



Assessment of Telstra's ULLS monthly charge undertaking

Draft Decision

Public Version

June 2006

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Abbreviations

2003 Core Services Decisions	ACCC, <i>Assessment of Telstra's undertakings for PSTN, ULLS and LCS—final decision</i> , December 2004.
2003 Model Price Terms & Conditions	ACCC, <i>Final Determinations for Model Price Terms and Conditions of the PSTN, ULLS and LCS Services</i> , October 2003.
2004 Undertaking	Telstra's Undertaking for the Unconditioned Local Loop Service, received 14 December 2004.
2005 Discussion Paper	ACCC, <i>Telstra's Undertakings for the Unconditioned Local Loop Service: Discussion Paper</i> , January 2005.
2005 Final Decision	ACCC, <i>Assessment of Telstra's ULLS and LSS Monthly Charge Undertakings, Final Decision</i> , December 2005.
2006 Discussion Paper	ACCC, <i>Telstra's Undertakings for the Unconditioned Local Loop Service: Discussion Paper</i> , January 2006.
AAPT	AAPT Limited
ACCC	Australian Competition and Consumer Commission
ACT	Australian Competition Tribunal
CAM	Customer access module
CAN	Customer access network
CAPM	Capital asset pricing model
CCC	Competitive Carriers Coalition
CMUX	Customer multiplexer
COLR	Carrier of last resort
CRAI	CRA International
DA	Distribution area
DSL	Digital subscriber line
ERP	Equity risk premium
ESA	Exchange service area

IDD	International Direct Dial
IEN	Inter-exchange network
IRIM	Integrated remote integrated multiplexer
LAN	Local area network
LAS	Local access switch
LCS	Local Carriage Service
LSS	Line sharing service
LTIE	Long Term Interests of End-users
Macquarie	Macquarie Telecom Pty Ltd
MJA	Marsden Jacob Associates
MJAEE	Marsden Jacob Associates and Europe Economics
MRP	Market risk premium
NECG	Network Economics Consulting Group
n/e/r/a	NERA Economic Consulting (formerly National Economic Research Associates)
NTP	Network termination point
Optus	SingTel Optus Pty Ltd
Optus Submission	<i>Optus, Optus Submission to Australian Competition and Consumer Commission on Telstra's ULLS Undertakings, March 2006.</i>
PIE	PSTN Ingress and Egress model
POI	Point of interconnection
Primus	Primus Telecommunications Pty Ltd
PSTN	Public Switched Telephone Network
PSTN O/T	PSTN Originating and Terminating Access Services
RAF	Regulatory accounting framework
RBOC	Regional Bell Operating Company

RIM	Remote integrated multiplexer
RSS/RSU	Remote switching stage/ remote switching unit
SAOs	Standard Access Obligations
STD	Subscriber Trunk Dialling
STS	Standard telephone service
TCAM	Telstra Customer Access Module
Telstra	Telstra Corporation Limited
Telstra service	Service of a particular technical attribute as specified by Telstra in the undertaking
Telstra's 2005 Supporting Submission	Telstra, <i>Telstra's Submission in Support of the ULLS Monthly Charges Undertakings Dated 23 December 2005</i> , 23 December 2005.
Telstra's Submission to the 2006 Discussion Paper	Telstra, <i>Telstra's Submission in Response to the ACCC's Discussion Paper in Respect of ULLS Dated January 2006</i> , 14 March 2006.
TPA	<i>Trade Practices Act 1974</i>
TS	Transit switch
TELRIC	Total element long-run incremental cost
TSLRIC	Total service long-run incremental cost
TSLRIC+	Total service long-run incremental cost plus indirect costs
ULLS	Unconditioned Local Loop Service
Undertakings	Telstra's ULLS access undertakings lodged with the ACCC on 23 December 2005
USF	Universal Service Fund
USO	Universal Service Obligation
VoIP	Voice over IP
WACC	Weighted average cost of capital

Glossary

Access Provider	Carrier or carriage service provider who supplies declared services to itself or other persons — see s. 152AR of the TPA.
Access Seeker	Service provider who makes, or proposes to make, a request for access to a declared service under s. 152AR of the TPA.
Customer access network	The network which enables the connection of telephones and other customer premises equipment to switching technology. It consists of a network of conduits and pipes in the ground with a mixture of cables containing copper wires and optical fibres. It has two parts – the distribution network and the feeder network.
Distribution network	That part of the customer access network connecting the distribution point (typically a pillar) to the network termination point.
Exchange	A generic term for a major node in an exchange service area (e.g. an IRIM, RSS/RSU, LAS, TS).
Feeder network	That part of the customer access network connecting the exchange to the distribution point (typically a pillar).
Integrated remote integrated multiplexer	This device consists of a protective housing, cable and optical fibre terminating strips, and multiplexing equipment, erected in street-based housing. ‘Integrated’ means that the housing contains multiplexers that enable different services to be carried over the same transmission cable (i.e. special services, telephone services, public telephone services, ISDN services are all carried over the same transmission cable/fibre). The transmission protocol is integrated with the telephone exchange software.
Inter-exchange network	The network connecting exchanges to each other.

Local access switch	This equipment provides ring current, dial tone and battery feed to end-users, as well as switching calls locally to other local access switches. It also provides number analysis for call routing and call charge recording, and enhanced (or supplementary) services such as call waiting and call diversion.
Multiplexer	A device that combines two or more signals into a single composite data stream for transmission on a single channel.
Network termination point	The termination point of the public switched telephone network at the end-user's premises. Cabling beyond this point is customer wiring.
Pre-selection	Function that enables an end-user or service provider to select a preferred carrier or carriage service provider for a certain type of call (e.g. long distance calls).
Remote subscriber stage	A customer access module of the LM Ericsson AXE telephone switching exchange located in buildings remote from the group switching function.
Remote subscriber unit	A customer access module of the Alcatel S12 telephone switching exchange located in buildings remote from the group switching function.
Service provider	Defined in s. 86 of the <i>Telecommunications Act 1997</i> . Means a carriage service provider or a content service provider.
Total service long run incremental cost	See Australian Competition and Consumer Commission, <i>Access Pricing Principles – Telecommunications: A guide</i> , July 1997.

Summary

Telstra Corporation Limited (Telstra) lodged access undertakings (undertakings) with the Australian Competition and Consumer Commission (ACCC) on 23 December 2005. The undertakings specify certain terms and conditions under which Telstra undertakes to meet its standard access obligations (SAOs) in respect of the unconditioned local loop service (ULLS).

Amendments to the *Trade Practices Act 1974* (the TPA) in 2002 encouraged the lodgement of undertakings as the main means of addressing access to declared services.¹ The lodgement of these 2005 undertakings follows a series of decisions by the ACCC since 2003 on ULLS monthly charges. First, the ACCC made its model price terms and conditions determination relating to the PSTN O/T, LCS and ULLS in 2003.² Second, the ACCC made a draft decision to reject the ULLS undertaking submitted on 14 November 2003.³ Third, the ACCC made a final decision on 21 December 2005 to reject the ULLS undertaking submitted on 13 December 2004.

The two 2005 undertakings under consideration relate to the monthly charge for the ULLS. In reaching this draft decision, the ACCC undertook extensive work on the assessment of appropriate price terms and conditions for the supply of the core services and consulted widely with interested parties on all relevant issues. The ACCC issued a discussion paper in January 2006 and received a number of submissions on the undertakings. Further, the ACCC commissioned its own external expert advice on matters relating to the PIE II model and ULLS-specific costs.

Under Part XIC of the TPA, the ACCC must accept or reject the undertakings. The process the ACCC follows to assess the undertakings is open and public, allowing parties to express their views and provide relevant information to the ACCC. In assessing the undertakings for this draft decision, the ACCC has, inter alia, had regard to, and has published (where possible):

- Telstra's 23 December 2005 ULLS monthly charges undertakings and their supporting submissions
- the ACCC's Final Determination of model price terms and conditions for the PSTN, ULLS and LCS services, issued in October 2003
- the ACCC's draft decision on Telstra's 14 November 2003 ULLS undertaking
- the ACCC's final decision on Telstra's 13 December 2004 ULLS and LSS monthly charges undertakings
- all submissions related to the current undertakings, including consultancy services performed for the ACCC.

¹ Explanatory Memorandum, *Telecommunications Competition Bill 2002*, p. 1.

² ACCC, *Final Determinations for model price terms and conditions for the PSTN, ULLS and LCS services*, October 2003.

³ ACCC, *Assessment of Telstra's undertakings for PSTN, ULLS and LCS - Draft Decision*, October 2004. Telstra withdrew the ULLS undertaking following the ACCC's draft determination to reject it and accordingly the ACCC made no final decision on that undertaking.

Subject to confidentiality restrictions, all of the above can be found at the ACCC's website www.accc.gov.au.

