

Optus Public Submission to
Australian Competition and Consumer Commission
on
Telstra's Access Undertaking for the Unconditioned Local Loop
Service: Response to Discussion Paper

August 2008

Table of Contents

1. Introduction and Executive Summary	3
Introduction.....	3
Executive summary	3
2. Approach to Access Pricing	5
The purpose of TSLRIC+ pricing principles	5
The NBN rollout and the build-buy decision.....	6
Recovery of investment costs	7
Proposed approach	8
3. Consistency with the Standard Access Obligations	10
Whether the undertaking specifies terms and conditions in respect of services other than the declared service.....	11
Supply, quality and fault handling in relation to the declared services.....	12
Interconnection of facilities	15
Provision, timing and content of billing information.....	19
4. Reasonableness of Terms and Conditions	21
Ability to properly assess the TEA model	23
Telstra's proposed ULLS monthly charge.....	30
Network design and engineering rules.....	33
Cost valuation	40
Trenching costs	42
Trench sharing	45
Methodology to calculate operations and maintenance and indirect cost factors	48
Cost of capital	50
Calculating annualised and unitised ULLS costs.....	56
Depreciation.....	58
Reasonableness of the non-price terms and conditions.....	64
Appendix A: ULLS Service Description.....	70
Attachment 1: Optus Letter re Conditions for Access to TEA Model	71

1. Introduction and Executive Summary

Introduction

- 1.1 Optus welcomes the opportunity to respond to the Australian Competition and Consumer Commission (ACCC)'s Discussion Paper on Telstra's access undertaking for the Unconditioned Local Loop Service (ULLS).
- 1.2 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 \$48 for the ULLS in Band 2.

Executive summary

- 1.3 This current undertaking from Telstra represents its latest flagrant attempt to subvert the regulatory process. In recent years both the ACCC and the Australian Competition Tribunal have rejected Telstra's claims for a price of \$30. The ACCC should fast track its consultation and reject this undertaking so that we can move to the appeal hearing that Telstra will inevitably seek.
- 1.4 Notwithstanding this view, the present consultation provides an opportunity to air a number of important issues for the telecommunications industry.
- 1.5 First and foremost, the ACCC's pricing method for the ULLS is outdated and needs to change, especially with the advent of the National Broadband Network (NBN). The ACCC sets prices based on the cost of a hypothetical copper access network, which means Telstra 'recovers' costs *as if its network was brand new* – even though its copper network is up to one hundred years old in places. The ACCC's pricing approach is thus exceptionally generous to Telstra.
- 1.6 A key purpose of this exercise is to give Telstra's competitors the incentive to build their own access network, if they can do it cheaper than Telstra. But it no longer makes any sense to do this, given the Government's decision to build a new NBN. No telecommunications company will be able to build its own access network to compete with government-subsidised natural monopoly infrastructure like the new NBN. So if the ACCC continues its current approach, all it will achieve is to allow Telstra to profit from its competitors by 'recovering' double compensation for costs that it has already recovered years ago – and in some cases it never incurred in the first place.

- 1.7 Optus will argue in this submission that the ACCC's pricing approach for fixed line telecommunications services needs to change, to reflect the fundamental shift now underway in the industry. The ULLS price should be based upon Telstra's forward-looking cost of service provision, including a reasonable rate of return on the written down value of its existing network assets in addition to efficient operating and maintenance costs.
- 1.8 Second, Telstra's new cost model (which it claims as evidence for its \$30 price) is not credible. The \$48 cost estimates that it produces are so extreme that they should be rejected out of hand, especially given that Telstra's own previous cost model (PIE II) calculated a cost for Band 2 that was less than half this amount, even when populated with parameters of Telstra's own choosing. 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. Telstra now dismisses results based on PIE II, since they are no longer convenient.
- 1.9 Telstra's new "TEA" 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. We should not take Telstra's existing network's cost inefficiencies into the NBN environment. Optus will argue in this submission that Telstra's cost model will systematically overestimate the efficient cost of supply of the ULLS, and cannot be relied upon to support Telstra's proposed access price.
- 1.10 Third, with this undertaking Telstra is attempting to perpetuate the unfair advantages it has enjoyed over its competitors to date, which result from Telstra giving itself a better standard of service than it gives its competitors. Telstra has undermined its rivals in a host of areas, including time frames for supply of new customers, fault handling, access to exchange buildings and many more. By neglecting to provide for equivalence of service standards, this undertaking does nothing to remedy the situation. Optus will argue in this submission that the terms of Telstra's undertaking are not consistent with its legal obligations and are not reasonable.
- 1.11 Telstra's objective in lodging this undertaking is clearly to sabotage its competitors' business strategy by promoting uncertainty in the terms and conditions of access they can expect regarding the ULLS. Optus proposes that the ACCC should move decisively to reject Telstra's undertaking as the abuse of process that it is and establish pricing certainty, so that Optus (and Telstra's other competitors) can get on with the job of delivering competitive telecommunications services to Australians.

2. Approach to Access Pricing

- 2.1 In setting access prices for the ULLS, the ACCC has for a number of years applied a pricing principle known as Total Service Long Run Incremental Cost (plus a contribution to indirect cost) or “TSLRIC+”. In its discussion paper for the ULLS undertaking the ACCC noted that for some services, an access price that adheres to TSLRIC+ principles is likely to be consistent with the legislative criteria, and that it had previously noted that the application of TSLRIC+ principles is likely to be appropriate for services possessing particular characteristics.¹
- 2.2 However the ACCC also acknowledged in its discussion paper that its approach to access pricing is not static and will be determined on a case-by-case basis, and that it will take into account submissions in respect of its approach to pricing.²
- 2.3 Optus considers that the ACCC should re-examine its pricing approach for the ULLS, especially given the imminent construction of a National Broadband Network (NBN). In this chapter Optus will propose that the ULLS price should reflect Telstra’s forward-looking efficient cost of service provision, including a reasonable rate of return on the written down value of its existing network assets in addition to efficient operating and maintenance costs.

The purpose of TSLRIC+ pricing principles

- 2.4 One of the key underlying purposes behind the TSLRIC+ pricing principle relates to the promotion of efficient investment in infrastructure. TSLRIC+ pricing is intended to promote efficient investment by the access provider (by providing for a normal commercial return on efficient investments in infrastructure).
- 2.5 It has also been argued that TSLRIC+ would promote efficient “build or buy” decisions by access seekers. If the access seeker could build its own access network at a lower cost than the access provider is able to do, it would ‘bypass’ the access provider’s network. If prices are set at long run efficient prices (based upon TSLRIC+), then any bypass that occurred would be efficient.
- 2.6 If these efficient investment objectives did not apply and if the access provider’s legitimate interest in recovering its costs was satisfied, then lower access prices would more efficient than TSLRIC+. It is well recognised that prices based upon marginal cost (which is below TSLRIC+) are superior in terms of promoting allocative efficiency. A price set below TSLRIC+ would encourage more efficient levels of utilisation of the network, and better promote competition (at least in the short term), compared to a TSLRIC+-based price.

¹ ACCC, Discussion paper p23

² ACCC, June 2008, *Telstra’s Access undertaking for the Unconditioned Local Loop Service: Discussion Paper*, p.23

- 2.7 However an access price below TSLRIC+ could in some circumstances have negative consequences, including that such a price could:
- discourage future investment by the access provider – and be inconsistent with the access provider’s legitimate business interests – if it resulted in the under-recovery of investment costs; and
 - discourage access seekers from investing in access networks themselves where such investment would be efficient.
- 2.8 In setting an access price, the ACCC seeks to balance its competing objectives by setting an access price based upon the efficient cost of rebuilding the CAN afresh in each regulatory period – that is, it determines that prices must reflect efficient cost according to TSLRIC+ pricing principles. As well as setting a price ceiling (at the level of TSLRIC+), this approach also sets a price floor (also at the level of TSLRIC+). The TSLRIC+ price floor is intended to avoid the potential negative consequences of setting too low a price, by:
- allowing the access provider to recover its efficiently incurred costs of investment; and
 - encouraging access seekers to build their own access network where they are capable of doing so at lower cost than the incumbent.
- 2.9 It is important to note, however, that setting a price floor at TSLRIC+ is necessary *only* where the potential negative consequences of setting a low access price (noted above) apply. If these two risks do not apply, then it would be significantly more efficient (and reasonable) to set prices below TSLRIC+.
- 2.10 Optus considers that in the current circumstances neither of the two risks discussed above apply, for reasons that will be developed in the following sections.

The NBN rollout and the build-buy decision

- 2.11 In applying its legislative objectives, the ACCC must take into account changing circumstances. One relevant change is the imminent rollout of a fibre to the node (FTTN) network as part of the Government’s National Broadband Network (NBN) project.
- 2.12 The new FTTN network will have strong natural monopoly features, in that it will have large fixed costs and low variable costs. It will be built as an overlay network on the copper CAN, will not be capable of being unbundled and will serve the bulk of end users. It will be subsidised through the injection of \$4.7 billion from the federal Government. In this new telecommunications landscape, it is not expected that access seekers will build competing fixed line access networks. Any such competing investment by an access seeker could not properly be considered an *efficient* investment in infrastructure

(given that all end users can be served at least cost by the one FTTN network); nor would such an investment be commercially feasible (given the Government subsidy and scale advantage of the FTTN).

- 2.13 Given these bottleneck characteristics of the national broadband network, setting a price floor at TSLRIC+ would *not* encourage access seekers to build their own access network where they are capable of doing so at lower cost than the incumbent. Equivalently, there is no risk that setting an access price below TSLRIC+ might discourage efficient investment in access networks by access seekers.

Recovery of investment costs

- 2.14 Recovery of the capital costs associated with investment in the network is in the access provider's legitimate business interests. This principle is subject to some caveats, however. First, as the ACCC noted in its discussion paper, the ULLS network costs should only include those costs that Telstra legitimately incurs in the provision of the service.³ Second, investment costs need be recovered only once – double recovery is not in the access provider's legitimate business interests.
- 2.15 Optus would observe that Telstra's copper network is up to one hundred years old in places. The capital outlay required for the construction of Telstra's copper access network has been depreciated significantly, and Telstra's costs of constructing the copper CAN have in fact been recouped many times over.
- 2.16 But the ACCC's TSLRIC+ ACCC sets prices based on the cost of a hypothetical copper access network, which means Telstra 'recovers' costs as if its network was brand new. It follows that to set prices at TSLRIC+ would allow Telstra to recover a great deal more than its efficient costs – it effectively allows Telstra to recover its costs twice.⁴
- 2.17 To meet the objective of allowing Telstra to recover the costs that it legitimately incurs in providing the ULLS, it is not necessary to set a price floor at TSLRIC+. Rather, it would be sufficient to set an access price based upon Telstra's forward-looking cost of service provision, including a reasonable rate of return on the written-down value of its network assets in addition to efficient operating and maintenance costs.
- 2.18 A further consequence of this point is that there is no need for the ACCC to give weight to Telstra arguments that the risk of "regulatory error" on some issue (eg, WACC) may lead to a failure to recover investment cost and thereby cause a capital strike. There is clearly no real risk of Telstra failing to recover its investment costs – since TSLRIC+-based prices exceed Telstra's real cost of service provision. It also implies there is no justification for the ACCC to take a

³ ACCC, Discussion Paper, p26

⁴ This is particularly the case where Telstra is seeking to recover costs it did not itself incur, such as trenching which requires boring through concrete driveways and returfing.

conservative (ie, favourable to Telstra) approach to assessing Telstra's cost submissions.

Proposed approach

- 2.19 Given the discussion in the previous two sections, it is clear that setting a price floor at TSLRIC+ cannot be justified by the objective of promoting efficient investment by either access seekers or the access provider. It follows that it is not appropriate to base access prices on a forward looking analysis of the cost of building a network. Optus submits that the TSLRIC+ approach should not be used to determine prices for the ULLS.
- 2.20 A better approach is to determine a regulatory asset base (a RAB), based upon the written down value of Telstra's existing network assets. To allow Telstra to recover its efficiently incurred costs, it would be sufficient to set an access price based upon Telstra's forward-looking cost of service provision, including a reasonable rate of return on the RAB in addition to efficient operating and maintenance costs.
- 2.21 A similar approach has been adopted by Ofcom in determining the value of the telecommunications access network. In its Final Statement on the value of BT's access network it states:
- “Ofcom has ... decided to create a regulatory asset value, or RAV, to represent the remaining value of the pre-1997 copper access network assets rather than continuing to value those assets at their current cost. The value of the RAV is set to equal the closing historical cost accounting value for the pre 1 August 1997 assets for the 2004/5 financial year and its value will be increased each year by the Retail Price Index to ensure it is not eroded by inflation.”*
- “The RAV relates only to assets which were in place at the time of the switch from HCA to CCA, i.e. 1 August 1997. All assets added after this date have been treated consistently under CCA and will continue to be so. This means that over time the asset base will move toward a full CCA valuation as pre-1997 assets are retired and replaced with new ones. As a result the RAV will gradually “unwind” and costs will be calculated on a full CCA basis.”*
- 2.22 This approach is superior to the TSLRIC+ approach as it gives investors certainty regarding returns on their investments and ensures that investments are not over-recovered due to underestimation of asset lives. For example, in the TSLRIC+ approach if the life of an asset is underestimated then the network owner will be paid for buying a new asset even when the existing asset is still in use. This does not occur in the RAB approach.
- 2.23 In allowing actual expenditures to be included in the RAB, an incentive must be created in order for these actual expenditures to be efficient. This can be achieved by the regulator reviewing expenditure forecasts as part of each control period to determine whether that

expenditure is prudent and/or via an incentive mechanism which gives the network owner an incentive to spend less than forecast levels of expenditure.

- 2.24 A price for the ULLS based on Optus' proposed approach would be below TSLRIC+-based prices, however it would still allow Telstra to recover its efficiently incurred costs of providing the ULLS. Optus submits that there is no risk that setting such an access price might result in the under-recovery of investment costs by Telstra, discourage future investment by Telstra or be inconsistent with Telstra's legitimate business interests.
- 2.25 By contrast, if the ACCC continues its current approach, all it will achieve is to allow Telstra to profit from its competitors by 'recovering' costs that it has already recovered years ago – and in some cases it never incurred in the first place.
- 2.26 In summary, 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 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 ULLS undertaking is unreasonable since it exceeds Telstra's efficient cost of providing the service.

⁵ While 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.

3. Consistency with the Standard Access Obligations

- 3.1 Under s152BV(2)(b) of the Trade Practices Act 1974, the ACCC must not accept an undertaking unless it is satisfied that it is consistent with the standard access obligations (SAOs) as set out in s152AR. In assessing an undertaking's consistency with the SAOs, the ACCC considers the terms and conditions in the undertaking and considers whether an access provider in giving effect to those terms and conditions would be able to satisfy each of the applicable obligations.⁶
- 3.2 In this chapter Optus will contend that in giving effect to the terms and conditions in its undertaking, Telstra would not be able to satisfy all of the SAOs. In particular, Optus will make the following submissions:
- Telstra's ULLS description is potentially more limited than the ULLS Declaration to the extent that it would affect the ability of Telstra to meet its SAOs;
 - Telstra's undertaking should (but does not) specify terms which guarantee access seekers an equivalent level of service, particularly areas where Telstra does not provide access seekers with a level of service equivalent to that it provides to itself, including:
 - i) time frames for supply of new customers;
 - ii) capacity thresholds on daily ULLS cutovers for supply of new customers;
 - iii) copper quality;
 - iv) fault handling;
 - v) billing information; and
 - vi) TEBA;
 - the POI described in the undertaking is not consistent with the SAO to permit interconnection of facilities;
 - the undertaking's definition of 'boundary of a telecommunications network' should be consistent with the ACCC definition; and
 - it may now be an appropriate opportunity for the ACCC to reconsider amendments to the ULLS service description to ensure declaration has a continuing effect in the event of network modernisation.
- 3.3 In summary, Optus submits that Telstra's undertaking is not consistent with the SAOs, and therefore should not be accepted.

⁶ ACCC, Discussion Paper p20

Whether the undertaking specifies terms and conditions in respect of services other than the declared service

3.4 The ACCC has posed the following question regarding this issue:

Q 5.1.2A Do you think Telstra's ULLS description is more limited than the ULLS Declaration to the extent that it would affect the ability of Telstra to meet its SAOs? If so, provide examples of potential situations where you consider the ULLS service as described by Telstra would not fall within the scope of the Declaration for the declared service.

- 3.5 The ACCC states that the service description in Telstra's undertaking differs from the ULLS service description set out in the ULLS declaration, and that Telstra's ULLS service description involves the use of a continuous metallic twisted pair whilst the Declaration involves the use of an unconditioned copper based wire.
- 3.6 Optus would observe however that Telstra has referred to the use of a continuous metallic twisted pair only in its 2005 undertaking but not in its current 2008 undertaking.
- 3.7 Nevertheless, Optus considers whilst Telstra's service description of ULLS on a high level appears very similar to the ACCC's current ULLS service description, the wordings the wordings and underlying definitions of key terms between the two are in fact quite different. Optus also observes that the definitions of TCAM, POI and Network Boundary in Telstra's 2008 undertaking are quite similar to its 2005 undertaking.
- 3.8 Optus refers the ACCC to Table A.1 in Appendix A, which draws out the similarities and differences in wording between Telstra's ULLS service description in its 2008 undertaking, its 2005 undertaking and the ACCC current ULLS service description.
- 3.9 Optus observes that the ACCC has in its *August 2006 Final Decision of the Assessment of Telstra's ULLS monthly charge undertaking* discussed the Telstra's ULLS service description in its 2005 undertaking.
- 3.10 Although the wordings of the two undertakings (Telstra 2005 ULLS undertaking and Telstra 2008 undertaking) are not exactly the same, as shown in Table A.1 in Appendix A, they are very similar in nature and Optus considers some of ACCC comments would still apply to Telstra's 2008 ULLS service description.
- 3.11 The ACCC has in its *August 2006 final decision* noted some of the limitations of Telstra's ULLS service description. The ACCC stated that:
- the terms and conditions contained in the undertaking could be interpreted to apply:

- only to the services supplied by Telstra (the Telstra Services) not to the relevant (corresponding declared service) if there are differences in definition or specification –Telstra would not be required to supply a form of declared service that differs from its service; or
- to all possible form of the declared service –Telstra could then refuse to supply any form of the declared service other than the Telstra service specified in the undertaking.

