



**Final Determination for model price terms and
conditions of the PSTN, ULLS and LCS services**

October 2003

Abbreviations

ACA	Australian Communications Authority
ACCC	Australian Competition and Consumer Commission
AD	Access deficit
ADC	Access deficit contribution
CAN	Customer access network
CAM	Customer access module
CBD	Central business district
C-MUX	Customer multiplexer
DCITA	Department of Communication, Information Technology and the Arts
DSL	Digital subscriber line
FDC	Fully distributed cost
FTM	Fixed to mobile
IEN	Inter-exchange network
IDD	International direct dial
ISDN	Integrated services digital network
LAN	Local area network
LAS	Local access switch
LCS	Local carriage service
LTIE	Long-term interest of end users
MTF	Mobile to fixed
NECG	Network Economics Consulting Group
PC	Productivity Commission
PIE	PSTN Ingress Egress

PSTN	Public switched telephone network
PSTN O/T	Public switched telephone network Originating/Terminating
RAF	Regulatory accounting framework
RIM	Remote integrated multiplexers
RSU/RSS	Remote switching units or stages
STD	Subscriber trunk dialling
TELRIC	Total element long-run incremental cost
TSLRIC	Total Service long-run incremental cost
TSLRIC+	Total Service long-run incremental cost plus indirect costs
TSLRIC++	Total Service long-run incremental cost plus indirect cost plus ADC
ULLS	Unconditioned local loop service
USO	Universal service obligation
WACC	Weighted average cost of capital

Table of contents

1	Executive summary	1
1.1	Pricing of core services and removal of access deficit contribution – Chapters 6, 7 & 8	2
1.2	Model access prices for PSTN O/T services – Chapters 9 and 13	4
1.3	Model access prices for ULLS – Chapters 10 and 14	4
1.4	Model access prices for LCS – Chapters 12 and 15	6
2	Introduction	9
2.1	Role of model terms and conditions	9
2.2	Nature of determination	10
2.3	Consultation	12
2.4	Other matters	13
3	Legislative criteria	14
3.1	The long term interests of end users	14
3.2	‘Reasonableness’ Criteria	15
3.3	Application of these considerations in developing model price terms	16
PART I – PSTN O/T services and the ULLS		20
4	Service descriptions	20
4.1	PSTN O/T services	20
4.2	ULLS	21
5	Appropriate pricing principles satisfying the legislative criteria	23
5.1	Total service long-run incremental cost	23
5.2	The legislative criteria, TSLRIC and the PSTN and ULLS	26
6	Modelling framework	28
6.1	The appropriate model	28
6.2	Applying an adjustment factor	31
6.3	Price ranges or points	33
7	Appropriate inputs	35
7.1	Trench Sharing	36
7.2	WACC	37
7.3	Network planning costs	40
8	PSTN - the access deficit contribution	42
8.1	Introduction	42
8.2	Background	43
8.3	Criteria for assessment of changes in the ADC	43
8.4	Possible changes in the ADC	54
8.5	Continuing with the currently defined AD and ADC	55
8.6	Redistributing the AD	56
8.7	Redefining the AD	59
8.8	Discontinuation of an ADC	60
8.9	Comparative assessment against the criteria of redefined AD option vs option of implementing TSLRIC+ prices over a transitional period	64
8.10	Conclusion	65
9	Model access prices for the PSTN O/T services	67
10	ULLS – network and non-network costs	70
10.1	Network costs for the ULLS	70
10.2	ULLS-specific costs	73
10.3	Conclusion	84
PART II – Local calls supplied using the local carriage service		86
11	Service description	86
11.1	Local carriage service	86
11.2	PSTN O/T services	86
12	LCS and PSTN O/T services – the supply of local calls	87
12.1	Introduction	87

12.2	LCS pricing issues	87
12.3	Local calls delivered using PSTN O/T services.....	104
PART III – Final determinations.....		106
13	Model access prices for PSTN O/T services.....	106
14	Model access prices for ULLS.....	107
15	Model access prices for LCS	108

1 Executive summary

Following amendments to the *Trade Practices Act 1974* (the Act) in December 2002, section 152AQB requires the Commission to make a written Determination setting out model terms and conditions, including prices, relating to access to each core telecommunications service ('core service'). The applicable core services are:

- the Domestic Public Switched Telephone Network Originating and Terminating ('PSTN O/T') Access Service;
- the Unconditioned Local Loop Service ('ULLS');
- the Local Carriage Service ('LCS'); and
- any additional core service specified in regulations by the Minister.

These services are the main fixed-line network interconnect or wholesale services used by competitors. Competitors need these services in order to compete with Telstra in the provision of a variety of retail services, such as local, domestic long distance ('STD'), international ('IDD') and fixed-to-mobile ('FTM') calls as well as various high-speed data services. Access to these core services has in the past been the main area of disputation about access services in the industry.

A Determination will remain in force for a period of 5 years, unless sooner revoked, although as noted below in section 2 it need not specify prices for all 5 years. The Commission is required to have regard to the Determination if it is required to arbitrate an access dispute in relation to a core service covered by the Determination. Therefore, although the model terms and conditions are non-binding, if an access dispute about terms and conditions of access arises between parties, the Commission's arbitration determination is expected to have regard to the model terms and conditions.¹ The model price terms and conditions Determination will also be relevant to the Commission's assessment of access undertakings relating to a core service.

The principal purpose of the model or indicative prices is to provide clear guidance about the Commission's views as to what constitute fair terms and conditions of access to these services. Parties will have an indication of the likely outcome of a particular issue, thereby encouraging them to reach commercial agreement on access or consider submitting an access undertaking.

This means these model prices should be assessed in terms of the same long-term interest of end-user ('LTIE') and reasonableness criteria under Part XIC that is applicable to the Commission's arbitration and undertaking decisions.

¹ Commonwealth, *Telecommunications Competition Bill 2002 Explanatory Memorandum*, House of Representatives (2002), p. 41.

The Commission has previously set out its views on model price terms and conditions for each of the core services: PSTN O/T², ULLS³ and LCS⁴. Notwithstanding this previous work, as part of its current consideration of model price terms and conditions, there have been a number of issues that have been raised which have required the Commission to review or revise its previous approach.

1.1 Pricing of core services and removal of access deficit contribution – Chapters 6, 7 & 8

The Commission has essentially confirmed its previous views on the pricing principles that should apply to each of these services. This means in relation to the PSTN O/T services and ULLS, an economic cost approach as reflected in a total service long-run incremental cost ('TSLRIC') framework would be applied. In relation to LCS, a retail-minus approach would apply, at least while the TSLRIC-based cost of a local call plus retail costs is above that of prevailing retail prices, given certain retail price constraints.

The Commission notes, however, that in forming its indicative views on appropriate prices for PSTN O/T services, in particular, there is also an opportunity to take a different stance on how access prices should be varied over time to ensure they reflect efficient (TSLRIC-based) costs. The Commission has been particularly concerned to ensure cost-reflective prices are set, as this best promotes competition and efficient supply outcomes, including efficient investment decisions.

In this regard, the acceptance of an access deficit contribution ('ADC'), to account for the gap between line costs and line revenues for Telstra's basic access services, is increasingly seen by the Commission as a significant distortion to competitive and efficient outcomes which should be removed from access prices as soon as practicable. Such a change would reduce PSTN O/T access prices by more than half as compared to existing commercially negotiated levels.

The Commission considers, however, that there are sound reasons why access prices should not move immediately to reflect TSLRIC+ (or conveyance only costs). A reasonable time-frame over which such a movement is effected would be appropriate to avoid any unexpected regulatory changes which may give rise to the perception of higher regulatory risk in the short-term and undermine a stable regulatory environment. For example, while the removal of the ADC is not seen as particularly significant for efficient investment decisions in the abstract (see Chapter 8) it is also true that Telstra's business plans and other decisions in recent years have been made on the basis of the Commission's current regulatory approach, under which the ADC forms nearly half of

² In May 2001, the Commission announced its provisional headline rate for 2001-02 for the PSTN O/T access services on Telstra's network.

³ ACCC, *Pricing of Unconditioned Local Loop services (ULLS) – Final Report*, May 2002.

⁴ ACCC, *Local Carriage Service Pricing Principles and Indicative Prices – Final Report (Revised)*, April 2002.

the PSTN charge. A more gradual removal of this increment would also have regard to access prices currently negotiated in the market with access seekers which incorporate an ADC. Such agreements are in place in some cases to 2005.

It should be noted that the prime issue is the removal of the ADC without particular regard to whether the access deficit ('AD') can also be removed at the same time. This is because there seems little compelling reason to support an ADC as a matter of principle given it is keeping access prices higher than they otherwise would be. The timing of the transition period, however, is informed by what the Commission considers reasonable having regard to current business and investment decisions that had been based upon the previous regulatory approach to the AD. The Commission considers that the transition period should conclude at the end of 2005-06. It is noted that this coincides with the timeframe over which Telstra, under the current price control arrangements, should be able to rebalance sufficiently its line charges towards costs and thereby remove the AD. Further, this also happens to also align with a phase-out period that would result with a redefined AD.

The Commission considers that a more gradual movement in regulatory pricing of the PSTN O/T access services towards efficient conveyance only charges would be in the LTIE where it was certain that at the conclusion of the transition period prices would reflect TSLRIC+. In other words, that access prices for the core services would not include any form of ADC or other increment referable to the existence of an AD.

The Commission acknowledges that this certainty would be assisted by Telstra committing not to make any claim for such an increment in core service charges from competitors beyond 2005-06, regardless of whether an AD was evident or not at that time. In the Draft Determination the Commission noted that in the event that no such commitment is provided, the Commission would need to reconsider its approach.

In its submission responding to the Draft Determination, Optus noted that this position provides considerable commercial uncertainty.⁵ For this reason it proposed that the Final Determination clearly and publicly state a deadline for the receipt of those commitments.

Following release of the Draft Determination, Telstra initiated discussions with the Commission concerning the possibility of lodging new and revised access undertakings for core services. As part of these discussions, Telstra indicated that it was to consider making a commitment that it would not seek an ADC in regulatory proceedings concerning core service access prices following the conclusion of the 2005-06 year.

As detailed in the following section, the Commission's model price terms and conditions for PSTN O/T services are predicated on access prices being solely based on TSLRIC+ or conveyance costs by 2006-07. In order to provide industry certainty of such an outcome the Commission has sought from Telstra a public commitment that from the conclusion of 2005-06 it will not seek to claim any ADC or any other related

⁵ Optus submission to the Draft Determination, p. 1.

increment in relation to any core service access prices. The Commission would welcome the giving of this commitment within two weeks of the Determination being publicly released. In the event that such a commitment is not provided, the Commission may have cause to vary its Determination.

1.2 Model access prices for PSTN O/T services – Chapters 9 and 13

Accordingly, the Commission considers that a significant reduction to PSTN O/T access prices over the next three years, compared to existing rates, together with a clear commitment that Telstra will not seek to impose an ADC in PSTN O/T charges *beyond* a certain period (2005-06) is consistent with the relevant statutory criteria. The Draft Determination provided a range that was seen as reasonable. In this Final Determination, the Commission considers it would be important to specify a single rate which would effectively form the upper bound in any future negotiations. This would also provide greater certainty about the Commission’s position on any upper-bound level. The Commission would expect that bilateral outcomes would vary from these rates to take account of individual commercial and economic circumstances. Accordingly, the Commission would be prepared to countenance the following PSTN O/T access prices for 2003-04, 2004-05 and 2005-06.

Table 1.1: Model access prices for PSTN O/T services (cpm)

Year	Model access price
2003-04	1.25
2004-05	1.15
2005-06	1.0

This would mean that by 2006-07, PSTN O/T access prices should be based solely on TSLRIC+ or conveyance costs and would be expected to be well below 1.0 cent per minute; on the basis of current cost and traffic projections the rate would be around 0.7 cpm by this time.

1.3 Model access prices for ULLS – Chapters 10 and 14

The ULLS provides the opportunity for competitors to compete with Telstra in the provision of broadband services using their own facilities together with Telstra’s copper wire network which connects most customers. Telstra has proposed access prices in its most recent undertakings (\$20 for CBD areas and \$40 for metropolitan areas). At this stage, and based on the information available to the Commission as a part of its model price considerations, the Commission considers these prices are unlikely to be in the LTIE and in particular are unlikely to promote the broadband infrastructure competition.

After reviewing the broad quantum of cost estimates for this service using Telstra’s PIE II model, the Commission considers that its previous approach, which resulted in an

access price for metropolitan areas (Band 2) of \$35, overstated these costs but that the access price for CBD areas (Band 1) were probably closer to efficient costs. Similarly Band 3 costs (regional centres) are close to previous estimates, while Band 4 is significantly higher.

In this Final Determination, the Commission considers it would be important to specify a single rate which would effectively form the upper bound in any future negotiations. This would also provide greater certainty about the Commission’s position on any upper-bound level. These rates have been determined by reference to an average ULLS-specific cost estimate of around \$10 per band. The Commission would expect that bilateral outcomes would vary from these rates to take account of individual commercial and economic circumstances.

Accordingly the Commission considers the following price points for 2003-04, 2004-05 and 2005-06 would be reasonable:

Table 1.2: Model access prices for ULLS (\$ per SIO per month) for 2003-04,2004-05 and 2005-06

Band	Model access prices	Previous ACCC access prices
1 (CBD)	\$13	\$13
2 (metro)	\$22	\$35
3 (regional)	\$40	\$39
4 (remote)	\$100	\$59

The Commission consider these access prices offer a reasonable prospect of stimulated broadband demand and competition in city/metropolitan areas where DSL⁶ technology is most suited. In particular, the proposed charge is partly predicated on levels of assumed demand for this service of around 140,000 lines by 2005. If this is achieved, it would mean a more substantive level of broadband roll-out which is likely to see much higher penetration levels than what has occurred to date and a more vigorous competitive broadband environment. On this basis, the proposed approach would accord with relevant statutory criteria and the Commission’s TSLRIC approach.

This would result in an average of around \$20 per month for the key Band 1 and 2 areas, which compares more than favourably to international averages of around A\$22 a month⁷ (A\$25/month in the UK; A\$22 in Continental Europe; A\$24 in North

⁶ DSL refers to digital subscriber line which enables existing copper (voice) lines to be converted into high-speed broadband lines.

⁷ This is based on a study by the German telecommunications Regulator RegTP, April 2003, some downward adjustment would be evident since then to take account of the recent appreciation of the Australian dollar, with averages falling to between A\$18-A\$20 overall.

America). In relation to Band 3 and 4 areas, little if any use of DSL for broadband provision is expected given the higher network costs evident in such areas. In this regard, other (wireless) technologies may be more suited to the provision of broadband services.

In addition, if take-up of this magnitude does materialise, it is likely to provide further justification for easing LCS regulation over this period, at least in those geographic areas where ULLS competition emerges, which would be consistent with less reliance on resale regulation, as discussed in Chapter 12.

If, however, demand is not forthcoming after this time, because ULLS does not prove itself in the broader (residential) market, the continuing need and appropriateness of regulating the ULLS would need to be reconsidered.

Given the relatively low take-up rates to date, it should also be noted that Telstra is yet to recover its ULLS-specific costs associated with the provision of this service to competitors. The Commission considers that reasonably incurred costs should be recovered over time. In this regard, the Commission considers it may also be reasonable for an adjustment factor to be applied to the above model access prices in each year, which is intended to provide some limits on Telstra's exposure from significant shortfalls in ULLS take-up, but also ensure that Telstra does not over-recover its costs. An adjustment mechanism proposed by Telstra in response to the draft report appears appropriate in this regard and is discussed in Chapter 10.

1.4 Model access prices for LCS – Chapters 12 and 15

The Commission's approach to determining the LCS access price in this Final Determination is based on pricing principles adopted previously which specify use of a retail-minus retail costs methodology. This reflects the Commission's view that the TSLRIC on a local call, including indirect costs and an ADC (i.e. TSLRIC++), plus retail costs is likely to exceed the price-capped retail price of 20 cents, at least for the 2002-03 and possibly the 2003-04 financial year.

In maintaining this approach the Commission also conducted an imputation test analysis. This was to determine if access seekers are able to compete with Telstra's retail bundles of local and pre-selected STD, IDD and FTM call services when faced with the LCS prices and other access prices previously determined by the Commission. This imputation analysis indicated that the negative margins on local call services are more than offset by positive margins on the other call services and hence that Telstra passed the imputation test. On this basis, the Commission has deemed it unnecessary to change the retail starting price from which retail costs are subtracted from Telstra's unbundled prices to bundled prices (or a weighted average thereof) as sought by some access seekers.

That said, the Commission will continue to monitor Telstra's bundling conduct and carry out regular imputation testing under the new accounting separation provisions, as well as investigate particular instances, as appropriate, using its competition powers under Part XIB of the Act.

Therefore, Commission has set indicative LCS prices based on its existing retail-minus methodology for 2003-04 and 2004-05 (see below). The Commission, however, has also opened up the possibility that it could utilise a TSLRIC based price to determine the LCS price in subsequent years. This may become relevant should a price determined on this basis fall below the price-capped level of 20 cents (including retail costs). If so, the need to determine three year LCS charges at the outset on the current basis would be moot.

In addition, the use of a TSLRIC approach raises several issues about the way LCS should be regulated. For example, an issue would arise as to whether LCS should be continued to be declared, given that the price would converge with the PSTN O/T. The continuing impact of the un-timed local call obligation would also need to be assessed. Related to this is the impact of use of the PSTN O/T services by some access seekers to provide local calls on a call over-ride basis. This means a broader review of LCS pricing may be required within the next two years to further consider these issues.

For the purposes of the Final Determination, the Commission considers the specification of a single rate which would form an upper-bound estimate in any commercial negotiations is appropriate to reduce uncertainty about the Commission's position on any upper bound level. The Commission would expect that bilateral outcomes would vary from these rates to take account of any individual commercial and economic circumstances.

On this basis, the Commission's estimate for the LCS price based on its retail-minus methodology is 13.61 cents for 2003-04 and 2004-05. Pricing for an additional year is not specified give the possibility of a review of the LCS declaration and associated pricing principles in 2005-06.

1.4.1 Provision of local calls using PSTN O/T services – Chapter 12

In its response to the Draft Determination, Telstra queried the proper pricing principle that should be applied to what are ostensibly PSTN O/T services when they are used by access seekers to provide local calls in certain circumstances.⁸ It was submitted that the use of these services by access seekers is an issue relevant to model LCS prices and noted that it is becoming an increasingly important. In essence Telstra proposed that such override calls should be priced on a per call basis consistent with that for LCS.

Although in its submission to the Draft Determination, Telstra named this service local call override ('LCO'). the Commission considers it is more appropriately named PSTN O/T local call or PLC.

As the issue of appropriate pricing of the PLC service arose late in the Commission's assessment of the model price terms and conditions for core services, and industry submissions did not initially address this matter, the Draft Determination did not comment on this matter in any detail. Accordingly, it was necessary for the

⁸ Telstra submission to the Draft Determination, p. 33-43.

Commission to consider the matter further and consult with interested parties to determine whether any changes to either PSTN O/T or LCS pricing was appropriate.

Notwithstanding that this consultation has taken place, the Commission does not believe it appropriate at this time to form any final view on this issue.

2 Introduction

Under Part XIC of the Act, the Australian Competition and Consumer Commission (the Commission) must, among other tasks:

- approve (or otherwise) undertakings submitted by access providers which may include the terms and conditions of access to declared telecommunications services;⁹ and
- arbitrate disputes between parties concerning the terms and conditions of access to declared telecommunications services.¹⁰

In addition, the recent enactment of the *Telecommunications Competition Act 2002* has made certain amendments to the telecommunications industry regulatory regime as contained in Parts XIB and XIC of the Act. The insertion of section 152AQB has initiated a requirement upon the Commission to publish by written determination non-binding model terms and conditions of access, including prices, for each of the core services.

These core services are the PSTN O/T services, the ULLS, the LCS and any additional core service specified in regulations by the Minister.

2.1 Role of model terms and conditions

The Commission considers that model price terms and conditions will provide guidance to industry participants in several circumstances. For example, they will provide guidance to access providers and seekers involved in negotiating the terms and conditions of access to the core services, particularly as they would be taken into account by the Commission in any arbitration of access disputes that arise from such negotiations. As well, it is expected that these model terms and conditions would also guide to carriers considering providing access undertakings to the Commission in respect of the core services.

The availability of model terms and conditions is designed to overcome any regulatory uncertainty industry participants may have prior to regulatory arbitration of disputes. Parties will therefore have an up-front view of the likely outcome of a particular issue thereby encouraging the parties to reach commercial agreement on access or by access undertaking.¹¹

⁹ Declared services are services declared under Part XIC of the Act. Refer to section 152AL of the Act.

¹⁰ Under the *Telecommunications Act 1997*, the Commission also has responsibilities to arbitrate disputes over the terms and conditions for matters such as preselection and number portability.

¹¹ Commonwealth, *Telecommunications Competition Bill 2002 Explanatory Memorandum*, House of Representatives (2002), at p. 2 and 32.

It should be noted that prior to the enactment of this new statutory requirement to disclose its views on model access prices, the Commission published indicative access prices for the PSTN O/T¹², ULLS¹³ and LCS.¹⁴ Consistent with its views outlined above, the Commission considered that this type of information would assist commercial negotiations, thereby increasing the chance of resolving differences in a more timely manner. In this regard, information on model access prices, which improves industry certainty, can act as an incentive for settlement using negotiations in a number of ways, including private mediation or other dispute resolution approaches.

In its submission to the Draft Determination, AAPT was of the view that model price terms and conditions should be sufficiently flexible to allow commercial negotiations to take place.¹⁵ It was concerned that overly prescriptive model price terms and conditions would impede commercial arrangements.

In this regard, the Commission notes that the access prices outlined in the attached Determination are indicative and non-binding on participants. This means that while the Commission would ordinarily see these access prices as appropriate in a general sense, it is bound to look at any specific issues raised by the parties in individual arbitrations or undertakings, based on their individual merits. This means a determination made in an arbitration will depend upon the particular circumstances of the dispute, as they exist at the time, and similarly an undertaking assessment would need to take account of its specific provisions. As such, there will inevitably remain some potential for an arbitration determination or an approved undertaking to depart from the model terms and conditions.

2.2 Nature of determination

Under section 152AQB, the Commission is required to take all reasonable steps to publish its Determination of model terms and conditions for core services within six months of the amendments or a regulation coming into force and must consult with interested parties and the Australian Communications Authority ('ACA') before making a Determination.

The Determination can have effect for up to five years, although it can be revoked at any time prior to this. Similarly, the Commission considers that a determination can be varied should circumstances require.¹⁶ In its submission to the Draft Determination,

¹² In May 2001, the Commission announced its provisional headline rate for 2001-02 for PSTN O/T services on Telstra's network. Prior to this the Commission provided its views on PSTN O/T access prices as part of its determination of access undertakings.

¹³ ACCC, *Pricing of Unconditioned Local Loop services (ULLS) – Final Report*, May 2002.

¹⁴ ACCC, *Local Carriage Service Pricing Principles and Indicative Prices – Final Report (Revised)*, April 2002.

¹⁵ AAPT submission to the Draft Determination, p. 3.

¹⁶ Section 33(3) of the *Acts Interpretation Act 1901*.

AAPT noted that the proposed model access prices are only specified for three years but that a Determination will remain in force for five years.¹⁷

The Commission considers that the Determination need not detail model prices for the entire 5 year period. In particular it appears the Commission has discretion as to the number of years for which indicative prices may be published. Given that circumstances may materially change over the next three years, meaning estimates for the fourth and fifth years are likely to be less reliable, the Commission considers it more appropriate at this stage to issue indicative prices for the first three years of the Determination. Further, the Commission understands that normal commercial practices mean that access agreements for the fourth year and beyond (2006-07 +) are unlikely to be established in the near future. For this reason, it would not seem that limiting the Determination to three years would reduce the extent of guidance and certainty available to industry participants.

This said, the Commission also considers it has the flexibility to revoke or vary the Determination. This may include a variation to include details of pricing for the two final years (2006-07 and 2007-08) if the Commission feels better placed at some point in the future to provide such guidance.

This determination will be the first the Commission will publish under the terms of the new section 152AQB requirements. As noted above, the Commission has published indicative access prices for the core services before. However, as part of its current consideration of model price terms and conditions there have been a number of issues that have been raised which have required the Commission to review or revise its previous approach.

In addition, during the period of the Commission's consideration, Telstra lodged access undertakings for each of the core services pursuant to section 152BS of the Act. These undertakings were accompanied by a voluminous amount of material, including a new economic costing model PIE II, which has required separate and detailed scrutiny. The Commission is still considering this material in the context of making a decision about whether to accept or reject these undertakings under the Act. The timeframes for this decision, however, are somewhat different from those under section 152AQB¹⁸, which has meant that the Commission's decisions on model price terms and conditions needs to be made prior to any decision on the core service undertakings.

Accordingly, the Commission may need to make changes to its model price terms and conditions determination at a subsequent stage, should its further analysis and consideration of Telstra's undertakings and proposed modelling framework warrant this.

¹⁷ AAPT submission to the Draft Determination, p. 10.

¹⁸ Consideration of undertakings is also subject to six month time-frames, however various clock stopping provisions are also available, which have the effect of extending the time-frames for the undertaking process as compared to this process of specifying model terms and conditions.

2.3 Consultation

This paper and the attached Determination are particularly concerned with model *price* terms and conditions. A companion paper deals with *non-price* terms and conditions. Both papers are being released at the same time.

As part of its preparation for this paper and specification of its model prices for core services, the Commission has published two discussion papers as well as a Draft Determination seeking the views of interested parties on the main aspects of its pricing considerations. Specifically, in February 2003 a discussion paper was released on the ADC, in April 2003 a separate paper on other pricing aspects was released and in June 2003 the Draft Determination on model price terms and conditions for core services was released.¹⁹

Responses to the ADC paper were extensive and have been posted on the Commission's website. These were taken into account in forming its views on the pricing of PSTN services (see Chapter 8). Responses to the more general pricing paper were limited which was not unexpected given the paper was issued around the same time as consultation on Telstra's core service undertakings began. There were also limited responses to the Draft Determination. The Commission has nonetheless taken into account those submissions that have been received in forming its views about pricing issues.

In addition, the Commission has consulted and has had meetings with interested parties about its pricing approach to these services, either as part of this model price exercise or in relation to the recent Telstra undertakings. In terms of the latter, Telstra has also discussed the possibility with the Commission of lodging new undertakings which more closely reflect the Commission's views on pricing for core services. Consistent with recent changes to the Act which promote the use of access undertakings, the Commission continues to welcome industry wide undertakings from Telstra which are broadly in line with the Commission's views on the pricing on core services as set out in this Determination.

Further, the Commission has yet to make a decision on Telstra's January 2003 undertakings for core services, although it is noted that the indicative rates proposed in this determination are less than, and in some cases significantly so, than what Telstra has recently proposed. As well, the factors used in determining these prices are essentially the same as those the Commission is obliged to consider in assessing the undertakings.

¹⁹ ACCC, *The Need for an ADC for PSTN Access Service Pricing*, February 2003; ACCC, *Model Prices Terms and Conditions for PSTN, ULLS and LCS*, Discussion Paper, April 2003; and ACCC, *Draft Determination for model price terms and conditions of the PSTN, ULLS and LCS services*, June 2003.