The ACCC's draft decision is to reject the ULLS undertaking. This decision is based on an assessment of the key components of Telstra's proposed undertaking against the statutory criteria under s. 152AH of the TPA. This assessment concluded that:

- The PIE II model is not considered to be able to produce an accurate estimate of TSLRIC, and network costs based on this model are therefore unreasonable.
- The ACCC considers that Telstra's proposed averaged network cost charge to recover its estimated network costs is unreasonable.
- The ACCC considers that Telstra's proposed WACC is too high and therefore unreasonable.
- The ACCC considers that Telstra's proposed approach to the recovery of ULLS-specific costs is unreasonable.
- The USO adjustment proposed by Telstra is likely to be insufficient, and therefore unreasonable.
- The proposed network modernisation provisions go beyond what is necessary to protect Telstra's legitimate interests, are likely to be unduly restrictive and burdensome upon access seekers, and are therefore unreasonable.

Based on this assessment, the ACCC has therefore reached a *draft* decision to reject Telstra's ULLS undertakings.

The ACCC seeks comment from interested parties on this draft decision and the matters set out and relied upon in reaching the draft decision. To this end, the ACCC seeks submissions on this draft decision by **7 July 2006**.

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Any queries on this draft decision should be directed to Andrew Deitz on 03 9290 1955 in the first instance.

Once all submissions to this draft decision have been received, the ACCC will, after consideration of these submissions, issue a final decision.

1. Introduction

The unconditioned local loop service (ULLS) is a service for access to unconditioned cable, usually a copper wire pair, between an end user and a telephone exchange. The ULLS essentially gives an access seeker the use of the copper pair without any dial tone or carriage service. This allows the access seeker to use its own equipment in an exchange to provide a range of services, including traditional voice services and high speed internet access, to the end-user.

The ULLS was “declared” by the Australian Competition and Consumer Commission (ACCC) under Part XIC of the *Trade Practices Act 1974* (the TPA) in August 1999.⁴ The ULLS declaration places access obligations on all potential providers of a ULLS, however primarily upon Telstra as the incumbent telecommunications provider.

Declaration of the service has two important consequences. Firstly, Telstra, as a supplier of the ULLS, is required to supply the service to all service providers upon request. Secondly, if Telstra and a service provider cannot agree on the terms and conditions of supply, one of them can notify the ACCC of a dispute. The ACCC can then arbitrate and resolve the dispute.

To reduce the scope for disputes and therefore the need for the ACCC to conduct arbitrations, a supplier of a declared service can offer the ACCC an undertaking setting out particular terms and conditions of supply. If the ACCC accepts the undertaking, then it is prevented from making an arbitration determination that is inconsistent with the undertaking.

Telstra lodged access undertakings for the ULLS with the ACCC on 23 December 2005. The undertakings specify certain terms and conditions upon which Telstra undertakes to meet its standard access obligations (SAOs) for the supply of the ULLS. The undertakings primarily relate to the monthly charge payable by access seekers for the ULLS. Each undertaking covers a separate period, one from 1 January 2006 to 30 June 2007 and one from 1 July 2007 to 30 June 2008.

This report contains the ACCC’s draft decision on Telstra’s undertakings.

⁴ ACCC, *Declaration of local telecommunications services*, July 1999.

2. Background

2.1. Declaration and the regulatory framework

The ULLS was declared in August 1999 under Part XIC of the TPA.⁵

Once a service is declared, carriers and carriage service providers supplying the declared service to themselves or others are subject to the SAOs. These obligations constrain the manner in which those carriers and carriage service providers can conduct themselves in supplying the declared service.

Section 152AR of the TPA sets out the SAOs applying to carriers and carriage service providers supplying the declared service to themselves or others. In summary,⁶ if requested by a service provider⁷, the carrier/carriage service provider is required to:

- supply the declared service
- take all reasonable steps to ensure that the declared service supplied to the service provider is of equivalent technical and operational quality as that which the carrier/carriage service provider is supplying to itself
- take all reasonable steps to ensure that the fault detection, handling and rectification which the service provider receives in relation to the declared service is of equivalent technical and operational quality as that provided by the carrier/carriage service provider to itself
- permit interconnection of its facilities with those of the service provider
- provide particular billing information to the service provider.

The terms and conditions upon which a carrier/carriage service provider is to comply with these obligations are as agreed between the parties. In the event that they cannot agree, one of them can notify the ACCC of an access dispute under s152CM of the TPA. Once notified, the ACCC can arbitrate and make a determination which resolves the dispute. The ACCC's determination need not, however, be limited to the matters specified in the dispute notification. It can deal with any matter relating to access by the service provider to the declared service.⁸

The TPA enables a carrier/carriage service provider to resolve potentially contentious issues with the ACCC outside the arbitral process. It can do this by giving the ACCC an access undertaking under s152BS of the TPA, setting out the terms and conditions on which it proposes to comply with particular SAOs.

If accepted by the ACCC, the undertaking becomes binding on the carrier/carriage service provider. If a carrier/carriage service provider breaches the undertaking, the

⁵ <http://www.accc.gov.au/content/index.phtml?itemId=328798>

⁶ There are some exceptions to these obligations. These are set out in s152AR, and in any exemption issued under s152AS or s152AT of the TPA.

⁷ A service provider is a carriage or content service provider within the meaning of the *Telecommunications Act 1997*.

⁸ *Trade Practices Act 1974* (Cth) ss. 152CP(2).

Federal Court can make an order requiring compliance with the undertaking, the payment of compensation, or any other order that it thinks fit (s. 152CD). In addition, in accepting an undertaking, the ACCC is limiting its flexibility in the context of arbitrating access disputes. Once an undertaking is in operation, the ACCC must not make an arbitral determination that is inconsistent with the undertaking.⁹

2.2. The declared service

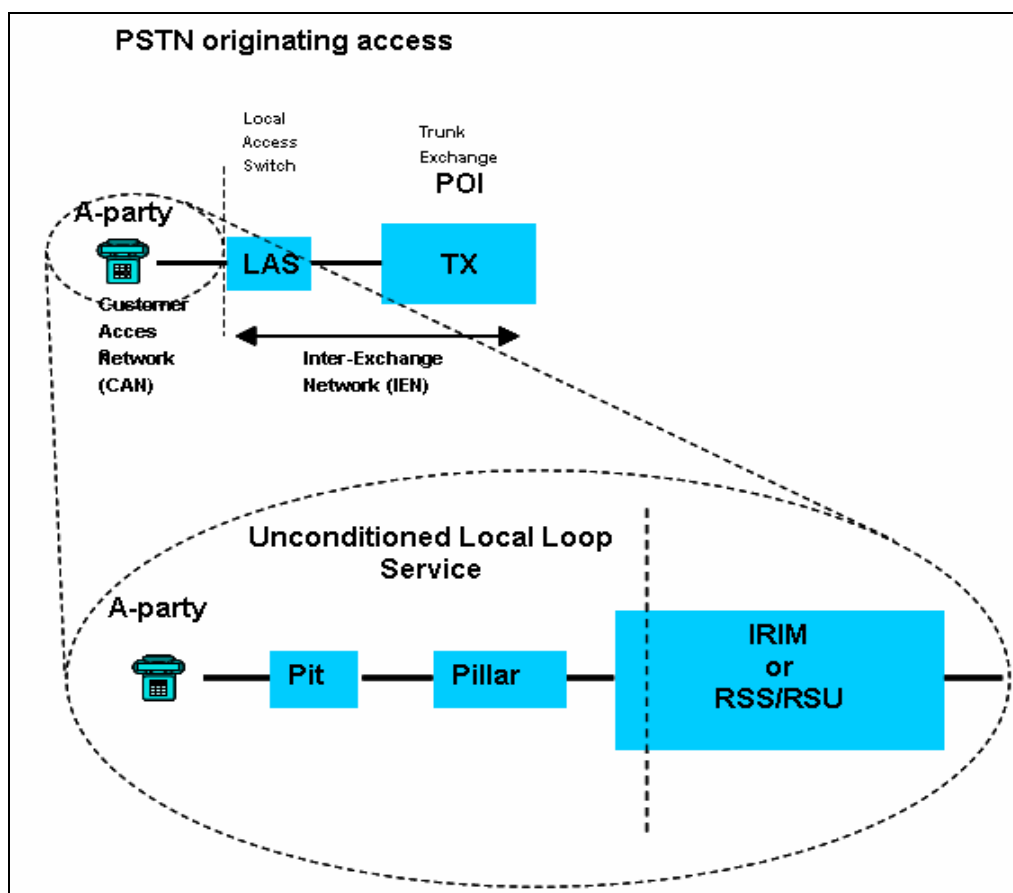
2.2.1. Unconditioned Local Loop Service

The ULLS involves the use of unconditioned cable, primarily copper pairs, between end-users and a telephone exchange, where the unconditioned cable terminates.

Under Telstra's customer access network (CAN) architecture, customers are connected to the broader network by cables, which run from a customer's premises 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 Local Access Switch (LAS) and/or a data/Internet Protocol 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 below). This is illustrated in Figure 2.2.1. In some areas, notably in CBDs, customers are directly connected to a LAS which effectively serves as the CAM.