The ACCC’s reading of the undertaking is that it applies only to a specific service supplied by Telstra but not to other possible forms of the declared service.

- Telstra ULLS service only states it will support a connection with DC continuity and that there is no other requirement for the Telstra ULLS to support other services.⁷
- 3.12 Optus concurs with the ACCC’s view that Telstra ULLS service description appears more limited than the ACCC current service description as it refers only to Telstra service rather than the declared service–“Telstra Unconditioned Local Loop service” rather than “The unconditioned Local Loop service”. Both interpretations identified by the ACCC on how the terms and conditions will apply are in some way limiting the current ACCC service description.
- 3.13 The ACCC has asked for examples of potential situations where Optus considers the ULLS service as described by Telstra would not fall within the scope of the Declaration for the declared service. This is considered below under interconnection of facilities.
- 3.14 In conclusion, Optus submits that Telstra's ULLS description is potentially more limited than the ULLS Declaration to the extent that it would affect the ability of Telstra to meet its SAOs.

Supply, quality and fault handling in relation to the declared services

- 3.15 The ACCC has posed the following question regarding this issue:

Q 5.1.2B If you consider that Telstra's undertaking should specify requirements, relating to the provision of equivalent supply, quality and fault handling of the declared service, provide example(s) of terms that are consistent with the obligation of providing equivalent supply, quality of service and fault handling performance.

- 3.16 The ACCC states that the undertaking does not contain terms and conditions specifying how Telstra will satisfy its obligations regarding

⁷ ACCC, Assessment of Telstra’s ULLS monthly charge undertaking Final Decision, August 2006 P29

the provision of equivalent supply, quality and fault handling of the declared service.⁸

- 3.17 Optus submits that Telstra does not provide access seekers with a level of service equivalent to that it provides to itself, particularly in the areas of time frames for supply of new customers; capacity thresholds on daily ULLS cutovers for supply of new customers; copper quality; and fault handling.

Supply

- 3.18 Provisioning time frames differ according to the ULLS Band. To initiate a ULLS order, Optus sends an ULLS request to Telstra who will respond with acceptance or rejection. If the order is accepted, Optus will then send a Cutover Notification advice which will nominate a cutover date. This Cutover date must be from five to thirty Clear Business Days from the date of receipt of the Cutover Notification by Telstra for Bands 1 and 2, and from ten to thirty Clear Business Days after the date of receipt of the Cutover Notification by Telstra for Bands 3 and 4.
- 3.19 The effect of this is that for Band 1&2 the connection can only occur, at absolutely best case, 7 days (and more typically 9 days) after we take the order from the End User and in Bands 3 to 4, 12 days after connection. This applies to both in-place services as well as services that require a new connection. The delays in the provisioning process expose Optus to potential loss of customers and/or significant CSG claims.
- 3.20 By contrast, Telstra Retail can take an order from a customer and connect the service within 2 days if there is an in place service. Clearly access seekers' provisioning time frames are not equivalent.
- 3.21 In addition to these transactional issues, Telstra has placed an arbitrary cap (Capacity Threshold) on daily ULLS cutovers at an exchange level AND at a macro overall daily level. This cap is 15/day per exchange and 1500 cutovers per day. **CiC** The application of the cap is not applied 100% of the time but Optus has no visibility as to how, or when, it will apply. In June 2008, Telstra Wholesale rescheduled 2,399 Optus customer cutover dates (representing 11.8% of all orders)⁹ as a consequence of this cap. The application of this capping is unnecessary especially as Optus provides detailed forecasts at the exchange level for the next 3 months and macro forecasts for the next year. Telstra appears to make little attempt to size its workforce in response to access seekers' demand forecasts.
- 3.22 By contrast, it is a safe assumption that Telstra uses best endeavours to deploy its workforce in accordance to its own needs. Telstra does not

⁸ ACCC, Discussion Paper p21

⁹ Source: e-mail from James Coburn (Telstra Wholesale), Wednesday, 30 July.

apply capacity thresholds to itself, as Telstra admitted in a letter to Optus earlier this year:¹⁰

“Telstra does not supply ULLS, SSS or SSS-DLS transfers to itself. Therefore the Capacity Thresholds are not directly applicable to Telstra. However, Telstra’s PSTN activities are subject to resource/workforce scheduling constraints, as well as spatial workspace considerations, which may result in PSTN activities being rescheduled to a date other than originally requested”

Quality

3.23 On copper quality, while Telstra has been willing to attempt to rectify telephony faults within the CSG periods, it has not been willing to rectify any fault that manifests itself in a degradation of the quality of the broadband service experienced by the end user customers of access seekers. Such faults are not given any SLA by Telstra.

Fault handling

3.24 On fault handling, the level of service provided by Telstra Wholesale to access seekers has been poor. Optus has a CSG obligation to its own customers to repair faults within a specified period of time. To meet our obligation, we rely on Telstra to provide maintenance on the copper (but not the Customer Premises Equipment), i.e. POI to Network Boundary. Over the last six months Telstra Wholesale’s performance in meeting SLAs has been particularly poor. Below is a table summarising the proportion of genuine faults where Telstra did or did not meet targets for restoration, between January and June 2008.

3.25 In summary, Telstra failed to meet targets for approximately 13,000 out of 25,000 genuine faults experienced by end user customers of Optus (a 52% failure rate).¹¹

Table 3.1: Faults (not) restored by target timeframe, Jan - June 2008

Restored within Target - Telstra Fix	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Grand Total
No	1649	2696	1737	2207	2056	2606	12951
Yes	1719	1330	1826	2337	2485	2165	11862
Grand Total	3368	4026	3563	4544	4541	4771	24813

Restored within Target - Telstra Fix	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Grand Total
No	49%	67%	49%	49%	45%	55%	52%
Yes	51%	33%	51%	51%	55%	45%	48%

3.26 In summary, Telstra has not met its obligation of providing equivalent supply, quality of service and fault handling performance.

¹⁰ Letter from Tim Cameron, Telstra Wholesale, to Anna Gum Gee, Optus, 15 June 2008

¹¹ Telstra has attributed its failure to meet SLAs to factors including Major Service Disruptions (e.g. extreme weather), lack of staff, IT system issues and delays in logging faults. NB: Telstra also rejects faults caused by the access seeker or located within the end user’s internal wiring, however such faults have already been excluded from the above table.

3.27 Accordingly, Optus considers that Telstra's undertaking should specify requirements relating to the provision of equivalent supply, quality and fault handling of the declared service. In particular, it should specify terms which guarantee access seekers an equivalent level of service (with specified SLAs for each and penalties if these are not met) in the following areas:

- time frames for supply of new customers;
- capacity thresholds on daily ULLS cutovers for supply of new customers;
- copper quality; and
- fault handling.

3.28 Given that such terms are absent from the current version of the undertaking, Optus considers that in giving effect to the terms and conditions in its undertaking, Telstra would not be able to satisfy the obligation of providing equivalent supply, quality of service and fault handling performance.

Interconnection of facilities

3.29 The ACCC has posed the following question regarding this issue:

Q 5.1.2C Do you think the POI and Network Boundary described in the undertaking is consistent with the SAO to permit interconnection of facilities? If not, please explain, and propose alternative terms that you consider are consistent with the SAOs.

3.30 As shown in Table A.1 in Appendix A, the definitions of TCAM, POI and Network Boundary in Telstra's 2008 undertaking are very similar to its 2005 undertaking. The only difference Telstra has made to these terms since its 2005 undertaking are that for:

- POI: it has changed the words "ULL End Customer" to "End User"; and
- Network Boundary: it has changed the words "Telstra network" to "End User" and "End User" to "ULL End Customer".

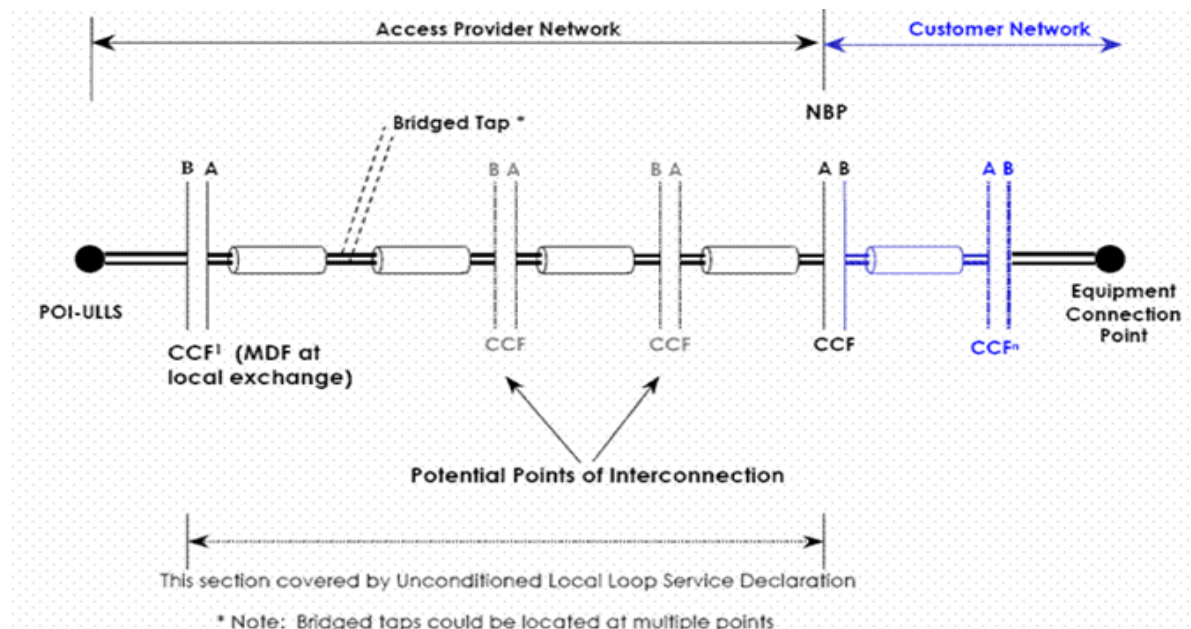
Definition of POI

3.31 The ACCC has previously discussed this issue in its *August 2006 Final Decision of the Assessment of Telstra's ULLS monthly charge undertaking*. The ACCC stated that "it is unclear why the POI would be defined by relation to a TCAM when the use of a ULL should mean that there is no Telstra equipment involved in the provision of services to the end user. It would be expected that the access seeker would provide the customer access module if it was acquiring an ULLS.

While the ULLS line would attach to Telstra’s MDF, the ACCC understands that an MDF would not be considered as a TCAM.”

- 3.32 Optus concurs with the ACCC’s point that the customer access module (CAM) is in fact owned by access seekers. Optus provides the CAM to its customers and it would therefore be incorrect to say the CAM is Telstra owned.
- 3.33 Optus further observes that even if the CAM is currently owned by Telstra, this may not necessarily be the case when the potential National Broadband Network (NBN) is built. Telstra might not be the ultimate owner of the NBN, as there are other potential bidders such as Terria. If that is the case, the term contained in the undertaking would be inconsistent with the SAO as Telstra will not be obliged to provide ULLS to access seekers.
- 3.34 Optus observes that Telstra has changed the definition of POI slightly from the ACCC service description. Telstra states that the POI “is an agreed point of interconnection” whilst the ACCC service description states it is “a potential point of interconnection”. Optus submits Telstra’s definition of POI is more narrowly defined than the ACCC’s definition. Diagram 1 below shows the simplest case of an end-to-end service operating from a single point of interconnection located at the exchange. The lower point of CCF (Cross Connect Facility) is the potential point of interconnection.

Diagram 3.1



Source: Communications Alliance¹²

¹² Communications Alliance, INDUSTRY CODE ACIF C559:2006 PART 1 ULLS PERFORMANCE REQUIREMENTS, p21

- 3.35 As shown in Diagram 1, the point of interconnection can therefore be in a number of places and it is not always easy to reach agreement with Telstra each time a ULLS service is connected. If Telstra and its access seeker cannot agree upon a point of interconnection, Telstra would not be then obliged to provide ULLS to its access seekers. It could provide Telstra with the excuse to exempt itself from the SAO as it can choose to reject any of the proposed points of interconnection from the access seeker and then simply say agreement cannot be reached.
- 3.36 Another concern is that the Telstra's TEA Model's network cost estimates are based on a Telstra Exchange-based ULLS service where the ULLS POI is located at the Telstra Exchange; however it is not clear that the POI will in fact remain at the exchange. If the current undertaking was accepted, and if Telstra subsequently chose to move the agreed ULLS POI to a downstream location such as a fibre node in the emerging FTTN scenario, Telstra could continue to charge access seekers the access cost associated with the Telstra Exchange-based ULLS service – even though the actual Telstra ULLS copper cable run could be only a few metres long (from an end-user's premises to the fibre node) as against the several kilometres long Telstra ULLS copper cable run required previously (to the redundant Telstra Exchange). This scenario would severely disadvantage access seekers as the TEA Model does not provide differential cost estimates for the various potential alternate downstream ULLS POI scenarios envisaged in ACCC's ULLS service description.
- 3.37 Optus submits that the POI described in the undertaking disadvantages access seekers and is not consistent with the SAO to permit interconnection of facilities.

Definition of Network Boundary

- 3.38 Optus observes that when comparing Telstra's definition of Network Boundary with the ACCC definition, the Telstra definition has added in two additional points including *“(a) if there is an MDF in the building and the line is connected to the MDF – a two wire point on the side of the MDF nearest to the End User; and (b) if paragraph (a) does not apply but the line is connected to a network termination device located in, on or within close proximity to, the building – the side of the device nearest to the End User.”*
- 3.39 Optus submits the two additional points inserted by Telstra are unnecessary as they have already been covered under s22(4)(a) of the Telecommunications Act. The additional points are not consistent with the Telecommunications Act. As such, Optus proposes that Telstra should remove the two additional points and revert to the ACCC's and the Telecommunication Act's definition of 'boundary of a telecommunications network'.

Alternative terms

- 3.40 Optus proposes that, to ensure the terms are consistent with the SAOs, they should be exactly the same as the ACCC's service description.
- 3.41 Optus however wishes to also reiterate its view that in the event of a network modernisation, amendments to the ULLS service description may be necessary to ensure declaration has a continuing effect.
- 3.42 Optus has previously proposed to amend the terms as per our March 2007 letter and the ACCC opened a public inquiry on this issue. The public inquiry however was suspended in December 2007 as the ACCC believed there was no pressing need to vary the ULLS service description at that time.
- 3.43 Optus proposes that given Telstra seeks to vary the ACCC ULLS service description in its undertaking, it may now be an appropriate opportunity to reconsider this issue. We have previously provided the ACCC with our reasons for amendment and our position still stands today. Optus refers the ACCC to its letter dated 15 March 2007, 26 February 2008 and its submission to the ACCC Discussion Paper in June 2007.

Telstra Exchange Building Access

- 3.44 Optus submits that Telstra does not provide access seekers with a level of access to Telstra exchange buildings (TEBA) equivalent to the level of access that it provides to itself.¹³ This issue is discussed in greater detail later in this submission at section 4 in the discussion on the reasonableness of non-price terms and conditions.
- 3.45 Telstra's undertaking does not specify requirements relating to equivalence or non-discriminatory service provision with regard to TEBA. Given that terms relating to TEBA are absent from the current version of the undertaking, Optus concludes that Telstra's undertaking does not contain non-price terms and conditions that ensure that access is provided to access seekers and to Telstra Retail on an equivalent and non-discriminatory basis.
- 3.46 Consequently, Optus submits that the terms and conditions in Telstra's undertaking do not satisfy the standard access obligations specified in section 152AR of the Act, in particular:
- i) the obligation to permit interconnection of its facilities with the facilities of the access seeker; and
 - ii) the obligation to take all reasonable steps to ensure that the access seeker receives interconnection fault detection, handling

¹³ Access to ULLS requires access seekers to deploy a DSLAM in close proximity to the Telstra exchange. This typically requires the Access Seeker to "lease" space in a Telstra exchange. Indeed, Telstra's terms and conditions for the supply of ULLS require access seekers to have signed its Facilities Access Agreement which enables access seekers to lease Telstra Exchange Building Access (TEBA) space.

and rectification of a technical and operational quality and timing that is equivalent to that which the access provider provides to itself.

Provision, timing and content of billing information

3.47 The ACCC has posed the following question regarding this issue:

Q 5.1.2D Should the undertaking contain further terms and conditions relating to the provision, timing and content of billing information? If not, please provide reasons for that view. If so, please propose alternative terms that you consider are consistent with the SAOs.