2.4 Other matters

2.4.1 Commercial-in-confidence information

In arriving at its draft pricing estimates the Commission has relied on commercial-in-confidence information supplied by Telstra and other industry participants. The Commission has assessed this material in terms of its policy on treatment of information²⁰ and has determined that it should not reproduce that material in this report. Accordingly, where commercial-in-confidence information has been relied upon in reaching a conclusion in this report, it has either been aggregated to a level such that it is no longer of a confidential nature or, where this is not possible, it has been masked with the designation [c-i-c].

The Commission recognises that its decision making processes should be as transparent as practicable, and in this regard notes the opportunity for interested parties to obtain the commercial-in-confidence information from the relevant party upon the giving of appropriate undertakings. The Commission notes that interested parties have been able to negotiate such undertakings in respect of some of the information that has been relied upon by the Commission in developing model prices, and would similarly encourage the provision of any further information that has been relied upon by the Commission but not to date supplied to interested persons. The Commission notes that, unless it can corroborate commercial-in-confidence information in some other way, it is constrained in the weight that it can give to information that has not been subject to industry scrutiny. In certain instances where it is not possible to otherwise corroborate information or where parties are unable to agree to the terms of provision of commercial in confidence information, the Commission would consider requests for it to supply the information so as to allow its scrutiny.

Part I of this paper discusses PSTN and ULLS issues while Part II discusses LCS related issues, including local calls supplied using the PSTN O/T services. Part III contains the Determination.

²⁰ ACCC, *Collection and Use of Information*, 2000.

3 Legislative criteria

The Commission will seek to promote the LTIE in determining model terms and conditions under section 152AQB of the Act. The Commission will also have regard to the reasonableness criteria, which include the promotion of the LTIE, that are contained in section 152AH of the Act. The use of these criteria to develop model terms and conditions is discussed in this chapter.

3.1 The long term interests of end users

The object of Part XIC of the Act is to promote the LTIE of carriage services or of services provided by means of carriage services.²¹ This will partly be achieved through establishing the rights of third parties to gain access to services which are necessary for competitive services to be supplied to end-users.

Accordingly, in making a Determination that sets out model terms and conditions, as is the case when it performs its other functions under Part XIC of the Act, the Commission will seek to promote the LTIE.

In considering whether a Determination will promote the LTIE, the Commission must consider the achievement of the following objectives:

- promoting competition in markets for telecommunications services;
- achieving any-to-any connectivity in relation to carriage services that involve communication between end-users; and
- encouraging the economically-efficient use of, and the economically-efficient investment in, the infrastructure by which telecommunications services are supplied.²²

An important part of the access regime is the terms and conditions of access (including the price or a method for ascertaining the price). Under Part XIC the Commission cannot draft an access code²³ or accept an undertaking unless satisfied that the terms and conditions specified are reasonable.²⁴

²¹ Section 152AB(1) of the Act.

²² Section 152AB(2) of the Act.

²³ Note that recent amendments to Part XIC remove references to the TAF and the TAF access code. Reference is simply made to an access code made by the Commission.

²⁴ The Commission must also ensure that the terms and conditions in an access code, undertakings and any arbitration determination are consistent with any Ministerial pricing determination in place. See section 152CH of the Act.

3.2 ‘Reasonableness’ Criteria

Although there is no express requirement for it to do so, the Commission will also have regard to whether a term is reasonable in determining model terms and conditions. Section 152AH of the Act contains criteria by which to assess reasonableness.

In taking this approach, the Commission is mindful that model terms and conditions are intended to provide guidance to industry on the Commission’s views as to what would constitute fair terms of access. The Commission is required to have regard to the reasonableness criteria both in assessing access undertakings and in making final arbitral determinations.²⁵ It is therefore appropriate to have regard to the same criteria in making model terms and conditions.

Having said that, the Commission notes that model terms and conditions are intended to be indicative and non-binding, and that a determination made in arbitration will depend upon the particular circumstances of the dispute as they exist at the time. As such, there will remain potential for an arbitration determination to depart from the model terms and conditions. This is also the case in regard to the assessment of individual undertakings.

In determining whether terms and conditions are reasonable, the following matters must be considered:

- whether the terms and conditions promote the LTIE of carriage services or of services supplied by means of carriage services;
- the legitimate business interests of the carrier or carriage service provider concerned, and the carrier’s or provider’s investment in facilities used to supply the declared service concerned;
- the interests of persons who have rights to use the declared service concerned;
- the direct cost of providing access to the declared service concerned;
- the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility; and
- the economically-efficient operation of a carriage service, a telecommunications network or a facility.²⁶

This does not, by implication, limit the matters under consideration.²⁷ This means other matters which are relevant to consideration of appropriate terms and conditions, including prices, may also be taken into account (see below).

²⁵ See section 152AQB and Commonwealth, *Telecommunications Competition Bill 2002 Explanatory Memorandum*, House of Representatives (2002), p 39.

²⁶ Section 152AH(1) of the Act.

²⁷ Section 152AH(2) of the Act.

3.3 Application of these considerations in developing model price terms

3.3.1 Long-term interests of end-users

As outlined above, the LTIE will generally be promoted by lower prices, that are sustainable, higher quality of service and greater choice of products. These outcomes will be promoted by:

- competition in markets for telecommunications services;
- any-to-any connectivity; and
- encouraging the economically-efficient use of, and investment in, telecommunications infrastructure.

Promoting competition in markets for telecommunications services

Part XIC is concerned with promoting competition in those markets that are dependent on the services of telecommunications markets (dependent markets). Where existing conditions do not already provide for the competitive supply of these services, Part XIC (including the pricing of access) aims to facilitate access to these services to encourage the efficient entry of firms and efficient competition in dependent upstream or downstream markets.

Any-to-any connectivity

Any-to-any connectivity is the ability of end-users of different networks to communicate. Access prices should not artificially discriminate against the users of any particular network in the provision of any-to-any connectivity and should encourage operators of different networks to configure their networks to promote any-to-any connectivity.

Encouraging economically-efficient use of, and investment in, telecommunications infrastructure

The economically-efficient use of, and investment in, infrastructure comprises three (interdependent) elements:

- dynamic efficiency – firms have the appropriate incentives to invest, innovate, improve the range and quality of services, increase productivity and lower costs through time;
- productive efficiency – firms have the appropriate incentives to produce services at least cost and production activities are distributed between firms such that industry-wide costs are minimised; and
- allocative efficiency – firms employ resources to produce goods and services that provide the maximum benefit to society in any given period. An important condition for allocative efficiency is that prices for services at least

reflect the value society places on the next best alternative use of the resources to produce the service.²⁸

3.3.2 Legitimate business interests of the carrier or carriage service provider concerned

The legitimate business interests of access providers requires the Commission to consider whether the access price would provide a normal commercial return on prudent investment.²⁹ The services to which Part XIC will mostly apply are provided using highly capital intensive and specialised infrastructure, the costs of which are largely sunk before the service is provided. It is legitimate for the carrier or carriage service provider to recover the costs of prudent investment from its commercial activities, including providing access.

However, it is unlikely the legitimate business interests extend to achieving a higher than normal commercial return through the use of market power. For example, an access price should not, in most cases, be artificially inflated because of the lack of competition in the supply of infrastructure services.

3.3.3 Interests of persons who have rights to use the declared service

In the Commission's view, persons who have rights to use the declared service have an interest in competing for the custom of end-users on the basis of their technical and commercial merits. Their ability to compete in the supply of a service in a dependent market should be based on the cost or quality of their service relative to their competitors. For example, an access price should not artificially protect a vertically-integrated access provider from being displaced by a more efficient service provider in a downstream market.

3.3.4 The direct costs of providing access

Direct costs are necessarily incurred/caused by the provision of access. An access price should not be inflated to recover any profits the access provider (or any other party) may lose in a dependent market as a result of the provision of access. As stated in the relevant explanatory memorandum:

²⁸ For example, it would be allocatively inefficient to devote resources to produce telecommunications services that society places a low value on, rather than other services (including other telecommunication services) that society desires highly. Further discussion of these efficiency concepts can be found in ACCC, *Access Pricing Principles – A Guide – Telecommunications*, July 1997, p. 35.

²⁹ The Commission may also take into account access providers' obligations to shareholders and other stakeholders.

... ‘ direct’ costs of providing access are intended to preclude arguments that the provider should be reimbursed by the third party seeking access for consequential costs which the provider may incur as a result of increased competition in an upstream or downstream market.³⁰

3.3.5 Operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility

An access price should not lead to arrangements between access providers and access seekers that will encourage the unsafe or unreliable operation of a carriage service, telecommunications network or facility.

3.3.6 The economically-efficient operation of a carriage service, a telecommunications network or facility

This criteria is similar to the productive and allocative efficiency elements described above in section 3.3.1. An access price should encourage access providers to select the least-cost method of providing the service and provide those services most highly valued by access seekers.

The criteria above are therefore interdependent and in most cases will be re-enforcing, i.e. promoting one criterion will also promote another. In some cases, however, the criteria may lead to different efficient outcomes as between the short term and the longer term. For example, telecommunications is an industry where the delivery of many services is characterised by economies of scale and scope. This could mean that an access price that maximises the economically-efficient use of infrastructure in the short term may, by being based on some short-run marginal cost approach, in some cases, not encourage efficient investment in infrastructure over the long term.

3.3.7 Other considerations

In addition to the specific reasonableness criteria noted under section 152AH above, the Commission may also take account of other matters under this provision which pertain to the determination or assessment of appropriate prices which promote the objects of Part XIC of the Act.³¹

In considering the LTIE and the reasonableness of the model terms and conditions, for example, the Commission has to some extent been also been guided by the *Telecommunications Competition Bill 2002 Explanatory Memorandum* (the explanatory memorandum) as to what principles should be reflected in the model terms and conditions.

It is clear from the explanatory memorandum that the model terms and conditions must be a reflection of what the Commission considers to be fair terms and conditions of

³⁰ Commonwealth, *Trade Practices Amendment (Telecommunications) Bill 1996* Explanatory Memorandum, p. 44.

³¹ Sub-section 152AH(2).

access.³² In the Commission's view, the concept of 'fair' as used in the context of model terms and conditions means that they strike an appropriate balance of the rights and interests of the various parties in terms of access to telecommunications services.

For example, it is important that the model terms and conditions be based on an assessment of current market conditions. The Commission has consulted and continues to consult with industry parties in relation to the current access arrangements. Therefore views of the Commission and any model terms and conditions arising from this process will be based on current market conditions. Also, implicit in this requirement is that if and when a particular model term and condition no longer reflects current market conditions, it will be appropriate for the Commission to revise its view in respect of that particular term and condition to accord with current market conditions that are evident at the time.

In this regard, the Commission notes the need to take account of current market conditions³³ as well as the promotion of a stable regulatory environment and hence the desirability of avoiding sudden and abrupt changes to regulatory policies. Such changes may cause undue disruption to business and investment plans, are relevant considerations for the purposes of this provision.

³² Commonwealth, *Telecommunications Competition Bill 2002 Explanatory Memorandum*, House of Representatives (2002), p. 32.

³³ See section 152AQB and Commonwealth, *Telecommunications Competition Bill 2002 Explanatory Memorandum*, House of Representatives (2002), p 39.

PART I – PSTN O/T services and the ULLS

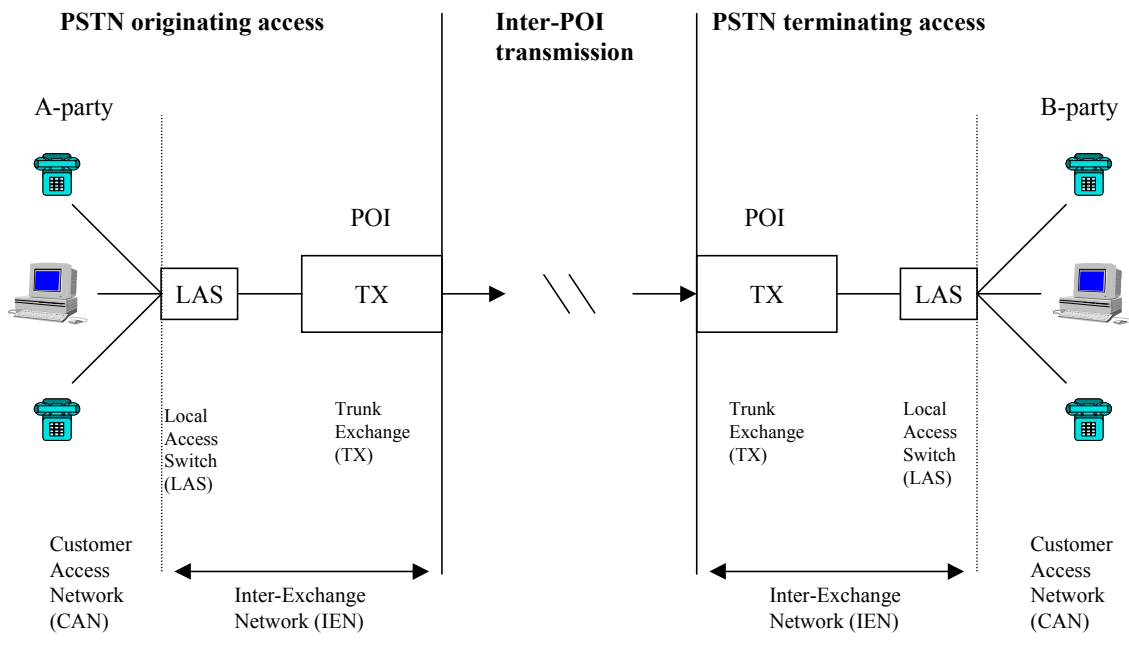
4 Service descriptions

The attached Determination specifies the model price terms and conditions for the core telecommunications services. This chapter outlines the nature of the domestic PSTN O/T access services and ULLS. LCS is discussed in Chapter 11 below.

4.1 PSTN O/T services

The Commission declared the domestic PSTN O/T services in July 1997. In summary, domestic PSTN originating access is the carriage of telephone calls from the calling party (the A-party) to a POI with an access seeker's network. Currently a POI is usually located at a trunk exchange. Domestic PSTN terminating access is the carriage of telephone calls from a POI within an access seeker's network to the party receiving the call (the B-party). This is shown in Figure 2.1. Further elements of the PSTN O/T services are set out on the face of the service descriptions attached to the *Deeming of Telecommunications Services* statement.³⁴

Figure 2.1: Domestic PSTN O/T services



³⁴ ACCC, *Deeming of Telecommunications Services – A Statement Pursuant to Section 93 of the Telecommunications (Transitional Provisions and Consequential Amendments) Act 1997*, 30 June 1997.

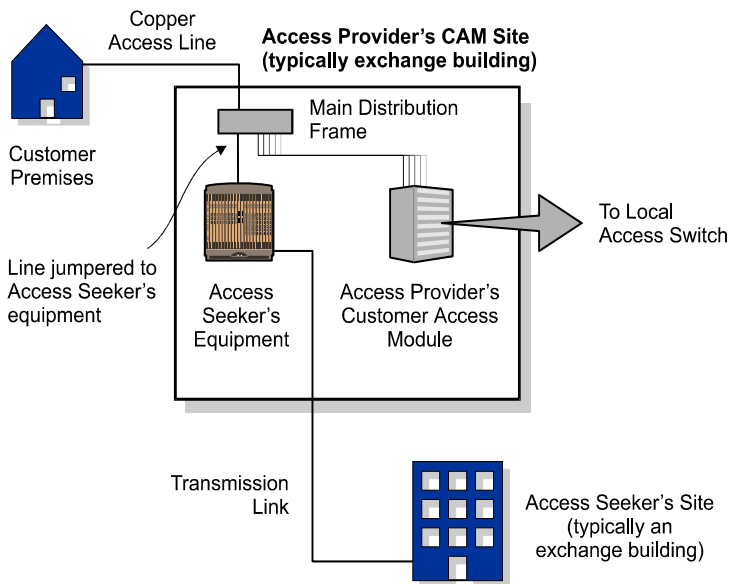
The declared domestic PSTN O/T services are, in general, used as inputs by service providers primarily to supply long distance calls, such as STD, IDD, as well as FTM and mobile-to-fixed ('MTF') calls to end-users in Australia. They can also be used by other network operators to interconnect with Telstra's fixed network.

4.2 ULLS

The Commission declared the ULLS in July 1999. The ULLS involves the use of unconditioned cable, primarily copper pairs, between end-users and a telephone exchange, where the unconditioned cable terminates. In Figure 2.1 above, the unconditioned cable would exist from the A and B party premises to a point at or below the Local Access Switch ('LAS').

Under Telstra's customer access network ('CAN') architecture, customers are connected to the broader network by cables, which run from a customer's premise to what is known as Customer Access Module ('CAM') equipment. CAM equipment includes remote switching units or stages ('RSUs/RSSs'), remote (and integrated remote) integrated multiplexers ('RIMs/IRIMs') or newer generation remote customer multiplexers ('C-MUXs'). The CAM equipment can then be connected (directly, or by means of other CAM equipment) to a LAS and/or a data/IP network. Voice traffic is currently routed to the LAS for carriage using a circuit switched network, while data traffic is routed to a data/IP network (not separately shown). This is illustrated 2.2. In some areas, notably in CBDs, customers are directly connected to a LAS which effectively serves as the CAM.

Figure 2.2: Use of the ULLS



Source: AdvaTel

In terms of the above figure, the ULLS refers to the unconditioned twisted copper pairs that connect a customer's premises to the nearest CAM.

Telstra as the predominant supplier of this service, has ownership of the copper CAN located throughout Australia.³⁵

The declared ULLS is used by access seekers to connect their own networks to existing infrastructure and deliver new and innovative high-speed and data-based services to end-users more efficiently. It can also be used to provide voice services more efficiently using voice over IP and DSL technologies. This includes services such high speed Internet access, 'tele-working', distance learning, video-on-demand, remote local area network ('LAN') access and other multimedia and data applications, as well as local, STD and IDD call services in competition with Telstra.

³⁵ ACCC, *Declaration of Local Telecommunications Services*, July 1999 for full details of the Commission's decision.

5 Appropriate pricing principles satisfying the legislative criteria

Consistent with the approach discussed in Chapter 3, the Commission has in the past determined access prices based on the TSLRIC necessary to recover efficient forward-looking network costs. The Commission has previously considered such an approach to be consistent with the reasonableness criteria under s. 152AH of Part XIC of the Act in circumstances where the declared service is well developed, necessary for competition in dependent markets, and the forces of competition work poorly in constraining prices to efficient levels.³⁶

The following chapter outlines the nature of such a pricing approach, industry participants' views in relation to this approach (where provided), how it best meets the reasonableness criteria and its application to the PSTN O/T services and ULLS.

5.1 Total service long-run incremental cost

The concept of TSLRIC can be understood by breaking it up into its components.

- 'Total service' refers to the cost of production of an entire service (or a production element) not to the cost of a particular unit.
- 'Long run' refers to a cost concept where all factors of production can be varied. In the short run the amount of at least one factor of production (usually capital equipment) is fixed.
- 'Incremental cost' is a form of marginal cost, although not the more familiar 'marginal cost' where the change in cost is incurred through a small change in the **amount** of output produced. Rather, incremental cost is the annual incremental or additional cost the firm incurs in the long run in providing the relevant service increment (or production element) as a whole, assuming all of its other production activities remain unchanged. In the case of the total service incremental cost, the service increment is the cost of production of an entire service.
- It is also an attributable cost concept as it refers only to those costs that can be attributed to the production of the service. However, in the case of the PSTN and the ULLS, these services are produced using production elements shared with other services (leased lines and ISDN), and these costs are rolled-in and shared over all lines on a fully-distributed cost ('FDC') basis.
- In practice TSLRIC is usually defined to include a contribution to indirect or organisation-level costs ('TSLRIC+').

³⁶ ACCC, *Access Pricing Principles — A Guide — Telecommunications*, July 1997, p. 35.

Given these attributes, TSLRIC can also be defined as the total cost (on an annual basis) the firm would avoid in the long run if it ceased to provide the service as a whole.

In a practical sense TSLRIC consists of the sum of the operating and maintenance costs, as well as the capital costs that the firm incurs in providing the service as a whole. *Operating costs* are the continuing operational costs of providing the service, including the labour and materials costs that are causally related to the provision of the service. *Capital costs* comprise the cost of capital (i.e. the opportunity cost of debt and equity used to finance the firm) and depreciation (i.e. the decline in economic value of assets) of capital that is specific to the production of the service.

In general most industry participants were of the view that a forward-looking cost principle should be applied and that TSLRIC was appropriate in this regard. For example, in its submission to *Model Price Terms and Conditions for PSTN, ULLS and LCS services* discussion paper, Telstra accepts that TSLRIC is an appropriate basis on which to determine access prices for PSTN and the ULLS, together with an allocation of common and indirect costs.³⁷ Optus also submitted that a forward-looking economic cost approach is the highest access price that will be consistent with achieving dynamic efficiency as well as productive and allocative efficiency.³⁸ AAPT, Macquarie, Primus and PowerTel were also supportive of a TSLRIC approach.³⁹

5.1.1 Inclusion of wholesale costs

The Commission's Draft Determination noted the possibility of including wholesale costs in the TSLRIC of supplying services. These are the costs that an access provider incurs in supplying the PSTN and ULLS to access seekers – which would not otherwise be incurred. For example, the costs of billing, marketing and administration. The Commission recognises that such costs exist and considers that it is legitimate that they be included in TSLRIC estimates. Indeed, the Commission has previously allowed for the inclusion of such costs in determining the appropriate access prices for the ULLS (ULLS-specific costs).

Telstra, however, expressed concern in its submission to the Draft Determination with the Commission's approach to recovering these wholesale costs.⁴⁰ This involved recovery of the costs over all lines and minutes as opposed to interconnection lines and minutes (as acquired by access seekers). Telstra submitted that the Commission's

³⁷ Telstra submission to the Model Price discussion paper, p. 1.

³⁸ Optus submission to the Model Price discussion paper, p. 57.

³⁹ AAPT submission to the Model Price discussion paper, p. 3, Macquarie submission to the Model Price discussion paper, p. 1-2, Primus submission to the Model Price discussion paper, p. 3, PowerTel submission to the Model Price discussion paper, p. 1-2.

⁴⁰ Telstra submission to the Draft Determination, p. 19-20.

approach was inconsistent with economic efficiency and therefore the legislative criteria.

While Telstra has provided little information in relation to wholesale costs as part of its undertaking proposal, it has provided the Commission with some detail of its approach. Under its costing methodology, Telstra proposes that these costs should be recovered solely from access seekers, arguing that they are incurred solely as a result of Telstra supplying these services to access seekers. However, it is not clear to the Commission that this methodology is necessarily consistent with relevant regulatory criteria.

Under Telstra's methodology, equally-efficient access seekers⁴¹ would face an additional cost that Telstra would not (i.e. PSTN or ULLS wholesale costs).⁴² In this case, Telstra fully recovers, say, the PSTN wholesale costs, however, as it does not face the PSTN wholesale costs when it supplies PSTN service to itself, it has a competitive advantage in providing both retail and wholesale services. Alternatively, Telstra can increase its retail prices to the level of its competitors by as much as the PSTN wholesale cost per minute, thus making an economic profit.

Even if Telstra faces wholesale costs in supplying the PSTN to itself, these will typically not be as high as PSTN wholesale costs (because of scale and scope effects and due to the fact that some of these costs are actually not incurred when supplying the PSTN service to itself, e.g. any sales and marketing costs). In this case Telstra will still be able to realise an economic profit.

An alternative methodology is to recover, say, PSTN wholesale costs (and wholesale costs Telstra faces when it supplies the PSTN to itself, if any) over all PSTN end-minutes of use.⁴³ Due to the number of minutes over which PSTN wholesale costs are recovered and due to the total PSTN wholesale cost remaining the same (or slightly increased if there are wholesale costs Telstra faces when it supplies the PSTN to itself), the PSTN wholesale cost per end-minute of use will decrease substantially. In this case, Telstra and an equally efficient access seeker would essentially face the same PSTN wholesale costs.

Under this methodology, Telstra does not have a competitive advantage over an equally-efficient access seeker either in supplying retail or wholesale services. However, Telstra still recovers all its wholesale costs.

⁴¹ An equally-efficient access seeker is defined, for these purposes, as one who incurs equal transmission, wholesale and retail costs as Telstra, on a per line basis.

⁴² In this instance PSTN wholesale cost per end-minute of use is broadly calculated as: PSTN wholesale cost / number of access seekers' PSTN end-minutes of use.

⁴³ In this instance PSTN wholesale cost per end-minute of use is broadly calculated as: (PSTN wholesale cost + wholesale costs Telstra faces when it supplies the PSTN to itself, if any) / total number of PSTN end-minutes of use.

In terms of the LTIE and reasonableness criteria:

- Telstra’s methodology does not appear to promote LTIE as it allows Telstra to earn economic profits, or to price below an equally-efficient competitor (see above). Further, it is not likely to encourage economically-efficient use of, and investment in, telecommunications infrastructure. As the access seeker is not able to share fully from the benefits Telstra enjoys due to vertical integration, its decision whether to build its own network or buy Telstra’s is biased towards building, even when it is more efficient to buy.
- The legitimate business interests of the provider are satisfied under both methodologies as Telstra recovers its costs. While it is true that under the alternative methodology Telstra can not receive as much revenue as it does under its methodology, this extra revenue is purely economic profit, and as such is not a legitimate business interest.
- The interests of persons who have rights to use the declared service concerned (i.e. access seekers) do not appear to be met by Telstra’s methodology as outlined above. In fact, even access seekers more efficient than Telstra will be at a disadvantage as long as access seeker-specific costs are greater than the efficiency advantages the access seeker may have.
- If provision of access services to access seekers is looked at in isolation, only Telstra’s methodology corresponds to the direct costs of providing access to the declared service. However, if provision of access services to both Telstra and access seekers is considered, the alternative approach satisfies this criterion.

Therefore, it is the Commission’s view that wholesale costs should be included in TSLRIC estimates and recovered over all lines and minutes of the relevant service (as outlined). Such an approach should best meet the relevant legislative criteria.

The issue of wholesale costs and the way in which these costs are recovered for ULLS is discussed specifically in Chapter 10. Further, the method of recovery for LCS wholesale costs is somewhat different as LCS pricing does not rely on TSLRIC estimates but rather is set using a retail price minus retail costs methodology. The implications of any wholesale costs for LCS are therefore explored in the Chapter 12 below.

5.2 The legislative criteria, TSLRIC and the PSTN and ULLS

In determining the appropriate pricing approach for declared services the Commission must have regard to the reasonableness criteria, under section 152AH of the Act. These are detailed in Chapter 3 but can be summarised as:

- promoting the LTIE;
- the interests of both the access provider and the access seeker;
- the direct cost of providing access to the declared service; and

- the economically-efficient operation of a carriage service.⁴⁴

Taking these criteria into account, the Commission has noted in its *Access Pricing Principles* that a TSLRIC pricing approach is appropriate where a declared service is well developed, necessary for competition in dependent markets, and the forces of competition work poorly in constraining prices to efficient levels.⁴⁵

Using these principles the Commission has previously concluded that access prices for PSTN and ULLS are appropriately determined using a TSLRIC(+) approach.⁴⁶

In relation to PSTN O/T services, they are clearly well developed. Voice services such as STD and IDD calls, which are supplied using these inputs, have been part of basic telephony services for a considerable period of time and have well established demand characteristics. These services are also necessary for competition in dependent markets as without the PSTN O/T services access seekers would not be able to terminate STD, IDD and FTM calls to a significant proportion of customers. Further, as it is uneconomic to duplicate Telstra's PSTN O/T services in many areas there does not appear to be any threat from alternative infrastructure providers.