⁹ *Trade Practices Act 1974* (Cth) ss. 152CQ(5).

Figure 2.2.1 Use of the ULLS



In Figure 2.2.1, the ULLS refers to the unconditioned twisted copper pairs that connect a customer's premises to the nearest CAM (IRIM, RSS or RSU in the above diagram).

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

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 potentially be used to provide voice services more efficiently using voice over IP and DSL technologies. Possible services include 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 traditional local, STD and IDD call services in competition with Telstra.

3. Summary of the undertakings

3.1. Introduction

On 23 December 2005 Telstra submitted to the ACCC two undertakings in respect of the monthly charges for ULLS. The first takes effect on 1 January 2006 and expires on 30 June 2007. The second takes effect on 1 July 2007 and expires on 30 June 2008. At the same time Telstra provided to ACCC a submission in support of the undertakings. Apart from the differing time periods Telstra's ULLS Undertakings are equivalent in every aspect.

On the same day Telstra withdrew its access undertaking in respect of the connection and disconnection charges for the ULLS dated 13 December 2004, stating that the withdrawal was to come into effect immediately.

Subsequent to the ACCC releasing a Discussion Paper on the undertaking, Telstra has also made a submission to the Discussion Paper.

3.2. Terms and conditions of the undertakings

In order to assess an undertaking it is necessary to form a view as to what are the terms and conditions of the undertaking.

In summary, the undertakings:

- describe the technical attributes of the service that Telstra will supply
- specify the price that Telstra proposes to charge for this service
- set out limited non-price terms and conditions on which the service is to be supplied.

3.2.1. Proposed charges

The proposed ULLS charges in the undertakings relate only to services connected to a RSS/RSU. Telstra did not submit proposed charges for services connected to IRIM/RIM/CMUX as Telstra considers there is currently only limited demand for these connections.

The following prices are GST exclusive.

Table 3.1.1.1 ULLS Monthly Charge 1 Jan 2006 to 30 June 2007

Location of ULL POI	Monthly Charge
RSS/RSU	\$30 per month
IRIM/RIM/CMUX	Not dealt with by undertaking

Table 3.1.1.2 ULLS Monthly Charge 1 July 2007 to 30 June 2008

Location of ULL POI	Monthly Charge
RSS/RSU	\$30 per month
IRIM/RIM/CMUX	Not dealt with by undertaking

As can be seen, Telstra proposes the same \$30 monthly charge in each of its undertakings. Combined, these undertakings cover the period from 1 January 2006 to 30 June 2008.

The charges in the above tables do not apply to the supply by Telstra to the access seeker of Telstra ULLS in a Contestable Area if the access seeker becomes approved as a competing universal service provider under the TPA in respect of that Contestable Area¹⁰. If the access seeker becomes so approved, Telstra has pledged in its Undertakings that the parties will enter into good faith negotiations with regard to the charges for the supply of Telstra ULLS by Telstra to the access seeker in that Contestable Area.

The undertakings specify that each Unconditioned Local Loop Service must be acquired for a minimum term of 3 months. The \$30 monthly charge is payable for the whole of that minimum term, even in the event that the access seeker cancels the ULLS prior to the expiration of that period.

Not all of the charges payable by the access seeker to Telstra for Telstra's ULLS are covered by the undertakings. Specifically, the connection charge, which is a once only charge payable at connection, is not covered by these undertakings. Similarly, charges for operational aspects of the service such as service qualification inquiries and order withdrawals are not covered. The only charge payable by the access seeker that is covered by the undertakings is the ongoing monthly charge.

3.2.2. Basis for proposed charges

Telstra claims to have estimated the long run 'efficient' costs of supply of the ULLS across the periods covered by the undertakings. These cost estimates are replicated in Table 3.2.1 below. Each estimate presented in this Table, and its supporting justifications, is further examined by the ACCC in this draft decision.

Table 3.2.1 Telstra's estimate of long run efficient cost of supply of ULLS

	1 January 2006 to 30 June 2006	2006/07	2007/08
Network costs	\$(c-i-c) - \$(c-i-c)	\$(c-i-c) - \$(c-i-c)	\$(c-i-c) - \$(c-i-c)
ULLS-specific costs	\$(c-i-c) - \$(c-i-c)	\$(c-i-c) - \$(c-i-c)	\$(c-i-c) - \$(c-i-c)
USO adjustment	-\$[c-i-c]	-\$[c-i-c]	-\$[c-i-c]
Total	\$(c-i-c) - \$(c-i-c)	\$(c-i-c) - \$(c-i-c)	\$(c-i-c) - \$(c-i-c)

¹⁰ Contestable Area has the same meaning given by the Universal Service Subsidies (2001-2003 Contestable Areas) Determination (No. 1) 2001 as amended from time to time or otherwise determined by ACMA or the Minister.

3.2.3. Non-price terms

Telstra's undertakings relate principally to matters of pricing. The only significant non-price terms in the undertakings relate to network modernisation and the Standard Access Obligations (SAOs).

Telstra has submitted that the changes to its network modernisation provisions, compared to its previously submitted ULLS undertakings:

...assist access seekers by promoting clarity and certainty around their investment decisions and that the network modernisation provisions, as a whole, strike an appropriate balance between Telstra's need to maintain and update its network and the interests of access seekers in having sufficient notice of changes that will affect them.¹¹

These changes can be separated into two groups based on the nature of the conditions that the access seeker accedes to.

The first group of changes relates to the conditions that the access seeker "agrees to":

- Previously the access seeker agreed that provision of ULLS did not prevent, limit or restrict Telstra from modernising its network in accordance with agreed terms and conditions
- The revised clause states that the access seeker agrees that:
 - Telstra has the right to maintain and upgrade its network
 - provision of the ULLS does not prevent, limit or restrict Telstra from maintaining or upgrading its network
 - maintenance and upgrade includes a wide variety of activities, including remediation, reconfiguration, enablement, augmentation, maintenance and repair, and specifically includes decommissioning copper and replacing it with fibre optic cable.

The second group relates to the conditions that the access seeker "acknowledges":

- Previously the access seeker acknowledged that any modernisation may include installing RIMs or CMUXs closer to end users than traditional exchanges, and that access seekers' ULLS might be truncated, that POIs might move to those RIMs or CMUXs and that the deployment class of access seeker equipment might change.
- The revised clause now states that the access seeker acknowledges that:
 - a network upgrade might include installation of a TCAM (Telstra customer access module)¹² closer to end-users than an exchange
 - such an upgrade might require truncation of a ULLS, that new access seeker POIs might have to be established at the new TCAMs and that the deployment class of access seeker equipment might change
 - a network upgrade might mean that ULLS can no longer be supplied or may adversely affect the quality of the ULLS

¹¹ Telstra's 2005 Supporting Submission, p. 35.

¹² A TCAM is a Telstra device that provides dial tone, ring current and power to the end user, and includes RSS, RSU and IRIM.

- Telstra will provide not less than 15 weeks notice where a ULLS needs to be moved to a new POI or a ULLS can no longer be supplied. An exception is “Emergency network upgrades” for which Telstra does not give a minimum guaranteed level of notice.¹³
- if a network upgrade is such that the access seeker needs to establish a new POI and it does not do so, or if a network upgrade means that a ULLS can no longer be supplied, Telstra has the right to terminate the ULLS and the access seeker must comply with a notice for hand-back.

The only other significant non-price terms relate to the SAOs. Telstra undertakes to, as required under Part XIC of the TPA, treat each access seeker on a non-discriminatory basis as required by the Standard Access Obligations in relation to the supply of the ULLS. Specifically Telstra proposes that it will take all reasonable steps to ensure that:

- the technical and operational quality of the ULLS is equivalent to that which Telstra provides to itself; and
- the access seeker receives, in relation to the ULLS, fault detection, handling and rectification of a technical and operational quality and timing that is equivalent to that which Telstra provides itself.

All other non-price terms which are not included in the undertakings, such as the terms and conditions of facilities access, must instead be negotiated between Telstra and the access seeker. The access seeker will need to enter into such facilities access arrangements with Telstra as are necessary for it to connect its network to a Telstra ULLS at the ULL POI.

¹³ An emergency network upgrade is defined as “a network upgrade that is required to protect the security or integrity of Telstra’s Network or the health or safety of any person”

4. Legislative Background

4.1. Form and contents of an undertaking

Section 152BS of the TPA provides that an ordinary access undertaking is a written document given to the ACCC under which the relevant carrier or provider undertakes to comply with the terms and conditions specified in the undertaking in relation to the applicable SAOs.

Section 152BS sets out that an ordinary undertaking may be one of the following types:

- an undertaking containing terms and conditions that are specified in the undertaking; or
- an undertaking where the terms and conditions are specified by adopting a set of model terms and conditions set out in the telecommunications access code, as in force from time to time.¹⁴

Telstra's undertakings fall into the first category where the terms and conditions are specified in the undertakings.