3.48 The ACCC observes that

- the undertaking makes reference to the ULLS Ordering and Provisioning Code, indicating that Telstra will provide access seekers with information in Telstra's records about the cable plant used to provide ULLS but that Telstra makes no representation as to the accuracy of the information.¹⁴
- the undertaking states that access seekers are responsible for billing end users for telecommunication services.
- under s152AR(7) of the Act and Trade Practices Regulation 1974 (Cth) Regulation 28s, an access provider must provide certain type of billing information to a service provider in a manner and form agreed by the access provider and service provider.¹⁵

3.49 Optus accepts that access seekers are responsible for billing the End User. However, in order for an access seeker to be capable of billing its end use customers in a timely manner, Telstra must provide in a timely manner any transactional data that is required to enable billing by access seekers. At the very least, Telstra should provide such transactional data according to a timeframe consistent with the timeframe it follows when billing access seekers. There is at least one instance where this is not the case.

3.50 For each ULLS cutover, Optus receives a ULLS Completion Advice. This notification is sent via a batch file, four times daily. This is the only notification provided to Optus by Telstra Wholesale. This notification is crucial because it triggers Optus' own customer billing. Optus cannot trigger billing for its own End Users until the ULLS Completion Advice is received.

3.51 According to the ACIF C569, the SLA for receiving this notification is one clear business day. Therefore, if a ULL is cutover on a Friday afternoon, Telstra may send Optus the ULLS Completion Advice on

¹⁴ ACCC, Discussion Paper p22

¹⁵ ACCC, Discussion Paper p22

the following Tuesday – and still be technically compliant with the ACIF C569.

- 3.52 However, Telstra Wholesale commences billing Optus for the ULLS (line rental and calls) for a given customer *immediately* – ie, starting on the actual day of cutover (Friday in the example above).
- 3.53 The impact of the delay by Telstra Wholesale in sending Optus the ULLS Completion Advice is that for up to 3 days Telstra receives revenue from Optus which Optus is unable to recover from its own end use customer. Any billing records generated before the ULLS Completion Advice is received are unassigned to any activated customer account – and must be written off by Optus. That is Optus underbills its own customers for both rental and calls while paying Telstra the correct amount.
- 3.54 Optus estimates that Telstra Wholesale’s delay in providing Optus with ULLS Completion Advice costs Optus approximately \$750,000 per annum.
- 3.55 Optus has requested that Telstra Wholesale provide the ULLS Completion Advice on the day of cutover. However, while Telstra Wholesale have responded by attempting to send the ULLS Completion Advices on the day of cutover, Telstra have maintained that they are complying with the ACIF code by sending the ULLS Completion Advice within one clear business day.
- 3.56 It is clearly administratively feasible for Telstra Wholesale to provide the ULLS Completion Advice on the day of cutover – given that it is able to bill Optus for the same customer from the day of cutover. Optus considers it highly unlikely that Telstra itself would forego the opportunity to bill its own retail customers. It follows that it is highly likely that Telstra Retail is provided with the ability to bill its own end use retail customers from the day of cutover.
- 3.57 In summary, for this particular billing issue, the ACIF code requirement (one clear business day) does not require Telstra to provide access seekers with a service which is either timely or at an equivalent level to that it provides to itself.
- 3.58 Accordingly, Optus considers that Telstra's undertaking should specify requirements relating to the provision, timing and content of billing information. It should specify terms which guarantee that access seekers receive a level of service equivalent to that it provides to itself and in particular it should specify that Telstra Wholesale will provide access seekers with the ULLS Completion Advice on the day of cutover.
- 3.59 Given that such terms are absent from the current version of the undertaking, Optus considers that in giving effect to the terms and conditions in its undertaking, Telstra would not be able to satisfy its obligations regarding billing information.

4. Reasonableness of Terms and Conditions

- 4.1 In considering whether to accept or reject Telstra's undertaking, the ACCC must consider whether the terms and conditions in the undertaking are reasonable having regard to s152AH of the Act.
- 4.2 In support of the proposed price in its undertaking, Telstra has relied on cost estimates produced by its network cost model, the TEA model.
- 4.3 Optus considers that the ACCC cannot be satisfied that Telstra's proposed ULLS monthly charge is reasonable, since the ability of access seekers to properly assess the TEA model has been limited, the proposed monthly charge represents a sudden and significant price increase and in any case the TEA model appears likely to significantly overestimate the efficient cost of supply of the ULLS.
- 4.4 In this chapter Optus will explain that the ability of access seekers to properly assess the TEA model has been limited, due to a lack of transparency in the model's operation, its use of a pre-processed network database, the lack of the geographic information required to properly verify the model, the lack of any proof of the integrity of the data used in the model and not least the onerous confidentiality arrangements imposed by Telstra.
- 4.5 Optus will contend that Telstra's proposed increase in the ULLS charge would result in expropriation of the value of sunk investments made by both access seekers and end use consumers, and thereby impact on expectations about the stability of telecommunications service prices.
- 4.6 Optus will submit that Telstra cannot derive any support from the TEA model's cost estimates because the model is flawed and its cost estimates are likely to significantly overestimate the efficient cost of supply of the ULLS, because it:
- is based on network design and engineering rules that are not likely to lead to an efficient network design, since the approach is based upon the unsupported assumption that Telstra's historical node layout is efficient, the degree of optimisation in the model is overstated and some of the engineering rules appear to be less than efficient;
 - uses copper cable costs and joint costs that are likely to be above 'replacement' cost;
 - overcompensates Telstra for trenching costs since its assumptions about surface barriers result in trenching costs which exceed efficient forward looking costs and which exceed costs incurred by Telstra historically;
 - significantly underestimates the level of trench sharing in new estates;

- uses inappropriate methodology to calculate operations and maintenance factors, and in particular, the proportions are likely to be inflated because the value for network capital costs in the RAF is based upon the depreciated value of assets, it does not recognise that a new entrant's network with modern equipment would be cheaper to maintain than Telstra's legacy network and it incorrectly assumes that operations and maintenance costs in Band 2 may be approximated by costs estimated using the total value of all the services in the RAF;
- overestimates Telstra's legitimate rate of return on capital by using inappropriate comparators in calculating the applicable equity beta, by extending the upper value of the range of WACC values by more than the lower value and by using a point estimate higher than the mid-point of the range;
- departs from methodology accepted by the ACCC in not incorporating a tilted annuity formulation for determining annual capital costs; and
- calculates depreciation schedules using an incorrect asset life for main cable (10 years) which is far too short.

4.7 Finally, Optus submits that the undertaking does not contain non-price terms and conditions that ensure that access is provided to access seekers and to Telstra itself on an equivalent and non-discriminatory basis (as discussed in Chapter 2). As a result of this omission, the undertaking does not promote competition, particularly in areas where Telstra does not currently provide access seekers with an acceptable level of service, including:

- Telstra Exchange Building Access (TEBA);
- time frames for supply of new customers;
- capacity thresholds on daily ULLS cutovers for supply of new customers;
- copper quality;
- fault handling; and
- notification of information required for billing (on the day of cutover).

4.8 In summary, Optus submits that the ACCC cannot be satisfied that the access price proposed in Telstra's undertaking reflects the efficient costs of supply of the ULLS; or that the terms and conditions of Telstra's undertaking are reasonable. It follows that Telstra's undertaking cannot be accepted.

Ability to properly assess the TEA model

- 4.9 In support of the proposed price in its undertaking, Telstra relies on cost estimates produced by its network cost model, the TEA model.
- 4.10 The ACCC has posed the following questions regarding the ability of interested parties to properly assess the TEA model:

Q 5.2.3A(i). Is the documentation provided by Telstra sufficiently comprehensive and clear for parties to understand and navigate the TEA model? If not, indicate what other information you require to be able to assess the TEA model.

Q 5.2.3A(ii). Is the TEA model sufficiently flexible to allow reasonable ranges of values for key parameters to run different scenarios at an appropriately disaggregated level? If not, provide evidence to support your reasons.

Q 5.2.3A(iii). Does the TEA model identify all relevant parameters required to assess the cost outcomes? If not, provide evidence to support your reasons.

Q 5.2.3. A(iv) Do you consider the formulas underlying each individual module (and any assumptions behind the use of these formulas and modules) to be sound? If not, provide evidence to support your reasons.

Q 5.2.3.A(v) Do you consider the reactions of the model to changes in values of key inputs to be consistent based on your experience, economic intuition and financial principles? If not, provide evidence to support your reasons.

Q 5.2.3A(vi) Do you consider there are any internal inconsistencies in the model or the formulas? If so, provide evidence to support your reasons.

- 4.11 The ACCC stated in its discussion paper that when assessing the robustness of the TEA Model, the TEA Model must:
- Be sufficiently transparent to that the ACCC and interested parties could reasonably assess the inputs and outputs at a disaggregated level;
 - Allow users to test the assumptions in the model and analyse the impact of different changes in inputs (and architecture) on outputs by understanding the linkages within the model; and
 - Allow users to assess how element costs and capital are allocated within services¹⁶.
- 4.12 In summary, Optus submits that
- Telstra's confidentiality arrangements regarding have been onerous and confusing;

¹⁶ ACCC, Discussion Paper, p25

- Optus has not had reasonable access to the TEA model and related information;
- Telstra has not made the TEA model and related information available to Optus in a manner which allows full, timely analysis and comment;
- the degree of scrutiny of the model by access seekers and other parties (and thus their ability to properly assess the TEA model) has been limited by the terms of Telstra's confidentiality arrangements; and
- a number of basic errors have been identified in the model by the ACCC, and the model has had to be updated several times to address these.

4.13 It follows that the ACCC must reduce the degree of weight that can be placed upon the model in setting ULLS access prices. Optus submits that the ACCC should have no regard to the TEA model.

Transparency of operation

4.14 In considering this issue previously, the ACCC has stated that the PIE II model Telstra relied on in its 2005 undertaking is not transparent, arising from a lack of detailed documentation and user manual; users' inability to manipulate the model; and Telstra's unwillingness to change the model or provide information on its assumptions or a detailed breakdown of the output of the model. The ACCC stated that the lack of transparency; and the inability of parties to scrutinise and sensitivity test its underlying assumptions means that the ACCC cannot be satisfied that the model accurately estimates efficient costs.¹⁸

4.15 The ACCC further stated that the difficulties in reviewing and critiquing the PIE II model were further aggregated by the fact that Telstra required all third parties to sign confidentiality undertakings which, among other restrictions, prohibit third parties from making changes to the model's coding or structure¹⁹.

4.16 One of the ACCC's principal requirements is that the model used to calculate ULLS pricing is transparent:

*"The ACCC considers that the cost model must: [...] be sufficiently transparent so that the ACCC and interested parties could reasonably assess the inputs and outputs at a disaggregated level"*²⁰

¹⁷ ACCC, Assessment of Telstra's ULLS monthly charge undertaking, Final Decision, August 2006, p37, p43

¹⁸ ACCC, Assessment of Telstra's ULLS monthly charge undertaking, Final Decision, August 2006, p44

¹⁹ p78

²⁰ ACCC (2008), *Telstra's Access undertaking for the Unconditioned Local Loop Service: Discussion paper*, June 2008, page 25.

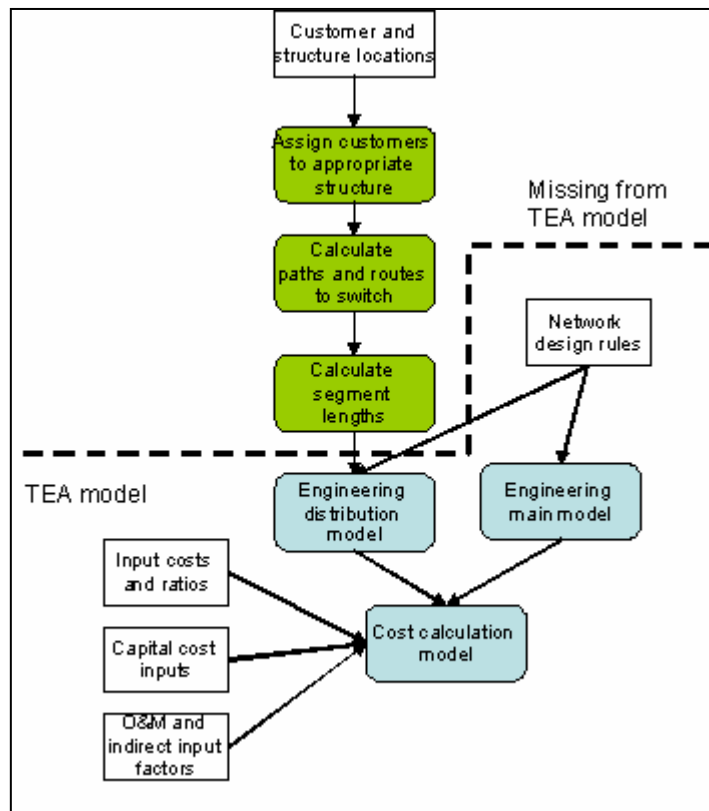
Network database

- 4.17 The TEA model appears to use a pre-processed network database file. As a result the user may vary only a limited range of components of the model: equipment costs, network dimensioning rules and financial factors used to calculate annual costs and mark-up.
- 4.18 It is not possible to vary network architecture (made up of the locations of pillars, manholes and pits) and to test the level of efficiency in the design, as this information is not provided in the model.
- 4.19 The consequences of basing the model on a pre-processed network database file are:
- a lack of necessary modelling transparency, including no scope to test the model operation by altering demand;
 - the likely possible modelling of inefficient costs;
 - questions concerning whether best practice modern network design has been employed; and
 - a possible incompatibility with the requirements of a TSLRIC+ cost calculation.
- 4.20 Optus observes that the network design is not a user adjustable input. Moreover, the access network database subsumes much of the complexity of regulatory access network modelling in a manner that prevents the testing of scorching, design and efficiency scenarios.
- 4.21 In addition, the network database fixes the demand (line numbers) at the unknown date on which it was created. Optus considers this is unusual for network cost models as normally it is possible to test the operation of TSLRIC+ models under changing demand conditions. Optus submits that such rigidity significantly limits the ability of the users to test the model under different scenarios.
- 4.22 Optus submits that little information is provided on the development of the network database. Further information and the ability to review the process and assumptions used in the developing database are required.
- 4.23 Optus submits that the network database within the model does not provide users with the ability to determine the actual locations of modeled customers and structure points (pillars, manholes, pits etc). Without this ability Optus is unable to effectively determine whether network routes are reasonable or likely to be the routes and distances adopted by a new entrant.
- 4.24 However, it is clear to Optus that the TEA model developers have worked extensively with Telstra's customer and network location data to produce the model's network database. In formatting the database, any geographically identifiable location data has been obfuscated

creating route information in a tree format that cannot be compared to any physical layout.

- 4.25 In Figure 4.1 Optus illustrates the customer location and route determination steps that we believe are missing from the Version 1.0 of the TEA model.

Figure 4.1: TEA model calculations included and missing



- 4.26 Full testing of customer location and routing aspect of Telstra’s modelling would require transparent access to the customer and network data used by the TEA model developers. Optus highlights that such information has not been forthcoming from Telstra, and this situation is unlikely to change.
- 4.27 Overall, Optus concludes that the TEA model’s use of cable segment lengths, based on distribution and main cable record information, is not a transparent process.
- 4.28 Optus submits that the ability of access seekers to properly assess the TEA model has been limited, due to the limited transparency of the model’s operation. Given Telstra’s track record of inflating costs, the ACCC cannot rely on a model that is not able to be adequately tested.

Lack of geographic information

- 4.29 Optus is unable to properly verify the operation of the TEA model since the network architecture data used by the TEA model (e.g.

location and number of SIOs in the network assumed by the model) has not been shown to be consistent with the 'real' network data (e.g. actual location and number of SIOs in the network).

- 4.30 Optus has approached Telstra and requested geospatial mapping data for the test ESA used in the TEA model.²¹ Optus considers that the best way for an access seeker to verify that the lists of equipment produced by the TEA model are appropriate is to review the geography of the area that is being modelled by TEA.
- 4.31 One of the key underlying premises of the TEA model is that it uses actual Telstra information to ensure that the results represent a 'real world' scenario. However, it is impossible for Optus (or any other party) to verify whether TEA does in fact operate this way, generate a 'best fit' optimal solution, or even a practical solution, without being able to compare the output with the real world data. Optus submits that no confirmation of the model's accuracy and applicability can be provided without this information.
- 4.32 Telstra claimed in response to Optus' request that its network information was "highly sensitive from a commercial and security perspective".²² Whilst Optus supports the maintenance of the security of the network, we note the following:
- Optus has already signed strong and binding confidentiality agreements with Telstra regarding use and disclosure of such data;
 - the requested data is for a hypothetical, single extract 'TEST' ESA with little resemblance to any particular ESA; and
 - Optus is a national carrier itself and already has some data on the network architecture that may exist.
- 4.33 Optus therefore submits that Telstra's concerns regarding security and the release of sensitive network information are overstated and will serve to delay a fair and proper review of the TEA model.

Integrity of data

- 4.34 Optus is unable to review the network architecture data that is used in the TEA model since there is no evidence that the codified (encrypted) TEA network architecture data with which parties have been provided matches the original (un-coded) data.
- 4.35 Telstra has encrypted the geospatial data contained in the TEA model to make it unusable and unrecognisable to Optus (and other parties). Optus is concerned that by the act of coding the data it is possible that the original integrity of the data has been (accidentally) compromised or corrupted. Optus considers that when one alters data artificially, and

²¹ Email to Tony Warren (Telstra) on 30 July 2008.

²² Reply email from Tony Warren (Telstra) to Optus on 1 August 2008.

especially a data set of this magnitude, there may be a chance of error/corruption in the final product.

- 4.36 Optus proposes that Telstra should be required to prove the validity of its methods by an audit (or similar) process.