In relation to the ULLS, while this is a new service for access seekers, it relates to the most basic building-block in Telstra's network, the copper CAN infrastructure which has been developed and in use for more than a hundred years. It is also a necessary input for the provision of a variety of voice and high-bandwidth data services and Telstra is the predominant supplier throughout Australia.⁴⁷

⁴⁴ It is noted that there is likely to be a considerable overlap between the matters that the Commission takes into account in considering the LTIE and its consideration of the economically-efficient operation of a carriage service.

⁴⁵ ACCC, *Access Pricing Principles — A Guide – Telecommunications*, July 1997, p. 35.

⁴⁶ ACCC, *Assessment of Telstra's Undertaking for Domestic PSTN Originating and Terminating Access – Final Decision*, June 1999, ACCC, *A Report on the Assessment of Telstra's Undertaking for the Domestic PSTN Originating and Terminating Access Services*, July 2000 and ACCC, *Pricing of Unconditioned Local Loop Services – Final Report*, March 2002.

⁴⁷ ACCC, *Declaration of Local Telecommunications Services*, July 1999.

6 Modelling framework

As indicated in the Draft Determination, there are several modelling frameworks available to the Commission to assist it in determining access prices for PSTN O/T services and the ULLS.⁴⁸ These include the Commission's n/e/r/a model and Telstra's PIE II model. The following chapter outlines the major aspects of each of these models, discusses the possibility of using an adjustment factor as well as price points versus ranges and provides the Commission's views as to which modelling framework it will use for the purposes this indicative pricing exercise.

6.1 The appropriate model

6.1.1 n/e/r/a model

The n/e/r/a model dates back to the late 1990s, where it was first used to determine access prices for the purposes of assessing Telstra's first undertaking for PSTN O/T services.⁴⁹ Subsequently, it was relied upon by the Commission for assessing Telstra's second undertaking for PSTN O/T services and as an input to determining ULLS access prices.⁵⁰ It was updated for the purpose of assessing the second undertaking and several modifications were made for the purpose of determining appropriate ULLS access prices. However, it now requires further updating of asset and network information.

In modelling the PSTN network, the n/e/r/a model uses average distances (as opposed to actual distances) between end-user locations and various network points in four specific geographic areas. It is a scorched-node model that estimates the costs of an efficient supplier operating a network based on the location of end-users and network points as they existed in Telstra's network.

6.1.2 PIE II model

The PIE II model has recently been developed by Telstra and is currently being used to support its most recent undertakings for PSTN O/T services and ULLS.⁵¹ Telstra

⁴⁸ ACCC, *Draft Determination for Model Price Terms and Conditions for the PSTN, ULLS and LCS services*, June 2003. Also see ACCC, *Model Prices Terms and Conditions for PSTN, ULLS and LCS*, Discussion Paper, April 2003 and ACCC, *Future Access Pricing Approaches for PSTN, ULLS and LCS*, Discussion Paper, September 2002.

⁴⁹ ACCC, *Assessment of Telstra's Undertakings for Domestic PSTN Originating and Terminating Access*, Final Decision, June 1999

⁵⁰ ACCC, *A Report on the Assessment of Telstra's Undertaking for the Domestic PSTN Originating and Terminating Access Service*, July 2000; and ACCC, *Pricing of Unconditioned Local Loop Services*, Final Report, March 2002

⁵¹ Telstra, *Telstra's Submission in Relation to the Methodology used for Deriving Prices Proposed in its Undertakings of 9 January 2003*, p 3.

claims it contains up-to-date traffic and service forecasts related to when the model was built and cost information.

Unlike the n/e/r/a model, the PIE II model is based on actual distances between end-user locations and various network points in four specific geographic zones. That is, it maps the locations of each end-user and network point in order to model the PSTN network in some detail. In that sense it may be superior to the Commission's n/e/r/a model. The Commission understands that similar to the n/e/r/a model, the PIE II model applies a scorched-node approach and uses the network architecture which constitutes best in use technology as at 1 July 2002. As noted by Telstra:

The model optimises the network elements necessary to build a least cost PSTN. It assumes however that where it is necessary to locate equipment (including local access switches) in a building within an Exchange Service Area ('ESA'), an existing Telstra equipment building is chosen.⁵²

Apart from its more detailed mapping of the network, another potentially significant difference between the n/e/r/a and PIE II models is that while n/e/r/a is a TSLRIC model Telstra describes the PIE II model a Total Element Long Run Incremental Cost ('TELRIC') model.⁵³ In its Draft Determination the Commission noted that both models cost the elements needed to supply the PSTN service (i.e. the switches and links between the switches), and then, using routing factors, calculate PSTN conveyance costs based on the usage by PSTN calls of those elements. Therefore, it considered the difference between TSLRIC and TELRIC in practice may only be in terminology.

In Telstra's submission to the Draft Determination it noted that both the n/e/r/a and PIE II models are TELRIC models, in that both models determine the elements needed to build a PSTN and cost those elements.⁵⁴ It stated that a TELRIC model enables the estimation of TSLRIC by simplifying the allocation of common costs. The key difference between the n/e/r/a and PIE II models from Telstra's perspective is that PIE II incorporates more services and therefore captures a higher degree of economies of scale. In this respect, it submits the n/e/r/a model is a more 'stand-alone' model than the PIE II model.

This said, both AAPT and PowerTel submitted that the PIE II model is not a true TSLRIC model.⁵⁵ AAPT considered that PIE II effectively creates a stand-alone model more akin to TELRIC than TSLRIC and Primus considered that PIE II adopts a scorched node instead of a scorched earth approach to establishing costs.

⁵² Telstra, *Telstra's Submission in Relation to the Methodology used for Deriving Prices Proposed in its Undertakings of 9 January 2003*, p 4.

⁵³ Telstra, *Telstra's Submission in Relation to the Methodology used for Deriving Prices Proposed in its Undertakings of 9 January 2003*, p 3.

⁵⁴ Telstra submission to the Draft Determination, p. 3.

⁵⁵ AAPT submission to the Draft Determination, p. 5, and PowerTel submission to the Draft Determination, p. 3.

The Commission is adamant that any model used in pricing PSTN and ULLS must be a TSLRIC model. Given the uncertainty over whether PIE II is a true TSLRIC (rather than TELRIC) model, the Commission would need to undertake a more complete examination of the model, should it choose to utilise it in any way in the future. The Commission would also seek Telstra's comments addressing concerns raised by other parties.

To date, the Commission's own examination of the PIE II model has shown the following:

- its estimates of headline conveyance costs are not unlike those produced by the n/e/r/a model; and
- its estimates of line costs in non-urban areas are significantly higher than those produced in previous models, and in particular the n/e/r/a model, but that its estimates in urban areas are significantly lower – this has implications for the ADC and ULLS costs (see Chapters 8, 9 and 10).

6.1.3 Industry participants' views

Telstra has submitted that the PIE II model is the most current and accurate model available, and is therefore the most appropriate model for determining model price terms and conditions for the PSTN and ULLS (as well as for assessing its most recent undertakings).⁵⁶ Macquarie supported the use of the PIE II model, providing the model followed a scorched-node approach with forward-looking technologies, and that the Commission approves or determines the inputs as appropriate.⁵⁷

However, other parties had reservations over the use of PIE II, particularly once they had the opportunity to scrutinise the model. An over-arching view was that the model has not been sufficiently analysed at this stage. AAPT submitted that PIE II systematically overstates the efficient network costs and that the Commission should not use the model in its current form to inform its pricing decisions.⁵⁸

PowerTel noted there are a number of significant flaws with the model and that the Commission should adopt an independently developed cost model.⁵⁹ Optus submitted it has material concerns with the underlying architecture, assumptions and methodologies associated with PIE II.⁶⁰ It considered that while it may be appropriate for the Commission to use the model to determine indicative prices, the Commission should retain the ability to amend the model and therefore the indicative prices.

⁵⁶ Telstra submission to the Model Price discussion paper, p. 1.

⁵⁷ Macquarie submission the Model Price discussion paper, p. 1-2.

⁵⁸ AAPT submission to the Draft Determination, p. 4-5.

⁵⁹ PowerTel submission to the Draft Determination, p. 4.

⁶⁰ Optus submission to the Draft Determination, p. 3-4.

Further, various access seekers in their submission to Telstra's most recent core service undertakings submitted a number of concerns regarding the structure and underlying assumptions of the model, claiming they result in a significant overestimation of network costs.

6.1.4 Commission's current views

As noted in the Draft Determination, the Commission continues to have reservations over the appropriateness of Telstra's PIE II model. This has been reinforced following feedback from industry participants which questions the model's underlying architecture, assumptions and methodologies. At this stage, and without further analysis of the model, the Commission considers that these concerns combined with the model's lack of transparency limit the extent to which it can be directly utilised in determining indicative price terms and conditions or for other regulatory purposes.

This said, given its preferred pricing approaches (as set out in sections 8, 9 and 10 below) the Commission has used the PIE II model less directly to inform itself of the broad quantum of network costs associated with the PSTN and ULLS. The Commission considers this is not unreasonable as despite the concerns noted above, its preliminary assessment of the model reveals outcomes, particularly call conveyance costs, not unlike those of the n/e/r/a model adjusted for similar periods and input values. Further, the charges being determined are only indicative and will be used to guide the industry in negotiations.

Should the Commission set binding prices in the context of an arbitration, it would consider using Telstra's, or any other model, only after a fuller assessment of the model is undertaken and industry participants have had the opportunity to analyse its modelling framework and assumptions in more detail than has been possible in the current processes.

This said, the Commission has not ruled out the possibility of updating and improving the n/e/r/a model in the future.

6.2 Applying an adjustment factor

In its discussion paper *Model Price Terms and Conditions for PSTN, ULLS and LCS services* the Commission noted the possibility of using a TSLRIC model to determine an initial access price and then applying an adjustment factor to update access prices in subsequent periods. It was considered that an adjustment factor would need to take into account consumer price index movements as well as technology and output changes.

The Commission noted that where prices are being determined for the purposes of indicative pricing such an approach may work well as it does not require substantial revisions to a complex TSLRIC model. This said, the Commission also acknowledged that an adjustment factor approach may suffer from reduced accuracy of the price estimates.

In its Draft Determination, the Commission noted that use of an adjustment was not necessary given PIE II would be used to generally inform it in relation to network costs. However, the Commission may need to reconsider this matter in its future regulatory work.

6.2.1 Industry participants' views

In relation to the use of adjustment factors, Telstra noted in its submission to the *Model Price Terms and Conditions for PSTN, ULLS and LCS services* discussion paper that the PIE II model includes appropriate technology factors and forecasts of traffic volumes for the 2002-03, 2003-04 and 2004-05 financial years. It submitted that running the model for each year would be no more burdensome than calculating the adjustment factor.⁶¹ Macquarie also considered it may be just as complex to use an adjustment factors as compared to an economic model to determine prices for subsequent years.⁶²

Primus on the other hand, did not oppose the use of a TSLRIC model as the starting point and the application of an adjustment factor to calculate indicative access prices for the following periods.⁶³ In its submission to the discussion paper Optus submitted that an adjustment factor should comprise a network price index, to measure the expected change in the costs of inputs from the projected annual change in equipment prices for each network asset type, as well as an output factor.⁶⁴ Optus further noted in its submission to the Draft Determination that the Commission's proposed approach was only appropriate if the starting asset values for each year are reduced in line with appropriate price trends. AAPT considered that any calculation of an adjustment factor should reflect the forward-looking nature of the telecommunications access regime.⁶⁵

6.2.2 Commission's current views

The Commission notes that its approach to pricing for the purposes of setting indicative prices involves the use of the PIE II model to inform itself of the broad quantum of network costs associated with the PSTN and ULLS. In this regard, it continues to consider the use of an adjustment factor is not necessary. As the PIE II model uses updated traffic and volume estimates as well as asset values to determine estimated costs in each year being considered, the Commission considers application of an adjustment factor is unwarranted for the periods concerned.

⁶¹ Telstra submission to the Model Price discussion paper, p. 1 and 3.

⁶² Macquarie submission to the Model Price discussion paper, p. 2.

⁶³ Primus submission to the Model Price discussion paper, p. 3.

⁶⁴ Optus submission to the Model Price discussion paper, p. 37-43.

⁶⁵ AAPT submission to the Model Price discussion paper, p. 3-4.

6.3 Price ranges or points

The Commission's *Model Price Terms and Conditions for PSTN, ULLS and LCS services* discussion paper also raised the issue of using the various modelling frameworks to determine model price ranges or price points. In particular, the Commission noted that using an adjustment factor could allow for a price range to be determined based on an upper and lower limit of the CPI, technology and output estimates. Equally, a range of model prices could be estimated by allowing for different key inputs in any particular modelling framework.

In its Draft Determination, the Commission noted that both price points and ranges have merit and that the use of either approach will depend on the specific circumstances and pricing approaches adopted.

6.3.1 Industry participants' views

In Telstra's view a range of indicative prices should be established if at the time of publishing model price terms and conditions, the Commission has not finalised its views on pricing methodology, including the PIE II model.⁶⁶ This said, in its submission to the Draft Determination Telstra was of the view that at the time of making the Final Determination the Commission should have finalised its views on these matters and that it would be preferable for indicative price points rather than ranges to be released.⁶⁷ It considered that in this context, price points would be more likely to facilitate commercial negotiations. Macquarie was also of this view.

AAPT supported the publication of a range of prices, as it considered they would create less uncertainty.⁶⁸ In response to the Draft Determination AAPT submitted where price ranges are published, it would also be appropriate to publish guidelines as to the factors that would influence the price within that range.⁶⁹ It considered that one of the bases for determining the particular price should be the volume of the service required by an access seeker. Optus also supported a price range, noting that a 'one price fits all' approach may not be appropriate, particularly where the economic costs of supplying services to different access seekers varies.⁷⁰ It also noted that where a range of prices is published there would need to be guidance as to the factors that would decide the point within the range which a particular access seeker would negotiate.

⁶⁶ Telstra submission to the Model Price discussion paper, p 2-3.

⁶⁷ Telstra submission to the Draft Determination, p. 4.

⁶⁸ AAPT submission to the Model Price discussion paper, p 3-4.

⁶⁹ AAPT submission to the Draft Determination, p. 6.

⁷⁰ Optus submission to the Model Price discussion paper, p. 55-56.

6.3.2 Commission's current views

The Commission remains of the view that both price ranges and price points have merit. However, at this stage the Commission intends to set upper bound model access price points for the core services. It considers that these prices reflect maximum access prices which the Commission would likely make an arbitration decision relating to price and are therefore relevant to the commercial negotiations between industry participants. However, these upper bound prices should not be interpreted in a 'one size fits all' manner and should parties believe their circumstances warrant lower charges, these should be addressed in any negotiations over the supply of services.

In relation to the above issue, some carriers also noted that the headline rates set by the Commission are for an average PSTN call. However, carriers with different call lengths will face different headline rates as the flagfall component of any PSTN charge would be distributed over varied call lengths. The Commission considers this as a matter that is more properly addressed in any negotiations over the supply of the PSTN service, given that it will be specific to each access seeker, rather than in this Determination.

7 Appropriate inputs

In examining the PIE II model, the Commission has focused its attention on certain inputs. These are the inputs which appear to have the main bearing on the TSLRIC(+) estimates for PSTN O/T services and the ULLS.

After examining these inputs, the Commission has used the following factors as specified in Telstra's PIE II model for the purposes of informing itself in relation to the quantum of network costs for PSTN and ULLS:

- routing factors;
- traffic and service volume estimates;
- network provisioning;
- asset prices and lives;
- operation and maintenance costs; and
- indirect (organisational level) costs.

Since the Draft Determination, the Commission has benefited from industry views on many of these inputs. Some industry participants expressed concern that the Commission had accepted these inputs. For example, AAPT submitted that many of these inputs are inappropriately specified.⁷¹ Optus and the Competitive Carriers Coalition also noted that a number of inputs will lead to over estimation of costs.⁷²

Given the limited amount of time available to publish this Determination, and since the Commission has only used the PIE II model to establish the broad quantum of costs associated with the PSTN and ULLS, the attached Determination continues to be informed by these inputs.

In addition to the above specified inputs, there are several others for which the Commission has not used the specifications in Telstra's PIE II model. These are trench sharing, the WACC and network planning costs. Each of these inputs is discussed below.

⁷¹ AAPT submission to the Draft Determination, p. 6.

⁷² Optus submission to Telstra's 2003 core service undertakings and Competitive Carriers Coalition submission to Telstra's 2003 core service undertakings.

7.1 Trench Sharing

Trench sharing has the overall effect of reducing the cost of trenches in the provision of PSTN services. This can occur in two main ways, reflecting the two basic types of trench sharing.

First, there is sharing which reduces the total trench length. This comprises:

- sharing within a network, e.g. within the feeder network ;
- sharing between feeder and distribution networks; and
- sharing between the customer access and conveyance networks.

Second, there is sharing that reduces the costs that should be allocated to PSTN services. This comprises:

- sharing with utilities in new estates; and
- sharing with other telecommunications carriers and Pay TV operators.

7.1.1 Industry participants' views

In regard to sharing with utilities in new estates, Telstra estimated that during any particular year there are at most 1 per cent of services connected in new estates. Therefore, PIE II excludes 1 per cent of trench costs from the PSTN cost pool. In its submission to the Draft Determination it considered that the Commission's assumption that new estates make up approximately 13 per cent of Telstra's network was incorrect.⁷³ Telstra submitted an efficient operator deploying its network today would not be able to share its trenches with other utilities in 13 per cent of its network. Rather, these trench sharing opportunities would be limited to new estates in the period of network deployment.

Optus, on the other hand, in its submission to the *Model Price Terms and Conditions for PSTN, ULLS and LCS services* discussion paper, submitted that at least 14 per cent of Telstra's network should be made up of new estates as past new estates should also be considered.⁷⁴

AAPT in response to the Draft Determination noted its understanding that assumptions made in the n/e/r/a model indicate that the proportion of new estates in Telstra's networks may in fact be greater than 13 per cent.⁷⁵ It therefore submitted that a careful analysis of Telstra's network is necessary before an appropriate assumption regarding the proportion of new estates in Telstra's networks can be made.

⁷³ Telstra submission to the Draft Determination, p. 5.

⁷⁴ Optus submission to the Model Price discussion paper, p. 61.

⁷⁵ AAPT submission to the Draft Determination, p. 7.

More generally, AAPT was concerned that Telstra's trench sharing assumptions may not be appropriately forward-looking.⁷⁶ Optus also argued in its response to the Commission's discussion paper *Model Price Terms and Conditions for PSTN, ULLS and LCS services* that a forward-looking model should look at the extent of trench sharing that would occur if an efficient new operator was rolling out a network today. A new operator would have greater scope and incentives for trench sharing than Telstra has faced historically. Optus also believes that previous TSLRIC models of Australian telecommunications networks have made inadequate sharing assumptions due to a misunderstanding or misrepresentation of the degree of trench sharing between the CAN and inter-exchange network ('IEN') as well as between fixed voice telephony and other Telstra businesses.⁷⁷

7.1.2 Commission's current views

The Commission believes that the scorched-node methodology that is considered appropriate in determining TSLRIC prices dictates that the level of trenching in new estates should reflect both Telstra's past ability to share trenches with utilities in new estates, and its ability to share over the regulatory period. This is because the appropriate network modelled should be Telstra's network, as it would look if it were optimised, and not a hypothetical new entrant's network.

As a result of its estimation of Telstra's past ability to share trenches with utilities in new estates, the Commission considers that the PIE II model should reflect the assumption that new estates make up around 13 per cent of Telstra's network.⁷⁸ Telstra claims that the 13 per cent assumption is an inappropriate input into PIE II as the model would consider 13 per cent of estates in each service area are new estates, however, this is not the case in CBD and Rural areas. Most new estates are likely to be in Metropolitan areas. The Commission sees this not as a reason for using a lower percentage of new estates, but rather as a modelling issue in properly specifying this factor to the appropriate areas, raising further concerns over the suitability of the PIE II model.

7.2 WACC

The WACC constitutes the return on capital. It is an important component of the overall annual capital costs which need to be calculated in order to determine efficient line and conveyance costs for the PSTN.

⁷⁶ AAPT submission to the Draft Determination, p. 8.

⁷⁷ Optus submission to the Model Price discussion paper, p. 62.

⁷⁸ Based on conservative estimates of the accumulative stock of new estimates over the last 10 years.

There are a number of differences on both the methodology and input assumptions used by the Commission and Telstra to calculate the WACC for the purposes of determining the TSLRIC estimates of the PSTN O/T services and the ULLS.

7.2.1 Industry participants' views

Telstra continues to disagree with the Commission in relation to the appropriate WACC parameters. It is of the view these should include a risk-free rate that is based on a 10-year Government bond and is not averaged, 7 per cent market risk premium, 1.16 to 1.10 per cent debt risk premium, debt issuance costs, 30 per cent tax rate and 50 per cent imputation factor.⁷⁹ In its submission to the Draft Determination Telstra noted the following as areas where it disagrees with the Commission:

- the market risk premium adopted by the Commission is not representative of estimates typically used in Australia;
- the asset beta used by the Commission is too low;
- the Commission's use of the undertaking period to define the maturity of the risk-free investment;
- the debt risk premium adopted by the Commission is too low; and
- the use of effective tax rate is not justified.

Optus submitted it is appropriate to use a number of different WACC inputs as compared to those used by either Telstra or the Commission.⁸⁰ In particular, it believes the debt premium should be set at, or close to, zero, the market risk premium at 3 per cent to 5 per cent, the PSTN asset beta at 0 to 0.25, and an imputation factor of 1. Optus also believed the risk free rate should correspond to the period that the indicative prices will remain current, and that the relevant bond rates should be averaged to correct for on-the-day bond fluctuations.

Primus considered that the WACC calculation should be associated with the PSTN and not Telstra as a whole and that this would imply lower risks and margins.⁸¹ Further, Primus submitted that the ACCC should consider using separate asset beta values for the IEN and CAN as risk to the CAN revenue would be reduced by any acceptance of the ADC.

⁷⁹ Telstra, *Telstra's Submission in Relation to the Methodology used for Deriving Prices Proposed in its Undertakings dated 9 January 2003*, 13 February 2003, p. 10.

⁸⁰ Optus submission to the Model Price discussion paper, p. 63-69.

⁸¹ Primus submission to the Model Price discussion paper, p. 4-5.

In its submission to the Draft Determination, AAPT supported the Commission’s scepticism regarding the WACC input assumptions used by Telstra.⁸²

7.2.2 Commission’s current views

As in its Draft Determination, aside from two notable exceptions, the Commission believes the WACC parameters that should be used are similar to those set out in its assessment of Telstra’s second PSTN undertaking.⁸³ The full justification for the use of these parameters is set out in the Commission’s assessment of Telstra’s second PSTN undertaking. Since then, the Commission has assessed arguments put forward to it by Telstra and other parties in favour of a different WACC. However, the Commission remains convinced its previous position on the majority of WACC parameters remains appropriate. The two exceptions, noted above, refer to the appropriate risk-free rate and the debt-issuance costs.

Further, the Commission notes Telstra’s submission to the Draft Determination includes an “equity issuance costs” parameter.⁸⁴ The Commission sees no justification for such an addition. Indeed, Telstra’s most recent submission claiming the inclusion of equity issuance costs in the WACC calculation did not contain any justification for such a parameter. Further, the Commission isn’t aware of any precedent for the addition of equity issuance costs in WACC calculations. Consequently, the Commission will not include claimed equity issuance costs in its WACC calculations.

The following table summarises WACC inputs used by the Commission.

Table 7.1: WACC inputs used by the Commission

Parameter	Value
Debt ratio (D/V)	0.4
Equity ratio (E/V)	0.6
Market risk premium ($r_m - r_f$)	6.0%
Asset beta (β_a)	0.5
Equity beta (β_e)	0.83
Effective tax rate (T_e)	0.2
Debt Premium	0.8
Imputation factor (γ)	0.5

With regard to the appropriate risk-free rate, the Commission is aware of the debate over the length of time the risk-free rate should refer to. The possible lengths of time range from one year (as that is the period for which the model sets a price) to 10 years (as argued by Telstra). For the purposes of calculating indicative costs using the PIE II model, the Commission will estimate a risk-free rate whose term equals the period over

⁸² AAPT submission to the Draft Determination, p. 8.

⁸³ ACCC, *A Report on the Assessment of Telstra’s Undertaking for the Domestic PSTN Originating and Terminating Access Services*, July 2000.

⁸⁴ Telstra submission to the Draft Determination, p. 8.

which the indicative prices are set, as a ten-day average leading up to the beginning of that period. This rate will be used to calculate the WACC which will be kept constant for the three years covered by period of the PIE II model. This is consistent with the Commission's past position on these matters, which is to set the risk-free rate corresponding to the relevant regulatory period.⁸⁵

Debt-issuance costs have previously been accounted by the Commission within its n/e/r/a model in terms of its TSLRIC estimates. There was no need, therefore, to account for these in the WACC. However, Telstra has stated that the PIE II model does not account for these costs, which means that for the purposes of setting indicative prices, the Commission will allow debt-issuance costs to be recovered through the WACC. This has a slight upward effect on the WACC value over that which would have been calculated solely based on the Commission's previous position.

7.3 Network planning costs

Network planning costs appear to be the costs Telstra estimates another network provider would incur in designing its PSTN network. These costs are in addition to the efficient annual network planning costs that Telstra incurs in the course of normal extensions to the PSTN.

7.3.1 Industry participants' views

Telstra contends that network planning cost should be included in the estimate of network costs.⁸⁶ It notes that there is no explicit costing for such an element in the n/e/r/a model, however, these costs are accounted for in the PIE II model. In Telstra's view without network planning activity it would not be possible for any access seeker to build an efficient best in use network. Further, it submits that given a network is constantly evolving it is essential that planning be undertaken to ensure that the necessary changes happen when required. Telstra considers these are a reasonable expense that would be incurred by any operator. Further, Telstra does not understand how the inclusion of network planning costs could be inconsistent with a scorched node approach to TSLRIC.

7.3.2 Commission's current views

Network planning costs are hypothetical costs that would be incurred by an access seeker should it develop an alternate network. They are not costs Telstra needs to

⁸⁵ The PIE II model covers a three-year period from 2002-03 to 2004-05 and the risk-free rate has therefore been set on this basis. However, the Commission's proposed glide-path covers the period to 2005-06.

⁸⁶ Telstra, *Telstra's Submission in Relation to the Methodology used for Deriving prices Proposed in its Undertakings dated 9 January 2003*, 13 February 2003, p. 13 and Telstra submission to the Draft Determination p. 8-9.

recover⁸⁷, and should therefore not be included in calculating TSLRIC of the network. Allowing Telstra to recover costs it does not actually incur is against legislative criteria and conflicts with LTIE.

Telstra's submission appears to ignore that under scorched node methodology, the modelled network is Telstra's network as it should look if it were optimised, not a hypothetical entrant's new network.

Although some network planning costs are associated with the ongoing maintenance and replenishment of infrastructure, any such costs should be appropriately covered by operation and maintenance costs which are allowed for by the Commission.

As the Commission considers the inclusion of network planning costs is inconsistent with the principles of TSLRIC using a scorched-node approach, it does not propose to allow for network planning costs in the PIE II model. In this regard, the Commission notes that the estimate of efficient costs based on Telstra's current network design ('scorched-node') rather than based on a 'greenfields' network ('scorched-earth') is not contentious between Telstra and the Commission.