4.2. Criteria for acceptance of an undertaking

Section 152BV sets out the matters which the ACCC must be satisfied before it can accept the undertaking. It applies where an ordinary access undertaking is given to the ACCC and the undertaking does not adopt a set of model terms and conditions set out in the telecommunications access code. Both of Telstra's ULLS undertakings are ordinary access undertakings.

Each of the matters set out in s. 152BV are explained in turn below.

4.2.1. Public process

Sub-section 152BV(2)(a) of the TPA provides that the ACCC must not accept an undertaking unless the ACCC:

- has published the undertaking and invited people to make submissions on the undertaking; and
- has considered any submissions that were received within the time limit specified by the ACCC when it published the undertaking.

The ACCC has posted electronic copies of public submissions on its website (<http://www.accc.gov.au>). Where parties have provided submissions in confidence or, where parts of submissions have contained confidential information, as claimed by submitters, these have not been included on the website.

¹⁴ Section 152BS(3) and (4).

4.2.2. Consistency with the standard access obligations

Sub-section 152BV(2)(b) provides that the ACCC must not accept an undertaking unless the ACCC is satisfied that the undertaking is consistent with the SAOs that are applicable to the carrier or provider.

The SAOs are set out in s. 152AR of the TPA. In summary, if requested by a service provider, an access provider is required to:

- supply the declared service
- take all reasonable steps to ensure that the technical and operational quality of the service supplied to the service provider is equivalent to that which the access provider is supplying to itself
- take all reasonable steps to ensure that the fault detection, handling and rectification which the service provider receives in relation to the declared service is of equivalent technical and operational quality as that provided by the access provider to itself
- permit interconnection of its facilities with the facilities of the service provider
- take all reasonable steps to ensure that the technical operational quality and timing of the interconnection is equivalent to that which the access provider provides to itself
- take all reasonable steps to ensure that the service provider receives interconnection fault detection, handling and rectification of a technical and operational quality and timing that is equivalent to that which the access provider provides to itself
- if a standard is in force under s. 384 of the *Telecommunications Act 1997*, take all reasonable steps to ensure that the interconnection complies with the standard
- if requested by the service provider, provide billing information in connection with matters, or incidental to, the supply of the declared services
- if an access provider supplies an active declared service by means of conditional-access customer equipment, the access provider must, if requested to do so by a service provider supply any service that is necessary to enable the service provider to supply carriage services and/or content services by means of the declared service and using the equipment.

The question of whether Telstra's undertaking is consistent with the applicable SAOs is considered in Section 5.

4.2.3. Consistency with Ministerial pricing determination

Division 6 of Part XIC of the TPA provides that the Minister may make a written determination setting out principles dealing with price-related terms and conditions relating to the SAOs.¹⁵

Paragraph 152BV(2)(c) provides that the ACCC must not accept an undertaking dealing with price or a method of ascertaining price unless the undertaking is consistent with any Ministerial pricing determination.

Telstra has for several months been asking the Government to issue a Ministerial pricing determination in relation to the averaged network cost terms in its ULLS undertakings. To date, a Ministerial pricing determination has not been made. Accordingly, the ACCC is not required to assess the undertaking under this criterion until such time that a Ministerial pricing determination is made, if at all.

4.2.4. Whether terms and conditions are reasonable

Paragraph 152BV(2)(d) of the TPA provides that the ACCC must not accept an undertaking unless the ACCC is satisfied that the terms and conditions specified in the undertaking are reasonable.

In forming a view about whether particular terms and conditions are reasonable, the ACCC must have regard to the range of matters set out in s. 152AH(1) of the TPA. In the context of assessing Telstra's undertakings, these are:

- whether the terms and conditions promote the long-term interests of end-users of carriage services or of services supplied by means of carriage services (the 'long-term interests of end-users')
- the legitimate business interests of Telstra, and its investment in facilities used to supply the declared services
- the interests of all persons who have rights to use the declared services
- the direct costs of providing access to the declared services
- the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or facility
- the economically efficient operation of a carriage service, a telecommunications network or a facility.

In addition, the ACCC may consider any other relevant matter.¹⁶

Set out below is a summary of the key phrases and words used in the above matters. While, in general, these phrases and words have not been the subject of judicial

¹⁵ In Section 152CH of the TPA 'price-related terms and conditions' means terms and conditions relating to price or a method of ascertaining price.

¹⁶ Section 152AH does not use the expression 'any other relevant matter'. Rather, s. 152AH(2) states that the matters listed in s. 152AH(1) do not limit the matters to which the ACCC may have regard. Thus, the ACCC may consider any other relevant matter.

interpretation, in order to have regard to those matters it is necessary for the ACCC to form a view as to what they mean.

1. Long-term interests of end-users (LTIE)

The ACCC has published a guideline explaining what it understands is meant by the phrase ‘long-term interests of end-users’ in the context of its declaration responsibilities.¹⁷ The ACCC’s view is that a similar interpretation is appropriate in the context of assessing an undertaking.

In determining whether a particular thing promotes the long-term interests of end-users, s. 152AB(2) of the TPA requires the ACCC to have regard to whether the terms and conditions are likely to result in the achievement of three specific objectives. Subsection 152AB(3) restricts the ACCC to have regard to these three objectives alone when assessing whether an undertaking is in the LTIE. These objectives are:

- the objective of promoting competition in markets for carriage services and services supplied by means of carriage services
- the objective of achieving any-to-any connectivity in relation to carriage services that involve communication between end users
- the objective of encouraging the economically efficient use of, and economically efficient investment in:
 - 1) the infrastructure by which carriage services and services provided by means of carriage services are supplied, and¹⁸
 - 2) any other infrastructure by which listed services are, or are likely to become, capable of being supplied.¹⁹

LTIE objective one – promoting competition

In determining the extent to which an undertaking is likely to result in the achievement of promoting competition in markets for listed services the TPA obliges the ACCC to have regard to the extent to which the undertaking will remove obstacles to end-users of listed services gaining access to listed services. However, the ACCC is not limited to this and may consider other matters in determining whether an undertaking will achieve the promotion of competition in markets for listed services.

LTIE objective two – achieving any-to-any connectivity

Subsection 152AB(8) of the TPA specifies that the objective of any-to-any connectivity is achieved if, and only if, each end-user who is supplied with a carriage service that involves communication between end-users is able to communicate, by means of that service, with each other end-user who is supplied with the same service or a similar service, whether or not the end-users are connected to the same telecommunications network.

¹⁷ ACCC, *Telecommunications Services — Declaration Provisions: a Guide to the Declaration Provisions of Part XIC of the Trade Practices Act*, July 1999.

¹⁸ s. 152AB(2)(e)(i)

¹⁹ s. 152AB(2)(e)(ii)

LTIE objective three – encouraging efficient use of and investment in infrastructure

In the ACCC's view, having regard to 'the objective of encouraging the economically efficient use of, and economically efficient investment in ... infrastructure' requires an understanding of the concept of economic efficiency. This concept consists of three components:

- Productive efficiency

This is achieved where individual firms use resources such that goods and services are produced using the least cost combination of inputs

- Allocative efficiency

This is achieved where the prices of resources reflect their underlying costs so that resources are then allocated to their highest valued uses (i.e. those that provide the greatest benefit relative to costs)

- Dynamic efficiency

This reflects the need for industries to make timely changes to technology and products in response to changes in consumer tastes and in productive opportunities

Subsection 152AB(6) lists the matters the ACCC must have regard to in determining the extent to which the terms and conditions of an undertaking is likely to result in the achievement of the above objective. Those matters are:

- Whether it is, or likely to become, technically feasible for the services to be supplied and charged for, having regard to:
 - 1) the technology that is in use, available or likely to become available; and
 - 2) whether the costs that would be involved in supplying, and charging for, the services are reasonable or likely to become reasonable; and
 - 3) the effects, or likely effects, that supplying, and charging for, the services would have on the operation or performance of telecommunications networks
- the legitimate commercial interests of the supplier or suppliers of the services, including the ability of the supplier or suppliers of the services, including the ability of the supplier or suppliers to exploit economies of scale and scope;
- the incentives for investment in:²⁰
 - 1) the infrastructure by which the services are supplied; and

²⁰ S. 152AB(7A) was assented to the TPA in September 2005. This section requires that the ACCC, in determining incentives for investment, must have regard to the risks involved in making the investment.

- 2) any other infrastructure by which the services are, or are likely to become, capable of being supplied.

However the ACCC is not limited to these matters in its assessment of the extent to which a particular undertaking is likely to achieve the above objective (s. 152AB(7)).

Subsection 152AB(2) has been the subject of recent legislative changes that received assent in September 2005. In the ACCC's final decision on Vodafone's MTAS undertaking the ACCC expressed its understanding that the purpose of these amendments was to make it clear that the incentives for investment in new and existing infrastructure and the risks of making such an investment are given due consideration in assessing whether the particular thing promotes the efficient use of and efficient investment in limb of the LTIE test.

Consideration to date does not suggest that this amendment presently requires any material change to the ACCC's approach in assessing whether an undertaking promotes the economically efficient use of, and investment in, the infrastructure by which the service is supplied or any relevant infrastructure.