Access to the TEA Model: Telstra's Confidentiality Arrangements

- 4.37 The ACCC has noted in its discussion paper that Telstra has implemented a process for parties to gain access to material (over which Telstra claims confidentiality) needed to assess its ULLS undertaking which is of significant concern to the ACCC. In particular, the ACCC is concerned that such a process has considerable potential to be onerous and confusing. The ACCC reminds Telstra that interested parties require reasonable access to information submitted in support of its undertaking, in terms of both sufficient review time and the terms and conditions on which interested parties may access the information. If Telstra does not make information submitted in support of its undertaking available to other parties in a manner which allows full, timely analysis and comment, the ACCC will not be able to place the same weight on that information as on information readily available for scrutiny by all interested parties. It is the ACCC's view that an approach which reasonably balances Telstra's need for confidentiality and the public interest in fully informed submissions should be adopted.

- 4.38 Optus considers that the process that Telstra has implemented for parties to gain access to its claimed confidential material relating to its ULLS undertaking and to the TEA model has been complex and restrictive. For example, Telstra has:

- adopted a definition of commercial and non-commercial roles which excludes practically all access seeker employees from viewing the information and is inconsistent with the ordinary English meaning of words. A staff member's role is defined as 'commercial' if they "have a degree of contact with Optus' commercial areas". Optus submits that this condition is unnecessary since employees in "commercial" roles would be legally prohibited (by the terms of the undertaking) from communicating confidential information to commercial staff with which they have "a degree of contact". Note also that staff in "commercial" roles are able to sign a version of Telstra's undertaking which according to Telstra, "facilitates access to Category 1 Confidential Material"; however this provision is of little practical use since according to Telstra, "there is currently no Category 1 Confidential Material".
- attempted to impose obligations that do not relate to confidentiality, eg, a condition imposed on an individual access seeker staff member to "bring any suggested changes to the model to Telstra's attention".

- imposed conditions which restrict communications between access seekers and their consultants and impair consultants' ability to communicate findings to access seekers. Eg, provision of two different versions of the information, where information provided for use by access seeker employees – but not consultants – has some information masked; and
- imposed multiple confidentiality undertakings in respect of the same matter (there are at least four undertakings that currently apply). A related concern is the replacement of confidentiality undertakings with new versions, requiring the same individual to sign numerous times.

4.39 Telstra's decision to apply different levels of access to the TEA model between access seekers' staff and their external consultants is likely to cause practical problems. It raises the question how the findings of an external consultant's examination of the model can be reported to the access seeker client in a meaningful way without revealing anything of the nature of the underlying information and data. To spell this out more concretely: the output of the model, i.e. the cost of the ULLS, will be largely determined by values of the input data and parameters to which the access seeker client is supposed to have no access. A finding may be that the cost for the ULLS is too high because the values of particular parameters are judged by the external consultant to be wrong. When reporting this finding and giving the reason, revealing in the process information that the consultant knows from other sources could perhaps be construed as a breach of confidentiality.

4.40 As a result, as one external consultant described the problem to Optus, "There would appear to be a grey area of wording, of ways of describing our findings, where the [consultant's] employees concerned would always feel to be under the risk of having violated the undertaking". This consultant declared itself unwilling to provide consultancy services in respect of a review of the TEA model, because of the potential risk arising out of Telstra's confidentiality provisions, stating "the potential triangle relationship between Optus, Telstra and us would generate risk factors for us which are difficult for us to evaluate". Optus submits that this is a clear illustration of the chilling effect on participation in the ACCC's public consultation processes caused by Telstra's onerous confidentiality arrangements.

4.41 Attached as Attachment 1 is a letter from Optus to the ACCC dated 28 March 2008 which identifies a number of unreasonable confidentiality conditions for access to the TEA model. The letter submits that some of the terms of the confidentiality undertakings that set out the proposed terms of access to the model are unreasonable, not related to confidentiality issues, inconsistent with the law and/or put Telstra's commercial interests ahead of the ACCC's obligation to implement the required undertaking process.

4.42 Optus considers that these problems are likely to detrimentally affect the operation of the access regime. The complexity of the regime is

often such that access seekers must devote substantial time and resources to understanding the requirements and negotiating the terms of the regime. Moreover, the restrictiveness of the confidentiality requirements imposed by Telstra has been so severe that it has threatened to impede or prevent access seekers from participating fully in the ACCC's public consultations.

- 4.43 In summary, the ability of access seekers to properly assess the TEA model has been limited by the onerous confidentiality arrangements imposed by Telstra.

Telstra's proposed ULLS monthly charge

- 4.44 Telstra has proposed in its undertaking a monthly ULLS price in Band 2 of \$30. In its discussion paper the ACCC has posed a number of questions on Telstra's proposed ULLS monthly charge:

Q 5.2.4 A. Do you consider the TEA model capable of producing reasonable TSLRIC cost estimates having regard to the legislative criteria set out in section 152AH?

Q 5.2.4 B Do you consider the model takes account of existing and future demand? Do you consider this relevant in considering whether the cost model is capable of producing reasonable TSLRIC cost estimates? Should the ACCC consider the assessment of only one part of the ULLS monthly charge (that is, not specify the ULLS specific charge)?

- 4.45 Telstra's proposed monthly ULLS charge (\$30.00) is significantly higher than the rate determined in the ACCC's most recent arbitration ruling (\$14.30), and is also significantly higher than the rate set out in the ACCC's most recent pricing principles (\$16.00). This has implications both for investments made by access seekers and for investments made by end use consumers.
- 4.46 Optus submits that Telstra's proposed increase in the ULLS monthly charge would result in expropriation of the value of sunk investments in DSLAMs and related infrastructure made by access seekers, which:
- (a) would not be in the interests of persons who have rights to use the declared service concerned; and
 - (b) would not promote efficient investment in telecommunications infrastructure.
- 4.47 Further, the proposed price increase would expropriate the value of sunk investments by end use consumers and thereby cause a deterioration in consumer expectations about the stability of telecommunications service prices, which:
- (a) would not promote the efficient use of telecommunications infrastructure; and
 - (b) would cause a reduction in "overall welfare".

Impact on investments made by access seekers

- 4.48 Optus submits that access seekers have formed their business plans and made significant investments in infrastructure in reliance on existing pricing structures, relying in particular on the assumption that the monthly ULLS charge will remain at rates similar to the rate that currently applies, and the rates that are set out in the ACCC's pricing principles. Optus itself has spent **CiC** on its DSLAM rollout over the past three financial years. A significant and sudden change to the monthly ULLS charge for Band 2 (such as Telstra has proposed in its undertaking) could strand these investments, and consequently deter efficient investment in infrastructure. As the ACCC has stated:²³

“If access seekers’ investments are subject to sudden arbitrary stranding on unreasonable grounds, incentives for access seekers to compete, invest in facilities and create innovative new services for consumers and business users would likely be reduced. This would not be in the long-term interests of end-users.”

- 4.49 Optus submits that the ACCC must have regard to the impact on access seekers' business plans and sunk investments of Telstra's proposed access price.
- 4.50 Further, the TEA Model does not provide differential cost estimates for the various potential alternate downstream ULLS POI scenarios envisaged in ACCC's ULLS service description. This issue is described in more detail in the discussion of the undertaking's service description in Chapter 2. The implication is that Telstra's proposed ULLS monthly charge would not be appropriate or supported by the cost evidence if Telstra subsequently chose to move the agreed ULLS POI to a downstream location such as a fibre node in the emerging FTTN scenario.

Impact on investments made by consumers

- 4.51 Optus considers that end user consumers of monopoly products and services also make significant decisions – and sunk investments – on the basis of assumptions about charges for access to infrastructure. As Biggar has observed:²⁴

“the users of a monopoly firm routinely have the opportunity to take some irreversible action which will significantly increase the value of or demand for the monopolist's product or services. The users or consumers, however, fear that once they have taken that action and incurred the associated sunk cost, the monopolist will engage in “ex post opportunism” - raising the price for the monopolist service, expropriating the additional benefit or value achieved.”

²³ ACCC, December 2007, *Assessment of FANOC's Special Access Undertaking in relation to the Broadband Access Service, Draft Decision*, p15-16

²⁴ Biggar, 2008, *Is Protecting Sunk Investments by Consumers a Key Rationale for Natural Monopoly Regulation?*, p.13

4.52 Optus submits that it is likely that end users of telecommunications services in Australia have made decisions and sunk investments in reliance on the assumption that prevailing charges for voice and broadband services will remain similar to existing levels (or that they will decrease). For example, some workers are likely to have chosen to purchase houses (and made other investments) at a greater distance from their place of work than they would otherwise have done, in the intention of relying on their ability to “work from home” using reasonably priced voice and broadband services. These end users have made decisions and sunk investments in reliance on competitive and affordable broadband services. That is, they relied indirectly on the premise that the monthly ULLS charge will remain at rates similar to those that currently apply, and that are set out in the ACCC’s most recent pricing principles.

4.53 A significant and sudden change to the monthly ULLS charge for Band 2 (such as Telstra has proposed in its undertaking) would effectively result in the expropriation by Telstra of the sunk investments of the end users. As Gomez-Ibanez has noted, “the customers can’t easily relocate if the infrastructure company decides to raise prices”.²⁵

4.54 Moreover, an increase in the ULLS price of the magnitude proposed by Telstra would have an impact reaching beyond the immediate loss to particular consumers, since it change end users’ expectations about the stability of telecommunications service prices, and thus impact on their future behaviour. As Biggar has stated:²⁶

“As long as the actions which buyers must take to increase their demand for or value of the monopolist’s service are sunk, buyers will fear that a proportion of the additional value created by these actions will be expropriated ex post. Anticipating this possibility, buyers will be reluctant to take actions which increase their exposure to opportunism by the monopolist. This may significantly reduce overall welfare.”

4.55 Optus submits that the impact on the future behaviour of end users arising out of a deterioration in consumer expectations about the stability of telecommunications service prices (and the resulting reduction in “overall welfare”):

- is a relevant matter to which the ACCC should have regard in assessing the reasonableness of the proposed terms and conditions in Telstra’s undertaking (as the ACCC has noted, it may, under s.152AH, consider any other relevant matter); and
- represents a likely reduction in the efficient use of telecommunications infrastructure which is not in the long term interests of end users.

²⁵ Gomez-Ibanez, Jose A. (2003), *Regulating Infrastructure: Monopoly, Contracts, and Discretion*, Harvard, p. 9-10.

²⁶ Biggar, 2008, *Is Protecting Sunk Investments by Consumers a Key Rationale for Natural Monopoly Regulation?*, p.16

Demand

- 4.56 The ACCC stated in its discussion paper that the year(s) to which the TEA model cost estimates apply is unclear.²⁷
- 4.57 Optus observes that the TEA Model uses a fixed level of customer demand. It does not model for different years – it models a fixed point in time. Telstra does not say which point in time (year) this level of demand represents. It does not consider future demand. The TEA Model cannot be used in its native form to estimate TSLRIC+ costs for changing demand or future years. In this respect its usefulness in producing reasonable TSLRIC+ cost estimates is very limited.

Charges specified

- 4.58 The ACCC noted in its discussion paper that Telstra’s ULLS undertaking appears to relate only to one part of the ULLS monthly charge – i.e. the network costs (capital, operational and maintenance and indirect costs).²⁸
- 4.59 Optus considers that access seekers need to know the level of the ULLS monthly charge in order to plan their business. Accordingly, Telstra should submit in its undertaking all parts of the ULLS monthly charge, and in particular it should specify the proposed level of the ULLS specific charge. Further, Telstra must submit evidence of efficient costs in order to support all parts of its proposed monthly price. Optus submits that the ACCC should not consider the assessment of only one part of the ULLS monthly charge.

Network design and engineering rules

- 4.60 The ACCC has posed the following questions regarding this issue:

Q 5.2.5A Do you consider the model applies best-practice, forward-looking engineering practices to determine plant and equipment requirements for providing ULLS? In discussing this issue, interested parties are asked to address the relevant statutory criteria in their comments.

Q 5.2.5B Is a model based on the actual existing Telstra network likely to generate cost estimates that are forward looking and efficient (and therefore in line with the section 152AH criteria)? Would these estimates differ from those of a hypothetical efficient forward looking network?

Q5.2.5C Do you consider Telstra has used the appropriate network assets to model an efficient forward-looking network that provides ULLS? Comment on whether the TEA model includes costs that are legitimately incurred in the

²⁷ ACCC, Discussion Paper, p26

²⁸ ACCC, Discussion Paper, p26

efficient and forward-looking provision of the ULLS. Is there over-provisioning of elements in the network?

Q5.2.5D Do you consider that the manner in which Telstra has optimised the distribution and main cable routes is appropriate to model an efficient and forward-looking model?

- 4.61 For an undertaking to be considered reasonable, the access provider must establish that its proposed price reflects the efficient costs of supply (as the Tribunal has held).²⁹ It follows that a key issue will be whether the cost estimates produced by the TEA model reflect the efficient costs of supply of the ULLS. A key determinant of this issue will be whether the network design and engineering rules of the TEA model are likely to result in an efficient network design.
- 4.62 In this section Optus will make submissions on the following issues:
- distribution cable engineering module;
 - main cable engineering module;
 - efficient network design;
 - non-tapered architecture;
 - scorched node design; and
 - best practice network design.
- 4.63 In summary, Optus submits that the network design and engineering rules of the TEA model are not likely to lead to an efficient network design, since the approach is based upon the unsupported assumption that Telstra's historical node layout is efficient, the degree of optimisation in the model is overstated and some of the engineering rules appear to be less than efficient.
- 4.64 It follows that the cost estimates produced by the TEA model are likely to significantly overestimate the efficient cost of supply (TSLRIC+) of the ULLS.³⁰ Consequently, Telstra cannot derive any support from the TEA model's cost estimates for the ULLS access price proposed in its undertaking.

Distribution cable engineering module

- 4.65 Telstra's model documentation describes the distribution engineering module as follows:

“This module uses best practice engineering design rules together with base data extracted, translated and loaded from Telstra's Cable Plant Records to design an optimised copper distribution network for the

²⁹ *Telstra's Line Sharing Service [2006]* ACompT 4 (2 June 2006) at [45] and [69]

³⁰ While in chapter 2 Optus submitted that an access price for the ULLS based upon TSLRIC principles was no longer reasonable, for the purposes of the current chapter, Optus has assumed that the TSLRIC+ pricing principles will continue to apply.

supply of the ULLS [.....] The output of the Engineering Distribution Module is a list of the amount of labour, plant and equipment required to deploy the optimised distribution network”³¹

- 4.66 However, Optus submits that Telstra’s claims of the ‘optimisation’ that is carried out in this module are overstated. As the network equipment descriptions and locations are fixed in the network database, there are no true network design functions, and therefore simply no optimisation, that occurs in this module.
- 4.67 Optus considers that this module is purely a dimensioning tool which determines the following:
- The numbers of cables between each equipment location based on demand, fill factors and the choice of ‘tapered’ or single size access cable scenarios;
 - Pit type depending on demand and line density;
 - Pillar type based on demand; and
 - The numbers of cable joints.
- 4.68 Importantly, the module appears to only choose equipment types that Telstra claims are “best practice” in its CAN design. As the network architecture is also fixed (by the network database), there is no scope to test other modern distribution design options. Optus submits that the model does not utilise common design features that would be included in a modern network, including:
- Direct buried distribution cable (which could save significant trenching and duct costs and is in common use in Band 2 type areas in other countries);
 - Above ground distribution points;
 - Laying distribution cable on both sides of suburban streets (to save the expense of frequent trenching across roads); and
 - Larger distribution cabinets as opposed to Telstra’s pillars.
- 4.69 Optus accepts that there may be some control of the network in regards to the number of cables between pillars, manholes and pits. However, the model does not optimise the location of these points.
- 4.70 Optus recommends that the ACCC give careful consideration to the model’s treatment of fibre costs, to ensure that inappropriate costs are not accidentally included. For example,
- the model includes the cost of CMUXs and related exchange equipment and fibre and ducts to connect the CMUXs even

³¹ ACCC (2008), *Telstra’s Access undertaking for the Unconditioned Local Loop Service: Discussion paper*, June 2008, page 29.

though these components are not part of the equipment needed to deliver ULL; and

- the model includes the cost of all lead-ins including those connected to fibre fed nodes but the cost per unit is calculated by dividing by the quantity of exclusively copper fed services.

Main cable engineering module

4.71 Optus considers that the functioning of the main cable engineering module is similar to that of the distribution module, providing main cable sizes, lengths and numbers of joints for the costing module. However, again, the module has no network design functions, other than dimensioning.

Efficient network design

4.72 In determining the appropriate monthly charge for the ULLS the Commission must come to a conclusion on whether the network design of TEA is efficient and forward-looking:

*“only efficient, forward-looking level of costs are brought to account in setting ULLS monthly charges.”*³²

4.73 The Commission is therefore required to review Telstra’s proposed network design in TEA to ensure that it is also free of historical inefficiencies. These are likely to be caused by issues such as:

- Network growth over time;
- Technology migration;
- Imperfect foresight or planning;
- Imperfect strategy; and
- Gold plating.

4.74 Optus would observe that the TEA database appears to represent the actual network cable routes and preserve much of Telstra’s historical network design philosophy. However, the network design is not a user adjustable input.

4.75 The TEA model uses only the locations of existing structure points thereby modelling Telstra’s *historical* network with its inherent inefficiencies. This observation is supported by Telstra’s view as recorded in the ACCC’s discussion paper:

“Telstra submits that the TEA model represents its actual existing network, which is based upon Telstra’s records of the locations of its

³² ACCC, *Unconditioned Local Loop Service: Pricing principles and indicative prices*, June 2008, section 2.1

*equipment and customers, rather than a hypothetical lay-out of its network.”*³³

- 4.76 Telstra has argued 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. Optus submits that there is absolutely no evidence in the model that it is indeed the case. In fact, with a large number of access network nodes and cable joints being very close, the network layout is extremely inefficient. Cable jointing is a particularly expensive exercise and this network inefficiency appears to be an important source inflated costs.
- 4.77 In particular, Optus submits that:
- There is no evidence that the locations of the structure points are in the optimal places;
 - There is no evidence that the cable paths between the nodes are optimal; and
 - There is no evidence that the routing of the cables between the structure points (i.e. the points a cable pair traverses between an end user and the exchange) is optimal.
- 4.78 Therefore, Optus concludes that neither the cable paths nor the cable routes are likely to be efficient.