⁸⁷ Telstra has developed its network over a long period of time, with the costs of planning long recovered.

8 PSTN - the access deficit contribution

8.1 Introduction

The Commission's present practice is to require that access seekers contribute to the AD resulting from the operation of retail price controls that limit Telstra's ability to retrieve its line costs directly from line rental charges on its own retail customers. This part of the charge for the PSTN O/T services is called the ADC and has comprised an average of about 45 per cent of the total access price regarded as reasonable by the Commission.

While recognising that adding an ADC to access prices will be associated with distortions (particularly of the build/buy choice and retail pricing of access seekers) this allowance was based mainly on concerns about possible long-run impacts of the access regime on Telstra's profitability and investment incentives.

The size of the ADC considered reasonable by the Commission to be levied on access prices is currently based on the average of the AD being allocated to calls and minutes on an equal basis (the 50:50 rule) as against being allocated totally to calls (the 100:0 rule) or totally to minutes (the 0:100 rule) . Because access seekers have shorter duration calls on average, the higher the proportion allocated to calls, the higher the ADC amount paid by access seekers.

As part of its work on model price terms and conditions, and in the context of Telstra's most recent undertakings, the Commission sought industry and consumer views on these issues through release of its paper on *The Need for an ADC for PSTN Access Service Pricing*⁸⁸. The paper raised key issues, including whether an ADC should continue to be included within regulatory pricing of the PSTN O/T services.

The Commission received ten submissions from industry participants. On the issue of whether an ADC should continue to be included in regulatory pricing of the PSTN O/T services, all parties except Telstra either opposed or questioned its continuation. It was argued by access seekers that, even if there was a case for the inclusion of an ADC, currently the AD was defined too narrowly and that surpluses on other line products (particularly ISDN) and (in some cases) call products should be brought to account.

This issue remains contentious as evidenced by the emphasis placed on this issue in submissions to the Draft Determination, and Telstra's claim that 'the Commission fails to address the primary arguments made by Telstra in the UPCC submission'.⁸⁹

⁸⁸ ACCC, *The Need for an ADC for PSTN Access Service Pricing*, February 2003.

⁸⁹ Telstra submission to the Draft Determination, p. 11. It is noted that Telstra uses the acronym UPCC (unrecovered PSTN CAN costs) to describe the AD.

This chapter considers the issue of whether the continuation of an ADC would promote the LTIE and be consistent with the reasonableness criteria. It also examines possible changes in the regulatory approach towards the ADC that have been raised in the consultation process, including if such a change is to be implemented, whether it should be implemented immediately or over the course of a transitional period.

8.2 Background

The AD is currently defined as follows:

The total annual costs of PSTN lines⁹⁰

plus

The costs of retailing PSTN lines

less

The maximum amount of revenue Telstra could receive from PSTN line rentals under the retail price controls

less

The amount of revenue from the USO fund.

Once the AD is calculated part of it is attributed to PSTN calls (ADC flagfall) and part to PSTN end-minutes of use (the ADC EMOU charge) to determine the ADC. The flagfall is then divided by the average call duration and added to the ADC EMOU charge to determine the total ADC EMOU or average per minute charge.

8.3 Criteria for assessment of changes in the ADC

The Commission has traditionally supported a limited ADC. This has been assessed on the basis of the LTIE and reasonableness criteria as required under Part XIC, and discussed in Chapter 3. Assessment of whether an access price with an ADC satisfies these criteria has particularly focused on the following:⁹¹

- achieving efficient use of telecommunications infrastructure;⁹²

⁹⁰ Line costs are determined using TSLRIC on a 'forward-looking basis' in both the Commission's n/e/r/a applied cost model and Telstra's PIE II model.

⁹¹ The other main criteria of achieving any-to-any connectivity and operational and technical requirements necessary for the safe and reliable operation of the carriage service are neither enhanced nor reduced by altering the ADC and are therefore not relevant to this debate.

⁹² Assessment against this criterion also, implicitly, takes into account the direct costs of providing access to declared services, as required under section 152AH of the Act. The direct cost

- achieving more efficient investment in telecommunications infrastructure;⁹³
- having regard to the legitimate commercial interests of access providers; and
- the promotion of competition.

In making this assessment, the Commission has had regard to the effect of other regulatory instruments on the AD, namely the retail price control arrangements that apply to Telstra (“the price controls”).⁹⁴ While these price controls constrain Telstra’s discretion as to the extent of any price increases for the line rental service it offers to retail customers, they do allow price increases to be made for the service. As such, over time, the current price controls will allow greater recovery of line costs to be made from line rental charges and for corresponding reductions to be made in the size of the AD. In this regard, in setting the current price controls, it was envisaged that they would allow the AD to be removed over a transitional period. Of course, once this point was reached, the underlying rationale for an ADC would also have been removed.⁹⁵

The ADC is assessed against these criteria below.

8.3.1 Achieving more efficient use of telecommunications infrastructure

There is little guidance in section 152AB of the Act as to what is meant by economically-efficient use of telecommunications infrastructure. Therefore, this is interpreted in standard economic efficiency terms of moving prices closer to underlying costs to achieve a closer matching of users’ valuations of the services, at the margin, with the cost to the economy of providing those units.

While retail prices in the areas covered by the declared services (essentially STD, IDD and FTM) have been decreasing over time as part of the ‘rebalancing’ of the retail price structure, they remain inefficiently high.⁹⁶ This process of rebalancing could be arrested – or even reversed – by increasing the PSTN O/T access prices. If, as is likely, this increase flowed through into higher retail prices for STD, IDD and FTM (including

criterion is also considered when having regard to the legitimate business interests of access providers

⁹³ Assessment against this criterion also, implicitly, takes into account the interest of persons who have rights to use the declared service, as required under section 152AH of the Act. The interests of persons having rights to use the declared service are also considered when having regard to the promotion of competition criterion.

⁹⁴ The current price controls are set out in *Telstra Carrier Charges – Price Control Arrangements, Notification and Disallowance Determination No. 1* of 2002.

⁹⁵ Media release from the Minister for Communications, *Information Technology and the Arts, Consumers to benefit from Telstra price caps*, 22 April 2002.

⁹⁶ ACCC, *Review of Telstra Price Control Arrangements – An ACCC report*, February 2001, Chapter 5. It is also noted that the Commission’s imputation test analysis in section 12.2.1 supports the fact that positive margins are realised on IDD, STD and FTM services when sold on a stand-alone basis or as a part of a bundle.

to their non-Telstra equivalents), the efficiency consequences would be substantial.⁹⁷ This is because prices are already well above long-run costs of supply and because demands are quite elastic.

8.3.2 Achieving more efficient investment in telecommunications infrastructure

This criterion has been interpreted by the Commission in terms of providing incentives for Telstra to make economically-justifiable investments in the PSTN and to ensure access seekers face an appropriate build/buy choice.

Prima facie, it would appear that the level of Telstra's profitability with or without the ADC (see section 8.3.3 below) would be sufficient to provide it with the incentive to invest in the maintenance of the productive capacity of the PSTN. Apparent rates of return from the PSTN are well in excess of Telstra's weighted average cost of capital. However, continuing concerns about the possible impact of the regulatory regime on investment have been raised by Telstra and NECG.⁹⁸ Further, at the time of Telstra's 1997⁹⁹ and 1999¹⁰⁰ undertakings, the Commission itself was concerned about the possible long-term impact of the regulatory regime on investment if no ADC was allowed.¹⁰¹

Since the time at which these undertakings were assessed, the Commission has conducted a number of internal studies of Telstra's capital investments. In 2001 the Commission also commissioned BIS Shrapnel to study infrastructure acquisition and investment by the industry as a whole.¹⁰² An updated study was also recently released by the Commission.¹⁰³ The Productivity Commission's report on *Telecommunications*

⁹⁷ Note however that Telstra's ability to raise IDD, STD and FTM prices is limited by the operation of the retail price controls.

⁹⁸ NECG's Henry Ergas told the Productivity Commission that the Commission's approach to local call resale is 'manifestly at odds with *ex ante* financial capital maintenance ... with the ability of investors to recoup investments prudently made' (Evidence to Productivity Commission, 16 May 2001, p. 207).

⁹⁹ On 7 November 1997 Telstra lodged an undertaking under Division 5 of Part XIC of the Act with the Commission specifying the terms and conditions upon which it undertook to meet its obligations in relation to the PSTN O/T services.

¹⁰⁰ On 24 September 1999 Telstra lodged an undertaking under Division 5 of Part XIC of the Act of the Act with the Commission specifying the terms and conditions upon which it undertook to meet its obligations in relation to the PSTN O/T services under Part XIC of the Act.

¹⁰¹ ACCC, *Assessment of Telstra's Undertaking for Domestic PSTN Originating and Terminating Access – Final Decision*, June 1999, p 52.

¹⁰² BIS Shrapnel, *Telecommunications Infrastructures in Australia 2001*, prepared for the ACCC, July 2001.

¹⁰³ ACCC, *Telecommunications Infrastructure in Australia*, October 2003.

Competition Regulation also made extensive observations on capital expenditure in the industry (see below).¹⁰⁴

Table 8.1 sets out Telstra's capital expenditures in total and for broad aggregates over the period from 1994-95 to 2002-03.

Table 8.1: Telstra's Capital Expenditure from 1994-95 to 2002-03 (\$m)¹⁰⁵

	1995	1996	1997	1998	1999	2000	2001	2002	2003
Switching	634	659	768	756	626	647	735	661	376
Transmission	335	486	579	584	602	693	429	416	378
Customer Access	666	920	848	681	864	1285	971	891	959
Mobile Networks	526	342	330	340	616	628	390	255	449
Broadband Network	60	282	459	97	34	30	33	38	–
International Infrastructure	112	197	119	143	138	125	100	233	193
Other ¹⁰⁶	Na	Na	Na	1223	1424	1422	1414	1112	1009
Capital Expenditure	3238	3904	4248	3824	4366	4830	4144	3606	3364

Source: Various Telstra Annual Reports

Overall, the analysis and the associated commentary reveals the following:

- Telstra has invested heavily in all infrastructure over the period 1994-95 to 2000-03, including in the PSTN (loosely the first three rows of Table 9.1).
- The amount of capital expenditure has fluctuated, with large increases (1995-96 and 1999-00) and falls (1997-98, 2000-01, 2001-02, and 2002-03).
- These fluctuations can largely be attributed to the commencement and completion of large capital expenditure projects, and this is reflected in Telstra's commentaries.

¹⁰⁴ Productivity Commission, *Telecommunications Competition Regulation*, Report No. 16, September 2001.

¹⁰⁵ Figures are for operating capital expenditure including capitalised interest. The figures were sourced from Telstra's annual reports. Exactly as reported by Telstra, these figures are not corrected for either increases in the CPI or declines in the telecommunications capital price index.

¹⁰⁶ Includes capital expenditure on capitalised software and 'other' items.

- More recently, the decline in capital expenditure has been influenced by Telstra's more 'disciplined' approach to investment, reflecting investor perceptions about the need for continued healthy increases in cash-flow and dividend growth, its marginal loss in market share in some service segments and particularly lower overall growth in the telecommunications sector.

To the extent that there are concerns with the financial position of particular services, this would appear to overlook the fact that the entire PSTN is required to produce any particular call service. Thus, in the Commission's view, it would not be prudent to abandon the entire PSTN just because one part of it was not profitable or not as profitable as some other parts. Only if the entire PSTN were in deficit would abandonment of it be a consideration. As the PC report also notes:

...access pricing is only one factor that shapes the returns to the investment made by access providers in telecommunications infrastructure.¹⁰⁷

The Productivity Commission's *Telecommunications Competition Regulation* report consistently recognises the high levels of investment occurring in the PSTN, and does not identify any harm to PSTN investment from the regulatory regime, at least while Telstra maintains such a strong retail market position.

A further investment-related issue is the effect of the ADC on the build/buy choice for access seekers. In the Commission's view, access seekers should be faced with an access price reflecting the TSLRIC of providing access on a forward-looking basis. Placing an ADC on top of this would appear to take the access price away from this ideal, providing an artificial stimulus to build rather than to buy.

The addition of an ADC could also potentially distort investment incentives in another sense. While the ADC is a contribution to line costs, there is no linkage between the total contribution paid by a particular customer and the cost of that customer's line. For example, CBD business customers and those living in relatively low-cost (densely-populated) areas are likely already to meet the cost of their lines through direct line-related charges, and then would be required to make further contributions through the ADC.

That said, the Commission is not aware of how significant this effect would be on the build/buy choice in such areas. It would be expected that the incentives for uneconomic by-pass caused by the ADC would be relatively small compared to other factors which lead to (efficient) infrastructure build in such areas. For example, there are strong incentives to directly connect high-yielding multi-line customers in such areas given the relatively low costs of doing so, particularly where other (utility, transport) infrastructure can also be readily utilised.

Looking forward, Telstra has presented a series of arguments that removing the ADC 'must erode Telstra's ability to maintain and renew its network'.¹⁰⁸ Telstra claims that

¹⁰⁷ Productivity Commission, *Telecommunications Competition Regulation*, Report No. 16, 21 September 2001, p. 397.

‘placing the entire burden of financing the CAN on Telstra would undermine its ability to raise funds, encourage access seekers to rely on Telstra’s facilities and increase regulatory risk. Telstra has also argued that:

... ACCC cannot determine what investment levels are appropriate, by whom and when. The ACCC plainly lacks information and capabilities any such decisions require.¹⁰⁹

While recognising there may be a position of informational asymmetry between the Commission and Telstra, it is clear that all available information does not point to an actual or imminent crisis in PSTN investment, and that no independent assessment agrees with Telstra’s pessimistic outlook.

8.3.3 Telstra’s legitimate commercial interests

Access pricing must have regard to Telstra’s legitimate commercial interests. This is interpreted as allowing Telstra to cover its efficient costs from the totality of its retail and wholesale pricing, having regard to the ability to exploit economies of scale and scope.

Since 2000, the Commission has carried out studies of the profitability both of Telstra as a whole and of the PSTN alone, and has carefully considered other appraisals, including those by industry analysts and by Telstra itself.¹¹⁰ In *The Need for an ADC for PSTN Access Service Pricing* discussion paper, industry participants were asked to comment on the bearing that Telstra’s profitability has for the ADC and the likely impact on profitability of the PSTN.

The 2001 Ovum study¹¹¹ of Telstra’s overall profitability concludes that, based on Telstra’s financial statements, as a whole it earns a rate of return well in excess of its WACC. This is the case whether the WACC used is as contended by Telstra or that determined by the Commission. According to this study, Telstra’s profitability is comparable with that of other highly-profitable telecommunications carriers in the region (SingTel and Telecom New Zealand). Further, it is reported to be in a strong position compared with many of its European and US counterparts since the ‘dot.com’ and telecommunications boom evaporated.

The Commission’s PSTN profitability study considered Telstra’s revenue from all services using the PSTN, including Telstra’s own retail services and the wholesale

¹⁰⁸ Telstra submission to the ADC Discussion Paper, paras 112-26.

¹⁰⁹ Telstra submission to the ADC Discussion Paper, para 126.

¹¹⁰ Throughout, the word ‘profitability’ is being used in the commonly-understood sense, including as used by Telstra in its annual and RAF reporting.

¹¹¹ Ovum, *Telstra Financial and Economic Profit Analysis: A Report to the ACCC*, 31 October 2001. This is available on the Commission’s website.

PSTN services.¹¹² In short, the economic profit was calculated as the total revenue from these services less the retail costs (including retail costs of capital) and wholesale costs (including wholesale cost of capital). The Commission used in its study data contained in Telstra's reports made under the Regulatory Accounting Framework (RAF) record keeping rule.

The profitability study revealed that over the last four years, on average, Telstra realised an economic profit, as a percentage mark-up on costs, of over [c-i-c]. This indicates that Telstra is more than just able to fully recover any AD.

In November 2002 Telstra's own appraisal of its overall profitability was that it is 'sensational'.¹¹³ This said, in its submission to the Draft Determination Telstra submitted its own [c-i-c] analysis of PSTN profitability for the first half of 2002-03 that either 'shows that Telstra does not make economic profits on its PSTN' or that 'the PSTN may not be profitable'.¹¹⁴

The broad methodology employed for this analysis involves:

- using RAF data information for the six months ending 31 December 2002;
- defining the PSTN as comprising the products 'End User Access', 'Local Calls', STD, IDD, F2M and PSTN OTA;
- replacing RAF Internal Wholesale costs and the network costs for PSTN OTA with equivalent PIE II model outputs;
- adding Mobile infrastructure costs from the 'Internal Wholesale Fixed to Mobile Product'; and
- distributing any UPCC across all calling products.¹¹⁵

Telstra asserts that the resulting calculation of PSTN profitability yields an economic loss on PSTN products for the six months ended in December 2002. This compares to an operating accounting profit for Telstra as a whole for this period in excess of \$2.5 billion on an earnings before interest and tax ('EBIT') basis.¹¹⁶ In addition, Telstra's reported EBIT for the full year ending 30 June 2003 was over \$5.7 billion.¹¹⁷

¹¹² Services considered were end user access, local, STD, IDD and FTM calls as well as the Conditional Local Loop, Unconditional Local Loop, Domestic PSTN O/T, Local PSTN O/T, and Local Carriage Service.

¹¹³ Dr Ziggy Switkowski, *Address to Australian Telecom's Telco Leaders Lecture Series*, Sydney, 26 November 2002.

¹¹⁴ Telstra submission to the Draft Determination, paras 57-85.

¹¹⁵ Telstra submission to the Draft Determination, p. 14.

¹¹⁶ Telstra, *Telstra Corporation Limited results announcement*, 27 February 2003.

¹¹⁷ Telstra, *Telstra Corporation Limited results announcement*, 28 August 2003.

While economic and accounting profits will not typically co-incide, the Commission believes that Telstra's analysis is incorrect due to the fact that its methodology has a number of fundamental flaws.

First, the Commission believes that Telstra's definition of which products constitute the PSTN incorrectly excludes the ULLS product.

Second, the Commission considers that the replacement of RAF Internal Wholesale costs and the network costs for the PSTN with the equivalent PIE II model outputs for use in assessing the profitability of the existing PSTN is inappropriate. The key issue that is being examined in this profitability analysis is whether, given the current scale and scope of PSTN revenues, Telstra is able to recover the costs of operating its existing network, and earn a return on its overall investment in the network. What Telstra is effectively measuring under its methodology is whether the PSTN would be profitable if Telstra deployed a new, forward-looking efficient network, incurring the related network costs, while retaining the historic level of revenues. The Commission consider that this approach is meaningless, amounting to an 'apples to oranges' comparison and provides no indication of whether the PSTN as actually configured is currently earning an economic profit. This difference in methodology appears to be the main source of the difference in the calculations of profitability as between Telstra and the Commission.

In addition, both the Commission's and Telstra's calculation of PSTN profitability exclude some key categories of revenue accruing from the PSTN, including contributions for PSTN value added services, revenue relating to incoming and transit international calls, as well as what was previously termed ship-to-shore revenues.

The Commission's overall assessments of the PSTN's profitability are also reflected in the publicly reported performance of the PSTN. Telstra noted in its 1999-2000 Annual Report (p. 80) that its traditional telephony products:

have traditionally generated most of our operating profit and have been more profitable than our non-telephony products such as data

This profitability has also been noted by industry analysts such as Macquarie Research Equities that notes that 'fixed line services provide the bulk of Telstra's cash flow' and predicts for 2003 that 'cash flow from basic telephony will continue to be strong'.¹¹⁸

The issue is not just whether Telstra's PSTN is overall profitable (implying that profits elsewhere exceed the AD) but also whether the reduction or removal of the ADC would affect that profitability sufficiently to make the margin uncomfortably close. In *The Need for an ADC for PSTN Access Service Pricing* discussion paper, the Commission estimated that, given that the flow of traffic is relatively invariant with the retail prices charged, a change in the ADC of 0.1cpm fully passed on in prices would change Telstra's revenue by \$50 million and, therefore, that the complete removal of the ADC

¹¹⁸ Macquarie Research Equities, *Another Tough Year Ahead for Telcos*, 17 January 2003, p. 4 and 13.

of 0.57cpm in 2001-02 would have reduced Telstra's revenues by a maximum of \$285 million.¹¹⁹

However, reactions to the Discussion Paper and further analysis by the Commission suggest there is a degree of uncertainty about this estimate. On the one hand, JPMorgan has estimated a much smaller financial impact from removing the ADC.¹²⁰ It claims that only a small part of any reduction in the ADC would be passed on in lower retail prices, with an estimated impact of complete removal on Telstra's revenues of \$80 million. On the other hand, Telstra has identified another possible source of loss that could make the impact greater than estimated by the Commission, claiming the adverse impact on Telstra is underestimated by over 50 per cent.¹²¹ Telstra is concerned that lower access prices for the PSTN O/T services could induce access seekers to offer local calls through combining PSTN O/T services rather than through the LCS. This issue is discussed in Chapter 12.

The Commission considers there is sufficient profit easily to cover even the highest estimates of the loss in revenue if the ADC were removed completely. That said, the Commission recognises that any abrupt or immediate removal of the ADC from access charges may result in a burden to Telstra to the extent that it may have made various business decisions based partly on the assumption that it will continue to receive an ADC, if only in the short-term. For example, any abrupt change to the regulatory approach towards the ADC may not be consistent with facilitating a regulatory environment in which long-term decisions can be made with relative certainty around the pricing parameters which should be used. This means such changes, while desirable in their own right as noted above, may need to be implemented in a more gradual way.

In terms of the statutory criteria, the Commission considers that a stable regulatory environment can act to promote efficient investment and as such the Commission considers it can have regard to this consideration within that criterion. However, the Commission notes that it may have regard to other matters under the reasonableness criteria as it thinks appropriate (section 152AH(2)). It would here consider that the maintenance of a more stable regulatory environment in order to facilitate efficient long-term investment planning by access providers and access seekers as a relevant consideration in its own rights in regard to this decision.

8.3.4 The promotion of competition

Broadly, the Commission regards anything that promotes (damages) competition, everything else being equal, as enhancing (damaging) the LTIE.

¹¹⁹ The reduction in Telstra's revenue would be lower to the extent that quantities increased in response to the decrease in prices, i.e. demand was more elastic.

¹²⁰ JPMorgan, *Telstra Corporation Ltd Still Some Residual Regulatory Risk for Telstra*, Asia Pacific Equity Research, 11 April 2003.

¹²¹ Telstra submission to the ADC discussion paper, updated March 2003, para 84, p. 21.

The current operation of the access regime has allowed entry into downstream markets for STD, IDD and FTM calls and local calls. This entry has occurred in the context of Telstra enjoying large margins on most of these services. While these margins may have been reduced over time, they remain large, and their maintenance implies that Telstra has advantages of incumbency, is able to bundle across all services and benefits from natural monopoly attributes (vertical economies) in downstream production components.¹²²

The Need for an ADC for PSTN Access Service Pricing discussion paper raised the issue of ‘competitive neutrality’ and how this may be affected by the presence of an ADC. It was pointed out that it appears to be the case that Telstra does not apply an internal transfer pricing system and that it is therefore incongruous for Telstra to appeal to ‘competitive neutrality’ with respect to its rivals. That is, if – as it appears – Telstra’s downstream managers pay nothing for PSTN O/T services when using it as a component in producing STD, IDD and FTM calls, increasing the access price to their rivals further above the direct costs of provision would only serve to increase the extent of non-neutrality that is inherent in the existing arrangements.

Telstra’s submission on the ADC discussion paper argued that the Commission’s case based on the absence of internal transfer pricing ‘seems plainly inconsistent with the economic notion of opportunity cost’.¹²³ The Commission continues to believe that the opportunity cost argument is invalid and that the ADC cannot be competitively neutral.¹²⁴

Put simply, if the ADC were increased and this were fully reflected in retail prices, Telstra gains by the amount of the ADC increase per minute (across both wholesale and retail minutes) and the position of access seekers is unchanged (higher access charge exactly matched by higher retail price). To the extent that any increase in the ADC is not passed through in retail prices, Telstra gains by the amount of the increase in the wholesale price while access seekers lose by the difference between the increase in the ADC and the unchanged retail price.¹²⁵

8.3.5 Telstra’s approach to the AD and ADC

Telstra is critical of the Commission’s approach to the AD and the ADC in the Draft Determination. In its submission to the Draft Determination, Telstra variously expresses disappointment; claims that the Commission ‘fails to address’ its primary

¹²² ACCC, *Review of Telstra Price Control Arrangements – An ACCC report*, February 2001, Chapter 5. As noted above, section 12.1.2 discusses the imputation testing performed in the LCS context. This testing supports the view that Telstra is earning positive margins.

¹²³ Telstra submission to the ADC discussion paper, updated March 2003, paras 129-35.

¹²⁴ The Commission also notes the conclusions of J. Gans and S. King, *Competitive Neutrality in Interconnection Pricing*, a report on behalf of AAPT, 25 June 2003.

¹²⁵ Telstra submission to the Draft Determination regards this ‘example’ as ‘irrelevant’.

arguments; claims that it ‘does not understand’ particular arguments or positions, regards the Commission’s example on competitive neutrality as ‘irrelevant’.^{126 127} In addition to issues about the profitability of the PSTN (dealt with above) and on the allocation of the AD to calls and minutes (discussed below), Telstra raises the following particular issues:

- *Inconsistent treatment of CAN and IEN costs is ‘economically irrational’* (paras 43-7): The Commission’s approach is – and has been – to assess different options according to direct application of the LTIE criteria, and this has led it to the conclusion that the case for an ADC is weak. The fact that Telstra can somehow arrive at a different conclusion in favour of an ADC (and its increase) based on claims of inconsistent treatment of CAN and IEN costs is not compelling where – as it is – the Commission is legally bound to assess the ADC against the criteria.
- *Commission’s approach is ‘inconsistent with incentive based regulation’* (paras 47-8): Telstra’s argument here and in the ADC Submission is not well developed. In this regard, Telstra’s own analysis of its total factor productivity performance over the period of price cap regulation ‘shows that Telstra’s performance in increasing the efficiency with which it uses inputs has been very substantial’ and apparently as compared with the price cap limits that have been set.¹²⁸ The Commission cannot see how removal of the ADC could possibly affect Telstra’s incentives to continue to outperform the regulatory benchmark set by the Government.
- *Commission’s approach amounts to a ‘differential profits tax’* (para 49): The Commission does not believe that its approach results in a tax on profits, *ex post* or otherwise. The relevance of references to supposed profits made by access seekers is not immediately apparent.

Put simply, the Commission is of the view that an ADC is unnecessary for the purposes of ensuring Telstra’s legitimate business interests and that is inconsistent with each of the criteria contributing to LTIE. The financial viability of the PSTN would not be threatened by removing the ADC because the AD is substantially outweighed by surpluses on key call services.

¹²⁶ Telstra submission to the Draft Determination, p. 9-19.

¹²⁷ The interpretation of this section is made difficult by the use of the term ‘UPCC’ to mean both the AD and the ADC. Logically, if the UPCC is the AD (according to Telstra’s ‘Report of Henry Ergas’, para 44, ‘this amount is also widely referred to as the “access deficit”’), the ADC must be the UPCCC. Confusingly, Telstra uses ‘UPCC’ to refer to both the AD and the ADC – on at least twenty occasions in section G Telstra refers to UPCC when it apparently means UPCCC, including in its tautological statement (para 77) that ‘the UPCC should not be eliminated until the AD is eliminated’.

