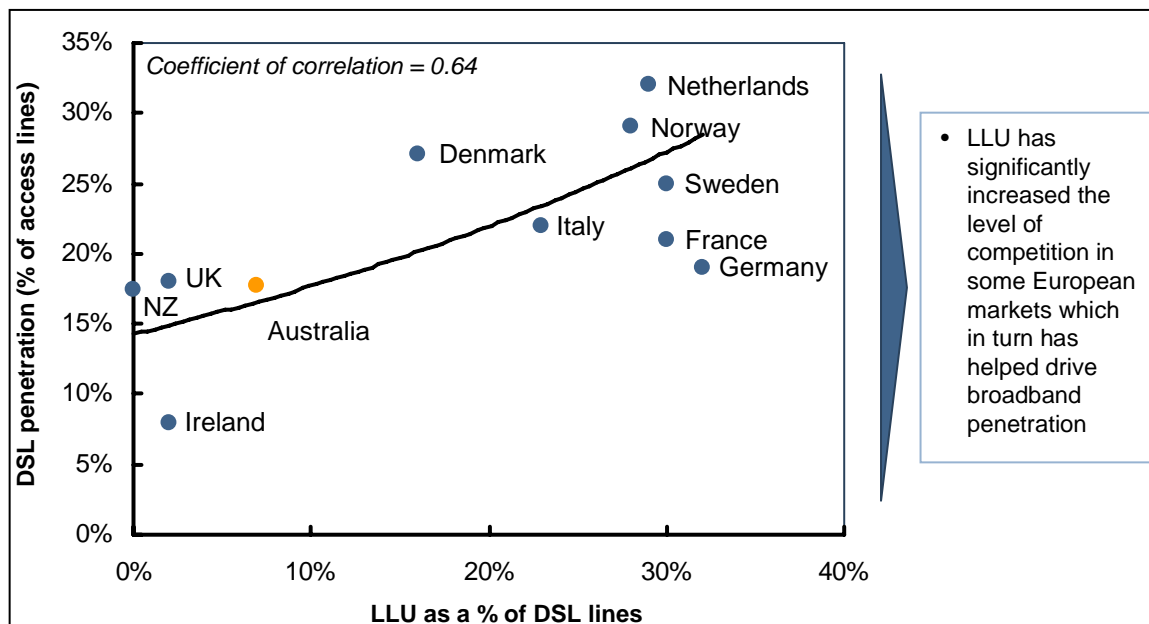
“Increased competition in the provision of broadband services has seen progressively lower broadband prices, increased data caps, better speeds and new innovation and products (such as naked DSL). This increased competition in broadband by other ISPs and carriers owes a significant debt to being able to obtain access to Telstra’s copper loop. Competitors have this access through the declaration of the unconditioned local loop service (ULLS) and the line sharing service (LSS)”¹³⁸.

¹³⁶ Spectrum/IIA Broadband Index – Fifth Edition (Q4 2008), 14 January 2008.

¹³⁷ Spectrum Value Partners analysis; ACCC, *Snapshot of broadband deployment as at 30 September 2006*; JP Morgan, *Australian broadband market 2007*, 17 March 2008

¹³⁸ ATUG, 2008 Annual Conference, Graeme Samuel – 13 March 2008

Exhibit: DSL penetration vs. LLU share of DSL lines (%)



An increase in the price of the ULLS would reverse competitive gains

6.20 The Tribunal discussed the legislative objective which lay behind the promotion of competition concept in the decision on the ULLS (Telstra Corporation Ltd (No 3) [2007] ACompT 3), where it stated:

*...the Act aims to promote competition because of the benefits that result from the process of competition, such as lower prices for consumers and the displacement of inefficient suppliers by efficient suppliers of services.*¹³⁹

6.21 Optus submits that the proposed increase in the ULLS charge to \$30 would not result in lower prices for consumers and would not facilitate the displacement of inefficient suppliers by efficient suppliers. Rather, the converse would apply. Access seekers would be forced to pay the \$30 access charge to Telstra and this charge would largely be passed on to end users. Telstra's retail unit, which does not face the \$30 access charge,¹⁴⁰ would be able to displace access seekers from the market by charging lower prices than they are able to charge.

¹³⁹ Telstra Corporation Ltd (No 3) [2007] ACompT 3, para 99

¹⁴⁰ Whilst Telstra claims that \$30 represents efficient cost, even if this were true it would only be true in the long run (that is, the time period in which all inputs are variable and a new network is built). Long run costs are not relevant for business purposes. In the short run Telstra faces only the short run marginal cost of supply, which is substantially smaller than \$30.

- 6.22 As the ACCC has recognised, the setting of ULLS prices above efficient costs will only “inflate costs to access seekers who use the ULLS to compete with Telstra in the voice and DSL markets using their own DSLAM infrastructure.”¹⁴¹
- 6.23 If access seekers are unable to match Telstra’s retail charges as a result of the increase in the ULLS access charge then customers will leave access seekers and become Telstra customers. Research carried out by Ipsos Loyalty for Optus shows that price is the main reason given by customers for their decision to churn to a different operator, **CiC**.
- 6.24 The impact of such an increase in the ULLS price would only be exacerbated by the fact that the ACCC has recently decided to grant exemptions from regulation of the WLR and LCS and PSTN OA services within identified metropolitan exchanges with the objective of encouraging access seekers to rely to a greater extent on the ULLS.¹⁴² These decisions remove from access seekers the possibility of alternative sources of supply and would exacerbate the impact on competition of an increase in the ULLS price.
- 6.25 In conclusion, the proposed charge in the undertaking would thus have the effect of reducing competition and strengthening Telstra’s monopoly position in fixed line telecommunications. The competitive gains brought about by the ULLS (noted in the previous section) would be reversed.

¹⁴¹ ACCC, *Unconditioned Local Loop Service Access Dispute between Telstra and Chime Communications – Statement of Reasons for Final Determination*, March 2008, p.22

¹⁴² ACCC, *Telstra’s local carriage service and wholesale line rental exemption applications – Final Decision*, August 2008; ACCC, *Telstra’s PSTN originating access exemption applications – CBD and metropolitan areas*, Final Decision, October 2008

Appendix A: Economic rationale for the tilted annuity

[Attached as separate document.]

Appendix B: International Benchmarking

[Attached as separate document.]

Appendix C: Urban Growth in Australian Capital Cities

[Attached as separate document.]

Attachment 1: Network Strategies Information Paper December 2008

[Network Strategies, Dec 2008, Information Paper, *Issues from ACCC Draft*, attached as separate document.]

Attachment 2: Network Strategies Report December 2008

[Network Strategies, Dec 2008, Confidential Report, *Review of Telstra TEA model version 1.1 – additional comments*, attached as separate document.]

Attachment 3: Statement on Input Costs

[Statement of **CiC** attached as separate document.]

Attachment 4: Statement on Surface Barriers

[Statement of **CiC** attached as separate document.]

Attachment 5: Optus Letter to Telstra Regarding Access to TEA Model

[Confidential letter dated 7 October 2008 attached as separate document.]