Non-tapered architecture

- 4.79 Optus submits that in using a non-tapered architecture, Telstra is passing on the costs of over-building its network to its ULLS customers. A non-tapered architecture is suitable for new exchange areas or distribution areas where future demand is unknown, and the network must accommodate the possibility of new subdivisions or multi-dwelling buildings. However in existing exchange areas where potential for network growth is limited, a tapered architecture is more suitable. Optus considers that using this architecture has the effect of producing a ULLS network design that is significantly above that which would be constructed by an efficient operator.
- 4.80 The TEA model’s network design rules assume that all ducts are “doubled”, that is Telstra assume duct routes would be built with a minimum of two 100mm conduits. Optus does not consider that this is necessary in the distribution network. This design feature adds significantly to cost, and is not consistent with efficient design of a network.

³³ ACCC (2008), *Telstra’s Access undertaking for the Unconditioned Local Loop Service: Discussion paper*, June 2008, page 29.

Scorched node network design

4.81 Optus observes that forward-looking and economically efficient TSLRIC+ models are often ‘scorched node’ (i.e. use existing switch locations but optimise the access network between the exchange and customer locations). Constraining a forward-looking efficient network design to use existing switch locations in a scorched node approach is an acknowledgement that regulatory access price setting should not be based on a network design that removes all inefficiency from an incumbent’s physical network infrastructure (as a scorched earth approach would do).

4.82 Optus believe it is reasonable for the ACCC to base its ULLS pricing on a scorched node model, however the TEA model is not based on a conventional scorched node approach:

*“...the network in this model is based on the locations of the pillars in Telstra’s network. As such, this model does not adhere to the “scorched node” approach, which is common to other cost models. In keeping with the hypothetical nature of the networks and customer locations in other models, the scorched node approach ignores the locations of nodes in the “outside plant” portion of the network.”*³⁴

4.83 Optus submits that by using the existing locations of pillars, manholes and pits in the model Telstra does not allow sufficient (if any) network optimisation. This means that historical inefficiencies will be carried into the final price and unfairly paid for by access seekers.

4.84 Optus further highlight that that conventional scorched node modeling techniques are commonly used for calculating unbundled local loop prices in other jurisdictions, including Germany, Austria and the US.³⁵

4.85 Telstra outlined the reasons for its approach as follows:

*“... in recent years, as public switched networks and competitive networks have evolved worldwide, it has become abundantly clear that the last mile copper loop, not the exchange building, is the bedrock portion of the existing network that will be carried forward as an integral part of the next generation network (NGN). In the NGN, DSLAMs (and/or their successors) will be placed next to pillars; and these “nodes” will be connected, via fibre, to Ethernet Aggregation Nodes and, ultimately, to soft switches. Exchange buildings will no longer form the backbone of the PSTN; in fact, many will be bypassed and abandoned. Consequently, the TEA model design appropriately treats the last mile of copper as the backbone and bedrock of the PSTN, so that as the rest of the network evolves to NGN, and is scorched, the model will reflect the changing environment.”*³⁶

³⁴ Harris R.G. (2007), *Use of the TEA model in ULLS Costing and Pricing*, 21 December 2007, p. 9 (quoted in ACCC discussion paper).

³⁵ http://www.rtr.at/en/tk/ULL/Summary_Z12_14_15_en%20.pdf

³⁶ Telstra (2007), *Telstra Efficient Access (TEA) Model Overview*, 21 December 2007, section D.

4.86 However Optus considers that while Telstra's arguments may be relevant to future next generation access (NGA) network designs, they are largely irrelevant in terms of pricing the current ULLS. By definition ULLS relies on the traditional MDF for co-location and the costs of an efficient copper loop from MDF to customer site are of key interest to the regulator. Optus therefore submits that the Commission should disregard Telstra's arguments on this issue as they are outside the scope of the current inquiry. Further, incumbents should not be able to take legacy inefficiency into an NGA environment.

Best practice network design

4.87 Telstra describes its network design as 'best practice'. However, the term best practice is open to interpretation. Optus submits that the ACCC should subject Telstra's claim to robust scrutiny, and question whether Telstra's current design techniques (based on methods for maintenance and extension of a historic network design) would be likely to be adopted in any form by an efficient new operator. In particular Optus wishes to highlight the following examples of Telstra's flawed and inefficient network design:

- (1) Distribution cable runs along only one side of a street; and
- (2) The model uses entirely underground cabling.

4.88 The TEA model designs the distribution cable to run along one side of a street with frequent road crossings to provide connectivity to customers on the other side of the street:

*"Reticulation along one side of the street with road crossings to provide the connection to allotments on the other side of the street is the preferred method of plant layout. Road crossings should generally feed two allotments each [...]."*³⁷

4.89 Optus does not believe that an underground road crossing every second allotment constitutes an efficient design. This is especially true considering the model only applies in Band 2 areas where road crossings are likely to be expensive (due to potential disruption of traffic and other utility services). Furthermore, Optus considers that frequent road crossings are not consistent with access network design principles that are observed in other jurisdictions (where distribution cables are typically laid on both sides of Band 2 roads).

4.90 Secondly Optus note that operators in other jurisdictions use more economically efficient direct buried and overhead distribution cabling, particularly for the last few metres of delivery and when poles are already installed for use by other utilities.

4.91 Further, Optus submits that it does not consider the TEA model's engineering design rules to be forward looking. For example, pit and

³⁷ Telstra (2007), *Access Network Dimensioning Rules: Long run incremental costing model input*, section 3.2.

pipe builds appear to be based on guidelines developed in the past. These simple builds do not take into account the long term move to a FTTH/FTTN based network where large multi way duct nests along main cable routes will not be required. In a similar manner, building the distribution network with a minimum of 2xP100 ducts would impose greater than efficient cost. In most instances a more efficient build would involve 2xP50 ducts or 1xP100 sub-ducted with textile (soft) subduct which would save 20%-30% of the build cost.

- 4.92 Optus submits that it is difficult to provide more comprehensive comments, since the model's application of practices cannot be verified until the output from the model is compared to the area modelled. The model's output has been stated to be based on the actual Telstra network, which cannot be analysed without geo-spatial comparison.

Cost valuation

- 4.93 The ACCC has posed the following questions regarding this issue:

Q5.2.6A. Do you consider the cost estimates reflect the 'replacement' cost of network assets, that is do they:

o reflect the most efficient technology,

o reflect the competitive market rates for relevant plant and equipment.

Q5.2.6B. The model does not appear to determine the forecasted network cost estimates for each year of the undertaking. What do you consider would be appropriate price trends for these cost estimates?

Q5.2.6C Comment on the appropriateness of the value for the loading factor for indirect overheads.

- 4.94 In summary, Optus submits that the model uses copper cable costs and joint costs that are likely to be above 'replacement' cost; and the price trends previously used by the ACCC would be appropriate price trends for these cost estimates.
- 4.95 It follows that the cost estimates produced by the TEA model are likely to significantly overestimate the efficient cost of supply (TSLRIC+) of the ULLS. Consequently, Telstra cannot derive any support from the TEA model's cost estimates for the ULLS access price proposed in its undertaking.

Replacement cost

- 4.96 The ACCC stated in its discussion paper³⁸ that it has previously indicated that replacement cost is the cost methodology most

³⁸ ACCC, Discussion Paper, p29

consistent with an efficient forward-looking network. The ACCC considers that the same asset does not have to be replaced but should be the best-in-use or best commercially available technology. Optus observes that copper cable costs and joint costs used in the model appear to be significantly higher than those used in other jurisdictions.

- 4.97 Further, Telstra's copper cable costs are also above competitive market rates available to carriers in Australia. For example, the following table sets out per-metre costs for copper cable of different sizes that are currently available to Optus, compared to the costs for the same sizes of copper cable that Telstra has assumed in the model. Optus' costs are for copper wire of 0.5mm diameter, while Telstra prices are for 0.4mm and 0.64mm; however on a like for like basis the Optus costs are significantly lower than the Telstra costs.

CiC

- 4.98 Similarly, Telstra's assumed fibre costs are above competitive market rates available to carriers in Australia. For example, the following table sets out per-metre costs for fibre (by number of fibres) that are currently available to Optus, compared to the costs for fibre (by number of fibres) that Telstra has assumed in the model. Optus' costs are significantly lower than the Telstra costs.

CiC

- 4.99 Further, the unit costs assumed in the TEA model are higher than necessary as a result of selecting short lengths of copper. The costings in the TEA model are based upon the selection of relative short cable distances between joints for large capacity cables (eg 250m for 2400 pair, 0.5mm diameter, or 250m for 1200 pair 0.64mm diameter). This selection drives up the unit cost, because the fixed costs associated with copper cable (eg, the need to mobilise, set up, haul and clear down) must be incurred for a large number of short lengths of cable. The selection also introduces additional jointing cost which may not be required.
- 4.100 It follows that the model's cost estimates for network assets are likely to be above 'replacement' cost.

Price trends

- 4.101 Telstra has not applied forward-looking prices in the TEA model;³⁹ nevertheless the Commission has sought comment on the value of price trends that should be applied (if there were any).
- 4.102 Optus considers that the price trends (and methodology) previously used by the ACCC in making a final determination of the access price in the access dispute between Telstra and Optus was acceptable.⁴⁰ Optus has no reason to consider there should be any variation from this. These trends were based upon publicly available ABS data, were verifiable and used a sound methodology.
- 4.103 However, given that neither Telstra or the Commission has calculated any price trends, nor determined how any trends would be applied to the TEA model, Optus reserves its rights to comment further on this issue when and if values are calculated.

Indirect overheads

- 4.104 Optus is unable to make substantive comments on Telstra's indirect overheads and associated mark-ups as to make a reasonable assessment it would require further information on the size of Telstra's business; the number of employees; and the method used to allocate costs. Optus reserves its right to make future comments based on the availability of greater information.

Trenching costs

- 4.105 The ACCC noted in its discussion paper that trenching costs represent a significant network cost component in the provision of the ULLS as reflected in the significant capital cost attributed to the cost of ducts and pipes.⁴¹
- 4.106 The ACCC has examined the effect that the cost and preparation of surface barriers on the total annual cost by running the TEA model with the assumption of trenching of turf only. The results show that there is a fall of almost 24% in the total annual cost, about a 51% fall in the annual cost for ducts and pipes in the main network and about a 42% fall in the distribution network.⁴²
- 4.107 The ACCC has posed the following questions regarding this issue:

Q5.2.7A. Comment on Telstra's approach of deriving trenching costs. Having regard to the reasonableness criteria under section 152AH, do you consider that trenching costs should take account of the different surfaces (and

³⁹ The issue of Telstra's proposed use of a flat annuity is addressed later in this submission.

⁴⁰ ACCC (2008), Unconditioned Local Loop Service Access Dispute Between Telstra Corporation Limited (access provider) and Optus Networks Pty Limited (access seeker), Statement of Reasons for Final Determination, March 2008, para 433, page 89.

⁴¹ ACCC, Discussion Paper, p30

⁴² ACCC, Discussion Paper, p30

therefore different construction activities) in estimating the cost of the ULLS? If Telstra were to lay copper today, would it face trenching costs that take account of different surfaces? Provide reasons to support your submissions.

Q5.2.7B. Comment on the appropriateness of the application of input ratios that identify the percentage of instances of different types of terrain, and probable occurrence of various types of placement activities where a plant is built.

Q5.2.7C. What should the surface barrier assumption be?

4.108 Optus would observe that in the model all Band 2 ESAs are assumed to have the same percentage of rocky terrain, which increases the average costs of all structure and civil engineering.

4.109 More generally, Optus considers that the ACCC's TSLRIC+ pricing principle is intended to establish a level of cost recovery consistent with Telstra's legitimate business interests. According to Hird:

*"...using TSLRIC (or TSLRIC+) ... is best justified on the grounds of providing for dynamic efficiency in the incumbent's future investments. That is, TSLRIC establishes a level of cost recovery that is consistent with the bottleneck owner's legitimate business interests in the long run. It follows that the appropriate interpretation of TSLRIC is driven primarily by what one considers a reasonable reflection [of] the incumbent's legitimate business interests."*⁴³

4.110 This is consistent with the ACCC's note in its discussion paper that it considers that the ULLS network costs should only include those costs that Telstra legitimately incurs in the provision of the service.⁴⁴

4.111 Aspects of network design in the TEA model (e.g. the choice of copper technology) are protected from optimisation, with the intention of protecting Telstra's legitimate business interests. Optus submits that given this protection afforded to Telstra, it would be unreasonable to allow Telstra a level of cost recovery greater than is required to serve Telstra's legitimate business interests. Forward looking cost estimates that are above historic cost cannot be regarded as reasonable. Such prices would not provide incentives for Telstra to operate efficiently and invest prudently, would not promote competition, and would distort end user retail prices in downstream markets. As Hird has noted:

"The decision to adopt a 'scorched node' approach effectively protects some of the incumbent's network from optimisation. However, there is a quid pro quo for customers in this in that elements so protected from

⁴³ Hird T (2003), Role of TSLRIC of Telecommunication Regulation A report for Optus, July 2003, p.10

⁴⁴ ACCC, Discussion Paper, page 26.

optimisation should not be subject to the possibility that forward-looking costs actually exceed historic costs.”⁴⁵

- 4.112 This principle is relevant to the TEA model’s incorporation of additional costs associated with boring and back-filling trenches (the surface barrier assumption). Optus submits that the TEA model’s approach to modelling such costs (which might be incurred in rebuilding the existing network “anew”) results in trenching costs which exceed both the cost of Telstra’s actual historically incurred costs and the cost of a new entrant building a network according to efficient forward looking best practice, since:
- an actual new entrant would adopt a more efficient network design than is assumed by the TEA model (after all, if a modern access network were to be built today it probably would not resemble the current form of Telstra’s CAN);⁴⁶ however
 - Telstra itself did not historically incur trenching costs of the same magnitude as those modelled as a result of TEA’s surface barrier costs in question (eg, since housing estate developers excavated many of the trenches that Telstra currently uses).
- 4.113 Optus submits that the TEA model’s assumptions regarding trenching highlight the absurdity of outcomes that can be derived from a TSLRIC+ modelling process if the purpose of the process is not kept upper most in mind. Under Telstra’s suggested approach even if they had never excavated a single trench, the TEA model still compensates them as if they had. The TEA model implicitly compensates Telstra not only for costs that were not prudently incurred but for costs that were simply not incurred at all. In continuing to claim for costs that have not been incurred, Telstra continues to defy clear direction from the ACCC that states that the ULLS network costs should only include “those costs that Telstra legitimately incurs in the provision of the service”⁴⁷ [emphasis added]
- 4.114 In summary, Optus proposes that in estimating the cost of the ULLS, assumptions about surface barriers (and indeed assumptions about any relevant factor) should be made with the objective of putting a ceiling on cost recovery: such that Telstra cannot recover costs that exceed its historical prudently incurred costs. To be specific, the model’s assumptions about surface barriers should be based upon the surface barriers faced by Telstra historically in building its copper access network.
- 4.115 Optus submits that the TEA model’s surface barrier assumptions are unreasonable, since they result in trenching costs which exceed efficient forward looking costs and which exceed costs incurred by Telstra historically.

⁴⁵ Hird T (2003), Role of TSLRIC of Telecommunication Regulation A report for Optus, July 2003, p.10

⁴⁶ Refer to the discussion under “efficient network design” in this submission.

⁴⁷ ACCC, Discussion Paper, page 26.

4.116 It follows that the cost estimates produced by the TEA model are likely to significantly overestimate the efficient cost of supply (TSLRIC+) of the ULLS. Consequently, Telstra cannot derive any support from the TEA model's cost estimates for the ULLS access price proposed in its undertaking.

Trench sharing

4.117 The ACCC has posed the following questions regarding this issue:

Q5.2.8A. If Telstra were laying the copper today, would Telstra be able to avail itself of the existing conduits laid by gas, electric or water utilities? Are there limitations that Telstra might face in its ability to share with other utilities?

Q5.2.8B. Is it appropriate to have regard to Telstra's historical trench sharing figures under a forward-looking network?

Q5.2.8C. Has Telstra taken account of all trench sharing activities in the copper network?

Q5.2.8D. Comment on the trench sharing default parameter values. Are these appropriate values?

4.118 The ACCC noted in its discussion paper that trench sharing has an overall effect of reducing the cost of trenches in the provision of fixed line network services, including the ULLS⁴⁸.

4.119 In considering this issue previously, the ACCC has stated that there are two basic types of trench sharing. The first type is sharing which reduces the total trench length and the second type is sharing that reduces the costs that should be allocated to PSTN services, including sharing with other telecommunication carriers and Pay TV operators and sharing with utilities in new estates.

4.120 The ACCC has further stated that:

- A new entrant would be able to optimise the sharing of trenches between the CAN and IEN rather than reflect Telstra historical deployment
- it believes the availability of free trenches in new estates provide an opportunity for a new entrant planning its network deployment over a number of years and that the opportunities to trench sharing increases with density.
- Telstra has not provided any evidence as to the reasons why a hypothetical, efficient operator may not consider the establishment of its node close to other utilities end-points to maximise potential trench sharing.