¹²⁸ Telstra submission to the ADC discussion paper, paras 9 and 80.

8.3.6 Effect of the price controls on the AD

As noted above, the Government has stated its intention is to allow Telstra to increase line rentals sufficiently over five years (beginning 2002-03) to eradicate the AD entirely. This point was underlined by the Minister when he observed that:

If you are going to fix the problem of the access deficit and get your interconnect prices down by about a third, you need to gradually rebalance.¹²⁹

Telstra has been given greater freedom in the retail price controls for 2002-03, 2003-04 and 2004-05 to facilitate this outcome. It is now allowed to increase line rentals by an amount equal to the change in the CPI plus 4 per cent per annum ('CPI + 4'), a rate of increase designed to allow elimination of the AD by 2006-07.¹³⁰

8.4 Possible changes in the ADC

There are a variety of alternatives which the Commission or industry has raised regarding the future approach to the ADC. For example, the Commission could:

- Continue the ADC as on the 'present basis' but with the recognition that (i) it is somewhat higher than anticipated because of the higher line costs being suggested by PIE II, as compared to that suggested by either PIE I, the n/e/r/a model or the RAF, and (ii) that it will nonetheless gradually reduce because of the greater freedom in the retail price control arrangements, but that this will take much longer than the Government expected and will not occur until 2009-10 at the earliest.
- Continue to include an ADC in regulatory pricing of PSTN O/T services but at an increased rate. This would involve a re-distribution of the AD as previously defined by either or both of allowing a 'local call surcharge' and allocating a higher percentage of the AD to calls than to minutes. If implemented immediately and on the basis that the full local call surcharge and a 100:0 allocation rule were adopted, this would take the price for PSTN O/TA services for 2002-03 to over 3 cpm.¹³¹ While there would still be a gradual reduction in PSTN O/T prices over the following years, through the ability to make CPI + 4 per cent price increases in line rental prices, because of the immediate jump it

¹²⁹ Senate: Environment, Communication, Information Technology and the Arts Legislation (ECITA) Committee, Consideration of Supplementary Estimates, 20 November, 2002, p. 10.

¹³⁰ However, as discussed below, the higher line costs estimated by the PIE II model compared with the n/e/r/a model (and compared with the RAF and PIE I) mean that the Governments allowance of CPI + 4 per cent annual price movements will not result in the ability to achieve this aim.

¹³¹ In Telstra's most recent undertaking it is prepared to set access prices for the PSTN O/T services at no more than 1.7 cpm, implying total AD-related elements of about 0.9 cpm. Telstra's undertaking therefore constitutes an increase of about 0.3 cpm in the 'ADC' component.

would mean considerably higher prices until such time as the AD was removed. Using the broad quantum of line related cost estimates arising from the PIE II cost model, the AD as previously defined would continue until 2009-10 at earliest.

- Continue to include an ADC in regulatory pricing of the PSTN O/TA services, but at a reduced rate. This would involve redefining the AD to bring to account costs and revenues attributed to all other CAN lines such as the ISDN and leased lines. Such a change if implemented immediately would lead to a significant initial reduction in the regulatory prices for the PSTN O/T services, and then a series of gradual reductions until there was no longer an AD. This point would be expected to be reached by the end of 2005-06.
- Discontinue the inclusion of an ADC in regulatory pricing of the PSTN O/T services. This would recognise that Telstra recovers its line costs through sufficient profits on other PSTN services, which removes the need for the ADC on PSTN access charges. Such a change, if implemented immediately, would lead to a once only large reduction in regulatory pricing of the PSTN O/T services.

In addition to considering whether to make any change to the regulatory approach towards the ADC the Commission has also considered how any such change should be implemented. In this regard, it has considered whether implementing such a change immediately or over a transitional period would best promote the LTIE and satisfy the reasonableness criteria.

Each of these options is considered below in turn.

8.5 Continuing with the currently defined AD and ADC

The AD could continue to be defined as detailed in section 8.2 and accordingly the ADC would remain as it is at present. Given previous modelling work by the Commission, using the n/e/r/a model, it was anticipated that on this basis the ADC would be phased out over a five year period (commencing in 2002-03) which was broadly consistent with current price cap settings, as noted above. However, as noted in Chapter 6, the Commission has used the PIE II model for the purpose of informing itself of the broad quantum of network costs associated with the PSTN. Using the PIE II model, which has substantially higher average line costs and brings to account greater costs of retailing lines than the n/e/r/a model, the AD is not phased out in this same five year time-frame. Specifically, using the PIE II model as the basis for determining the ADC, it is now anticipated that the AD, and therefore the ADC, will not be phased out until 2009-10 at the earliest.

As this approach was not advocated by any party and was not proposed by the Commission in the Draft Determination, it is not considered further.

8.6 Redistributing the AD

Proposals by Telstra to recognise a ‘local call surcharge’ and to allocate all of the AD on a per-call basis would both result in an increase in the ADC.

8.6.1 Local call surcharge

The basis of a local call surcharge is the following. Telstra claimed that the Commission ‘allocates’ part of the AD to local calls but that the price controls concerning local call prices prevent Telstra from recovering the amount ‘allocated’. This shortfall (the ‘local call deficit’) is then routed back to non-local calls and Telstra proposed that its recovery ‘effected by means of a surcharge’. Telstra also argues for a surcharge on ‘competitive neutrality’ grounds previously considered.

All other parties previously submitted that they were opposed to the surcharge on various grounds including that the issue has to be seen in terms of overall returns from the PSTN and that these clearly appear to be positive (e.g. PowerTel¹³²); that empirically there was not in fact a local call deficit (e.g. Optus and AAPT¹³³); that Telstra voluntarily does not charge the maximum amount possible for local calls (e.g. Australian Telecommunications Users Group¹³⁴), and various refutations of the competitive neutrality arguments. Further, AAPT noted in its submission to the Draft Determination that Telstra’s justification for a local call surcharge treats local call services as a stand-alone product when in reality they are not.¹³⁵ It therefore supported the Commission’s position not to include a local call surcharge.

The Commission’s specific concerns in relation to allowing a local call surcharge were outlined in Chapter 9 of its *The Need for an ADC for PSTN Access Service Pricing* discussion paper. The Commission is not persuaded that it should deviate from its previous practice of not including a ‘local call surcharge’ in the charge for PSTN O/T services.

8.6.2 Higher allocation to calls than minutes

The ADC is currently determined as the mid-point between the results of apportionment of the AD to non-local call minutes and the apportionment to non-local calls. This is the 50:50 rule. Telstra has previously argued on efficiency grounds for a greater reliance on calls than minutes in determining the ADC, in the extreme a 100:0 rule. The Commission raised the prospect of a 20:80 rule, reflecting Telstra’s retail pricing structure for non-local calls (i.e. flagfall and per minute charges). While

¹³² PowerTel submission to the ADC discussion paper, p. 2-4.

¹³³ Optus submission to the ADC discussion paper, p. 26-30 and AAPT submission to the ADC discussion paper, p. 8.

¹³⁴ Australian Telecommunications Users Group submission to the ADC discussion paper, p. 1.

¹³⁵ AAPT submission to the Draft Determination – ADC aspects, p 26-27.

dependent on the absolute size of the AD, the difference between 20:80 and 100:0 is anywhere between about 0.1 cpm and 0.3 cpm.

Telstra's submission to *The Need for an ADC for PSTN Access Service Pricing* discussion paper argued that the entire AD should be allocated to calls or flagfall, and produced new empirical evidence and more sophisticated Ramsey-Boiteux pricing analysis to support its position. Further analysis was produced in its submission to the Draft Determination. Put simply, Telstra's case is based on its contention that the demand for flagfall is perfectly inelastic and that it therefore can bear a high price without efficiency cost.

The other parties that commented on this issue broadly favoured a greater allocation to minutes than to calls, *inter alia*, questioning the empirical evidence that call demand is more inelastic; relating the recovery issue to the USO; suggesting conformity of wholesale pricing with Telstra's retail pricing structure and commenting on the adverse effect on LTIE of an increase in the charge for access.

In the Commission's view it would not be in LTIE to move towards a greater allocation to calls. Further, it considers that an allocation based on Telstra's retail pricing would improve the LTIE over the present 50:50 allocation. Many of these reasons for this were explored in Chapter 7 of *The Need for an ADC for PSTN Access Service Pricing* discussion paper and Telstra's more recent evidence has not changed this position. In summary, the Commission's view is based upon the following:

- The idea of Ramsey-Boiteux pricing is to raise a *given* amount of revenue to recover efficient costs, whereas Telstra is using the argument to try and justify raising a greater amount of revenue which is above efficient costs. As previously noted, any increase in the ADC clearly does not meet the LTIE criteria and is unnecessary for Telstra's legitimate business interests.
- To the extent that Ramsey-Boiteux pricing can be applied it must be related to retail demands, not wholesale demands, and this is not what Telstra does. Further, Telstra takes elasticities estimated from retail demands and applies them to wholesale demands. This procedure cannot be defended by Telstra on the grounds that PSTN access and downstream production components are combined in fixed proportions, as at the same quantity level, the retail elasticity is greater than the wholesale elasticity. Further, as retail prices are well in excess of the sum of the (economic) costs of the production components, the estimated retail elasticity will be even further more elastic than the wholesale elasticity.¹³⁶

¹³⁶ Telstra claimed in *Telstra's Detailed Submission in Support of its Undertakings dated 9 January 2003*, 31 July 2003, Annexure A, para 143, that 'wholesale call and minute elasticities are proportional to those for final demand'. This will not be true where retail prices differ from the sum of wholesale and downstream costs, and in any case, the proportionality factors are likely to differ between call and minute demand, necessitating appropriate adjustments of the retail elasticities before they could be used in the Ramsey-Boiteux formula.

- As previously, the new empirical evidence which underlies Telstra’s efficiency case is not compelling.¹³⁷ The claim that the demand for calls is perfectly inelastic is counter-intuitive (see below) and the econometric evidence appears weak (e.g. based on demand and price data aggregated across three very different services) and is not fully reported.
- Telstra’s submission to the core service undertakings contains a qualitative analysis of consumer demand leading to the conclusion that ‘call duration is much more sensitive to price changes than the number of calls’ (paragraph 9).¹³⁸ In the Commission’s view this conclusion is based on a series of assumptions and propositions about consumer behaviour, and is not guided by any empirical evidence. For example, a key support is the assertion that ‘many people are likely to value the number of calls they make so much that they do not wish to vary them — even in the event of a change in prices. Instead they vary only the length of calls ...’ (paragraph 13). The Commission could make the contrasting assertion that, *ceteris paribus*, increasing the price of call initiation would lead to fewer longer calls to escape the higher per-call charge. Such an assertion would have the same status as Telstra’s — an unsupported hypothesis. Notably, the analysis does not reach the conclusion that call demand is perfectly inelastic; just that it is ‘relatively insensitive’ (paragraph 3) or ‘much more insensitive’ (paragraph 9). Therefore it cannot, as claimed, be used to support the conclusion that ‘revenue from flagfall should contribute to 100% of the UPCC ...’ (paragraph 13).¹³⁹
- Attempting to move only access seekers towards a greater reliance on flagfall is unlikely to improve efficiency, as they will need to compete with Telstra in downstream markets on its terms — i.e., a much lower flagfall component in its pricing. Effectively forcing access seekers to adopt a pricing structure different from Telstra’s is likely to be unsustainable.

As noted below, to the extent that an ADC remained, the Commission favours a move from the existing 50:50 allocation in the direction of greater reliance on minutes. Specifically, in light of further analysis performed by the Commission it now considers a 30:70 allocation (as compared to a 20:80 allocation initially raised) would be appropriate. This would result in a total PSTN charge reflective of Telstra’s emerging retail pricing structure.

8.6.3 Assessment against the criteria

Assessed against the LTIE and reasonableness criteria, any proposal to increase the ADC by, for example, incorporating a local call surcharge or allocating the AD to calls

¹³⁷ This new empirical evidence is provided in *Telstra’s Detailed Submission in Support of its Undertakings dated 9 January 2003*, 31 July 2003, Annexure A.

¹³⁸ Telstra, *Telstra’s Detailed Submission in Support of its Undertakings dated 9 January 2003*, 31 July 2003, Annexure H.

¹³⁹ Presumably Telstra means 100 per cent of the UPCCC (i.e. ADC) rather than the UPCC.

appears unacceptable on all criteria. This is evident from the previous discussion where the continued imposition of the currently defined ADC is becoming more problematic under the relevant criteria and that, if anything, the appropriate regulatory policy response is to determine how it can be reduced or removed over a defined period. In terms of any increase to the ADC, this is seen to raise the following concerns under the relevant criteria:

- Increasing the ADC would drive a greater wedge between retail price and the cost to the economy of producing each of STD, IDD and FTM calls, and would clearly increase inefficiency in use of the PSTN.
- Telstra does not appear to require a higher rate of return in order to induce it to continue investing efficiently in the PSTN. To the extent that higher retail prices reduce demand for PSTN services, investment requirements could be reduced below efficient levels. The build/buy choice of access seekers would be further distorted by having to face an access charge even further above efficient costs.
- It is clear to the Commission that a higher ADC would only serve to increase Telstra's economic profits and is therefore indefensible by appeal to legitimate commercial interests.
- The impact on competition would either be neutral (retail prices would rise by the same amount as the ADC) or detrimental (retail prices rise less than the ADC, squeezing access seekers' margins).

Further, the increase in the ADC would be contrary to the Government's aim of removing the AD and the ADC by 2006-07 – the access prices for the PSTN O/T services would increase immediately and would not be eliminated as quickly; perhaps taking to 2009-10 to be eliminated completely.

8.7 Redefining the AD

In contrast to continuing with the current approach, the AD could be re-defined by taking a more 'holistic' approach and considering the CAN more broadly to include ISDN, leased lines and its other uses. The effect of this would be to bring to account substantially more revenues than costs, thereby reducing the AD.

Under this specification and using the PIE II model, which incorporates more recent estimates of line and retail costs, the normal erosion of the AD under CPI + 4 per cent, given increases in line rental yield, are likely to suffice to bring the AD and the ADC down to zero by 2006-07. Such a change in regulatory policy approach would see, however, a substantial fall in PSTN O/T prices in the initial period (as compared to current commercial agreements which the Commission understands are on average above the 1.3 cents per minute established by the Commission as reasonable in May 2001). The PSTN O/T price would then transition to a TSLRIC+ price, i.e. a price based only on efficient conveyance costs, by 2006-07.

In essence, the difference between this and continuing with the current regulatory approach to the ADC, is the time-frame before which TSLRIC+ prices are

implemented, and the extent to which in this period regulatory pricing of the PSTN O/T services remains above TSLRIC+. This approach would be expected to reduce this time-frame by approximately three years.

The actual impact of this change on the AD and hence the regulatory pricing of PSTN O/T services within the transitional time frame, however, is rather unclear at this stage since the net line revenues from ISDN and leased lines cannot be estimated with a sufficient degree of precision from data currently available from either the RAF or the PIE II model.

The approach of broadening the definition of the AD had been recommended by Optus and by AAPT in their submissions to the Commission's paper on *Future Access Pricing Approaches for PSTN, ULLS and LCS*¹⁴⁰ as well as to *The Need for an ADC for PSTN Access Service Pricing* discussion paper and the Draft Determination. For example, AAPT's submission to the Draft Determination noted that the relevant question in relation to the AD is whether total revenues from the joint product cover the total costs of the joint product.¹⁴¹ AAPT considered it crucial to recognise that basic access is a part of a joint product, including local and other call services, and has no value by itself. All of the parties making submissions except Telstra and Primus supported the broadening of the definition of AD to include net revenues from other line services like ISDN lines, and in some cases to include net revenues from call services as well.

This approach is assessed further below when it is compared with the last option, being the discontinuation of an ADC within regulatory pricing of the PSTN O/T services.

8.8 Discontinuation of an ADC

When the Commission initially considered the inclusion of an ADC in the PSTN O/T charge, it was concerned that without the ADC Telstra may be unable to recover the AD in an efficient way. Even though at that time Telstra was able to recover the AD through profits on services using the PSTN (e.g. STD, IDD, FTM), it was expected that as competition increased it would no longer be able to do so. The Commission was concerned that without the ADC, the PSTN might no longer be profitable, and that as a result Telstra's legitimate costs would not be covered and that investment in infrastructure would suffer.

As shown in section 8.3.2 and 8.3.3 above, the Commission's investment and PSTN profitability studies suggests that this concern is misplaced.

In particular, the Commission's PSTN profitability study indicates that the expansion of competition into services dependent on the PSTN has not prevented Telstra from

¹⁴⁰ ACCC, *Future Access Pricing Approaches for PSTN, ULLS and LCS*, Discussion Paper, September 2002.

¹⁴¹ AAPT submission to the Draft Determination – ADC aspects, p. 9-10.

realising substantial economic profits even once the AD is fully covered. Since the circumstances justifying the ADC have not eventuated, the Commission believes the case for the removal of the ADC is compelling.

8.8.1 Immediate or transitional implementation?

However, the Commission is aware that there are certain concerns with an immediate move to TSLRIC+ pricing of PSTN O/T services.

For example, although the ADC is having distortionary effects on efficiency and competition objectives which need to be addressed in a reasonable timeframe, the immediate removal of the ADC may unduly disrupt existing business plans of access providers and seekers, including in regards to access arrangements and investment decisions.

8.8.2 Draft determination position and industry comments

The Commission proposed in the Draft Determination an approach that involved establishing initial access prices which are slightly higher than those that would be determined under the current ADC approach but which transition, using a glide path, to an access price based solely on TSLRIC+ costs by 2006-07. This is the same time-frame that would be expected to apply if the ADC was redefined and reduced as noted in 8.3.6 above

In the Draft Determination the Commission noted that Telstra's legitimate business interests would be taken into account by such an approach. In particular, that Telstra would be able to rely on the Commission's previous access pricing approach, which accepted an ADC, for its recent and prospective business planning. Similarly, the Commission considered that some access seekers who have current contracts extending to at least 2004 or 2005 may find themselves "stranded" at significantly higher rates if immediate changes to the ADC were made.

In relation to the transition period, the Commission noted it was relevant that the current price cap period envisages sufficient rebalancing to line rentals such that it would be possible to remove the AD by 2005-06, on the basis of previous average line cost estimates. As well, redefinition of the AD to bring to account revenues and costs from other services such as the ISDN, which is discussed above, would also be likely to result in TSLRIC+ pricing being introduced over the same time frame.

The prime issue was seen to be the movement to TSLRIC+ pricing of the PSTN O/T services without regard to whether or not the AD would continue beyond the transitional period. This was because there seemed little compelling reason to support an ADC as a matter of principle, given it was keeping access rates inefficiently high and having the distortionary impacts as noted above.

A number of access seekers, however, expressed concerns about the above approach in their submissions to the Draft Determination.

Optus was of the view that this approach did not lessen the distorting effects of the ADC.¹⁴² It believed that in net present value terms the ADC paid by access seekers would be greater under the above approach than would be the case under the existing path for removal of the ADC. In this regard it submitted that access seekers, and therefore consumers of pre-selected services, would be worse off under such an approach and that Telstra would be considerably better off. Optus also considered that increasing the ADC recovery initially is unnecessary to satisfy Telstra's commercial interests as Telstra's plans would have logically been based on the existing glide path for the ADC. Further, it was of the view that the Commission has given too much consideration to the commercial arrangements that have been agreed between parties.

In its submission to the Draft Determination, AAPT noted its concern with the above phasing out of the ADC.¹⁴³ In particular, that increasing access prices above the level they would be with the current approach to the ADC would create further significant distortions to competitive and efficient outcomes. AAPT also noted that the methodology and justification for determining that the higher access charges than what would exist under the current approach to the ADC are offset by the low access charges is unclear. Further, AAPT did not consider that such an approach was necessary to meet the legitimate commercial interests of Telstra and questioned the number of access seekers that could potentially be 'stranded'.

PowerTel also considered that the Commission had given too much weight to Telstra's commercial interests as compared to the objectives of promoting competition and efficiency.¹⁴⁴ In this regard it noted that Telstra is one of the most vertically integrated telecommunications companies in the world and continues to be a dominant wholesale and retail supplier. Further, PowerTel considered that most, if not all, access seekers would prefer the immediate removal of the ADC. It noted that even if there are existing agreements between Telstra and various access seekers these can be avoided via the use of a transit provider – meaning it is unlikely any access seekers would be 'stranded' on higher agreements.

8.8.3 Commission's position

Removal of the ADC

The Commission believes that inclusion of an ADC is not necessary for Telstra to recover the AD, and that a proper application of the relevant criteria to the currently available information does not support the inclusion of an ADC within PSTN O/T prices. Having said that, the issue before the Commission is whether, and if so how, to change the previous regulatory approach to the ADC. In this regard, the Commission considers that the LTIE will be best promoted by transitioning regulatory pricing of the

¹⁴² Optus submission to the Draft Determination, p. 2.

¹⁴³ AAPT submission to the Draft Determination, p. 10-13.

¹⁴⁴ PowerTel submission to the Draft Determination, p. 5.

PSTN O/T services from its current level which includes an ADC, to TSLRIC+ prices, i.e. no ADC, over a relatively short period of time.

However, it must be pointed out that any increment above the conveyance cost during a transition period is not part of an ADC *per se*. As stated earlier, the Commission favours the removal of the ADC, therefore, any increment above the conveyance cost is an increment designed to cushion any short-term negative effects that may occur due to the shift in the Commission's regulatory pricing approach.

Transition period

The Commission considers that the transition from current PSTN pricing to TSLRIC+ pricing should end in 2005/06 with the 2006/07 price therefore based solely on call conveyance. The starting point for the transition process should be the average negotiated PSTN price in 2002/03 with the end point being the currently estimated 2006/07 conveyance cost. Using information currently available to the Commission from both Telstra's PIE II model, and its n/e/r/a model, the Commission believes the 2006/07 call conveyance charge is likely to be well below 1 cent per minute and at this stage is forecast to be around 0.7 cents per minute.

The Commission believes this particular transition period is appropriate for several reasons:

- the transition period of three years is sufficiently long for Telstra and access seekers to revise their business and investment plans as well as their interconnection agreements;
- the transition period corresponds to previous government expectations (when setting the CPI + 4 per cent line rental price increases) for the elimination of the ADC; and
- the transition period corresponds to that which would eventuate should the Commission re-define the AD to include all lines using the CAN (including ISDN and leased lines).

Following the release of the Draft Determination the Commission and Telstra have discussed the possibility of Telstra lodging new access undertakings for core services for the three years commencing with 2003-04. As part of these discussions, Telstra indicated it would consider making a commitment that it would not seek an ADC following the conclusion of the 2005/06 year. The Commission considers that such a commitment should be provided as part of Telstra lodging any revised undertakings for PSTN access services.

Transition path

With the start and end points fixed, the Commission considered a number of paths between these two points. The transition path would form the headline indicative prices for 2003/04 – 2005/06, the years considered by this determination.

In this regard, the Commission considers that a concave path, as is evident under its more gradual approach, is appropriate. This type of a path leads to smaller reductions in the early years, but larger reductions in the later years. It is considered this will best cushion the impact of the change in regulatory approach and will be the least distorting, since it will allow the industry more time to plan for the larger decreases in the PSTN price. This is in contrast to introducing a more sudden, unexpected rate drop, as given by a more convex glide-path.

8.9 Comparative assessment against the criteria of redefined AD option vs option of implementing TSLRIC+ prices over a transitional period

Under either of these approaches, there would continue to be a gap between the retail price and cost to the economy of producing STD, IDD and FTM calls. However, this gap would under either option be reduced over time, and be removed completely by 2006-07. A lesser gap would however be expected over this period should the option of redefining the AD be adopted. Therefore, it could be argued that competition and other efficiency outcomes would be better promoted by redefining the AD.

However, adopting the approach of moving to TSLRIC+ prices over a more gradual transitional period is supported by having regard to other of the relevant criteria. In particular, while introducing either option would of itself be unlikely to harm ongoing investment in the PSTN or the legitimate commercial interests of Telstra (see sections 8.3.2 and 8.3.3), to the extent that doing so would change the regulatory parameters on which Telstra and access seekers have previously relied, this may have some impact on the legitimate commercial interests of Telstra and access seekers. In this regard, the three year transitional period to move to TSLRIC+ pricing is designed to allow Telstra and access seekers a sufficient period to adjust to the revised regulatory approach. Such protection is not provided by redefining the AD which would result in a more substantial decrease in access prices in the initial period.

Competitive neutrality may not be assisted by the earlier removal of the ADC effected by redefining the AD, particularly where some access seekers are currently out of contract and others are stranded on current contracts. However, under the three- year transitional period approach, competitive neutrality concerns are far less likely to arise.

The Commission also notes that phasing out the ADC by the beginning of 2006-07 would be consistent with the objectives implicit in the current price controls. Further, the Commission notes that choosing between these approaches may have implications for the extent of bypass of the LCS – see Chapter 12.

As can be seen above, there are relative advantages and disadvantages, in terms of satisfying the LTIE and reasonableness criteria, with implementing each of these options. For example, the interests of Telstra and some access seekers are likely to be better met by the transitional approach, at least to the extent Telstra and access seekers have previously relied on the past regulatory approach to the AD (e.g. in arriving at long-term PSTN service supply agreements). This said, it could be argued that competition and efficiency outcomes could be better promoted by redefining the AD.

The Commission considers, however, recognising that the case for including an ADC no longer exists, that adopting the three year transitional approach better balances the relevant criteria. As noted above, this approach involves establishing initial access prices which are based on current industry agreements which transition, using a concave glide path, to an access price based solely on TSLRIC+ costs by 2006-07. This is the same time-frame that would apply if the AD was redefined and reduced as noted in 8.7.6 above.

A significant change in regulatory policy, which would occur if the AD was re-defined or removed immediately, without sufficient indication of such a change, could be contrary to the legitimate commercial interests of Telstra and certain access seekers, and may in the longer term discourage efficient investment due to perceived regulatory risk. However, the Commission notes that over time the weight placed on this criterion necessarily diminishes given that Telstra and access seekers are now able to factor into their decision-making processes the change in regulatory approach to the AD.

Basing access prices on efficient forward-looking conveyance costs after a relatively short transition period will therefore serve to promote competition and efficient investment and, therefore, better promote the LTIE and satisfy the reasonableness criteria overall.

8.10 Conclusion

At the time of its original decision regarding the AD and ADC the Commission was concerned about the possible long-term impact of the access regime on investment and profitability, and on balance allowed an ADC while recognising its adverse effects. However, the Commission has always maintained that there is a possibility that a deficit might not exist if examined on an aggregate PSTN or fixed-network level. In other words, even if there is a shortfall between line costs and line revenues for PSTN services, this could be more than made up by revenues from other services using the CAN and other elements of the fixed-line network.

Since then, work by the Commission and its consultants has raised questions about the underlying premises of the Commission's qualified acceptance of an ADC. Evidence now available to the Commission suggests that there would remain sufficient economic profit easily to cover even the highest estimates of the loss in revenue if an ADC were no longer included in PSTN O/T prices.

Overall, the Commission considers that, while there is a strong case for removing the ADC and moving to TSLRIC+ pricing, this change should be implemented over a three year transitional period. This would balance the competing interests in the LTIE and reasonableness criteria by amongst other things promoting a more stable regulatory environment for both Telstra and access seekers. Further, such an approach would also continue the steady reduction in the access prices for the PSTN O/T services that began in 1997, with the achievement of smooth transition to TSLRIC+ pricing for the PSTN O/T services in 2006-07.