2. Legitimate business interests of the carrier, and the carrier's investment in infrastructure used to provide the service

The ACCC is of the view that the concept of legitimate business interests should be interpreted in a manner consistent with the phrase 'legitimate commercial interests' used elsewhere in Part XIC of the TPA. Accordingly, it would cover the carrier's or carriage service provider's interest in earning a normal commercial return on its investment.

However, as is explained in the ACCC's guide "Access Pricing Principles – Telecommunications" it is unlikely the access provider's legitimate business interest would extend to achieving a higher than normal commercial return through the use of market power.²¹ For example, access prices should not, in most cases, be artificially inflated by the lack of competition in the supply of infrastructure services. However, carriers should also not be precluded from earning higher than normal commercial returns where these returns are generated from, for example, innovative investments or unique cost-cutting measures rather than through the exercise of market power.

Following on from this, the access provider's legitimate business interests do not extend to receiving compensation for loss of any 'monopoly profits' that occurs as a result of increased competition. In this regard, the Explanatory Memorandum for the *Trade Practices Amendment (Telecommunications) Bill 1996* states:

... the references here to the 'legitimate' business interests of the carrier or carriage service provider ... 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.²²

When considering the legitimate business interests of the carrier or carriage service provider in question, the ACCC also considers what is necessary to maintain those

²¹ ACCC, *Access Pricing Principles – Telecommunications*, July 1997, p. 9

²² *Trade Practices Amendment (Telecommunications) Bill 1996 Explanatory Memorandum*, p.46.

interests. This can provide a basis for assessing whether particular terms and conditions in the undertaking are reasonable to maintain those interests.

3. Interests of persons who have rights to use the declared service

Persons who have rights to use a declared service will, in general, use that service as an input to supply carriage services, or a service supplied by means of carriage services, to end-users. In the ACCC's view, these persons have an interest in being able to compete for the custom of end-users on their relative merits. Terms and conditions that favour one or more service providers over others and thereby distort the competitive process may prevent this from occurring and consequently harm those interests.

4. Direct costs of providing access to the declared service concerned

Direct costs are those costs necessarily incurred in or caused by the provision of access. As stated in the same explanatory memorandum mentioned above:

... the references here ... the '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.²³

This requires that an access price should not be inflated to recover any profits the access provider (or any other party) may lose in a dependant market as a result of the provision of access.

This criterion also implies that, at a minimum, an access price should cover the direct incremental costs incurred in providing access. It also implies that the access price should not exceed the stand-alone costs of providing access.²⁴

5. The operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or facility

The ACCC understands this criterion to mean that 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.²⁵

6. Economically efficient operation of a carriage service, telecommunications network, or a facility

In the ACCC's view, the phrase 'economically efficient operation' embodies the concept of economic efficiency set out in section 4.2.4. It would not appear to be limited to the operation of carriage services, networks and facilities by the carrier or carriage service provider supplying the declared service, but would seem to include those operated by others (e.g. service providers using the declared service).

²³ *Trade Practices Amendment (Telecommunications) Bill 1996 Explanatory Memorandum*, p.46.

²⁴ Stand-alone costs are the costs an access provider will incur providing a service assuming the access provider produced no other services.

²⁵ ACCC, *Access Pricing Principles – Telecommunications*, July 1997, p. 10.

To consider this matter in assessing an undertaking, the ACCC may consider whether particular terms and conditions enable a carriage service, telecommunications network or facility to be operated in an efficient manner. This may involve, for example, examining whether they allow for the carrier or carriage service provider supplying the declared service to recover the efficient costs of operating and maintaining the infrastructure used to supply the declared service under consideration.

In general, there is likely to be considerable overlap between the matters that the ACCC takes into account in considering the long-term interests of end-users and its consideration of this matter.²⁶

The question of whether Telstra's Undertakings are reasonable is considered in Section 6.

4.2.5. Expiry date

Sub-section 152BS(7) of the TPA provides that an ordinary access undertaking that specifies the text of the terms and conditions, as opposed to one that adopts a set of model terms and conditions set out in the telecommunications access code, must specify the expiry time of the undertaking. Further, s. 152BV(2)(e) provides that the expiry time of the undertaking must be within 3 years after the date on which the undertaking comes into operation.

4.3. Procedural matters

4.3.1. Confidentiality

In arriving at its draft decision, the ACCC has relied on commercial-in-confidence information supplied by Telstra and interested parties. The ACCC has assessed this material in terms of its policy on treatment of information²⁷ and has determined that, in most instances, it should not reproduce that material in this report.

Accordingly, where information that is commercially sensitive 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 commercially sensitive or, where this is not possible, masked with the designation [c-i-c]. Unless otherwise indicated, the information masked with [c-i-c] is information provided by Telstra over which it has made a confidentiality claim.

The ACCC recognises that its decision making processes should be as transparent as practicable. In this regard it notes that interested parties can obtain the commercial-in-confidence information from the provider of that information upon the giving of appropriate confidentiality undertakings. The ACCC notes that interested parties have been able to negotiate such undertakings in respect of some of the confidential

²⁶ In considering whether particular terms and conditions will promote the long-term interests of end-users, the ACCC must have regard to their likely impact on the economically efficient use of, and economically efficient investment in, the infrastructure by which carriage services and services provided by means of carriage services are supplied. Clearly there is overlap between the phrase 'economically efficient use of ...' in the LTIE criteria and the phrase 'economically efficient operation of ...' in this criterion.

²⁷ ACCC, *Collection and Use of Information*, 2000.

information that has been relied upon by the ACCC. However the timeliness of the provision of confidential information continues to be an ongoing matter of concern to the ACCC, given the substantial delays experienced throughout this process.

The ACCC notes that, unless it can corroborate commercial-in-confidence information in some way, it is constrained in the weight that it can give to information that has not been subject to broader industry scrutiny.

4.3.2. Information requests and further submissions from Telstra

The ACCC has the power under s. 152BT(2) to request that the applicant give the ACCC further information about the undertaking in order to facilitate the ACCC's consideration of the undertaking.

The ACCC made a request to Telstra for further information under s. 152BT(2) on 23 March 2006. Telstra provided a partial response to the ACCC on 13 April 2006.

4.3.3. Information relied upon

The ACCC, in its assessment of the Undertakings, has primarily used the supporting submission of Telstra, as well as the submissions of interested parties made pursuant to the ACCC's Discussion Paper. The ACCC has also relied upon relevant information from sources other than submissions where this has further facilitated its analysis, including previous ACCC reports and related processes, expert advice from consultants engaged by the ACCC, and other material such as journal articles, etc. All information the ACCC has had regard to in making this draft decision is specified in Appendix H.

In its consideration of submissions from interested parties, the ACCC particularly notes that only those submissions which were received by the ACCC prior to Friday 26 May 2006 were considered by the ACCC in the making of this draft decision. Any submissions received on or subsequent to this date will be considered by the ACCC in the making of its final decision.²⁸

4.3.4. Decision-making period

The ACCC has a 6 month statutory time frame by which it must make a decision to accept or reject an access undertaking. For the purposes of calculating the 6 month timeframe certain periods of time are disregarded. In particular, the time it takes between when the ACCC makes a request for further information (under s.152BT of the TPA) and when an access provider has furnished the information requested is disregarded, as is the time between the date when the ACCC publishes an undertaking

²⁸ It should be noted that some relevant aspects of the Australian Competition Tribunal's (ACT) decision on Telstra's LSS undertaking, released on 2 June 2006, have been reflected in a preliminary way in the reasonableness analysis outlined in the appendices to this report. A fuller consideration of the Tribunal's decision for the purpose of this ULLS undertaking will be in the final report.

and invites submissions²⁹ and the due date for receipt of those submissions (the ‘Consultation Period’).

Section 152BU(7) of the TPA allows the ACCC to extend or further extend this 6 month period by a period of not more than 3 months.

²⁹ See sub-section 152BV(2)(a) of the TPA.

5. Consistency with standard access obligations

5.1. The standard access obligations

Under s. 152BV(2)(b), the ACCC must not accept an Undertaking unless it is satisfied that they are consistent with the SAOs that are applicable to the relevant carrier or provider – in this case, Telstra. The SAOs are set out in s. 152AR of the TPA. An access provider that supplies a declared service to itself or others must comply with any applicable specified obligations. These obligations were referred to above in section 4.2.2. The purpose of this provision is to ensure that an undertaking at least meets the basic level of access obligations that would normally apply to the provider of the declared service, but for this undertaking.

This chapter assesses whether Telstra's Undertakings are consistent with the applicable SAOs. Section 5.2 sets out the ACCC's approach to assessing consistency with the SAOs. Section 5.3 contains the actual assessment.

5.2. Approach to assessing consistency with the standard access obligations

The TPA does not detail a specific approach for assessing whether the terms and conditions in an undertaking are consistent with the access provider's SAOs. The ACCC finds it useful to consider whether the terms and conditions in an undertaking raise any inconsistencies with the SAOs. If the terms and conditions are not inconsistent with the obligations, the ACCC is likely to regard them as consistent.