⁴⁸ ACCC, Discussion Paper, p31

- Telstra has previously argued that operational issues may prevent it from sharing with other utilities and that it would not be cost-effective. Telstra has not however provided evidence to the ACCC as to why such sharing would not be cost-effective.
- it acknowledged that in some instances the need for the infrastructure to be separated may not be conducive for sharing, the ACCC acknowledges that separation may require building larger trenches. However, Telstra has not argued its case that separation or building larger trenches would necessarily lead to higher costs where cost is shared between utilities and Telstra.

4.121 The ACCC concluded that it believes trench sharing in new estates should be of the order of 13% as it reflects historical trench sharing measures.⁴⁹ The ACCC has stated: “the 13% figure reflects the amount of trench sharing available to Telstra historically and the level of sharing available to a future provider of the ULLS”.⁵⁰

4.122 Telstra has included two main types of trench sharing in the TEA model:

- conduit sharing between the IEN and distribution network – for which it has assigned a value of 5 per cent; and
- trench sharing with other utilities in new estates – assigned a value of 1 per cent.

4.123 Optus has made submissions on this issue in assessing past ULLS undertakings and reiterates in this particular proceeding that the level of trench sharing occurring in new estates is much greater than 1 per cent, and in the order of at least 13 per cent. The ACCC has previously concluded that it believes trench sharing in new estates should be of the order of 13%, which reflects historical trench sharing measures.⁵¹

4.124 Optus submits that the TEA model significantly underestimates the level of trench sharing in new estates (as the TEA 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. This view is supported by the expert reports of NERA,⁵² Marsden Jacobs,⁵³ and the approach of the Federal Communications Commission (FCC) (as reported by NERA⁵⁴).

⁴⁹ p56

⁵⁰ ACCC (2008), Unconditioned Local Loop Service Access Dispute Between Telstra Corporation Limited (access provider) and Optus Networks Pty Limited (access seeker), Statement of Reasons for Final Determination, March 2008, para 464, page 95.

⁵¹ ACCC, Assessment of Telstra's ULLS monthly charge undertaking, Final Decision, August 2006, page 56.

⁵² Hird T, *Role of TSLRIC in Telecommunications Regulation: A Report for Optus*, July 2003.

⁵³ Competitive Carriers' Coalition Inc, *Comments on Discussion Paper - Telstra's undertaking in Relation to the Unconditioned Local Loop Service*, 4 May 2006.

⁵⁴ Hird T, *Role of TSLRIC in Telecommunications Regulation: A Report for Optus*, July 2003.

- 4.125 The FCC has given consideration to the appropriate degree of trench sharing to be assumed in a forward looking TSLRIC+ model of network costs and determined that a predictive judgment needs to be made as to what future sharing will be available to the incumbent.⁵⁵ The resulting trench sharing percentages adopted by the FCC are substantially greater than that used in the TEA model.⁵⁶
- 4.126 The TEA model is inconsistent in its application of TSLRIC+ in relation to new estate trenching as it models costs based on a forward looking new entrant rebuilding the network today but it also requires that a certain network design (i.e. designated by Telstra design rules) be followed by that new entrant. Costing based on mixing these concepts will lead to a price that could encourage inefficient bypass (as a new entrant would adopt a scorched earth network if the new entrant were rebuilding the network today) and will lead to cost recovery greater than is required to serve Telstra's legitimate business interests.
- 4.127 Further, in relation to new estates Optus submits that the proper application of a scorched node TSLRIC+ model would recognise that it would be prudent of Telstra to use trenches excavated by others in new estates and to include only the costs incurred by Telstra in these areas.⁵⁷
- 4.128 It is Optus' view that even though TEA is designed to be a forward-looking model, Telstra's historical ability to share trenches is still relevant to the costing of the ULLS. This view is supported by the Tribunal's recent ULLS Decision where it found that only those efficient costs actually involved in constructing the network are to be included in the capital costs. It stated that:
- “the capital costs would be annualised over the lifetime of the assets involved in constructing the network”*⁵⁸
- 4.26 Further, the Tribunal has previously confirmed that it is only efficient costs incurred that are relevant to the pricing when it said that:
- “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.”*⁵⁹
- 4.129 In the long run, a new entrant (similar to Telstra) would have available to it all inputs of production, including the availability of open trenches in new estates. New entrants would also not be constrained by the technology choices of the incumbent in a forward looking network rollout.

⁵⁵ Hird T, *Role of TSLRIC in Telecommunications Regulation: A Report for Optus*, July 2003, page 21.

⁵⁶ 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.

⁵⁷ Hird T, *Role of TSLRIC in Telecommunications Regulation: A Report for Optus*, July 2003, page 14 .

⁵⁸ *Telstra Corporation Ltd (No 3)* [2007] ACompT 3 at [340].

⁵⁹ *Seven Network Limited (no 4)* [2004] ACompT 11 at [135].

- 4.130 Optus submits that the approach of the TEA model to trench sharing and new estates are further examples of the model's inappropriate methodology and significant limitations. It follows that the cost estimates produced by the TEA model are likely to significantly overestimate the efficient cost of supply (TSLRIC+) of the ULLS. Consequently, Telstra cannot derive any support from the TEA model's cost estimates for the ULLS access price proposed in its undertaking.
- 4.131 It follows that the cost estimates produced by the TEA model are likely to significantly overestimate the efficient cost of supply (TSLRIC+) of the ULLS. Consequently, Telstra cannot derive any support from the TEA model's cost estimates for the ULLS access price proposed in its undertaking.

Methodology to calculate operations and maintenance and indirect cost factors

- 4.132 The ACCC has posed the following questions regarding this issue:

Q5.2.9A. The RAF does not distinguish between costs across Bands. The RAF also provides revenue and cost data for a range of Telstra's networks (fixed and mobiles). As the undertaking is for only Band 2 and relates only to the CAN, is the approach used by Telstra to estimate costs using the total value of all the services in the RAF reasonable?

Q5.2.9B. Do you consider that the O&M costs for the distribution and main network should include only those costs associated with the copper network (that is, properly exclude provision of the service on the fibre network)?

Q5.2.9C. Comment on Telstra's approach to calculating O&M expense and indirect cost factors. In particular, provide views on Telstra's approach to using:

o the total sum of the cost to all RAF products;

o the total sum of all directly attributable, attributable and non-attributable costs for all these products;

o the total sum of the cost to Internal and External Wholesale Businesses.

Q5.2.9D. Comment on whether Telstra should be using historical or current costs in factor cost estimates. Comment on whether the historical O&M and indirect costs used to calculate factor percentages reflect efficient costs. Are Telstra's historic cost estimates for the ULLS reasonable? In discussing this issue, interested parties are asked to address their comments in accordance with the relevant statutory criteria.

Q5.2.9E. Are the categories used to calculate O&M and indirect cost factors appropriate?

Q5.2.9F. Are the adjustments applied to the O&M and indirect costs appropriate? For instance, is the forward-looking adjustment for Investment Costs in Ducts and Pipes and Copper Cables appropriate?

Q5.2.9G. Do you consider that Telstra is more efficient under a TEA model design where the level of O&M expenses calculated in the TEA model is

approximately 10 per cent below Telstra's actual O&M expenses allocated to ULLS in the RAF?

- 4.133 The ACCC noted in its discussion paper that operations and maintenance (O&M) and indirect cost factors in the TEA Model are calculated using the 2005/2006 Regulatory Accounting Framework (RAF) data⁶⁰.
- 4.134 The ACCC said that whilst the Telstra's undertaking is modelled for Band 2, the RAF data Telstra used does not spilt across Bands. E.g. in deriving investment costs, Telstra uses the total value across all RAF products for both Internal and External Wholesale Businesses.⁶¹
- 4.135 In considering this issue previously, the ACCC has stated that the use of historical Telstra O&M costs is not appropriate as Telstra's historic costs are not necessarily those of an efficient and forward looking operator. Even allowing adjustments due to the exclusion of legacy technologies is not clear if these costs reflect those of an efficient forward-looking operator⁶².
- 4.136 Optus considers that Telstra's approach to calculating the markup factors for O&M will result in an over-estimation of efficient cost for three main reasons.
- 4.137 First, the markup factors for O&M costs are derived from the proportions that exist in Telstra's RAF reporting (ie, the ratio of O&M costs in the RAF to network capital costs in the RAF). But these proportions are inflated because the value for network capital costs in the RAF is based upon the wholly depreciated value (WDV) of assets; while the O&M costs in the RAF are not depreciated. To take a stylised example,⁶³ imagine that the original capital cost for a particular network asset was \$100, and that the O&M cost for that asset was \$10. The 'correct' O&M proportion (ie, the ratio of O&M cost to network capital cost) is $10/100 = 10\%$. Now assume that the asset has been in service for some time, and has been written down by 50%. Then if RAF values are used to calculate the O&M proportion for the asset, the result (ie, the ratio of O&M costs in the RAF to network capital costs in the RAF) will be $10/50 = 20\%$. Under Telstra's approach, this inflated proportion would then be applied to a non-depreciated network capital value calculated by the TEA model. In this simple example, that capital value would be \$100, and the resulting O&M value would be 20% of \$100: \$20. Telstra's approach would thus estimate a value for O&M costs on that asset of double the actual cost.
- 4.138 Second, the markup factors for O&M costs have been calculated based upon Telstra's legacy network; this does not take account of likely

⁶⁰ p32

⁶¹ p32

⁶² p51

⁶³ The rate of inflation is assumed to be zero in this example.

improvements in O&M costs for modern equivalent assets. The size of O&M costs is related to the nature of the asset's specific characteristics (e.g. composition, type, age etc). So a new entrant's network with modern equipment would be cheaper to maintain than Telstra's legacy network.

- 4.139 Third, Optus considers that the approach used by Telstra to estimate costs using the total value of all the services in the RAF is not reasonable, given that the undertaking is for only Band 2 and relates only to the CAN. In particular, Telstra's approach ignores the well-known fact that rural O&M costs (such as those experienced in Band 4 and parts of Band 3) are likely to be higher than urban (Band 1 and 2) O&M costs. In Optus' experience, the average service assurance activity cost with respect to attending a rural fault (\$547.43) is 41% higher than the cost of attending an urban fault (\$320.96).⁶⁴
- 4.140 It follows that the cost estimates produced by the TEA model will be likely to overestimate the efficient cost of supply (TSLRIC+) of the ULLS.

Cost of capital

- 4.141 The ACCC states in its discussion paper that Telstra has submitted that that its preferred vanilla WACC as at 1 January 2008 ranges from 10.49 per cent to 13.91 per cent. In a letter of 4 April 2008, Telstra indicated that the WACC point estimate value in Version 1.0 of the TEA model of 11.86 per cent has been updated to 12.28 per cent to reflect actual outcomes for the risk-free rate and debt risk premium as at 1 January 2008.
- 4.142 The ACCC has posed the following questions regarding this issue:

Q5.2.10A. Having regard to the regulatory criteria in section 152AH of the Act, is Telstra's range of WACC values appropriate and should the upper value of that range be extended by more than the lower value? Are the costs of under-estimating the WACC greater than those of over-estimating the WACC (i.e. are there any asymmetric costs)? Provide evidence, where possible, to support your submission.

Q5.2.10B. How should the WACC inputs be calculated? Provide evidence, where possible, to support your submission.

Q5.2.10C. Advise whether you consider Telstra preferred WACC parameter values are appropriate. Provide evidence to support your submission.

Q5.2.10D. Are there any other issues concerning the appropriate WACC, which the ACCC should consider?

⁶⁴ Quoted costs are averages across the direct line, DSL and mobile networks.

- 4.143 In its most recent consideration of the appropriate WACC to apply in setting Telstra's ULLS price, the ACCC determined that a post-tax vanilla WACC of 10.15% would be appropriate.
- 4.144 Optus submits that this WACC set by the ACCC remains an appropriate ceiling for the WACC to be applied to the ULLS (however there is scope to reduce the WACC by setting a more appropriate, lower, asset beta, as is discussed later in this section). Optus proposes to examine only selected WACC parameters.
- 4.145 In this section Optus will submit that:
- Telstra's proposed market risk premium is excessive and is inconsistent with regulatory precedent;
 - Telstra's proposed equity beta is too high, since:
 - i) use of a Telstra-wide asset beta is inappropriate;
 - ii) regional Bell operating companies are not appropriate comparators; and
 - iii) better comparators include BT's Openreach division, as well as gas and electricity customer access networks; and
 - the point estimate for the WACC should not be higher than the midpoint of the range and in particular no allowance should be made to accommodate claims of asymmetric consequences of estimating the WACC.
- 4.146 It follows that the cost estimates produced by the TEA model are likely to significantly overestimate the efficient cost of supply (TSLRIC+) of the ULLS. Consequently, Telstra cannot derive any support from the TEA model's cost estimates for the ULLS access price proposed in its undertaking.

Market risk premium

- 4.147 Telstra has proposed 7.0% as its point estimate for the market risk premium. This proposal is inconsistent with regulatory precedent. A recent report by CEG provides support for the ACCC's position regarding the market risk premium for the ULLS. As CEG observe, there is a strong consensus amongst Australian regulators for an MRP of 6%;⁶⁵ as is demonstrated in the following table:

⁶⁵ CEG, June 2008, The Cost Of Capital for the NBN, p.20

Table 4.3: MRP used by Australian Regulators in Relevant Decisions

Industry	Regulator/Year	MRP
Telecommunications		
Telstra ULLS	ACCC/2006	6.0
Electricity Distribution		
NSW Distributors (3 businesses)	IPART, 2004	5.0 to 6.0
ActewAGL	ICRC, 2004	6.0
Aurora (Tas)	OTTER, 2003	6.0
Queensland Distributors (2 businesses)**	QCA, 2005	6.0
Victorian Distributors (5 businesses)	ESC, 2005	6.0
ETSA Utilities	ESCOSA 2004	6.0
Electricity Transmission		
Draft Statement of Regulatory Principles [†]	ACCC, 2004	6.0
National Electricity Rules	AEMC, 2006	6.0
Gas Distribution		
ActewAGL	ICRC, 2004	6.0
Victorian Distributors (3 businesses)	Vic. ESC, 2003	6.0
Victorian Distributors (3 businesses)	Vic. ESC, 2008	6.0
Envestra/Allgas	QCA, 2006	6.0
Envestra	ESCOSA, 2006	6.0
AGLGN	IPART, 2005	6.0
Gas Transmission		
ACCC, (5 businesses)	ACCC/variou s	6.0

4.148 Optus submits that a market risk premium of 7.0% would result in an overestimate of efficient cost, and that the ACCC should adopt an estimate of 6.0%.

4.149 Further, Optus observes that Telstra’s submission is not entirely consistent with its position in the mobile context. WIK-Consult’s Mobile Network Cost Model (WIK MNCM) used a value of 4.5% for the market risk premium. While Optus does not endorse WIK-Consult’s views in this regard, Telstra has very recently relied on estimates produced by the WIK MNCM which rely on this parameter value, amongst others. This was in the context of **CiC**

Beta

4.150 Turning to the asset beta and equity beta, the ACCC states in its discussion paper that Telstra assumes an asset beta for the CAN of approximately 0.725, and considers that a reasonable range is from 0.625 to 0.825. These values are based on a mix of sources including a Telstra-wide asset beta estimate; comparing the average estimated asset beta of the remaining regional Bell Operating Companies (RBOCs); and estimates of income elasticity for the products provided on the CAN to obtain a revenue weighted average income elasticity value (assumes a positive relationship between income elasticity and beta). Telstra assumes a debt beta of 0.0. Telstra applies an equity beta value of 1.03.

4.151 In its most recent consideration of the appropriate WACC to apply in setting Telstra’s ULLS price, the ACCC stated that it used an asset beta of 0.5, “leveraged to provide an equity beta of around 0.83.” The

ACCC took the view that “the appropriate WACC for the ULLS is one based on a business providing access to a fixed-line customer access network, either to itself or to other service providers.”⁶⁶

- 4.152 On Telstra’s proposed use of a Telstra-wide asset beta estimate, Optus submits that the ACCC should consider the position of Ofcom, which faced a similar issue when determining an asset beta for BT’s copper access network business in 2005. In its 2005 decision, Ofcom recognised that “companies commonly make investment decisions at a project or activity level, and reflect variations in systematic risk between different activities.” In order to “reflect some of the most important of these variations in systematic risk”, Ofcom decided to “disaggregate its estimate of BT’s equity beta “in order to reflect Ofcom’s view of the differing levels of systematic risk faced by different parts of BT’s business.”⁶⁷ In particular, it took the view that it was “reasonable to disaggregate BT’s group beta of 1.1 into two components which broadly relate to BT’s copper access network business with an equity beta of 0.9 and the rest of BT (including retail calls, broadband, and leased lines) with an equity beta of 1.23.”⁶⁸ Ofcom more recently said that:⁶⁹

In the 2005 Final Statement, we estimated an appropriate notional beta for BT’s copper access network business which was 0.2 lower than BT Group’s. While we recognise that the process of disaggregation of equity betas is not an exact science, we remain of the view that Openreach’s beta is below that of the BT Group

- 4.153 Consistent with Ofcom’s view, Optus submits that use of a Telstra-wide asset beta estimate is inappropriate since Telstra provides a range of services which is much broader and of a significantly different risk profile, compared to providing access to a fixed-line customer access network. The beta appropriate for calculation of the WACC for Telstra’s ULLS prices is below that of Telstra as a whole.
- 4.154 On Telstra’s use of regional Bell operating companies as comparators, Telstra has stated that it “considers that the remaining regional Bell operating companies (colloquially referred to as the “RBOC’s”) are reasonable analogues of the CAN-only provider.”⁷⁰
- 4.155 However, these RBOCs provide a range of services quite different and of a significantly different risk profile compared to providing access to a fixed-line customer access network. Verizon, for example, serves nearly 69 million wireless customers, and also provides VoIP services, long distance calling, video-on-demand and DIRECTV services, and other non-traditional services (eg, a joint venture with Microsoft called

⁶⁶ ACCC, June 2008, *ULLS Pricing Principles and Indicative Prices*, p.17

⁶⁷ Ofcom’s position was supported in part by research carried out by PwC which concluded that “there is sufficient directional evidence for serious consideration to be given to applying disaggregated betas”.