It should be noted that the Commission's approach is based on the view that an ADC is not an appropriate component of the PSTN charge, and as such the increment above TSLRIC+ based prices for PSTN OTA services within the transition period does not relate to the AD. This implicit increment relates solely to the need to balance competing considerations arising under the LTIE and reasonableness criteria that arise due to the changed regulatory approach to such a significant matter as the treatment of the AD.

9 Model access prices for the PSTN O/T services

The approach adopted by the Commission, as noted in section 8.8 above, which follows discussions with Telstra, results in access prices that are initially higher than what would exist under the current ADC approach, noted in the PSTN O/T costs above. This is because some allowance needs to be made for the fact that in later periods access prices will be lower than what would occur under the current ADC approach and that the ADC will be removed earlier than otherwise (by the beginning of 2006-07). In these later periods, the Commission has placed greater importance on promoting competition for the downstream STD, IDD and FTM services and other efficiency objectives. Access prices based on efficient forward looking conveyance costs will serve to promote competition and efficient investment.

Importantly, the Commission's proposed approach also recognises the reality of existing levels of commercially agreed access prices and reflects the extent of rebalancing allowed under the current retail price control arrangements (which have been designed for the purpose of eliminating the AD within a similar period).

Therefore, the Commission's view is that this arrangement is compatible with the LTIE and reasonableness criteria. As such, it will provide industry with the added benefit of increased certainty which should assist in commercial negotiation and reduce regulatory costs as was intended by Government when introducing the indicative or model price provision.¹⁴⁵

It is noted that Commission's model price terms and conditions for PSTN O/T services are predicated on access prices being solely based on TSLRIC+ or conveyance costs by 2006-07. In order to provide industry certainty of such an outcome the Commission has sought from Telstra a public commitment that from the conclusion of 2005-06 it will not seek to claim any ADC or any other related increment in relation to any core service access prices. The Commission would welcome the giving of this commitment within two weeks of the Determination being publicly released. In the event that such a commitment is not provided, the Commission may have cause to vary its Determination.

Using the approach detailed above the indicative access prices for the PSTN O/T services on a headline rate basis are as detailed in Table 9.1 with access prices being solely based on conveyance costs by 2006-07.

¹⁴⁵ See Commonwealth, *Telecommunications Competition Bill 2002 Explanatory Memorandum*, House of Representatives (2002), p. 39.

Table 9.1: Model access prices for PSTN O/T services

Year	Model access price (cpm)
2003-04	1.25
2004-05	1.15
2005-06	1.0

In response to a number of requests for the Commission to also set out disaggregated and de-averaged PSTN rates, the Commission has used the above headline rates and attempted to derive disaggregated flagfall and per-minute charges in various geographic areas to yield the following schedules.¹⁴⁶ These are detailed below in Table 9.2, 9.3 and 9.4 for each of the three years for which access prices have been determined.

Table 9.2: Disaggregated model access prices for PSTN O/T services in 2003-04

2003-04	<i>Flagfall</i>	<i>EMOU charge</i>	<i>Headline rate</i>
<i>CBD</i>	1.14	0.51	0.80
<i>Metropolitan</i>	1.14	0.65	0.93
<i>Provincial</i>	1.24	0.84	1.15
<i>Rural</i>	2.47	3.96	4.58
Average	1.26	0.93	1.25

Table 9.3: Disaggregated model access prices for PSTN O/T services in 2004-05

2004-05	<i>Flagfall</i>	<i>EMOU charge</i>	<i>Headline rate</i>
<i>CBD</i>	0.98	0.44	0.69
<i>Metropolitan</i>	0.97	0.58	0.82
<i>Provincial</i>	1.08	0.79	1.06
<i>Rural</i>	2.27	3.98	4.55
Average	1.09	0.88	1.15

¹⁴⁶

Despite its concerns over the use of the PIE II model, the Commission feels that the model's allocation of costs to different geographic areas is suitable.

Table 9.4: Disaggregated model access prices for PSTN O/T services in 2005-06

2005-06	<i>Flagfall</i>	<i>EMOU charge</i>	<i>Headline rate</i>
<i>CBD</i>	0.85	0.35	0.57
<i>Metropolitan</i>	0.84	0.49	0.70
<i>Provincial</i>	0.94	0.68	0.91
<i>Rural</i>	2.06	3.66	4.18
Average	0.95	0.76	1.00

The primary driver in the disaggregation of the headline rates outlined above was the overall preservation of a flagfall:EMOU charge ratio similar to that reflected in Telstra’s own retail pricing. However, it should be noted that the disaggregated rates, in particular, are only indicative rates and only approximate the appropriate disaggregation of Commission’s indicative headline rates. They should not be taken as definitive. The Commission will be willing to consider alternate (but not too dissimilar) disaggregation of PSTN headline rates should they be proposed, for example, in an undertaking.

Consistent with the Commission’s previous views regarding the setting of prices for access to non-dominant PSTN networks, these revised disaggregated rates would also be seen as relevant as a basis for the determination of such charges.

10 ULLS – network and non-network costs

In determining model access prices for the ULLS, the Commission has taken two particular cost elements into account – network costs and ULLS-specific costs. Each of these are discussed below in turn.

10.1 Network costs for the ULLS

10.1.1 Model used to determine network costs

As discussed in Chapter 6, and subject to the qualifications therein, the Commission has decided to use the PIE II model to determine the broad quantum of network costs associated with the ULLS.

The modelling approaches for determining ULLS network costs are quite different between the PIE II model and the n/e/r/a model. Specifically, the n/e/r/a model had to be modified in a number of ways to determine the ULLS network costs – as it was designed to determine network costs for the PSTN O/T service, not lower levels of the network such as the ULLS.

Using the PIE II model means such modifications are unnecessary as the model concurrently calculates PSTN and ULLS network costs taking into account the difference between these services. As Telstra has noted in its submission relating to methodology for determining core service access prices, the PIE II model derives the ULLS network costs by excluding the cost of PSTN line cards and radio access technologies from total PSTN CAN costs.¹⁴⁷

The Commission notes that the PIE II model derives network costs which are significantly lower for the CBD and metropolitan areas and higher for regional and rural areas than the n/e/r/a model. As noted in the Draft Determination, the Commission has not explored the model in sufficient detail to provide definitive reasons for these differences. While it is possible the PIE II model is more reflective of a forward looking network configuration and contains updated information and a more sophisticated disaggregation approach, the comments from access seekers suggest that the underlying structure of the model may be problematic – see Chapter 7.

In accepting the PIE II model for the purposes of determining model prices for the ULLS, the Commission notes it is using Telstra's assumptions about optimal network architecture and the way in which network costs should be determined. As discussed earlier, the Commission has reservations in relation to the appropriateness of the model's underlying architecture but notes that outcomes of the model in relation to ULLS line costs in Band 1 and Band 2 are actually significantly below those of the

¹⁴⁷ Telstra, *Telstra's Submission in relation to the Methodology used for Deriving Prices Proposed in its Undertakings dated 9 January 2003*, February 2003, Annexure A p. 13.

n/e/r/a model. Further, the access prices being determined are only indicative and will be used to guide the industry in negotiations rather than setting actual prices.

10.1.2 Inputs used to determine network costs

Chapter 7 details the inputs which the Commission considers are appropriate for the purposes of determining model terms and conditions for PSTN O/T and the ULLS. As noted in that chapter, the Commission has decided to use some of Telstra's inputs for the purposes of informing itself in relation to indicative ULLS network costs. This said, there are some inputs for which the Commission will use its own and not Telstra's assumptions. These are:

- the trench sharing assumptions in new estates;
- the WACC parameters; and
- the network planning costs.

10.1.3 De-averaged prices

As a result of uniform or average prices for retail telecommunications services, the practice of relating prices to costs is sometimes known as de-averaging even though new services like the ULLS do not have an existing average price to de-average.

As previously noted by the Commission in its *Pricing of Unconditioned Local Loop Services – Final Report*, application of a de-averaged approach is consistent with the Commission's standard approach to access pricing that relates to the direct costs of service supply and promotes economic efficiency of infrastructure use and investment.¹⁴⁸ For reasons also detailed in that report the Commission, therefore, proposes to use a de-averaged approach.

10.1.4 No allowance for the AD

The Commission has previously determined that the access price for the ULLS should not include an ADC.¹⁴⁹ This is because the Commission believes that services that do not need to be provided in conjunction with loss-making lines should not be recovering the AD.

While the Commission has allowed an ADC to be recovered in the access prices for PSTN O/T services this is because these services are provided over lines that are forced, by the retail price controls, to be sold at a loss. However, the ULLS involves the lease of lines that recover their costs so that conversion of a PSTN line to an ULL line would ensure that such a line was no longer provided at a loss.

¹⁴⁸ ACCC, *Pricing of Unconditioned Local Loop Services – Final Report*, March 2002, p.18.

¹⁴⁹ ACCC, *Pricing of the Unconditioned Local Loop Services – Final Report*, March 2002, p. 23.

As noted in the Commission’s report on *Pricing of Unconditioned Local Loop Service*, it does not consider arguments previously submitted by Telstra, that an ADC is necessary for the ULLS to ensure the efficient recovery of costs, as being persuasive.

10.1.5 Industry participants’ views

A number of industry participants provided comments regarding the Commission’s approach for calculating ULLS network costs in response to the Draft Determination. In general, several participants, while not agreeing with the use of the PIE II model to determine model ULLS access prices, were broadly supportive of the prices proposed in the Draft Determination.

For example, in its submission to the Draft Determination, PowerTel stated that it does not agree with the Commission’s use of the PIE II model to determine the TSLRIC of ULLS services because:

- Telstra has developed the PIE II cost model as a tool to help it further its own commercial interests by overstating the costs of the ULLS;
- the PIE II model is not a true TSLRIC model as it adopts a scorched node instead of a scorched earth approach; and
- there are a number of significant flaws with the PIE II model.

PowerTel considered that the Commission should adopt an independently developed cost model for the purpose of calculating access prices for the PSTN and ULLS.¹⁵⁰

Similarly, AAPT did not agree with the Commission’s use of the PIE II model for the calculation of ULLS network costs. It stated that the model is flawed and that the inputs used by Telstra are inappropriate. AAPT contended that these factors are likely to overstate the efficient network costs related to the ULLS.¹⁵¹ That said, AAPT supported the Commission’s view that the use of geographically de-averaged prices for the ULLS is appropriate and that an ADC for the service is not necessary.¹⁵²

Further, in its submission to the Draft Determination, Optus was supportive of the Commission’s approach for calculating ULLS prices and stated that reductions in access prices will have a significant effect on the market for broadband services in metropolitan areas as well as promoting facilities based competition.¹⁵³

However, Telstra stated that it was not able to test or comment constructively on the Commission’s proposed network costs as set out in Table 10.1 of the Draft

¹⁵⁰ PowerTel submission to the Draft Determination, p. 3-4.

¹⁵¹ AAPT submission to the Draft Determination, p. 4.

¹⁵² AAPT submission to the Draft Determination, p. 13.

¹⁵³ Optus submission to the Draft determination, p.5.

Determination as the input values necessary to perform such analysis had not been provided by the Commission.¹⁵⁴

10.1.6 Network costs for the ULLS

In accordance with the Commission’s approach for estimating ULLS network costs discussed above, the following network costs for bands 1 to 4 are have been determined for the purpose of deriving ULLS access prices as part of model terms and conditions:

Table 10.1: ULLS network costs (\$ per SIO per month)¹⁵⁵

Year	Cost – Band 1	Cost – Band 2	Cost – Band 3	Cost – band 4
2003-04	\$3	\$12	\$26	\$144
2004-05	\$3	\$12	\$26	\$143

10.2 ULLS-specific costs

In addition to the ULLS network costs discussed above, the other main component of the ULLS access price is the ULLS-specific costs charge. The ULLS-specific charge is designed to cover costs Telstra incurs exclusively to provide the ULLS to access seekers. Broadly, these ULLS-specific costs comprise:

- IT system development and operational costs;
- ULLS connection group costs;
- wholesale management costs; and
- indirect costs.

10.2.1 Previous examination of ULLS specific costs

In the course of its previous pricing considerations for the ULLS, the Commission engaged the Communication and Media Policy Institute of the University of Canberra and AAS Consulting Pty Ltd (the consultants) to undertake a review of Telstra’s ULLS-specific costs. The consultancy was commissioned primarily to provide advice to the Commission on the reasonableness of the \$11.42 per month/line ULLS specific cost charge then proposed by Telstra (which equates to \$137 per year) at the time of the release of the Commission’s August 2000 pricing discussion paper.¹⁵⁶ In addition, the consultants were requested to undertake an international benchmarking study of ULLS-specific costs.

¹⁵⁴ Telstra submission to the Draft Determination, p.20.

¹⁵⁵ These represent the ULLS network costs for services connected to Network Units (equivalent to an RSS/RSU)

¹⁵⁶ ACCC, *Pricing of unconditioned local loop services (ULLS) and review of Telstra’s proposed ULLS charges – Discussion Paper*, August 2000

The consultants provided a draft report to the Commission in June 2001 that was provided to the parties involved in arbitrations for comment. Following a review of all the submissions, including some which were subject to separate confidentiality conditions, the consultants provided a final report to the Commission in October 2001.¹⁵⁷

The final report concluded that Telstra's ULLS-specific charge was considerably larger than could reasonably be justified by the information examined in the review. The consultants suggested several changes to Telstra's ULLS-specific costs estimation model which they believed would lead to a lower, more reasonable estimate. The consultants concluded that the costs associated with ULLS-specific activities were only about 22 per cent of those initially proposed by Telstra.

The following three main factors were examined by the consultants which they argued resulted in a substantial reduction in the charge:

- a significant reduction in the estimated capital expenditure needed for the development of the ULLS IT System compared to Telstra's estimates;
- significant reductions in the estimated operational expenditures as compared to Telstra's estimates; and
- a significant increase in demand levels assumed by the consultants compared to Telstra's estimates.

The details of the adjustments undertaken by the consultants are further discussed in the Commission's *Pricing of Unconditioned Local Loop Services – Final Report*.¹⁵⁸

The Commission decided to accept the consultants' report on the review of Telstra's ULLS-specific costs and in particular their reasons for the cost reductions. Essentially, there were two main categories of adjustment to Telstra's model that resulted in the consultant recommending a reduction in the charge for ULLS-specific costs to \$46 on a once-off basis or \$30 on an annual basis. As noted above, these were a reduction in Telstra's estimated costs associated with ULLS-specific costs and higher demand estimates than those submitted by Telstra.

Increased demand estimates for ULLS

The consultants, as part of their review, used a number of different approaches to estimate demand for the ULLS. They considered estimates provided by access seekers and Telstra, independent analysts, information in the public domain, statements by Telstra executives, official ABS statistics, and overseas experience with ULLS take-up.

¹⁵⁷ Review of Telstra's ULLS Specific Costs — final report to the ACCC by the Communication and Media Policy Institute of the University of Canberra and AAS Consulting Pty Ltd, October 2001; Review of Telstra's ULLS specific costs – draft report to the ACCC by CMPI/AAS, June 2001

¹⁵⁸ ACCC, *Pricing of the Unconditioned Local Loop Services – Final Report*, March 2002, pp. 40-42.

On the basis of this information the consultants estimated that by 2004–05 (i.e. after five years) aggregate demand for ULLS would likely to be in the range of 400 000 to 500 000 services. The consultants recommended that 400 000 would be a reasonable aggregate demand estimate for ULLS in 2004–05.

The consultants’ demand estimates are outlined below in table 10.2.

Table 10.2: Consultants’ demand estimates

Year	Simple demand	Cumulative demand
2000-01	2 000	2 000
2001-02	40 000	42 000
2002-03	100 000	140 000
2003-04	170 000	270 000
2004-05	230 000	400 000

The Commission acknowledged that forecasting demand, particularly for new services such as ULLS, involves a considerable degree of uncertainty, given there are no historical demand patterns or trends.

In deciding, at the time of issuing its *Pricing of Unconditioned Local Loop Services – Final Report*, to accept the consultants’ higher demand estimates, the Commission was influenced by the evidence the consultants had received, including demand experienced in overseas markets. Notwithstanding this decision, the Commission noted that demand levels should be monitored and that actual ULLS demand would, of course, be relevant to the setting of charges in the future.

As discussed in detail below, the Commission has derived ULLS-specific costs, for the purposes of this determination, by using the consultants underlying cost estimate (with an adjustment to the risk-free rate used to calculate the WACC) in combination with downward revised demand estimates.

10.2.2 Other parties’ views on ULLS-specific costs

AAPT and Telstra provided responses in relation to the Commission’s proposed approach for calculating ULLS-specific costs as outlined in its Draft Determination. These are discussed below under specific headings.

Demand estimates for ULLS

While AAPT was supportive of the Commission’s decision to largely adopt the underlying ULLS-specific costs as estimated by the consultants, it stated that the Commission may have underestimated the take-up of ULLS in the future. It submitted that the Commission should use the previous demand range as proposed by the consultants unless there is a strong justification for adopting an alternative estimate.¹⁵⁹

¹⁵⁹ AAPT submission to the Draft Determination, p.14.

In contrast, Telstra submitted that the Commission must review and re-assess demand estimates for ULLS in light of actual demand trends following the launch of ULLS. It asserted that the revised estimates of demand in the Draft Determination lack credibility as they do not reflect the reality of ULLS take-up since the service was launched.

Telstra stated that the Commission has provided no mechanism or rationale as to how ULLS demand will increase by 203 per cent in 2003/04 and by a further 164 per cent in 2004/05 and that the estimates assume an unproven linkage between broadband take-up and use of ULLS.¹⁶⁰

Additionally, Optus stated that Telstra's approach to forecasting ULLS demand forecasts is flawed as the model inputs are based on observed demand, and therefore incorporate a range of inefficiencies that gave rise to that level of demand.¹⁶¹ Therefore, Optus contends that this has resulted in demand figures that are below those consistent with a forward looking efficient operator model. It believes that an estimate of 337,500 to 607,500 accumulated demand for 2004/05 should be used in deriving the ULLS-specific cost charge.

ULLS-specific WACC

Telstra contended that a separate WACC must be calculated for application in the ULLS context.¹⁶² This separate WACC would function to capture the different risks associated with the specific assets Telstra has had to construct in order to deliver ULLS to access seekers. Telstra submitted that this affects only the beta used for ULLS, with all other WACC parameters valued the same as for the PSTN (as set out in Annexure K of the Telstra's Detailed Submission¹⁶³).

According to Telstra, the application of separate WACCs for these different asset categories is justified as there is a general lack of interdependencies between the ULLS-specific assets and the relevant PSTN assets. The lack of interdependencies subjects the asset types to different risk exposures and requires separate WACCs to adequately capture the differing levels of systematic risk. It noted that the ULLS involves access to parts of the PSTN in respect of which a PSTN-similar WACC would be appropriate, however it also involves investment in ULLS-specific, non-network assets for which a separate ULLS-specific WACC is required.

Telstra's noted that as there is no listed company that solely provides the ULLS-specific assets and associated services from which empirical guidance may be obtained,

¹⁶⁰ Telstra submission to the Draft Determination, p.27.

¹⁶¹ Optus submission to Telstra's 2003 core service undertakings, p. 25-26.

¹⁶² Telstra submission to the Draft Determination, p.22-26.

¹⁶³ Telstra, *Detailed Submission in support of its Undertakings dated 9 January*.

it may be more appropriate to identify and differentiate ULLS-specific risks relative to those of the PSTN.

To this end Telstra submitted that the directional risk differentiators of the ULLS-specific WACC from the PSTN WACC include the following:

- the costs associated with the ULLS-specific assets are largely fixed¹⁶⁴ and therefore would have higher operating leverage compared with the PSTN;
- ULLS itself is relatively new with uncertain and currently ill-defined¹⁶⁵ take-up potential;
- ULLS is likely to be used extensively by providers of DSL services the demands for which are more risky because:
 - the demand projections may not be realised; and
 - in terms of systematic risk, DSL demand is more likely to co-vary with economic activity than normal PSTN demand (i.e. greater systematic risk).

Telstra noted that augmenting the unlevered beta to reflect the directional risk factors identified above is necessarily subjective, however submitted that an appropriate asset beta for the ULLS-specific assets should be [c-i-c] higher than that for the PSTN. This would mean an asset beta for the ULLS-specific assets of somewhere between [c-i-c] and [c-i-c].

Furthermore, Telstra stated that there are significant implications for the PSTN arising from the availability of the ULLS. It submitted that the ULLS creates a dichotomy between traffic flows over that part of the PSTN used in the supply of ULLS (“ULLPSTN”) relative to that part of the PSTN bypassed by ULLS (“NULLPSTN”).

It submitted that there are two aspects to this dichotomy:

- the availability of ULLS may cause reduced switch utilisation and bypass of the NULLPSTN, and therefore it is argued that the availability of ULLS threatens over-capacity and potential obsolescence in the NULLPSTN; and
- it is likely that the availability of ULLS will facilitate DSL services over the ULLPSTN (but not over the NULLPSTN). Given that DSL services are likely to be more discretionary in nature (relative to the services available generally over the PSTN) it is highly probable that the systematic risk associated with the ULLPSTN will be higher than that for the NULLPSTN.

Therefore, Telstra contended that the WACC used to cost the PSTN will be higher in a post-ULLS environment than in the absence of ULLS.

¹⁶⁴ Telstra claims that there is a higher proportion of fixed costs in the cost of ULLS-specific assets than there is in the PSTN costs.

¹⁶⁵ In terms of quantities and product mix.

Telstra stated that these risk causation considerations suggest that the higher PSTN WACC should only be applied in the ULLS context and not in the broader PSTN context. It asserted that since these heightened risks emanate directly from the availability of the ULLS, they should be mapped to the WACC used to cost the PSTN in the ULLS context only (i.e. effectively the ULLPSTN WACC).

In consideration of these factors, Telstra submitted that an asset beta towards the high end of the potential range should be used in the ULLS-specific beta to capture the extra risks occasioned for the ULLPSTN by the availability of the ULLS and bypass of the NULLPSTN. Thus Telstra stated that [c-i-c] should be used for the ULLS-specific asset beta with the other component parameters of the ULLS-specific WACC the same as in the PSTN-specific calculation.

Telstra noted that, the given its proposed methodology for costing ULLS-specific assets, the appropriate WACC variant is a pre-tax WACC exclusive of imputation.

IT systems development costs

Telstra disagreed with the Commission's approach for treating IT systems development and operational capital costs as a discrete, once-off expenditure in addition to the TSLRIC+, which should be recovered over the course of the project life.¹⁶⁶

Telstra viewed this statement to mean that the Commission considers IT systems development costs only need to be recovered for a period of 5 years and that this effectively implies that the IT systems implemented in July 2000 can be used indefinitely, without any further capital expenditure or maintenance costs being incurred.

Allocation of ULLS-specific costs

Telstra also noted that any proposal for allocating ULLS-specific costs across all lines in the network would break the link between the cost of providing ULLS and the price of ULLS.¹⁶⁷ Telstra stated that this would be inconsistent with the legislative criteria to which the Commission is required to have regard. In Telstra's view, economic efficiency requires that costs incurred as a result of Telstra's statutory obligation to provide ULLS should be recovered from ULLS only.

Telstra also disagreed with the Commission's use of the consultants' estimates of underlying ULLS-specific costs. For the purposes of calculating indicative prices, Telstra submitted that the relevant costs are those Telstra has compiled on the basis of actual costs incurred and the experience of operating ULLS.¹⁶⁸

¹⁶⁶ Telstra submission to the Draft Determination, p.21.

¹⁶⁷ Telstra submission to the Draft Determination, p.21.

¹⁶⁸ Telstra submission to the Draft Determination, p.21.

Inputs

Telstra stated that it is unable to test or comment constructively on the Commission's calculation of ULLS specific costs as outlined in section 10.2 of the Draft Determination as the Commission has not provided details of the assumptions and input values necessary to perform any such analysis. Telstra stated that it will provide its views on the preliminary estimate of wholesale costs when these input values have been supplied.

Adjustment mechanism

Telstra agreed with the Commission's proposition, that given the uncertainty surrounding demand estimates for ULLS, it is appropriate to apply an adjustment mechanism to prices at the end of each year to account for differences between estimated and realised demand.¹⁶⁹

In this regard, Telstra proposed an adjustment mechanism as outlined in Annexure A of its submission.¹⁷⁰ The basic methodology underlying this mechanism is a formula which takes the total number of ULLS services in operation (SIOs) at the commencement of each year, and then adjusts the prices for the services for the following year by a given amount in either direction (i.e. price decreases or increases) depending on the extent to which actual demand either exceeds or falls below the Commission's demand forecasts. For every 10 per cent increase or decrease above or below these forecasts, there is a corresponding \$1 decrement or increment to the prices. The adjustments are capped at a 60 per cent deviation from those forecasts.

10.2.3 Commission's views on ULLS-specific costs

As noted above, ULLS-specific costs comprise:

- IT system development and operational costs;
- ULLS connection group costs;
- wholesale management costs; and
- indirect costs.

Regarding the treatment of ULLS related IT systems capital and operational costs, the Commission notes that its acceptance of a ULLS-specific costs component, in addition to TSLRIC+ calculation of ULLS network costs, was premised on the fact that as a new service, Telstra was required to establish new systems for the provision of ULLS to access seekers. ULLS-specific costs represent the efficient forward looking costs that an access provider would incur in establishing and operating its systems for the provision of the ULLS and should be recovered throughout the course of the assumed project life.

¹⁶⁹ Telstra submission to the Draft Determination, p. 27.

¹⁷⁰ Telstra submission to the Draft Determination, p. 45-46

The Commission considers that the above type of ULLS-specific costs should be treated as recurring. However, for future regulatory periods the Commission believes that Telstra should recover these efficient costs through the capital, operational and maintenance, as well as associated indirect costs components of the TSLRIC+ charge as opposed to a separate ULLS-specific cost charge. In essence, this represents the assumption that an efficient access provider would take into account the IT systems and associated processes necessary for the provision of ULLS to access seekers when building its network. Based on the assumption of a five year project period with a July 2000 start date, this approach effectively means that a ULLS-specific charge should no longer be applicable after the 2004/05 period.¹⁷¹

It should be noted that the ULLS-specific costs charge as calculated by the Commission is also distinct from the once-off provisioning and additional service charges which Telstra charges to access seekers. The main categories of these charges are service qualification and connection charges. In its previous pricing considerations, the Commission assessed Telstra's proposed connection charge of between \$93 and \$108 as being roughly in line with Telstra's charges for similar services for other products. In addition, the Commission considered that the proposed service qualification test charge of \$6.50 did not appear unreasonable. However, it should be noted that the Commission decided not to require the payment of such charges as a term of access to the ULLS, and stated that access seekers should resolve any disputes in relation to the payment of such charges by negotiation.

As discussed above, the two key variables which affect the scale of the ULLS-specific costs charge are the underlying ULLS-specific costs and the demand estimates for the number of ULLS across which these underlying costs are distributed. These two issues are discussed below.

Underlying ULLS-specific costs

As in the Draft Determination, the purpose of calculating indicative prices, the Commission considers that it is appropriate to largely adopt the consultants' estimates of underlying ULLS-specific costs.¹⁷² As noted above, these cost estimates are derived using various adjustments to Telstra's previously proposed costs and reflect the quantum that would be incurred by an efficient access provider. The Commission considers that the use of historical costs is inappropriate in calculating ULLS-specific costs as these do not represent the efficient forward-looking costs. It was also noted that the underlying costs as estimated by the consultants are very similar to those proposed by Telstra in its latest ULLS undertakings.