The ACCC considers that terms and conditions specified in an undertaking would be inconsistent with the SAOs if an access provider in giving effect to those terms and conditions would not satisfy each of the applicable obligations. Such inconsistency could arise either expressly or by implication from the circumstances in which the terms and conditions could be satisfied.

The purpose of this assessment is to ensure that an access provider would comply with the SAOs should the Undertakings be accepted. The ACCC is not here concerned with the reasonableness of the terms and conditions of the Undertakings. Reasonableness is assessed separately in section 6.

In making this assessment, it has been necessary for the ACCC on occasion to interpret how the Undertakings would operate. The ACCC's assessment of the Undertakings is based on the ACCC's interpretation of the relevant terms and conditions. Any alternative interpretation that might be given to the Undertakings at a later time cannot be said to have been considered or accepted by the ACCC as consistent with the SAOs. Accordingly, an undertaking can only be considered as accepted to the extent that it is given effect consistent with the ACCC's understanding of the undertaking at the time of conducting its assessment.

The ACCC has especially considered whether any of the non-price terms and conditions specified in the Undertakings (including the attachments) are inconsistent with each of the applicable SAOs. The price terms and conditions are more relevant to an assessment of reasonableness with reference to the criteria set out in s. 152AH and outlined in section 4.2.4 above.

5.3. Assessment

Clause 3.1 of each of the respective Undertakings provides that Telstra will comply with the terms and conditions specified in the various attachments to the Undertakings to satisfy the relevant SAOs.

The terms and conditions principally relate to pricing, although the attachments also contain clauses that may be classified as non-price terms and conditions.

The Undertakings specify services of particular technical attributes (Telstra services) and then set out the terms and conditions upon which these Telstra services will be supplied. These terms and conditions do not specify all the matters which an access provider and access seeker would need to agree on in the supply of the services.

5.3.1. Non-exhaustive scope of the Undertakings

While the price and non-price terms and conditions that are contained in the Undertakings do not cover all of the matters relating to the supply of a service, it is the ACCC's view that it is not necessary for an undertaking to exhaustively address all matters that could relate to the applicable SAOs.

Any relevant matters that are not addressed in the Undertakings could be settled by commercial negotiation. Should the parties be unable to reach agreement, the matters could be determined in an ACCC arbitration if a dispute was notified.

Accordingly, the ACCC considers that the absence of terms and conditions about certain matters does not, of itself, make an undertaking inconsistent with the SAOs. However, it is open to the ACCC to form a view that the absence of certain terms and conditions could make the undertaking unreasonable in the terms of section 152BV.

5.3.2. Whether the Undertakings specify terms and conditions for services other than the Telstra services

The ACCC notes that there could be uncertainty about the scope of the Undertakings as they specify terms and conditions for services which are not defined in the precise form used to define the relevant declared services. In certain respects, the Telstra services would appear more limited than the declared services. Some of these limitations are noted below.

The ACCC's interpretation is that the price and non-price terms specified in the Undertakings apply *only* to the services supplied by Telstra (the Telstra Services) and not to the relevant (corresponding) declared services if there are differences in definition or specification. In other words, Telstra would not be required to supply, on the terms in the Undertakings, a form of the declared service that was different to or beyond the scope of a Telstra Service.

If the Undertakings were interpreted as specifying terms and conditions for *all* possible forms of the declared services, then Telstra could, in accordance with the Undertakings, refuse to supply any form of the declared service other than the Telstra Service specified in the Undertakings. If such an interpretation was given to the Undertakings, the ACCC could not be satisfied that the Undertakings were consistent with Telstra's SAOs.

Accordingly, the views expressed below assume that the Undertakings specify terms and conditions only for the supply of Telstra Services and not for every possible form of the relevant declared services.

The practical consequence of this distinction depends on the extent to which a Telstra service would not actually cover all instances of the corresponding declared service.

The ACCC notes the following about the Undertakings:

- the Telstra service will support a connection with DC continuity – there is no requirement for the Telstra service to support any other service
- the Telstra service involves the use of a continuous metallic twisted pair, whereas the declared service involves the use of an unconditioned copper based wire
- the Undertakings do not specify prices for ULLS where the end user is connected to IRIM/RIM/CMUX and therefore arguably does not cover connection to these points. By contrast, the declared service enables connection to any of these network nodes.

At this time, the ACCC's consultation with access seekers has not revealed any significant current or prospective use of the relevant declared services that would not fall within the scope of the services definitions or specifications in the Undertakings. The ACCC has not been presented with evidence that such a use will emerge before the expiry of either Undertaking.

However, if an access seeker was to seek access to a form of a declared service other than as specified in the Undertakings, then the ACCC believes that it would be open to the access seeker to negotiate access to the different form of the declared service from Telstra. If Telstra and the access seeker could not agree on terms and conditions of access to such a form of the declared service, the access seeker could ask for the ACCC to arbitrate.

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

The attachments to the Undertakings specify certain technical requirements and applicable codes or industry standards relating to supply of the Telstra services. The ACCC has not received submissions contending that these requirements would be inconsistent with the obligation to provide services of an equivalent technical and operational quality.³⁰ On their face, the provisions of the Undertakings do not appear to be inconsistent with this obligation insofar as they relate to the Telstra services.

The Undertakings do not contain provisions specifying how Telstra will satisfy its obligations regarding the quality and timing of fault detection, handling and rectification for the Telstra services. Nor do they contain provisions on the commencement, refusal, suspension or termination of supply.

The ACCC does not consider that this necessarily makes the Undertakings inconsistent with the SAOs specified in section 152AR(3) of the TPA. Rather, Telstra has simply chosen not to specify in these Undertakings all aspects concerning how these obligations will be satisfied in respect of the Telstra services³¹. The ACCC

³⁰ The ACCC has previously sought industry comment on the appropriateness of these or quite similar technical attributes.

³¹ It is understood such aspects are addressed by Telstra in its individual access agreements.

considers that, should agreement not be reached on these matters, any such disagreement could be resolved by the ACCC in arbitration.³²

Overall, the ACCC is of the view that the Undertakings in so far as they stand are consistent with the standard access obligations in relation to the supply and quality of the Telstra services and related fault handling obligations.

5.3.4. Interconnection of facilities

The attachments to the Undertakings specify how the location of points of interconnection (POI) between Telstra's network and the service provider's network are to be determined. The Undertakings state that the POI:

means, in relation to a line, a point that is an agreed point of interconnection located at or with a TCAM and located on the ULL End Customer side of the TCAM.³³

In particular, the Undertakings specify that the POI will be at a point agreed by Telstra and the service provider.

The ACCC has noted in past undertaking assessments that it is unclear to the ACCC why the POI would be defined by relation to a TCAM, when the use of a ULLS should mean that there is no Telstra equipment involved in the provision of services to the end-user. It would be expected that the access seeker would provide the customer access module if it was acquiring an ULLS. While the ULLS line would attach to Telstra's MDF, the ACCC understands that an MDF would not be considered as a TCAM. However the ACCC notes that this issue has not been raised by interested parties and therefore may not be a concern.

The Undertakings do not contain further provisions relating to the technical and operational quality and timing of interconnection, or provisions in relation to interconnection, fault detection, handling and rectification. The ACCC considers that the terms and conditions set out in the Undertakings relating to interconnection of facilities would not make the Undertakings inconsistent with the SAO to permit interconnection of facilities (s. 152AR(5)). While Telstra has chosen not to specify in its Undertakings all the terms concerning interconnection of facilities, the ACCC does not consider that this makes the Undertakings inconsistent with the SAO to permit interconnection of facilities. Should the negotiations contemplated by the terms and conditions, or negotiations concerning other aspects of facilities interconnection, not result in agreement, the ACCC considers that those matters could fall for determination by the ACCC in arbitration.

Overall, the ACCC considers that the Undertakings are consistent with the SAOs relating to interconnection of facilities.

5.3.5. Provision, timing and content of billing information

Sub-section 152AR(7) of the TPA provides that the billing information that must be provided by an access provider to a service provider must be given at such times and

³² It should be noted that the ACCC has also published its views on the model (non-price) terms and conditions for the ULLS and this view would also inform any dispute on such matters.

³³ Attachment A to the Undertakings – Service Schedule x167 – Telstra Unconditioned Local Loop Service – definitions.

in a manner ascertained in accordance with the *Trade Practices Regulations*. Regulation 28S provides that billing information must be given in a manner and form, and at the times, agreed by the access provider and service provider. It also sets out the type of billing information that must be given.

The Undertakings do not contain terms and conditions on the provision, timing and content of billing information. The ACCC therefore considers that billing matters would be resolved by commercial negotiation or arbitration, and considers at this time that the Undertakings are not inconsistent with the billing information SAOs.

5.3.6. Conclusion

The ACCC's view is that the Undertakings in as far as they address relevant provisions are consistent with Telstra's SAOs.