⁶⁸ Ofcom, August 2005, Final Statement: “Ofcom’s approach to risk in the assessment of the cost of capital”, pp.3-4

⁶⁹ Ofcom, 30 May 2008, A New Pricing Framework for Openreach, p.83, p.90

⁷⁰ Telstra WACC submission, p.36

"Verizon Web Calling", a type of VoIP service used within Windows Live Messenger).⁷¹ AT&T provides a similar range of services to Verizon and also provides additional services such as Virtual Private Network (VPN), a substantial directory business and Wi-Fi (AT&T is the USA's largest Wi-Fi provider).⁷² Qwest provides a similarly broad range of services. Consequently, Optus submits that the RBOCs are not reasonable analogues of the CAN-only provider and cannot be used as comparators in determining Telstra's WACC for the purposes of its ULLS undertaking.

4.156 Telstra has stated that as far as it is aware "there is no listed entity that uniquely and solely provides only the range of services supplied by the notional CAN-only provider, the subject of the WACC estimation exercise."⁷³ However, Telstra has neglected a highly relevant comparator entity, namely BT's Openreach division. Openreach is "responsible for the 'first mile' of the national access network", on which it "services, supports and maintains the wiring, fibres and connections".⁷⁴ Openreach provides access to a fixed-line customer access network and thus has a relevant risk profile for current purposes. The equity beta range applied to BT's Openreach division by Ofcom in its recent decision of May 2008 was 0.7 to 0.8,⁷⁵ as compared with Telstra's range of 0.887 to 1.17. Optus submits that Openreach's equity beta as determined by Ofcom in 2008 should be used as a comparator in determining Telstra's WACC for the purposes of its ULLS undertaking.

4.157 Optus also submits that an investment in the CAN has substantially similar characteristics to an investment in other natural monopoly assets – such as gas pipelines and electricity distribution networks. In particular, these networks all:

- have a similar cost structure – with high upfront construction costs and relatively low ongoing maintenance costs;
- are subject to limited competition from other services; and
- derive demand for services from the purchasing decisions of a large number of small end customers (mainly households).

4.158 As CEG has observed, "there is little reason to believe that Telstra's existing copper customer access network is subject to higher CAPM risks than gas and electricity customer access networks."⁷⁶ Accordingly, Optus submits that in setting a WACC for the ULLS, the ACCC should take into account the equity beta values set by regulators in other natural monopoly assets – such as gas pipelines and electricity distribution networks – such as are set out in the following table:⁷⁷

⁷¹ <http://investor.verizon.com/profile/overview.aspx>

⁷² <http://www.att.com/gen/investor-relations?pid=5711>

⁷³ Telstra WACC submission, p.36

⁷⁴ http://www.openreach.co.uk/orpg/aboutus/Downloads/web_corp_brochure.pdf#page=2

⁷⁵ Ofcom, 30 May 2008, *A New Pricing Framework for Openreach*, p.83, p.90

⁷⁶ CEG, 2008, *The Cost Of Capital for the National Broadband Network*, p.17

⁷⁷ Note that an ACCC telco decision from 2006 has been removed from the table.

Table 4.4: Equity Beta used by Australian Regulators in Relevant Decisions (gearing at 60%)

Electricity Distribution		
NSW Distributors (3 businesses)	IPART, 2004	0.78 to 1.11
ActewAGL	ICRC, 2004	0.90
Aurora (Tas)	OTTER, 2003	0.95
Queensland Distributors (2 businesses)**	QCA, 2005	0.90
Victorian Distributors (5 businesses)	ESC, 2005	1.00
ETSA Utilities	ESCOSA 2004	0.8 (0.9 on appeal)
Electricity Transmission		
Draft Statement of Regulatory Principles [†]	ACCC, 2004	1.0
National Electricity Rules	AEMC, 2006	1.0
Gas Distribution		
ActewAGL	ICRC, 2004	0.9 to 1.09
Victorian Distributors (3 businesses)	Vic. ESC, 2003	1.00
Victorian Distributors (3 businesses)	Vic. ESC, 2008	0.70
Envestra/Allgas	QCA, 2006	1.1
Envestra	ESCOSA, 2006	0.8 to 1.0
AGLGN	IPART, 2005	0.8 to 1.1
Gas Transmission		
ACCC, (5 businesses)	ACCC/various	1.0-1.14

- 4.159 Also of relevance is that CEG has established that an asset beta of 0.45 would be appropriate for the FTTN.⁷⁸ Optus considers that CEG’s findings are also relevant to a discussion of ULLS WACC parameters. As CEG observes in its report:

“Our estimate is consistent with the cost of capital estimated for the current ULLS service that the FTTN would be replacing.”⁷⁹

“we believe that the appropriate range for the FTTN CAPM beta (assuming 60% gearing) is between a value of 1.00 consistent with the equity betas of gas and electricity customer access networks and a value of 1.25. The upper end of this range is defined by the ACCC’s beta for Telstra’s ULLS assets.”⁸⁰

- 4.160 Optus submits that the ACCC should consider adopting an asset beta of 0.45 for the ULLS, consistent with the asset beta which CEG has established would be appropriate for the FTTN.

Asymmetric costs

- 4.161 The ACCC states in its discussion paper that Telstra has submitted that the adverse effects of choosing a WACC that is below the true WACC will be greater than the adverse effects of choosing a WACC that is above the true WACC, therefore, a WACC higher on the range of values should be chosen.

- 4.162 In its most recent consideration of the appropriate WACC to apply in setting Telstra’s ULLS price, the ACCC made no allowance to accommodate claims of asymmetric consequences of over-estimating or under-estimating the WACC, “consistent with past practice, and

⁷⁸ CEG, June 2008, The Cost Of Capital for the NBN, p.21

⁷⁹ CEG, June 2008, The Cost Of Capital for the NBN, p.1

⁸⁰ CEG, June 2008, The Cost Of Capital for the NBN, p.19

views of the Tribunal.”⁸¹ This is consistent with the view taken in early 2008 in the final determinations on the various ULLS access disputes.

- 4.163 Optus agrees with the ACCC’s reasoning for rejecting Telstra’s “welfare asymmetry” argument. As the ACCC has recognised, the “welfare asymmetry” argument put by Telstra implicitly assumes that there is a single “true” required return and that if the ACCC sets the allowed return marginally below this “true” required return there will be a capital strike leading to failure to invest in new projects or maintain the existing network.⁸² Telstra’s implicit assumption is a gross oversimplification. In reality small errors in setting the allowed regulated return would involve only small changes in the amount of capital that investors will provide to finance new investment. In other words, small errors in setting the regulated return will not result in all investors ceasing to provide funds.
- 4.164 Moreover, a large proportion of the capital invested in the Telstra network is sunk. As Ockerby has observed,⁸³ this means that the investment decision in relation to these assets is irreversible (by definition) and therefore the effect of an additional return on capital in the regulated return will not affect the decision of whether or not to invest. This is not to say that regulators should intentionally set a low allowed return to expropriate the sunk assets. However it does support the view that there can be no general presumption that setting an unbiased estimate of the allowed return will lead to negative social consequences.
- 4.165 Optus submits that in determining a reasonable WACC to be applied with respect to the monthly price in Telstra’s ULLS undertaking, the upper value of the range of values should not be extended by more than the lower value, the point estimate for the WACC should not be higher than the midpoint of the range and in particular no allowance should be made to accommodate claims of asymmetric consequences of estimating the WACC, consistent with past practice, the views of the Tribunal⁸⁴ and the ACCC’s position in the 2008 Pricing Principles.

Calculating annualised and unitised ULLS costs

- 4.166 The ACCC stated in its discussion paper that for the purpose of calculating the TSLRIC+ for a particular year(s), capital investment must be converted to annual capital costs.⁸⁵ The ACCC has posed the following questions regarding this issue:

⁸¹ ACCC, June 2008, *ULLS Pricing Principles and Indicative Prices*, p.18

⁸² ACCC, March 2008, ULLS access dispute - Optus - Telstra - Final determination, Statement of Reasons, para 413

⁸³ Ockerby, 2005, *Response to a Report on the appropriate weighted average cost of capital for the PSTN network by Professor Bowman dated December 2005*

⁸⁴ Telstra Corporation Ltd (No 3) [2007] ACompT 3 (17 May 2007) at 474.

⁸⁵ ACCC, Discussion Paper p40

Q5.2.11A. Is Telstra's method of calculating annualising and unitising network costs appropriate? Provide reasoning to support your submission.

Q5.2.11B. Is assuming end of year cash flows an appropriate assumption? Provide reasoning to support your submission.

4.167 Optus submits that Telstra has departed from methodology accepted by the ACCC in that the TEA model does not incorporate a tilted annuity formulation for determining annual capital costs. The ACCC adopted a tilted annuity approach in 2000 in order to prevent “the owner of the assets being over-compensated”, and provided detailed reasons for its approach. The ACCC said that:

“The Commission believes that the tilted annuity approach is most consistent with the TSLRIC approach to cost estimation as used to determine annual capital costs within the short period of the undertaking for a service with relatively long-lived assets.”⁸⁶

4.168 A tilt is placed in the annuity calculation to mimic the price path that might be expected in a competitive market. In such a market, one would expect the recovery of capital (or more precisely the price path) to reflect the following factors:

- the level of competition in the market;
- expectations of new technologies, and
- changes in the replacement cost of relevant assets.

4.169 A tilt is normally incorporated in the annuity function to reflect the expected price trends of assets that are being valued (as these incorporate expectations of new technologies and replacement costs), and allow regulators to replicate the cost recovery conditions that would be faced by a firm in a competitive market. The ACCC has noted that:

“The replacement cost of assets may vary from year to year. In some instances, the replacement cost may fall due to technological advances (e.g. switches and processors). In others, it may increase (e.g. trenches). To deal with this, the approach adopted by the Commission is to tilt the annuity in response to projected changes in the replacement value of particular assets.”⁸⁷

4.170 An annuity with a tilt provides the same NPV of the level of compensation but with the profile of that compensation rising/falling over the life of the asset (i.e. the degree of tilt). The assurance that the level of compensation does not change regardless of the tilt applied is the competitive market condition. That is, investors in a competitive market will not invest unless they expect returns will cover the net

⁸⁶ ACCC (2000), *A report on the assessment of Telstra's undertaking for the Domestic PSTN Originating and Terminating Access Service*, Final Report, July 2000, page 96.

⁸⁷ ACCC (2000), *A report on the assessment of Telstra's undertaking for the Domestic PSTN Originating and Terminating Access Service*, Final Report, July 2000, page 96.

present value of the invested capital. An annuity with a zero tilt compensates for the initial investment by providing the same annual return over each of those years (i.e. there is no expectation of price changes for assets in the future).

4.171 The rationale for the tilt is as follows:

- when input prices are falling, the incumbent operator will know that a new entrant in the future will have a lower cost base. As a result, incumbent operators will only invest in the market today if they can recover more of their capital in the early periods, because they know they will face a lower cost entrant in the future; or alternatively
- when input prices are rising, the incumbent operator will know that a new entrant in the future will have a high cost base, therefore their future return will be ‘protected’, they are can therefore afford to invest and compete price down today in the knowledge they will not face a new entrant with a lower cost base in the future.

4.172 It is important to note that although it is assumed that there will be a constant level of tilt for the relevant period this does not mean that the annuity need follow a single tilt over the life of the asset, as the actual return path can be flexible. Moreover, as the Commission has highlighted previously “replacement costs of assets may vary from year to year”.⁸⁸ As the value of the asset rises or falls with the trend in asset values so will the depreciation values rise and fall. However, a consistent approach to the annuity ensures that a price path is set to recover the value of the assets over their life.

4.173 Optus submits that Telstra’s method of calculating annualising and unitising network costs is not appropriate and the ACCC should apply the tilted annuity approach it has adopted in calculating indicative prices for the ULLS.

4.174 It follows that the cost estimates produced by the TEA model do not reflect the forward-looking efficient costs of supply of the ULLS according to the TSLRIC+ pricing principle. Consequently, Telstra cannot derive any support from the TEA model’s cost estimates for the ULLS access price proposed in its undertaking.

Depreciation

4.175 The ACCC has posed the following question regarding this issue:

Q5.2.12A. Comment on the appropriateness of Telstra's default depreciation schedule. Do the values appropriately reflect the expected decline in the economic value of the underlying assets?

⁸⁸ ACCC (2000), *A report on the assessment of Telstra’s undertaking for the Domestic PSTN Originating and Terminating Access Service*, Final Report, July 2000, page 96.

Provide evidence where possible, with reference to the reasonableness criteria set out in section 152AH of the Act.

- 4.176 In considering this issue previously, the ACCC stated that it was interested in the life of copper cables used in PIE II as copper represents a major cost of the total CAN costs. The ACCC did not believe Telstra's values of asset life used in the PIE II model is appropriate as it believes that the asset life should correspond to its economic life rather than accounting life⁸⁹.
- 4.177 The ACCC has stated in its discussion paper that depreciation schedules should be based on the expected decline in the economic value of assets and that the asset life directly affects the asset depreciation schedule and will therefore affect network cost estimates.⁹⁰
- 4.178 Optus considers that the asset life variable generally has a significant influence on the final ULLS price. Optus has found that the TEA model is very insensitive to changes in the asset life variable and that this is an unusual, and concerning, result that suggests further review by the Commission would be appropriate.
- 4.179 In regards to the previous network cost model (the PIE II model), Optus calculated that increasing the asset life of 'main cable' by 5 years decreased the ULLS price by approximately 14% and 11% in bands 1 and 2 respectively. However, similar changes made in the TEA model decrease the price by only 2%.
- 4.180 Optus accepts that the PIE II and TEA models are quite different; nevertheless it would expect that the main drivers of costs, and hence sensitivity associated with changing parameters associated with these drivers, would remain reasonable similar. The fact that the model does not react as expected in regards to this variable (and others) is cause for concern and suggests that the model may be intrinsically flawed.
- 4.181 The Commission's past position has been to accept the asset lives proposed by Telstra; however this decision was made 'on balance', as it was suggested by the Commission that although the use of Telstra's (lower) values would likely increase the ULLS, the tilted annuity calculation would likely provide a counter-balancing affect. Given that the new TEA model does not (in its current form) allow for any tilt, Optus considers that this is cause for the Commission to analyse Telstra's proposed asset lives in greater depth.
- 4.182 This issue is important because when TSLRIC+ prices are calculated using an annuity it sets a price path (be that flat or tilted) that perfectly recovers the asset value over its life (in net present value terms). If the asset base is reset each year and the same annuity is followed then a consistent price path will be followed and the price will recover the asset base over its life. However, if the asset base is re-set every year

⁸⁹ p65

⁹⁰ p40

based on an incorrectly assumed asset life this will not just affect the profile of returns (or price path), it will also affect the level of cost recovery.

- 4.183 Optus contends that the asset life for main cable used in the TEA model (10 years) is far too short and as a result the capital costs of the CAN are likely to be significantly over-recovered. In its most recent Pricing Principles Determination the ACCC previously considered that the most appropriate asset life to use was 12 years for the main cable.⁹¹
- 4.184 Optus submits, however, that the asset life for copper cable should be adjusted to at least 15 years as a conservative estimate of the economic life of the asset. A 15 year asset life is a reasonable estimate, consistent with international standards and aligns with Telstra’s own statements on the asset life of main copper cable in the CAN.
- 4.185 This section of the submission:
- demonstrates use of 10 years, rather than the true life of 15 years, inflates prices and leads to over-recovery of capital which is inconsistent with LTIE;
 - provides direct evidence from Telstra and its own experts that supports an asset life of at least 15 years; and
 - details international study after international study that support an asset life of at least 15 years. Evidence is detailed from a range of jurisdictions, including those with more difficult operating conditions than faced by Telstra.

International Benchmarking

- 4.186 Optus submits that an asset life for copper main cable of 10 years is far below the international evidence as supported in various sources including reports by PricewaterhouseCoopers (PwC) and Ernst and Young.
- 4.187 The PwC study surveyed the asset lives of telecommunications assets across 30 international carriers, covering Europe, Asia and America. The results of the PwC analysis are reproduced in the table below.

Table 4.5: Asset life of copper cable in various global regions⁹²

Region	Asset life of copper cable
Asia	10 to 15 years
Europe	14 to 20 years
USA	10 to 20 years

- 4.188 Notably PwC found that the average service life for copper main cabling was 15 years. In PwC’s expert opinion

⁹¹ ACCC (2008) *Unconditioned Local Loop Service - Pricing Principles and Indicative Prices*, June 2008, page 21.

⁹² PricewaterhouseCoopers (1999), *Telco Network Service Lives*, March 1999, page 5.