¹⁷¹ The treatment of any new capital expenditure after fiscal 2005 in ULLS charges would need to also be considered and whether it would be appropriate to also roll such expenditure into annualised TSLRIC-based rates.

¹⁷² This underlying cost will be different to that calculated by the consultant's due to the use of different demand estimates. This effect is related to the sensitivity of ULLS connection group costs to demand - see below.

As in the Draft Determination, the only adjustment to the Commission's previous approach which has been undertaken for the purpose of this indicative pricing exercise is the use of a different ULLS-specific WACC. Previously, the PSTN WACC was applied in deriving ULLS-specific charges. However, in this context, the Commission has decided to calculate a separate ULLS-specific cost WACC.

The ULLS-specific cost WACC contains the same parameters as the PSTN WACC except for the risk-free rate. While the Commission used a 3-year risk-free rate to calculate the PSTN WACC (since the Commission chose to set indicative prices for 3 years), a 5-year risk free rate is used in calculating the ULLS-specific cost WACC. The Commission considers that use of a 5-year risk free rate aligned to the July 2000 starting date is appropriate as it corresponds to the project life for the ULLS-specific systems. This approach is consistent with the Commission's general principle of using a risk-free rate which corresponds with the period over which prices are set.

Additionally, the Commission notes that the systematic risk associated with ULLS-specific assets may differ from that of PSTN assets given the types of services which these assets are used to provide. The Commission considers that the DSL demand, the service which access seekers are likely to use ULLS, may currently co-vary with economic activity to a greater degree than normal PSTN demand (i.e. voice services). However, the Commission notes that this is an issue which is difficult to quantify, and that this may change over time as end-users' consumption patterns and expectations in relation to broadband services develop.

The Commission considers that there is a strong degree of interdependency between the ULLS-specific assets and the PSTN CAN assets given that both these asset types are necessary and co-ordinated inputs for the provision of the ULLS.

The Commission considers that claims regarding increased risk for ULLS-specific assets arising out of uncertainty over future ULLS demand and higher proportion of fixed costs in the cost of ULLS-specific assets relative to PSTN costs are not sufficient to warrant an adjustment to the asset beta component of the ULLS-specific WACC calculation. To the extent that any risk concerning future ULLS take-up does exist, the Commission believes that the use of an adjustment mechanism to affect cash flows (via ULLS prices - discussed below) would be a more appropriate means to address this predominantly specific type risk factor. Furthermore, it is not clear to the Commission that ULLS-specific costs would have a greater proportion of fixed costs as compared with those costs related to the PSTN such that they would lead to a higher operating leverage and greater level of risk exposure for ULLS-specific assets than those for the PSTN.

In addition, the Commission believes that any proposed adjustments to the asset beta to reflect supposed additional risks to the PSTN arising out of the use of the ULLS by access seekers is fundamentally flawed. Any relevant issues pertaining to systematic risks involving the PSTN should be addressed in the context of PSTN O/T access pricing, rather through adjustments to the WACC calculated for the purpose of determining ULLS-specific costs.

Even putting this basic issue of cost causation aside, it is not apparent that any proposed heightened risk of bypass for the NULLPSTN should be addressed through a higher asset beta value for the PSTN WACC. This issue of the capacity and utilisation of the NULLPSTN would already be accounted for in the pricing of PSTN OTA through the traffic volume assumptions (as provided by Telstra) as part of the network costs component of the TSLRIC calculation.

Additionally, Telstra's argument concerning heightened risk of the ULLPSTN arising out of the use of the ULLS to provide DSL services appears problematic considering Telstra's own pessimistic views on ULLS demand going forward, and the fact that the ULLPSTN assets are generally those same assets that would be used alternatively to provide fixed-line voice services. The use of these PSTN assets for this function would most probably have a lower related systematic risk according to Telstra own reasoning in the previous section on ULLS-specific WACC.

Given the above factors and the lack of empirical information that could be utilised for quantifying a ULLS-specific WACC, the Commission considers that the PSTN WACC with an adjustment to the risk free rate as determined by the Commission should be applied for the calculation of ULLS-specific costs.

Accordingly, the Commission has used a ULLS-specific cost pre-tax nominal WACC of 9.59 per cent in the consultants model for the purpose of calculating the ULLS-specific costs charge.

Under this approach, ULLS-specific costs amount to more than \$19.5 million over the five year project life 2000-2005.

Demand estimates for ULLS

As it noted in its Draft determination, the Commission considers that it is necessary at this point in time to re-evaluate the demand estimates previously used for the calculation of the ULLS-specific costs charge.

The Commission is cognisant that the actual take-up of ULLS by access seekers has fallen considerably short of the demand estimates made at the time of the consultants' report. In 2002-03 for example, total ULLS lines in use were around 17,500.

At the same time, the Commission notes that there is a problem of circularity regarding demand estimates and ULLS prices under the current methodology for calculating ULLS-specific cost charges. Under this approach, estimated demand, *ceteris paribus*, is inversely related to the ULLS-specific costs charge, such that reducing the estimated demand used for calculating ULLS-specific costs charges will increase the overall ULLS access price. This increase in the ULLS price, in turn, will have the effect of further reducing the level of realised demand for the service going forward. Thus, the relationship between estimated demand and realised demand, via the ULLS price, has a consolidating effect which, unless addressed, the Commission considers will exacerbate the problem of ULLS take-up for future periods.

To this end, the Commission has decided to use the following revised ULLS demand estimates for the purpose of calculating ULLS-specific costs charges as part of determining indicative prices for the ULLS.

Table 10.3: Commission’s demand estimates

Year	Simple demand	Cumulative demand¹⁷³
2000-01	1 614	1 614
2001-02	7 886	9 500
2002-03	9 614	17 500
2003-04	43 386	53 000
2004-05	96 614	140 000

As noted in the Draft Determination, these demand figures seek to balance the need to stimulate ULLS take-up through lower ULLS prices and the need for Telstra to legitimately recover its efficiently incurred ULLS-specific costs associated with the provision of the ULLS to access seekers.

The Commission continues to consider that in order to encourage take-up of the ULLS, it is necessary to take a reasonably optimistic approach to demand for ULLS by taking account of where overall broadband demand may be over the next three years, reflecting an appropriate level of broadband take-up and competition. Currently Australia has 4.6 million¹⁷⁴ households online with approximately 520,000 of these using broadband services. Therefore, Australia’s level of broadband penetration, on a per on-line household basis, is currently over 10 per cent. This is in comparison to leading countries such as South Korea and Canada which had broadband penetration as percentage of on-line households at September 2002 in the of order of 48 per cent and 65 per cent respectively. Middle range countries such as Hong Kong, France, Sweden and the USA had penetration levels of between 23 per cent and 28 per cent at September 2002.¹⁷⁵

In this context, if Australia was to achieve *half* the current broadband penetration levels of the leading countries over the next three years, at a penetration rate of more than 30 per cent in that time, then demand of approximately 1.5 million lines would be evident. To put it another way, a broadband penetration rate of around a third would merely serve to close the gap with the middle range countries over that period, which still appears as a modest objective in relative terms. On this basis, the Commission considers ULLS demand of 140,000 lines on a cumulative basis, resulting in a ULLS share of total broadband lines of around 9 per cent, would not be unreasonable.

¹⁷³ This is based on an average connection period for a ULLS being two years.

¹⁷⁴ Source: ABS, Internet Activity Australia, accessed at www.abs.gov.au/Ausstats/abs%40.nsf/e8ae5488b598839cca25682000131612/6445f12663006b83ca256a150079564d!OpenDocument.

¹⁷⁵ Source: AC Nielsen

The Commission acknowledges that there is a risk that using demand estimates in excess of actual demand realised may lead to under-recovery of ULLS-specific costs. Equally, however, if demand is realised, Telstra will readily recover its costs. To take account of this uncertainty associated with a relatively new service, the Commission considers that it may be appropriate to apply an adjustment mechanism to the prices at the end of each year, which reflects the difference between estimated and realised demand in each year.

In this regard, the Commission considers the adjustment mechanism proposed by Telstra is appropriate. In essence, this mechanism involves a formula which takes the total number of ULLS SIOs at the commencement of each year, and then adjusts the prices for the services for that year by a given amount in either direction (i.e. price decreases or increases) depending on the extent to which actual demand either exceeded or fell below the Commission’s demand forecasts for the previous period. The starting point for this mechanism is the Commission’s estimated accumulative demand figure of 53,000 for the 2003/04 period. Therefore, for every 10 per cent increase or decrease above or below forecasted demand, there will be a corresponding \$1 decrement or increment to the prices for the following period (2004-05) with a cap at a 60 per cent deviation from those forecasts.

10.2.4 ULLS specific costs charge

For the reasons detailed above, the Commission considers that the ULLS-specific cost charge for the indicative prices for the ULLS should be \$10 per SIO per month for the periods 2003-04, 2004-05 and 2005-06. This represents a mid point of the \$8-\$11 per SIO per month ULLS-specific cost charge the Commission advocated in its Draft Determination.

10.3 Conclusion

When the above ULLS specific costs charges are coupled with disaggregated network costs, this provides the following indicative ULLS rates as a starting rate¹⁷⁶:

Table 10.4: Model access prices for ULLS

(\$ per SIO per month)		
Band	Model access prices	Previous ACCC access prices
1	\$13	\$13
2	\$22	\$35
3	\$40	\$39
4	\$100	\$59

¹⁷⁶ As noted above, this may also be subject to an adjustment factor at the end of each year.

As can be seen, Band 1 rates are very similar to those previously determined by the Commission in its Final report on ULLS pricing¹⁷⁷, whereas Band 2 rates are considerably lower, given the significant reduction to network costs in Band 2 (metro) areas evident in the PIE II model. This is the area where the biggest take-up of ULLS is expected and where the technology is best suited.

Additionally, it is noted that these access prices result in an average of around \$20 per month for the key Band 1 and 2 areas, which compares more than favourably to international averages of around A\$22 a month¹⁷⁸ (A\$25/month in the UK; A\$22 in Continental Europe; A\$24 in North America).

By contrast, in regional (Band 3) and remote (Band 4) areas, network costs are significantly higher than previously estimated. It should be noted, however, that in many band 3 areas and all of band 4, the network configuration is unlikely to support efficient broadband services using digital subscriber line (DSL) technology. Such technology is typically limited to distances of 3.5-4.5 kilometres from an exchange, which makes it unsuitable outside most city and metropolitan areas.

As discussed above, the application of an adjustment factor to take account of ULLS demand may affect the above starting indicative rates going forward. For example, if realised demand is in the range of 58,301-62,799 at the end of the 2003-04 period this will lead to a \$1 decrement in the indicative ULLS charges, such that the Band 1 rate will be \$12 and the Band 2 rate will be \$21 for 2004-5. Conversely, if realised demand is in the range of 42,401-47,699 at the end of 2003-04, this will lead to a \$1 increment in the indicative ULLS charges such that the Band 1 rate will be \$14, and Band 2 rate will be \$23 for the 2004-5 period.¹⁷⁹

The Commission's model access prices for the ULLS, as detailed in Table 10.4, are reflective of efficient costs (TSLRIC+) and importantly are set in such a way as to stimulate demand and competition in areas where DSL technology is most suited (CBD and metropolitan areas). Additionally, the Commission notes that these indicative access prices are based on assumed aggregated demand for this service of 140 000 lines by 2005.

¹⁷⁷ ACCC, *Pricing of the Unconditioned Local Loop Services – Final Report*, March 2002

¹⁷⁸ This is based on a study by the German telecommunications Regulator RegTP, April 2003, some downward adjustment would be evident since then to take account of the recent appreciation of the Australian dollar, with averages falling to between A\$18-A\$20 overall.

¹⁷⁹ These examples are made using a base demand estimate of 53,000 for the 2003-04.

PART II – Local calls supplied using the local carriage service

11 Service description

This chapter outlines the nature of the LCS which can be used by Telstra's competitors to supply local calls.

11.1 Local carriage service

The LCS is a service for local call resale. That is, for the carriage of telephone calls from customer equipment at an end-user's premises to separately located customer equipment of an end-user in the same standard zone.¹⁸⁰ After holding a public inquiry, the Commission declared the LCS in August 1999.

On 17 July 2002, the Commission granted an order providing Telstra with an exemption under section 152AT of the Act with respect to the supply of LCS in the CBD areas of Sydney, Melbourne, Brisbane, Adelaide and Perth to take effect on 17 July 2003. The exemption is subject to a number of conditions requiring the provision of information to the Commission in particular circumstances once the exemption takes effect.

At the same time the Commission issued a determination under section 152AS of the Act granting a class exemption for all carriers and carriage service providers other than Telstra in the same areas as Telstra's individual exemption. This took effect on 31 July 2002 – the date of gazettal. It is not subject to conditions.

The Commission released its most recent pricing principles and indicative prices for the LCS in April 2002.

11.2 PSTN O/T services

The nature of the PSTN O/T services was detailed in Chapter 4. In summary these services provide for the carriage of a telephone call from the calling party to a POI with an access seekers network.

¹⁸⁰ Standard zone has the same meaning as in Part 4 of the *Telecommunications (Consumer Protection and Service Standards) Act 1999*.

12 LCS and PSTN O/T services – the supply of local calls

12.1 Introduction

This chapter considers the appropriate pricing principles, and resulting access prices, when local calls are supplied by access seekers using LCS and the PSTN O/T services. In a technical and legal sense the issues associated with the supply of local calls using these two services are quite separate. That said, certain interdependencies exist between these services in terms of their regulatory pricing and therefore it is appropriate to discuss the supply of local calls both using LCS and the PSTN O/T services together. The chapter starts by discussing pricing issues associated with the LCS and concludes by examining use PSTN O/T services to supply local calls and the most appropriate pricing.

As is detailed below, there are a variety of reasons which have led the Commission to conclude that at this stage it is appropriate for the Determination to specify a LCS access price for only two year (2003-04 and 2004-05). The Commission notes that while this reduces the extent of guidance being provided to access seekers it is the most appropriate option given the possibility of a review of the LCS declaration and associated pricing principles in subsequent financial years. This review may include issues such as the ongoing need for declaration as well as the appropriateness of a retail-minus retail cost pricing approach. These questions arise due to a number of factors, including the possibility of the TSLRIC++ (plus retail costs) of a local call falling below its retail price. Further there is likely to be a need to examine issues associated with the estimation of retail costs as well as emerging trends in the way local calls are being delivered – including via the use of PSTN O/T services and non-circuit switched (non-PSTN) technologies.

12.2 LCS pricing issues

Issues surrounding the determination of the LCS access price in accordance with the legislative criteria have been dealt with extensively by the Commission in the development of prior pricing principles and indicative prices for this service. The Commission's most recent approach is detailed in the revised final report *Local Carriage Service Pricing Principles and Indicative Prices* released in April 2002.

Optus' submission to the Draft Determination on model price terms and conditions raised the issue of modifying this pricing approach.¹⁸¹ It encouraged the Commission to apply the retail-minus approach to each of Telstra's optional local calling plans (including bundled plans) to derive a number of different LCS price structures for

¹⁸¹ Optus submission to the Draft Determination p. 4 and *Competitive Neutrality in Access Pricing – A report for Optus, n/e/r/a*, July 2003.

access seekers to choose from. This approach was detailed in a n/e/r/a report prepared for Optus on *Competitive neutrality in access pricing*.

The Commission notes that such a modification to LCS pricing would involve an even greater degree of micro involvement than current pricing arrangements. At this stage the benefits of this are not clear, particularly given some of the retail cost issues detailed below. Further, as noted above, there is the possibility of a review of LCS pricing at some point after the 2004-05 financial year. Therefore, at this point in time the Commission is of the view that it would be appropriate to examine such modifications at the same time as considering the broader issue of LCS pricing principles, including whether to move to TSLRIC pricing.

The key principles for determining a suitable LCS price, as detailed in its revised final report noted above, were:

- the use of a retail-minus retail costs pricing methodology;
- the estimation and use of Telstra's average retail costs rather than its retail costs actually avoided;
- the subtraction of average retail costs from unbundled retail local call prices that are associated with particular line rental offerings;
- that where Telstra has been required to accommodate the GST within the local call price cap (i.e. for calls priced 20 cents excluding GST or 22 cents including GST) the cost to Telstra of this is shared by access seekers; and
- to the extent that no retail discount on line rental is forthcoming, a further retail discount on the local call price (equal to line related retail costs expressed on a per call basis) should be applied as an alternative.

These principles are expanded upon in turn below.

The retail-minus retail cost methodology for determining the LCS access price is used to ensure competitive neutrality between access seekers and Telstra where the cost of a local call is greater than the retail price. In this regard, the retail price must be within the retail price controls faced by Telstra and in particular may not be greater than 20 cents per call (or 22 cents including GST). Under the Commission's pricing approach, Telstra should be indifferent between supplying calls to access seekers for resale or to its own retail customers

In applying the retail-minus methodology the Commission has used an estimate of Telstra's average retail costs rather than its marginal retail costs avoided in supplying LCS services to access seekers. This is to ensure that access seekers can compete with Telstra in the retail functions of a supplying a local call, a task made difficult if an access seeker also had to incur Telstra's residual retail costs as well as its own retail costs.

When the Government introduced the GST, it required Telstra to accommodate any GST that would push the price of a local call above 22 cents (i.e. for calls priced between 20 and 22 cents prior to the introduction of the GST). On this basis, the

Commission considered that where Telstra charged the maximum of 20 cents for a local call after the introduction of the GST (i.e. 22 cents with GST), some of the cost of this (the 'GST accommodation cost') should fall on purchasers of the LCS. The Commission's approach to this is to apportion the GST accommodation cost between Telstra and access seekers in proportion to the wholesale and retail cost shares of the call. This means that Telstra should bear the GST accommodation cost that is related to the wholesale component of the call, and access seekers that which is related to the retail component of the call. Therefore in determining the LCS call price, the average local call retail cost subtracted from the GST exclusive retail local call starting price is reduced by the GST accommodation cost posited to be absorbed on the retail component of the call.

The use of Telstra's unbundled local call prices associated with different line rental offerings for determining the retail starting prices to calculate LCS access prices is designed to capture Telstra's standard local call prices free of any cross-subsidisation by other call services such as long distance calls. This avoids the prospect of 'ratcheting down' of the access price were access seekers to lower their retail local call prices below Telstra's which if matched by Telstra would lead to a lower LCS price in an ongoing process. The Commission did however raise the possibility that Telstra could potentially price squeeze its competitors if it reduced its bundled retail local call prices without offsetting increases in the prices of other call services, and considered revisiting this approach to determining the starting price if evidence of a price squeeze were to emerge. The Commission has investigated this for the purposes of determining the model price terms and conditions for the LCS in this report.

Further, in determining its LCS price the Commission has recognised that it has been the practice of access seekers to take over responsibility for billing retail customers for basic access (i.e. line rental).¹⁸² In view of this approach to the supply of the LCS, the Commission has previously considered that access seekers are entitled to receive a discount off this retail basic access price, preferably from the retail basic access price or if this is not done, as a further per call discount from the local call retail price.

In accordance with these principles the Commission has previously published indicative LCS access prices, as at February 2002, which are shown in Table 12.1 below.

¹⁸² This is reflected in Telstra's latest undertakings, where the undertaking price is only available where access seekers purchase from Telstra retail basic access as specified in its HomeLine Part and BusinessLine Part retail offerings on the terms provided in Telstra's Standard Form of Agreement.

Table 12.1: Indicative LCS call prices February 2002 (GST inclusive)

	Residential	Business
Standard LCS call price with retail discount on line rental	19.26 cents	19.26 cents
Standard LCS call price <i>without</i> retail discount on line rental	13.81 cents	13.81 cents
Neighbourhood LCS call price with retail discount on line rental	14.99 cents	13.49 cents
Neighbourhood LCS call price <i>without</i> retail discount on line rental	9.54 cents	8.04 cents

Possible approaches to projecting LCS prices forward were discussed in the Commission discussion paper *Future Access Pricing Approaches for PSTN, ULLS and LCS* released in September 2002. The Commission indicated that its preferred approach would be to make a new estimate of retail costs for a given year, and project retail costs forward for a number of subsequent years using an adjustment factor composed of the change in the Consumer Price Index (CPI) and Total Factor Productivity (TFP).

12.2.1 Recent developments in the local call services market

Subsequent to the publication of the prices in Table 12.1 above, and in the course of establishing the model prices for this Determination, the Commission has been cognisant of the following developments:

- the availability of new TSLRIC++ estimates of a local call;
- Telstra abolished its neighbourhood call rates for its unbundled offerings;
- related to this, the Commission received a number of complaints from access seekers alleging a price squeeze (also argued in submissions to the discussion paper);
- the Commission received updated regulatory accounts from Telstra permitting it to consider revised estimates of Telstra's retail and wholesale costs.

In view of these developments, and related issues raised in submissions to the above discussion paper, the Commission considered the following broad issues for the purposes of arriving at its model price terms and conditions for the LCS:

- whether the TSLRIC++ of a local call is above 20 cents;

- whether access seekers face a price squeeze with LCS prices based on Telstra's current unbundled offerings; and
- derivation of revised estimates of Telstra's retail and wholesale costs based on its 2001-02 regulatory accounts.

TSLRIC++ price of a local call

As noted in the Draft Determination, the Commission's preference for the use of the retail-minus methodology derives from its conservative estimate that the TSLRIC++ along with retail costs of a local call exceed the maximum price of 20 cents (GST exclusive) that Telstra is able to charge under the price control arrangements.

Optus, in its response submission to the *Future Access Pricing Approaches for PSTN, ULLS and LCS* discussion paper, indicated that it considered the Commission should use whatever LCS price is lowest as derived on a pure TSLRIC or retail-minus basis.

Telstra has repeatedly indicated to the Commission that it considers that the TSLRIC++ approach should be used to determine the LCS price. It did so again in responding to the model price terms and conditions Draft Determination.¹⁸³ Specifically Telstra considered that the retail-minus methodology used by the Commission is inconsistent with both full cost recovery and the fundamental principle of competitive neutrality. Further, it submitted that as the Commission has acknowledged that access seekers do not compete for the provision of local calls only, there is no longer any basis on which to set the price of LCS using a retail-minus methodology.

Further, AAPT noted in its response to the model price terms and conditions Draft Determination that given the Commission's apparent uncertainty as to whether the TSLRIC of LCS is above or below the retail price cap this modelling work should be undertaken.¹⁸⁴ AAPT considered this would provide interested parties with greater certainty as to the appropriate pricing methodology that best meets the legislative criteria. It also submitted that the TSLRIC+ of LCS should be estimated rather than TSLRIC++.

As noted in the Draft Determination, use of Telstra's PIE II model, modified to include the Commission's assumptions, to estimate the broad quantum of network costs associated with a local call indicates that the TSLRIC++¹⁸⁵ (along with the Commission's estimated retail costs) does exceed 20 cents for 2002-03. However, it

¹⁸³ Telstra submission to the Draft Determination, p 28.

¹⁸⁴ AAPT submission to the Draft Determination, p 15.

¹⁸⁵ The Commission's approach has been to use a TSLRIC++ estimate to determine the cost of a local call. It is noted, however, that this is a conservative approach and not one the Commission would likely take if it was to actually estimate the efficient costs of a local call. In this regard it is unlikely to incorporate an ADC in any efficient cost estimates and would therefore be likely to use a TSLRIC+ estimate. This said, as detailed in section 8 it is the Commission's intention to transition to a PSTN O/T access price that does not include an ADC and in this regard TSLRIC+ estimates of local calls will become increasingly relevant.

also indicates that this cost may fall below 20 cents for 2003-04, depending on the estimate of retail costs, and is likely to be significantly below 20 cents for 2004-05.¹⁸⁶

Given the uncertainties surrounding the PIE II model, however, the Commission remains of the view that the retail-minus approach should continue to be used to estimate the LCS price for 2002-03 and 2003-04. This said, the Commission considers there is no apparent reason why a TLSRIC++ approach should not be examined further once a robust cost model is developed, and the TSLRIC++ (plus retail costs) of a local call falls below 20 cents. This development does however raise the issue of whether it would be necessary to retain the LCS as a declared access service. This issue is discussed later in the section.

The Commission also notes that a retail-minus methodology is used to ensure compatibility between the LCS price charged to access seekers and the prices that Telstra charges at a retail level when constrained by the retail price caps. This acts to ensure Telstra is indifferent between wholesaling or retailing local calls. The use of this principle is independent of whether access seekers are supplying local calls alone or as a part of a bundle of services; this does not change the fact that Telstra faces a price cap.

Retail starting price

In its previous use of the retail-minus approach, the Commission has considered it appropriate to use Telstra's 'unbundled' retail local call service offerings as a basis for subtracting retail costs to determine suitable LCS prices. These unbundled offerings comprise Telstra's retail local call price for a given line rental absent of pre-selection for Telstra for STD, IDD and FTM call services. These presently comprise Telstra's HomeLine Part and BusinessLine Part retail offerings. These contrast to Telstra's 'bundled' offerings which are the retail local call prices and line rental conditional on preselection to Telstra for STD, IDD and FTM call services. Current examples of these are Telstra's HomeLine Complete and BusinessLine Complete offerings.

The Commission has recognised, however, that Telstra could potentially price squeeze its access competitors by increasing its unbundled local call prices relative to its bundled local call prices without any corresponding increases in the prices of other services in its bundled offerings. The Commission therefore indicated in its April 2002 pricing principles that it would monitor the market and revisit this approach if it believed there was evidence of a price squeeze.

Under price changes implemented in the latter half of 2002, Telstra abolished the Neighbourhood call rates in its HomeLine and Business Line Part packages but retained them within its bundled offerings.¹⁸⁷ This has precipitated a number of

¹⁸⁶ These calculations are based on Telstra's average local call duration.

¹⁸⁷ It is to be noted that the Commission also expressed the view in its April 2002 pricing principles that it would expect the LCS price to change as Telstra made any changes to its unbundled offerings. The increase in the unbundled local call price (with the abolition of the Neighbourhood call rate) would therefore result in the specification of a higher LCS price.

complaints to the Commission from access seekers claiming that their ability to compete in the local call market is being compromised. The broad principle of the Commission adopting Telstra's unbundled offerings to determine the retail starting price has similarly been challenged by access seekers in submissions.

In order to investigate whether access seekers are facing a price squeeze as a result of Telstra's pricing of its unbundled vis-à-vis its bundled pricing the Commission performed an imputation analysis. This imputation analysis examined whether or not access seekers will realise a positive margin on the costs they incur in supplying call services when facing LCS access prices, determined on a retail-minus basis, with Telstra's current unbundled retail offerings used as starting prices. Telstra's prices used for comparison are the weighted average of its retail prices covered by its main residential and business line rental and call bundles such as HomeLine Complete, BusinessLine Plus etc,¹⁸⁸ and the aggregate of its non-standard business offerings.

In performing this analysis it is assumed that access seekers:

- have the same traffic profile as Telstra;
- obtain access prices determined by the Commission for declared services along with Telstra's network costs (as applicable) where such pricing does not apply; and
- incur Telstra's average retail costs as estimated by the Commission.

The Commission compiled the information necessary for the analysis from a variety of sources. Telstra's national STD, IDD and FTM average retail price and traffic quantity data for its different bundles is based almost entirely on a run of Telstra's bills issued on 17 December 2002. It includes only those bills for which the customer belonged to a particular bundle for the full duration of the billing period. The sample numbers for each bundle range from around 2,000 bills to many times this figure. Line rental, local and neighbourhood call price information was obtained from bundle details published on Telstra's website. Average retail price and traffic quantity data for Telstra's non-standard business offerings is based on aggregate revenue and traffic data for the six months to December 2002. Percentages of Telstra's lines covered by the various bundles were derived from information on the aggregate lines covered by each bundle.