However, the ACCC wishes to emphasise that it considers the Undertakings cover only certain forms of the declared services – Telstra's Services – and that it would be open to access seekers to seek other forms of the declared services, including by recourse to arbitration by the ACCC if agreement cannot be reached between Telstra and the access seeker. However, the ACCC acknowledges that it is unlikely that access seekers would seek to access the declared services in different forms from that specified by Telstra during the period of operation of the Undertakings.

The ACCC also emphasises that the Undertakings do not contain a complete set of terms and conditions or deal with all aspects of the acquisition of the services covered in the Undertakings. However the Undertakings are not required to be exhaustive, and other terms and conditions of supply could be determined by commercial negotiation, or failing agreement, through arbitration by the ACCC.

6. Draft Decision on Telstra's ULLS monthly charge undertakings

On 23 December 2005 Telstra submitted to the ACCC two undertakings in respect of the monthly charges for ULLS. At the same time Telstra provided to ACCC a submission in support of the undertakings.

The terms and conditions of Telstra's undertakings were outlined in further detail in section 3.2.

In coming to its draft decision, the ACCC has relied upon material submitted by Telstra and other interested parties, as well as other material it has considered appropriate and informative. This other material includes:

- previous ACCC reports and processes related, but not limited, to the ULLS
- expert advice from consultants engaged by the ACCC
- general materials such as academic writings.

Where appropriate and available, citations have been provided.

The ACCC has included a list of documents examined in the course of making this draft decision in Appendix H.

6.1. The approach used by the ACCC to assess the undertakings

Subsection 152BV(2)(b) provides that the ACCC must not accept an undertaking unless the ACCC is satisfied that the undertaking is consistent with the standard access obligations that are applicable to the carrier or provider. The ACCC's assessment of this issue can be found section 5.

As stated in 4.2.3, no Ministerial pricing determination has been made. Therefore, the ACCC is not required to be satisfied that the undertaking is consistent with such a determination (as required by subsection 152BV(2)(c) of the TPA).

As set out in Appendix A, subsection 152BV(2)(d) precludes the ACCC from accepting an undertaking unless the ACCC is satisfied that the terms and conditions in the undertaking are reasonable. Section 152AH provides that, in determining whether terms and conditions are reasonable, the ACCC must have regard to certain matters. In coming to its draft decision, the ACCC has assessed all the terms and conditions – price and non-price – according to these criteria. The assessment has considered the various terms and conditions individually, combined into relevant concepts, and on a global or “whole-of-undertaking” basis. The “conceptual” analysis can be found in the following Appendices:

- the estimation of network costs is examined in Appendix B
- the proposed averaging of network cost charges is examined in Appendix C
- the appropriateness of the WACC is examined in Appendix D
- the ULLS specific cost charge is examined in Appendix E
- the USO adjustment is examined in Appendix F
- the proposed network modernisation provisions are examined in Appendix G.

6.2. ACCC's draft decision on the undertakings

As a result of this assessment process, the ACCC has come to the following preliminary findings:

- subject to the comments made in section 5, the undertakings **are** consistent with the standard access obligations;
- in the absence of a Ministerial pricing determination, there is no need to consider whether the undertaking is consistent with such a determination; and
- to the extent that the undertakings seek to impose price and non-price terms and conditions in accordance with Telstra's proposals on these matters, they are unreasonable.

In relation to the preliminary finding on the reasonableness of the terms and conditions, the ACCC has concluded on an overall basis that the proposed price and non-price terms and conditions contained in the undertakings:

- are unlikely to promote the LTIE, as they will not promote competition and will not encourage the economically efficient use of, and investment in infrastructure
- result in Telstra recovering more than is necessary to promote Telstra's legitimate business interests
- would harm the interest of access seekers and the persons who have rights to use the service
- exceed the direct costs of providing access
- do not have a material effect on the operational and technical requirements necessary for the safe and reliable operation of telecommunications services
- are not likely to facilitate the economically efficient operation of the ULLS.

Accordingly, the ACCC's draft view is that it is not satisfied that the terms and conditions specified in the undertaking are reasonable.

The ACCC's draft decision is therefore to reject Telstra's undertakings.

Appendix A. The ACCC's approach to assessment

This Appendix outlines the ACCC's approach to assessment of key components of Telstra's ULLS undertakings, as conducted in the following Appendices. In general, the approach followed and the matters taken into consideration are standardised across each Appendix to the greatest extent possible. However variations to the standard approach are made in certain circumstances in order to reflect differences in the matters under consideration. The application of the standard approach, and any variations to that approach, are specified in the introduction to each Appendix.

A.1. Criteria for assessment

Sub-section 152BV(2)(d) of the TPA provides that the ACCC must not accept an undertaking unless the ACCC is satisfied that the terms and conditions specified in the undertaking are reasonable.

In forming a view about whether particular terms and conditions of Telstra's undertaking are reasonable, the ACCC must have regard to the following matters set out in s. 152AH of the TPA:

- whether the terms and conditions promote the long-term interests of end-users of carriage services or of services supplied by means of carriage services (the 'long-term interests of end-users')
- the legitimate business interests of Telstra, and its investment in facilities used to supply the declared services
- the interests of all persons who have rights to use the declared services
- the direct costs of providing access to the declared services
- the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or facility
- the economically efficient operation of a carriage service, a telecommunications network or a facility
- in addition, the ACCC may consider any other relevant matter.³⁴

In conducting an assessment under these criteria, the ACCC will apply these criteria in accordance with the interpretations set out in section 4.2.4 above.

In the following Appendices, each criteria is considered, either directly or indirectly. Where a criterion is not considered to be relevant to the matter under consideration, the ACCC has included express statements to that effect.

³⁴ Section 152AH does not use the expression 'any other relevant matter'. Rather, s. 152AH(2) states that the matters listed in s. 152AH(1) do not limit the matters to which the ACCC may have regard. Thus, the ACCC may consider any other relevant matter.

A.2. Applying the ‘future with and without’ test

In considering the various criteria in s. 152AH, the ACCC will apply, where appropriate, the ‘future with and without’ test expressed in the Sydney Airports case.³⁵ This test involves the ACCC, when considering particular terms and conditions, contrast the outcome under the section 152AH criteria in the event the undertaking was accepted against the outcome in the event the undertaking was rejected. The ACCC does not consider that the ‘future with or without’ test will assist the ACCC in assessing all of the reasonableness criteria, and the ACCC has only applied the test where it facilitates the ACCC’s analysis as an analytical aid. Where the ACCC has applied the test, this has been stated. The ACCC, however, has not applied the test in assessing the overall reasonableness of the undertakings.

In its assessment the ACCC has given consideration to the application of the ‘future with and without test’ with respect primarily to matters relating to the LTIE (under section 152AH(1)(a)), the interests of persons who have rights to use the service concerned (under section 152AH(1)(c)), and the economically efficient operation of the service (under 152AH(1)(f)).

Where applied, in having regard to these matters, the ACCC has considered whether acceptance of the undertaking (the ‘future with’) based on the relevant cost claims made out by Telstra would better achieve those outcomes under s. 152AH.

With respect to considering the outcome ‘without’ the undertaking, the ACCC notes that a number of alternative pricing outcomes might arise. All procedures and protections provided for in Part XIC in respect of declared services will be available to access seekers who wish to acquire the service. Access seekers may continue to seek to determine terms and conditions of access via commercial negotiation.

Division 8 of Part XIC of the TPA gives the ACCC power to arbitrate access disputes. The ACCC has made its views on appropriate price terms and conditions clear to industry and progressively updates these views as circumstances require. The ACCC appreciates that given commercial imperatives for certainty and the costs involved with pursuing a regulatory outcome, an access seeker will in some instances negotiate an access price higher than it believed could be obtained using regulatory means. However, the ACCC notes that its views are likely to influence industry in respect to achieving commercial or regulatory outcomes, and therefore that all relevant ‘without’ scenarios are likely to lie within a reasonable bound of the ACCC’s views on appropriate price and non-price terms and conditions, where the industry could reasonably expect that it would seek to apply these views through its arbitral powers.

³⁵ *Sydney Airports Corporation Ltd* (2000) 156 FLR 10

Appendix B. Network Costs

B.1. Introduction

Telstra proposes to charge \$30 a month for the ULLS for the 30 month period from 1 January 2006 to June 2008. In calculating the efficient network costs over this period, Telstra has used the PIE II model. In addition, to demonstrate the reasonableness of its claim, Telstra has compared these prices to Telstra's own historic and current costs as provided to the ACCC under the Regulatory Accounting Framework.

This Appendix contains the ACCC's assessment that the price terms and conditions are not reasonable in accordance with the ACCC's statutory criteria. Furthermore, it contains the ACCC's reservations, as expressed in past deliberations, regarding the use of the PIE II model to accept Telstra's undertaking.

B.2. PIE II Model

Telstra has estimated the efficient network and associated costs using its PIE II model for the 30 month period from January 2006 to June 2008. The PIE II model has been used by Telstra for network cost estimations in support of several recent Undertakings.