*“Cabling - The life attributed to cabling will mainly depend on the type of technology and cable used (copper v. fibre optic). The part of the network to which it relates (backbone v. local connections) does not generally appear to make a difference on the economic life. Our research indicates that 15 years appears to be a reasonable average in the industry with regards to copper cables. Fibre cables are in general depreciated over a longer period, and 20 years appears to be reasonable. Where cabling is aerial, lives are normally reduced slightly, as these cables are more susceptible to damage, as well as obsolescence due to advancing technology.”*⁹³ [Emphasis added]

- 4.189 Telstra’s claimed asset life of 10 years is in the lowest bound of responses and significantly below the average. It is also less than the actual life Telstra uses for copper main cable reported by PwC of 15 years.
- 4.190 Whilst the PwC expert report is released in 1999, it notes that “[f]rom our research it is not evident that asset lives have changed significantly over time”.⁹⁴
- 4.191 Ernst & Young undertook a similar analysis and surveyed 14 international carriers across Europe, Asia and America. The Ernst & Young study found that:
- 60 per cent of European carriers indicated their copper lines had an asset life of between 16 and 20 years;
 - 75 per cent of American carriers indicated their copper lines had an asset life of between 11 and 15 years; and
 - 50 per cent of Asian carriers indicated their copper lines had an asset life of between 11 and 15 years.⁹⁵
- 4.192 The results of the Ernst & Young study emphasize that the internationally accepted asset life for main cable is in excess of 10 years. Optus submits that given the weight of evidence presented in the Ernst & Young report the Commission should adopt an asset life for main cable of 15 years.
- 4.193 Optus also highlights that in the United Kingdom, Ofcom adopted an asset life for main cable of 18 years. The implications of this decision are important as the carrier concerned (BT) submitted that an asset life of 15 years was appropriate. BT’s statements regarding the copper life were that:

*“The design life of copper cables is around 20 years under ideal conditions; and that typical service life is likely to be between 15 and 20 years although precise empirical data is not available”*⁹⁶

⁹³ PricewaterhouseCoopers (1999), *Telco Network Service Lives*, March 1999, page 5.

⁹⁴ PricewaterhouseCoopers (1999), *Telco Network Service Lives*, March 1999, page 5.

⁹⁵ Ernst & Young (2002), *Global Telecom Depreciation Survey*, October 2002, page 9.

⁹⁶ Ofcom (2005), *Valuing Copper Access*, Final Statement, 18 August 2005, page 24.

- 4.194 Ofcom determined that the period over which costs are recovered should match the operational life of the asset. It further noted that given the advancements in copper transmission (e.g. ADSL2+, VDSL) it was likely that the asset life was likely increasing rather than decreasing. It was therefore Ofcom's final view that the period "BT's current life of 15 years [was] likely to be significantly shorter than the useful life of the asset".⁹⁷
- 4.195 The Canadian telecommunications regulator, CRTC, recently ruled on the universal service funding application of Northwestel. In this proceeding the CRTC reviewed the average service life (ASL) of copper cabling (considering underground and aerial in aggregate). Northwestel sought a reduction in the ASL from 26 to 20 years as it believed technological advancements would decrease the use of copper in the network.
- 4.196 The CRTC provided a detailed analysis on the relevant issues that should be considered in determining an appropriate asset life. The discussion of the CRTC is reproduced below to illustrate the depth of analysis that is required by regulators when determining the asset base:

"In its consideration of Northwestel's proposed changes in depreciation life characteristic, the Commission focused on two main factors in analyzing Northwestel's depreciation studies: historical retirement patterns and future expectations.

The Commission notes that it has consistently taken into account historical analysis along with future expectations in approving depreciation life characteristics. The Commission also notes that this can create a divergence between the ASL resulting from a purely historical analysis, and the ASL established after due consideration is given to future expectations. In the case of Account 60, the Commission has accepted a divergence of several years as reasonable, given the anticipated impact of new technologies and new services on the future of copper cable.

The Commission also notes that over the past several years, the divergence between historical and approved service lives ranged from 2 to 13 years for Northwestel's Account 60. Further, the Commission notes that the depreciation study submitted in this proceeding indicates an historical life of 25 to 27 years for this account for which an ASL of 26 years is currently approved.

With respect to TCC's position, the Commission considers that in addition to facilities-based local competition, technological change also poses a significant risk of stranded investment in cable plant. In the Commission's opinion, fibre-based digital transmission technology will continue to move further into the network as service demand and technology develop, shortening the service life of paired copper plant, particularly in the access plant.

⁹⁷ Ofcom (2005), *Valuing Copper Access*, Final Statement, 18 August 2005, page 24.

In light of the above, the Commission is of the view that the ASL of 20 years and the Iowa R-3 survivor curve proposed by Northwestel are reasonable since retaining the currently approved ASL of 26 years would not recognize the impact of future expectations on the company's cable plant. Furthermore, the divergence of five to seven years that would result compares favourably with the divergences approved for Account 60 in the past for Northwestel. In light of the foregoing, the Commission finds the proposed ASL of 20 years is reasonable and approves Northwestel's proposal for Account 60.”⁹⁸

- 4.197 Optus proposes that the Commission adopt a similarly detailed review of the issue and based on the evidence before it the main cable life should be set at 15 years.
- 4.198 Further, the Northwestel decision highlights that despite the threat of technological change, and hence stranding of the network, both the regulator and carrier believed an asset life of 20 years was reasonable. Optus submits that in comparison the Australian telecommunications environment is much more stable and there are no legitimate or unique market conditions that would require Telstra to use such a short asset life.
- 4.199 In a report presented to the ACCC in June 2006, Marsden Jacobs and Associates (MJA) undertook a detailed study of 13 international pricing models for carriers across Europe, Asia and America. The asset lives contained in these accounting models are accepted by regulators and used in formal regulatory proceedings.
- 4.200 The MJA study confirmed that Telstra's value of 10 years in PIE II is not support by in any other jurisdiction. MJA recommended the use of an asset life of “at least 20 years”.⁹⁹ Optus submits that MJA's comprehensive analysis of costing models provides an extremely robust basis for the Commission to reject Telstra's proposed asset life as unreasonable.
- 4.201 Optus has provided evidence from many jurisdictions with more difficult operating conditions than Telstra. The Commission must recognise that weight of evidence clearly demonstrates that Telstra's asset life of 10 years is incorrect and unreasonable.

Statements of Telstra

- 4.202 Optus wishes to draw the Commission's attention Telstra's own statements in regards to the asset life of the CAN. Optus notes that in Telstra's 2006 Financial Report lists the service life of main cable as

⁹⁸ CRTC (2007), *Telecom Decision CRTC 2007-5: Price cap regulation for Northwestel Inc.*, 2 February 2007, para 273.

⁹⁹ MJA (2006), *Comments on Discussion Paper – Telstra's undertaking in relation to the Unconditioned Local Loop Service Report for the Competitive Carriers Coalition*, 4 May 2006, page 31.

between 5 and 25 years.¹⁰⁰ This implies the midpoint of the service life is 17.5 years, and hence Telstra's use of 10 years is plainly incorrect.

4.203 In addition, in a report on the WACC by Telstra's expert witness, Professor Bowman, it was stated:

*"I am informed by Telstra that the average life of the revenue generating assets of ULLS-Network is about 35 years."*¹⁰¹

4.204 Further, in relation to the FANOC's Special Access undertaking for the 'broadband access service', Telstra provided the view that:

*"The copper pair cable access network has a limited operational life and many lines were installed more than 20 years ago."*¹⁰²

4.205 While Optus considers that there are differences between the operational and economic life of assets, it is clear from Telstra's own admissions above that an asset life of 10 years is not correct.

4.206 Optus submits that the weight of evidence proves that Telstra's asset life of 10 years is incorrect, unreasonable and a significantly below the true value that should be adopted for the network costing in the TEA model. It follows that the cost estimates produced by the TEA model are likely to significantly overestimate the efficient cost of supply (TSLRIC+) of the ULLS. Consequently, Telstra cannot derive any support from the TEA model's cost estimates for the ULLS access price proposed in its undertaking.

Reasonableness of the non-price terms and conditions

4.207 The ACCC notes in its discussion paper that the undertaking contains limited non-price terms and conditions, which set out:¹⁰³

- the description of the ULLS that Telstra undertakes to supply access seekers;
- that the service may vary depending on the geographic and technical capability of the Telstra network when a request for the ULLS is made or the ULLS is delivered;
- in accordance with the ULLS Ordering and Provisioning Code (ACIF C569:2005), that Telstra will provide the access seeker with information in Telstra's records about the cable plant used to provide the ULLS. Telstra makes no representation as to the accuracy of that information;

¹⁰⁰ Telstra (2006), *Telstra Financial Reports*, 30 June 2006, page 16.

¹⁰¹ Bowman, R. G. (2005), *Report on the appropriate weighted average cost of capital for the ULLS network*, Public Version, December 2005, page 18.

¹⁰² Telstra (2007), *Submission in response to the Commission's Discussion Paper "FANOC Special Access undertaking in relation to the Broadband Access Service - Discussion Paper"*, Public Version, 31 August 2007, page 39.

¹⁰³ ACCC, Discussion Paper, p42

- that the access seeker comply with applicable industry safety standards, including the Network Deployment Rules (ACIF C559:2005) for voltages and currents on the ULLS. The access seeker must install all necessary surge protection to safeguard against personal injury and damage to equipment;
- that the access seeker must comply with the ULL Fault Management Guideline, the Network Deployment Rules (ACIF G572:2001) and the ULL Ordering and Provisioning Code (ACIF C569:2005);
- that the access seeker enter into, with Telstra, facilities access arrangements necessary for it to connect its network to Telstra's ULLS at the ULL Point of Interconnection (POI). Telstra states that its undertaking does not deal with facilities access; and
- that the access seeker is responsible for billing the end user for the telecommunications service provided by the access seeker to the end user.

4.208 The ACCC has posed the following question regarding this issue:

Q5.2.13A. Do you consider that these non-price terms and conditions ensure access seekers have the ability to reasonably access the ULLS? Provide reasoning to support your submission.

Q5.2.13B. Are non-price terms and conditions contained in the undertaking consistent with the reasonableness criteria set out in section 152AH of the Act? Provide reasoning to support your submission.

4.209 The reasonableness criteria set out in section 152AH of the Act include (inter alia) the objective of promoting competition in markets for listed services.

Promoting competition: the role of equivalent and non-discriminatory access

4.210 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.*¹⁰⁴

4.211 The Tribunal explained the process of competition as follows:

... The process of competition allows efficient suppliers to survive and displace less efficient suppliers in well functioning markets. Inefficient suppliers will ... be forced out of the market. If, however,

¹⁰⁴ Telstra Corporation Ltd (No 3) [2007] ACompT 3, para 99

*efficient suppliers are unable for other reasons to remain in the market, prices will not reduce to levels consistent with the costs of the efficient suppliers....*¹⁰⁵

4.212 It follows that the terms and conditions in an undertaking will promote competition if they allow all suppliers of services to compete on their merits (that is, on the basis of their own efficiency), so that the competitive process described in the preceding quotation can take place unimpeded by extrinsic factors and obstacles unrelated to the efficiency of the competitors. Consequently, a key principle is that the terms and conditions in the undertaking (including access prices) will promote competition if they are non-discriminatory. Only if the access provider does not discriminate between access seekers will the process of competition be free to operate as the legislators intended. The ACCC has noted the relevance of the principle of non-discriminatory access:

*An important benchmark in assessing whether competition will be promoted is the consistency of the proposed terms of access with the principle of non-discriminatory access between downstream suppliers of the service. Ultimately, a proposal for access must represent an opportunity for effective access by an access seeker to the particular service. An effective form of access should lead to a promotion of competition and contribute toward an efficient use of infrastructure.*¹⁰⁶

4.213 Accordingly, in order for competition to be promoted, it is necessary that Telstra provide access to ULLS access seekers and to itself on an equivalent and non-discriminatory basis.

4.214 In answer to propositions of this nature, Telstra typically argues that it does use the ULLS, so the requirement for equivalent access does not apply. For example, Telstra has informed Optus that: “Telstra does not apply ULLS... transfers to itself. Therefore the Capacity Thresholds are not directly applicable to Telstra.”¹⁰⁷

4.215 Optus submits that Telstra’s argument is a mere technicality which is of no relevance to the promotion of competition. The ACCC should consider the substantial reality of the competitive dynamics in the relevant markets. In this case, the substantial reality of the competitive dynamics is that Telstra competes with access seekers in downstream markets using services equivalent to the ULLS, ie:

- access seekers provide voice and broadband services to their end use customers using the ULLS as an input; and
- Telstra provides voice and broadband services to its end use customers using internal services equivalent to the ULLS (which it provides to itself), as an input.

¹⁰⁵ *Telstra Corporation Ltd (No 3) [2007] ACompT 3, para 98*

¹⁰⁶ ACCC, *Assessment of Telstra’s PSTN and LCS undertaking, Final Decision*, Public version, 29 November 2006 at [26]

¹⁰⁷ Telstra, 13 June 2008, letter to Optus, *ULLS Capacity Thresholds*, p.2

- 4.216 It follows that if Telstra does not provide ULLS access seekers with terms and conditions equivalent to those that it provides to itself (in providing the internal services equivalent to the ULLS), then access seekers will not be able to compete on their merits with Telstra in downstream markets. That is, the competitive process will be impeded by extrinsic factors and obstacles unrelated to the efficiency of the competitors, and Telstra will have been able to give itself an unmerited advantage over its competitors. As Doyle has observed, it is well recognised in the academic literature that a vertically integrated firm has an incentive to undermine the competitive process by engaging in ‘sabotage’, that is, anti-competitive non-price discrimination against non-integrated downstream competitors.¹⁰⁸
- 4.217 Consequently, in order to be consistent with the reasonableness criteria set out in the Act, it is necessary that Telstra’s undertaking contain non-price terms and conditions that ensure that access is provided to access seekers and to Telstra itself on an equivalent and non-discriminatory basis.

Telstra Exchange Building Access

- 4.218 Optus submits that Telstra does not provide access seekers with a level of access to Telstra exchange buildings (TEBA) equivalent to the level of access that it provides to itself.¹⁰⁹
- 4.219 According to Telstra, a number of its exchanges have limited TEBA space available. These exchanges are classified as ‘capped’. Telstra considers that these exchanges have insufficient rack or MDF space to meet the needs of access seekers. This means that access seekers may not be able to deploy sufficient rack capacity in those exchanges to meet current or future requirements. According to information available on the Telstra Wholesale website at 7 August, there are currently 53 exchanges on the list of “Capped sites for Telstra Equipment Building Access (TEBA)”.¹¹⁰
- 4.220 Telstra does not apply these exchange “caps” to itself. Telstra assesses the TEBA space available in its exchanges only after taking into account the planned future requirements for all of its own services including Next Generation services. That is, Telstra receives ‘priority treatment’, in that it is placed at the head of the queue for the limited space available in exchanges. **CiC**

¹⁰⁸ Doyle, 2008, *Structural separation and investment in the National Broadband Network environment*, pp2-3

¹⁰⁹ Access to ULLS requires access seekers to deploy a DSLAM in close proximity to the Telstra exchange. This typically requires the Access Seeker to “lease” space in a Telstra exchange. Indeed, Telstra’s terms and conditions for the supply of ULLS require access seekers to have signed its Facilities Access Agreement which enables access seekers to lease Telstra Exchange Building Access (TEBA) space.

¹¹⁰ Telstra Wholesale, *Capped sites for Telstra Equipment Building Access (TEBA): as at 2 July 2008*, http://telstrawholesale.com/products/docs/teba/fixed_facilities_access_capped_sites.pdf. The 53 sites are listed as either “Racks & MDF capped”, “Racks capped” or “Potential”,

- 4.221 Capacity limits in exchanges may be mitigated to some extent by the availability of an External Interconnection Cable (EIC) service provided by Telstra.¹¹¹ However, there are many practical and technical problems with the EIC service. For example, the terms and conditions upon which Telstra makes the service available are onerous and there are significant practical impediments to the use of the EIC. Perhaps most relevant for the current issue is that the use of the EIC adds a significant length of up to 250 metres to the ULLS copper loop used to access the customer's premises – which degrades the broadband capacity which can be supplied over the loop. As a result of these issues it is clear that the EIC is not an equivalent service.
- 4.222 Telstra's undertaking does not specify requirements relating to equivalence or non-discriminatory service provision with regard to TEBA. Given that terms relating to TEBA are absent from the current version of the undertaking, Optus concludes that Telstra's undertaking does not contain non-price terms and conditions that ensure that access is provided to access seekers and to Telstra Retail on an equivalent and non-discriminatory basis.

Other non-price issues

- 4.223 Optus has made submissions earlier in this submission at section 2 regarding supply, quality and fault handling, as well as provision of billing information, where we concluded that Telstra does not currently provide access seekers with a level of service equivalent to that it provides to itself, particularly in the areas of:
- time frames for supply of new customers;
 - capacity thresholds on daily ULLS cutovers for supply of new customers;
 - copper quality;
 - fault handling; and
 - notification of information required for billing (on the day of cutover).
- 4.224 Given that terms relating to these issues are absent from the current version of the undertaking, Optus concludes that Telstra's undertaking does not contain non-price terms and conditions that ensure that access is provided to access seekers and to Telstra itself on an equivalent and non-discriminatory basis.
- 4.225 Consequently, Optus submits that the non-price terms and conditions contained in the undertaking:

¹¹¹ The EIC allows access seekers to extend a ULLS or LSS from a Telstra MDF to a Point of Interconnect (POI) that is not within Telstra's building. It would enable access seekers to deploy a DSLAM outside the Telstra exchange in, for example, a roadside cabinet and still access ULLS from the exchange.

- do not promote competition in markets for listed services;
- do not ensure access seekers have the ability to reasonably access the ULLS; and
- are not consistent with the reasonableness criteria set out in section 152AH of the Act.

Appendix A: ULLS Service Description

Attached as separate document.

Attachment 1: Optus Letter re Conditions for Access to TEA Model

Attached as a separate document.