Network access costs were based on the Commission's previously determined pricing estimates for applicable declared services. Where these prices were not available Telstra or Commission estimates of costs were used. The average retail costs added to these costs were Commission estimates. Access prices for the LCS were determined according to the April 2002 pricing principles.

¹⁸⁸ Telstra's HomeLine Part and Business Line Part bundles are not included in determining Telstra's weighted average retail service quantities or prices. This serves to bias the tests slightly against Telstra (i.e. makes it harder for Telstra to pass the tests). Other minor bundles excluded mainly due to data constraints were HomeLine Budget, HomeLine Net and Business Line Fax.

Imputation tests were performed on a service by service, local call service only and full service (i.e. with all services bundled together) basis. Services included in the analysis were line rental and local, neighbourhood, STD, IDD and FTM calls. Separate tests were performed for all bundles, residential bundles and business bundles.

In formal terms, for Telstra to pass the imputation test it is required that for all applicable services covered by the test n , that:

$$\sum_{i=1}^n r_i \geq \sum_{i=1}^n a_i q_i + \sum_{i=1}^n c_i q_i \quad (1)$$

where

r_i = Telstra's weighted average revenue for service i , determined as:

$$\sum_{j=1}^m x_j p_j q_j \quad (2)$$

where

x_j = Customers on bundle j as percentage of customers across all applicable bundles m ;

p_j = Average price of service i sold in bundle j ;

q_j = Average quantity of service i sold in bundle j .

a_i = Average access and associated costs for service i .

q_i = Telstra's weighted average quantity of service i sold, determined as:

$$\sum_{j=1}^m x_j q_j \quad (3)$$

with x_j and q_j defined as above.

c_i = Telstra's average retail costs for service i .

The results of the various imputation tests performed are summarised in Table 12.2 below.

Table 12.2: Results of imputation tests

	Residential bundles	Business bundles	All bundles
Line rental	PASS	PASS	PASS
Local calls	FAIL	FAIL	FAIL
N'hood calls	FAIL	FAIL	FAIL
National LD calls	PASS	PASS	PASS
International calls	PASS	PASS	PASS
Fixed-to-mobile calls	PASS	PASS	PASS
Local call services*	FAIL	FAIL	FAIL
All services	PASS	PASS	PASS

* Includes line rental, local and neighbourhood calls.

The imputation analysis indicated that Telstra fails the imputation test for local call services alone. Nonetheless, it only just fails and slightly different assumptions about costs could mean it passes. Importantly, however, Telstra passes the imputation test for all services taken together, and by a fairly substantial degree. This indicates the negative margins on local call services are more than offset by the positive margins on other call services.

Optus, Macquarie and the Australian Telecommunications Users Group argued in various submissions to the Commission that it should adopt an average of Telstra's retail local call offerings as the retail starting price for determining the LCS price. As in the Draft Determination the Commission considers that if it were to adopt this approach, access seekers would also need to incur an average charge for line rental given that the lowest local call prices offered by Telstra are within bundles that have the highest line rental. This charge would be higher than Telstra's current unbundled line rentals based on Telstra's current retail offerings.

Also relevant to the consideration of the retail starting price is the nature of the cross-subsidisation of local call services by other call services. The Commission's imputation analysis indicated there is cross-subsidisation of Telstra's local call services from its long distance services. However, the existence of positive margins on the long distance services which more than offset the negative margins on local calls services means that Telstra's retail local call prices are not considered to be predatory because access seekers should be able to emulate this cross-subsidisation.

From a competition perspective if the relevant market was seen strictly in terms of a local call market, this may indicate a concern, however, access seekers do not compete in the local call market alone, i.e. only for local call services. The Commission understands, and has received no information to the contrary, that access seekers would aim to supply STD, IDD and FTM services to customers as well local calls, consistent

with current preselection arrangements. This means that while the issue of the appropriate market definition would figure in any competition analysis, the market definition used would also need to have regard to the market characteristics and regulatory factors discussed above.

In view of the above analysis, the Commission considers that there is no need for it to change the basis on which the retail stating price is determined in relation to the LCS pricing approach. It will continue to monitor the market, using its new monitoring powers under the augmented accounting separation provisions, to ensure that Telstra continues to pass the imputation test for all services as constructed above and that the margins between bundled and unbundled approaches are not unduly eroded. Were Telstra to fail the broader imputation test at any time the Commission would be prepared to review its approach. Failure by Telstra of such a test would also need to be assessed in terms of any breaches to the competition rule under Part XIB of the Act.

Calculation of retail costs

To apply the retail-minus methodology for determining the LCS price, estimates of Telstra's average avoidable retail costs for local calls and line rental need to be made. Prior to the Draft Determination, the Commission last published such estimates in its April 2002 pricing principles. These estimates were derived using retail and wholesale cost information contained in Telstra's 1999-00 Regulatory Accounting Framework (RAF) accounts and were determined by the economic consultants n/e/r/a.

The estimates involved a number of re-allocations and other adjustments to the RAF accounts in order to provide a more accurate representation of the average retail costs that would be avoided by a 'wholesale only' firm.

Key adjustments made to derive the estimates published in the April 2002 pricing principals included:

- removal from retail costs of 'unambiguous' wholesale costs – these included network costs, installation costs, interconnection costs, international settlements and other product expenses;
- 'scaling-up' of retail allocations for organisational and product and customer costs for basic access and local calls relative to the wholesale allocations where the former were more than 30 per cent lower than the average allocation to retail for all other RAF product categories;¹⁸⁹
- treating avoidable IT retail costs as 19 per cent of total IT costs in accordance with a Telstra internal cost study;
- treating all marketing costs (retail and wholesale) as avoidable;

¹⁸⁹ This involved adjusting the share of these costs allocated to retail (out of retail and wholesale allocations) to a level of 30 per cent below the average for all other RAF products where they were lower than this threshold. The cost categories adjusted were operator services, general administration, other non-communications assets and other organisational costs.

- addition of a number of capital financing costs that would become avoidable as a result of a change from retail to wholesale billing; and
- adding a reduction in Telstra's USO contribution as a result of it becoming a wholesale only firm to avoidable retail costs.

The resulting estimates of Telstra's average retail costs for line rental and local calls, as detailed in the April 2002 pricing principles, are shown in Table 12.3.

Table 12.3: Commission's previously accepted estimates of Telstra's average retail costs 1999-2000*

Local calls	2.74 (cents/call)
Line rental	57.71 (\$/SIO p.a.)
Total	7.69 (cents/call)

* These figures were derived using n/e/r/a estimates of costs, SIOs and number of calls.

In accordance with the April 2002 pricing principles, access seekers were required to absorb the GST on the retail proportion of the call where Telstra's retail price for local calls was 20 cents (Telstra having been required to reduce the price from 22 cents to accommodate the GST). In such cases the retail cost for local calls was adjusted to 2.49 cents.¹⁹⁰

Revised estimates of retail costs

In order to arrive at new draft estimates of retail costs for local calls and line rental, the Commission largely replicated n/e/r/a's methodology for adjusting Telstra's cost allocations and in particular applied that methodology to the latest full year RAF accounts (2001-02). While this approach has been adopted, the Commission remains concerned about the somewhat arbitrary nature of the scaling up of retail and product and customer costs to be closer to the average of other RAF retail product categories. This issue is a further reason why the Commission is of the view that a review of local call pricing is likely to be necessary.

To determine its estimates of retail costs, the Commission made the adjustments detailed in Table 12.4 to the 2001-02 RAF retail cost categories for local calls and basic access. These estimates include an amount in avoidable retail costs to account for the full impact of the scaling up effect and are reflective of the upper bound estimates of retail costs detailed below.

¹⁹⁰ This is determined as $2.74 - 2.74/22*2$ or $2.74/1.1$.

Table 12.4: Incremental adjustments to Telstra's RAF retail costs 2001-02 (\$ m)

<i>Adjustments</i>	<i>Basic access</i>	<i>Local calls</i>
Re-allocation to wholesale costs of unambiguous wholesale related costs	[c-i-c]	[c-i-c]
Scaling-up of retail share of organisational and product and customer costs to closer to average of all other RAF products	+53.2	+31.7
Removal of wholesale marketing costs	[c-i-c]	[c-i-c]
IT costs adjustment	-14.0	+3.5
Avoidable capital financing costs*	+39.9	+30.4
USO liability savings	+5.1	+2.2

* Due to difficulty in replicating n/e/r/a's calculations these figures are derived by taking the estimate of avoidable capital financing cost determined by n/e/r/a as a percentage of Telstra's retail cost of capital for basic access and local calls in 1999-00 and applying these to Telstra's retail cost of capital for basic access and local calls for 2001-02. These adjustments constitute capital financing savings that result from moving from retail to wholesale billing and some other minor adjustments (to form the total of avoidable capital financing costs). Residual capital financing costs are implicitly allocated to wholesale (i.e. as non-avoidable capital financing costs). For the avoidance of any doubt, these are the only cost of capital allocations included in the Commission's estimate of avoidable retail costs for the two services.

In relation to the scaling up of retail costs, Optus noted in its submission on the Draft Determination that it considered such an approach to be appropriate.¹⁹¹ Telstra, however, submitted that the scaling up of retail costs is seriously flawed.¹⁹² It argued that the scaling displays disregard for the RAF principles and that the proportion of costs allocated to retail and wholesale activities for basic access and local calls is completely consistent with the cost characteristics of these products. It also noted that basic access and local calls are the most wholesale intensive products of all PSTN services as they form the underlying building blocks for most other PSTN services.¹⁹³ For this reason, Telstra submitted it is reasonable that a substantially higher proportion of total costs for these services are wholesale costs.

¹⁹¹ Optus submission to the Draft Determination, p 5.

¹⁹² Telstra submission to the Draft Determination, p 29.

¹⁹³ Specifically, Telstra submits that if a high proportion of a product's costs are associated with wholesale activities, such as network related activities, a high proportion of organisational costs associated with the product will also be related to wholesale.

This matter formed a part of n/e/r/a's original retail cost considerations. In that context it noted there may be some merit in Telstra's argument for why basic access and local calls may not have retail costs as high as other services. As outlined above this is because adjustments need to be made for the level of network and other wholesale costs incurred by Telstra in supplying basic access and local calls services. On this basis n/e/r/a's recommended approach involved scaling up only be applied where cost categories for basic access and local calls have an allocation to retail that is 30 per cent lower than the average for all other products. Further, that each cost category so affected only be scaled up such that the proportion of retail costs is increased to 30 per cent less than the average for all other products. The Commission continues to accept this approach which is considered to be conservative and recognise Telstra's concerns.

Telstra also raised the treatment of the USO liability savings in its submission to the Draft Determination.¹⁹⁴ It considered that there is no reason to assume that Telstra could avoid its USO liabilities in the market as it currently operates. Further, that access seekers will not incur any extra USO costs and will have no actual need to add any extra costs to the price of the LCS. As such, Telstra is of the view that including a proportion of its USO liabilities in the calculation of avoidable costs for LCS would subsidise the operations of access seekers.

The Commission remains of the view that it is appropriate to include USO liability savings in its calculation of retail costs for local calls and line rentals. Such an approach is consistent with the basic premise behind the retail-minus pricing approach of determining the retail costs that Telstra would avoid if it was only a wholesaler of local calls.

Further, Telstra raised the issue of avoidable capital financing costs in its submission to the Draft Determination.¹⁹⁵ It submitted that it is unreasonable to assume that Telstra faces a shorter billing cycle as a wholesaler compared to if it was a retailer. In this regard, it submits that the average of debtor days for access seekers is considerably larger than 30 days and that the nature of wholesale customers means they make bigger, lumpier payments than retail customers.

In relation to this issue, the Commission notes that Telstra has not supplied any evidence that would convince it that n/e/r/a's approach to, and assumptions behind, determining avoidable capital financing costs is incorrect. For this reason the Commission does not, at this stage, intend to modify its approach.

Unitisation of retail costs

The resulting estimates of total retail costs are unitised to obtain per line and per call estimates of retail costs. In accordance with previous n/e/r/a practice, mid-point estimates of Telstra's retail and total (retail and wholesale only) line and local call

¹⁹⁴ Telstra submission to the Draft Determination, p 31.

¹⁹⁵ Telstra submission to the Draft Determination, p 31.

services supplied are used. This methodology was employed by n/e/r/a as compromise between using either retail only or total services, in acceptance of the proposition that Telstra has been unable to avoid some fixed costs of retailing as it has lost retail market share to competitors.

On the other hand, however, Telstra has supplied the LCS to access seekers for several years, and Telstra's reported retail costs are now more likely to reflect the retail costs that Telstra incurs in supplying local call services to its own retail customer base. In its Draft Determination the Commission noted that it was, therefore, prepared to consider the use of Telstra's retail only line and local calls for unitisation in determining its final estimates.

In response to the Draft Determination, Telstra submitted that the most appropriate approach to unitising retail costs is to divide the retail costs by the total number of local calls (i.e. retail plus wholesale).¹⁹⁶ It considers this approach is appropriate because the retail costs it incurs are essentially fixed costs and do not vary to any material degree as a result of access seekers selling local calls. It uses the example of billing and customer support activities to demonstrate this, stating that these costs are largely fixed in nature because the same systems are necessary irrespective of whether Telstra provides all or some retail calls.

As noted above, the Commission's approach of taking mid-point estimates of Telstra's retail and total line and local call services supplied recognises that there are some fixed costs of retailing that Telstra may be unable to avoid. It considers that this compromise adequately addresses Telstra's argument.

Retail cost estimates per call and per line

The above processes of adjustment produce the estimates of retail costs for 2001-02 shown in Table 12.5:

Table 12.5: Commission's estimates of Telstra's average retail costs 2001-2002

	<i>Lower bound</i>
Local calls	1.99 cents
Line rental	\$50.77 per line p.a. (or 4.72 cents per call)

The Commission notes that Telstra undertook a process of adjustment of its own. This produced estimates of avoidable retail costs for line rental and local calls of approximately half the value of the above estimates calculated by the Commission.

¹⁹⁶ Telstra submission to the Draft Determination, p 32.

Projecting retail costs forward

As indicated most recently in the Draft Determination, the Commission considers it appropriate to project retail costs forward using an adjustment factor composed of the change in the Consumer Price Index (CPI) and Total Factor Productivity (TFP). The Commission notes that there is an issue of whether Telstra's overall TFP factor is suitable to apply for retail costs, particularly given that updated retail costs are available periodically from the RAF. However, given the delays associated with obtaining these estimates this tends to suggest it is appropriate to rely on projections for one or at the most two years.

Therefore retail costs for a given time period t , can be estimated as:

$$\text{Retail costs}_t = \text{RC}_{t-1} (1 + \text{CPI}_{t-1} - \text{TFP}_{t-1}) \quad (4)$$

where

RC_{t-1} is the retail costs calculation for the previous period.

In order to estimate retail costs for 2002-03, the Commission used its estimates of retail costs for 2001-02, as detailed in Table 12.5 above, the CPI increase for 2001-02 of 2.9 per cent and its estimate of the change in TFP for Telstra's PSTN of 5 per cent. This produces the retail cost estimates reported in Table 12.6.

Table 12.6: Commission's estimates of Telstra's average retail costs 2002-2003

	<i>Lower bound</i>
Local calls	1.95 cents
Line rental	\$49.70 per line p.a. (or 4.62 cents per call)

The Commission continues to consider that such an approach is appropriate for the purposes of projecting LCS prices forward, particularly with the delayed availability of RAF data. Further, as these access prices were initially determined late in the 2002-03 financial year it is also considered that these should carry over to the 2003-04 and 2004-05 financial years without adjustment. However, given the prospect of updated retail cost information becoming available through Telstra's RAF accounts the Commission does not intend to project forward a further year. Additionally, the Commission notes projecting forward for only two years, and therefore determining access prices for only two years, is consistent with the likelihood that it will review the future pricing approach for LCS pricing.

12.2.2 Further LCS issues

Changes to retail costs reported in the RAF

The Commission has made a number of observations as a result of reviewing the changes in basic access and local call retail and wholesale costs reported by Telstra in

its RAF accounts between 1999-00 and 2001-02. In the Draft Determination the Commission noted the following specific matters which it considered required further explanation:

- a drop of \$[c-i-c] in reported retail costs for local calls and \$[c-i-c] for basic access;
- that of these changes in retail costs, around half in both cases was accounted for by a fall in organisational costs;
- an increase in wholesale costs for local calls of \$[c-i-c];
- the fact that the retail costs allocated to local calls has experienced the greatest percentage reduction compared to other common call services (and is also significantly below the proportions of retail costs for these services).

In particular the Commission noted that these are matters it would like to explore further prior to publishing final model prices and sought comment from Telstra and industry participant's.

The Commission only received one submission to the Draft Determination that addressed this issue. Optus stated that any significant change in cost allocations should be investigated given Telstra's capacity to manipulate the RAF allocations.¹⁹⁷ In this regard it suggested the Commission analyse Telstra's top 10 account categories and independently audit and verify that any reductions in the size of these cost categories for basic access and local calls are reflected in other RAF call categories.

In examining this issue further, the Commission has looked closely at the RAF accounts and also held separate discussions with Telstra. The Commission has been given some degree of comfort around the above changes to the RAF and in particular in relation to the size of the reduction in local call retail costs relative to other call services. In this regard, it appears a large proportion of these changes are explained by separate reporting of LCS in the RAF accounts from 2001/02, as well as changes in the way billing expenses were allocated which had a particular impact on local call services.

LCS-specific wholesale costs

Telstra has claimed that it incurs LCS specific wholesaling costs that should be added to any LCS price. These are the costs which are identified in Telstra's RAF accounts as LCS 'external wholesale' costs. As in the Draft Determination, the Commission is reluctant to accept these costs on the basis that the adjustments made to the retail costs in the RAF accounts, that serve to increase the allocation of some costs from retail to wholesale, are designed to capture costs that a wholesale only firm would incur in the supply of services to a retail only provider. Consequently the LCS access price in this Determination does not reflect the subtraction of any LCS specific external wholesale costs from the estimate of average retail costs.

¹⁹⁷ Optus submission to the Draft Determination, p 4-5.

12.2.3 Conclusion

When the LCS service was declared by the Commission in August 1999, it was conceived of as a transitional service that would be used by access seekers to gain a foothold into the local call services market prior to developing more of their own infrastructure and/ or using other declared access services. Consistent with this, in July 2002 the Commission granted an exemption to Telstra for the supply of the LCS in the CBDs of major capital cities with effect from 17 July 2003. This was on the basis there was considered to be sufficient alternative infrastructure in place, as well as other declared services being available, to ensure ongoing participation by Telstra's competitors in the local call services market in these areas.

Relevantly, however, the Government recently designated the LCS as a core access service for the purposes of requiring the Commission to publish price and non-price terms and conditions for the service.

The Commission has determined draft prices for the LCS for 2002-03 (carried over to 2003-04 and 2004-05) only at this stage. This is on the basis of a possible review of the LCS declaration and associated pricing principles in subsequent financial years. Any such review would include the following issues which have been detailed above:

- whether and when the LCS access prices should be based on a TSLRIC approach and the LTIE considerations associated with this;
- the need for the LCS declaration to continue if a TSLRIC approach is adopted, particularly given that as the PSTN O/T access prices decrease it will be increasingly cost efficient for a large proportion of local calls to be provided using the PSTN O/T services;
- if a retail-minus approach was to continue, whether the LCS access prices should be based on the retail-minus retail cost approach using the local call prices in each of Telstra's optional local calling plans to derive a number of different LCS price structures;
- determination of a suitable adjustment factor for projecting retail prices forward, if TSLRIC++ is not used;
- the sensitivity of the LCS price to Telstra's retail local call prices using a retail-minus pricing approach; and
- concerns about some of the retail costs adjustments.

The Commission notes that any potential transition from the retail-minus retail costs methodology and the adoption of TSLRIC as an alternative may be preceded by a reduction of the ADC, or the relaxation of the retail price cap on local calls or both. If this is the case then it will raise the issue of whether the Commission's existing approach to regulation of the LCS should continue and whether the current declaration

should be subject to review.¹⁹⁸ This would be on the basis that the LCS price may be almost identical to that for PSTN O/T services.

The Commission is also aware that some access seekers are currently using the PSTN O/T services to supply short-held local calls. Unlike the LCS, which is priced on an untimed per call basis, local calls using PSTN O/T services are priced on a timed per minuted basis. This means there may be benefits in using the PSTN O/T services to construct a local call. However, this could raise issues for LCS pricing as it can be expected that increased use of PSTN O/T services to supply local calls may have an impact on the sustainability of any retail-minus retail cost pricing approaches for LCS as well as the average cost of local calls.

For example, the average duration of LCS local calls will rise over time while the volume of calls will fall. In turn this will tend to increase the TSLRIC++ of local calls and potentially perpetuate the retail-minus (per call) approach to calculating the LCS price, at least while the price cap on local calls remains. Working in the other direction is the expected fall in TSLRIC++ per minute due to cost efficiencies and the removal of the ADC over the next three years. The net effect of these changes are difficult to determine accurately at this time and will also need to be considered.

12.3 Local calls delivered using PSTN O/T services

In its response to the Draft Determination, Telstra queried the proper pricing principle that should be applied to what are ostensibly PSTN O/T services when they are used by access seekers to provide local calls in certain circumstances.¹⁹⁹ It was submitted that the use of these services by access seekers is an issue relevant to model LCS prices and noted that it is becoming an increasingly important. In essence Telstra proposed that such override calls should be priced on a per call basis consistent with that for LCS.

Although in its submission to the Draft Determination, Telstra named this service local call override ('LCO'). the Commission considers it is more appropriately named PSTN O/T local call or PLC.

As the issue of appropriate pricing of the PLC service arose late in the Commission's assessment of the model price terms and conditions for core services, and industry submissions did not initially address this matter, the Draft Determination did not comment on this matter in any detail. Accordingly, it was necessary for the Commission to consider the matter further and consult with interested parties to determine whether any changes to either PSTN O/T or LCS pricing was appropriate.

Notwithstanding that this consultation has taken place, the Commission does not believe it appropriate at this time to form any final view on this issue.

¹⁹⁸ The Commission is required to review LCS declaration before its expiry date of July 2006, however, a review can occur at any time prior to this.

¹⁹⁹ Telstra submission to the Draft Determination, p. 33-43.

PART III – Final determinations

13 Model access prices for PSTN O/T services

The last indicative PSTN O/T access price published by the Commission was 1.3 cent per minute for 2001-02.²⁰⁰ This price was calculated as an adjustment to the price determined by the n/e/r/a model in 2000-01, and included both the conveyance costs and an ADC. The Commission is also aware that current commercial arrangements contain a PSTN price above the Commission's 2001-02 indicative price.

It has been noted above that the Commission believes it is imperative to move to a pure TSLRIC-based PSTN cost (i.e. no ADC) by the beginning of 2006-07. Therefore, the Commission is of the view that the three years beginning 2003-04 represent a transition period over which the regulatory pricing for the PSTN O/T services moves to a TSLRIC+ basis after which it will reflect only the call conveyance cost.

Using PIE II modelling as a guide (including the inputs discussed above), the call conveyance cost over the period of indicative prices is in the vicinity of 0.7 cents per minute. However, the Commission understands that in future years there may be significant traffic migration away from the PSTN resulting in an increase in the per-minute call conveyance cost. Nonetheless, based on its preliminary sensitivity analysis, the Commission expects the call conveyance cost to remain well short of 1 cent per minute for the foreseeable future.

For the reasons outlined above in Chapters 8 and 9, the Commission believes that a smooth reduction in the ADC is appropriate for the purpose of setting indicative prices. The Commission considers the following ranges of indicative prices suit the transition from current pricing with an ADC to pricing based only on conveyance costs:

Table 13.1: Model access prices for PSTN O/T services (cpm)

Year	Model access price*
2003-04	1.25
2004-05	1.15
2005-06	1.0
2006-07	conveyance charges (no ADC)

* These are headline rates that will need to be disaggregated as between flagfall/call and geographic areas

²⁰⁰ ACCC, *ACCC Issues its Views on Access Pricing to Encourage Negotiated Settlements Over Access to Telstra's Fixed Network in 2001-2002*, Media Release, 18 May 2001

14 Model access prices for ULLS

The following are the indicative starting prices for the ULLS for the 2003-04, 2004-05 and 2005-06 financial years:

**Table 14.1: Model ULLS access prices (\$ per SIO)
for 2003-04, 2004-05 and 2005-06**

	Indicative monthly total
Band 1	13
Band 2	22
Band 3	40
Band 4	100

The Commission notes that it is in Bands 1 and 2 only that the current demand for ULLS exists. Band 3 and 4 are less suited to the use of the ULLS to provide broadband services, although some limited areas may be suitable in the future. The indicative rates for Bands 3 and 4, however, are only loosely based on underlying costs and it would be expected that should Telstra offer services in these areas, more specific pricing proposals would need to be submitted in undertakings or in bilateral agreements. That said, little if any use of DSL for broadband provision is expected in Band 3 and 4, given the higher network costs evident in such areas. In this regard, other (wireless) technologies may be more suited to the provision of broadband services.

Further, these access prices are starting prices only and an adjustment mechanism will operate to either increase or decrease them for the 2004-05 and 2005-06 financial years. Specifically, for every 10 per cent increase or decrease above or below forecasted demand, there will be a corresponding \$1 decrement or increment to the prices for the subsequent period with a cap at a 60 per cent deviation from those forecasts. A specific example of how the adjustment mechanism will operate is detailed in Chapter 10.

15 Model access prices for LCS

The model price terms for the LCS are those shown in Table 15.1. These are based on Telstra's current unbundled retail prices for local calls and line rental²⁰¹ and the Commission's retail costs estimates for 2002-03 (based on the 2001-02 cost estimates adjusted for inflation and productivity growth). It is to be noted that given that the local call prices in Telstra's unbundled offerings are at the maximum of 20 cents, the local call retail cost subtracted is adjusted to reflect a proportionate share of the assumed absorption of GST on these calls. Further, indicative line rental prices are detailed in Table 15.1. This reflects the Commission's view that given access seekers take over responsibility for billing retail customers for line rental they are entitled to a discount off the retail price of line rental. The discount is preferably made from the line rental price or alternatively as a further per call discount from the local call retail price.

As indicated in Chapter 12, given the LCS prices were determined late in the 2002-03 financial year, it is considered that these should carry over for 2003-04 and 2004-05 without adjustment.

Table 15.1: Model LCS call prices and annual line rentals 2002-03, 2003-04 and 2004-05*

	<i>Upper bound</i>	
	<i>Residential</i>	<i>Business</i>
Prices with retail discount on line rental	18.23 cents \$206.66	18.23 cents \$331.57
Prices <i>without</i> retail discount on line rental	13.61 cents \$256.36	13.61 cents \$381.27

* All prices exclude GST.

To some extent the Commission has taken a cautious approach to determining its LCS prices. This reflects its view that the LCS should serve as a transitory access service prior to the use of lower-level declared services such as PSTN O/T and the ULLS and facilities based competition. As a consequence it does not wish to promote undue regulatory dependence by access seekers on this service.

²⁰¹ These reflect Telstra's retail price changes that came into effect on 7 May 2003 and are therefore based on retail prices and line rental at that time.