The ACCC has previously reviewed the appropriateness of the PIE II model in assessing Telstra's past Undertakings. It concluded that the results generated by the PIE II model are not in accordance with the statutory criteria. Furthermore, the ACCC expressed its concern regarding the appropriateness of numerous key assumptions underlying the model and its results.³⁶ The ACCC continues to believe that it cannot accept the PIE II model as definitive in estimating network costs for the ULLS.

The ACCC considers that, in general, prices which reflect the costs of providing the service are most likely to achieve access prices consistent with all of the statutory criteria. It is therefore the ACCC's view that for the majority of services, including the ULLS, access prices should be based on the TSLRIC of providing the service, plus a contribution to common costs. Any access price for the ULLS consistent with TSLRIC+ is therefore likely to be consistent with the statutory criteria.

As a result, the ACCC considers that any assessment of Telstra's submission, with respect to the costs of the underlying network assets used to provide the service, is a consideration as to whether Telstra's claimed costs represent a reasonable estimate of TSLRIC+. Any network cost claim which is not a reasonable estimate of TSLRIC+ cannot achieve outcomes consistent with the statutory criteria. Conversely, a network cost claim which is a reasonable estimate of TSLRIC+ will be consistent with the statutory criteria.

³⁶ ACCC, *Assessment of Telstra's undertakings for PSTN, ULLS and LCS*, December 2004, App. C.

B.2.1. Telstra's Support of PIE II

In its recent Undertaking, Telstra noted³⁷:

...that the ACCC has made number of criticisms of Telstra's PIE II model...Telstra believes that these criticisms made by the ACCC are unfounded and, as a result, the conclusions that the ACCC has reached are incorrect.

In support of its claim that the ACCC's criticisms are unfounded, Telstra submitted that:

- By its nature, the model must necessary be complex and that complexity, by itself cannot be a reason for rejecting the model.
- Telstra had gone to great lengths and cost to make the PIE II model available for all interested parties, to provide detailed documentation and to assist with problems encountered by parties assessing the model.
- The input parameters in the model need to be consistent and that it is often impossible to adjust one parameter without impacting on others. Furthermore, Telstra argued that the model was not designed for changes to be made regarding underlying assumptions such as modelling a scorched earth versus a scorched node scenario.
- The ACCC's claim that inputs and assumptions cannot be changed was factually wrong as the ACCC itself had adjusted certain parameters.
- The ACCC's claim that Telstra has not adjusted the PIE II model in response to criticisms made of it is not a consideration as to whether the Undertakings Price is reasonable pursuant to the statutory criteria. The reason Telstra has not made these adjustments is that Telstra disagrees with them and Telstra is entitled to use input parameters and assumptions in its model that it believes are most accurate.

Furthermore, regarding the ACCC's criticism of the structure of the model, Telstra submitted that:

- The ACCC claims that it is far from clear that the use of rectilinear distance is appropriate but has not offered an alternative.
- The ACCC lists Telstra's optimisation of trench distances as a concern. Telstra noted that, given that the MST algorithm employed by Telstra minimises trench distances and trench costs account for the majority of CAN costs, it is difficult to understand that concern.
- The ACCC claims that Telstra's use of predetermined engineering rules does not necessarily produce an optimal network. Telstra argues that a TSLRIC model cannot be built without engineering rules and such rules were employed by the ACCC's own consultants in the development of a TSLRIC model for the ACCC.

³⁷ Telstra's 2005 Supporting Submission.

- Telstra does not understand the ACCC's concern or confusion over the manner in which operation and maintenance (O&M) cost percentages are calculated within the model as these are set out in Telstra's description of the model. As for adjusting for the level of efficiency of actual costs, Telstra excluded O&M costs related to legacy technology from its calculation of O&M percentages and applies those percentages to the efficient capital costs.
- Network planning is not a once-off exercise and hence Telstra disagrees with the ACCC's position that these costs be excluded from the cost pool. Telstra also argues that these costs are not duplicated in the PIE II model as the ACCC continues to claim.

B.2.2. Marsden Jacob Associates and Europe Economics Study

The Competitive Carriers Coalition (CCC) commissioned a study prepared by Marsden Jacob Associates and Europe Economics (MJAEE) to examine the issues associated with the PIE II model.³⁸ The study acknowledges that much effort has been put into the design and workings of the PIE II model noting that the model is comparably a fairly advanced cost model of the network and it has the potential to become an important tool for regulatory purposes. Nevertheless, the study's major recurring theme is the model's lack of transparency.

In assessing the PIE II model, the study points to problems with the model's methodology and approach:

- PIE II cannot be regarded as a forward-looking cost model based on best practice network technology.
- The rolling forward methodology is inappropriate.
- There would appear to be inconsistencies between the allocation and dimensioning in the access network leading to overestimated ULLS unit costs.
- Key parameters used to annualise costs (price trends and asset lives) used for the access network deviate from international practice and would, when adjusted, result in lower unit costs of the ULLS.
- Trench sharing should be set to a long-term 'equilibrium' new estate trench amount (proxied by historical developments) that is held constant over the regulatory period. This would increase sharing in the model and lead to lower ULLS unit costs.
- Efficient O&M costs are overestimated.
- The model fails to optimise based on annualised cost (incl. O&M), but bases its technology choice on investment cost only.

The study concludes that the PIE II model is likely to overestimate the forward-looking cost of ULLS and urges the ACCC to commence modelling of a new core and

³⁸ Marsden Jacob Associates and Europe Economics *Comments on Discussion Paper—Telstra's Undertaking in relation to the Unconditioned Local Loop Service*, 4 May 2006.

access network model given the lack of transparency of the PIE II model and the industry's move to Next Generation Networks (NGN).

B.2.3. ACCC's View on PIE II

The ACCC has on many occasions expressed its concern about using the PIE II model to assess Telstra's undertakings. Accordingly, the ACCC wishes to reiterate that:

- While it is true that Telstra has made the PIE II model available to interested parties, the ACCC and other industry participants remain of the view that the model's lack of transparency makes it difficult for the ACCC and other interested parties to assess Telstra's network claims.
- By its nature PIE II is a complex model and the ACCC agrees with Telstra's assertion that this is not a basis for rejection. The ACCC also wishes to note that the outputs of the PIE II model have not been rejected on this basis but mainly due to the lack of transparency.
- The ACCC is aware that models require underlying assumptions to be made in developing the network architecture or structure. Nevertheless, to the extent that Telstra has not made changes to the model as a result of the ACCC's and industry's concerns, questions remain regarding the suitability of the model.

To further assess the appropriateness of the PIE II model, the ACCC commissioned UK consulting firm Analysys to review the PIE II model.³⁹ Its major findings are:

- Trench lengths may be overstated due to the model's use of rectilinear distances and the minimum spanning tree algorithm.
- The likelihood of overestimation of trench and cable distances due to the absence of clustering algorithm is higher in relatively lower density areas.
- The availability of free trenches in new estates provides an opportunity for a new entrant planning its network deployment over a number of years that is greater than currently acknowledged in the PIE II model.
- A new entrant would optimise the sharing of trenches and ducts between the IEN and the CAN rather than reflect Telstra's actual or historical deployment.
- The engineering rules employed in rural areas do not reflect the technological choices available today, such as WIMAX.
- There is a significant risk of over-estimation of O&M costs for assets that are treated in a purely top-down fashion.
- In provisioning for future and heterogeneous demand, some of the modularity of the equipment used may result in higher charges.

Many of the issues noted by the studies prepared by the Competitive Carriers Coalition and by Analysys have been discussed in previous Undertakings. As set out

³⁹ Analysys, *Review of Specific Issues in Telstra's PIE II Model: Report for the Australian Competition and Consumer Commission*, 9 May 2006.

above, for the model to be used by the ACCC to set charges, the ACCC needs to be convinced that its outputs are reasonable and consistent with the statutory criteria.

B.3. Reasonable requirements for modelling

For a model to be useful it needs to produce estimates which the ACCC believes are reasonable under the statutory criteria. The ACCC is still to be convinced that the model produces a reasonable estimate of TSLRIC+ and, given that that any estimate is by definition an approximation, that modelling assumptions represent a balancing of the interests of access seekers and the access provider and represent some form of consensus on both model parameters and inputs.⁴⁰

The ACCC continues to believe that, given these requirements, a model must:

- be sufficiently transparent that the ACCC and access seekers could reasonably assess the inputs and outputs at a disaggregated level
- allow users to test the assumptions in the model and analyse the impact of different changes in inputs (and architecture) on outputs by understanding the linkages within the model
- allow users to assess how element costs and capital are allocated within services.

B.3.1. Appropriateness of modelling assumptions

The ACCC has continuously pointed out that Telstra has made no adjustments to the modelling assumptions underlying the PIE II model in its estimation of the efficient network and associated costs.

In its submission, Telstra notes that:⁴¹

The reason that Telstra has not made these adjustments is that Telstra disagrees with them. Telstra believes it is entitled to use input parameters and assumptions in its model that it believes are most accurate.

The ACCC understands that Telstra is entitled to its opinions and therefore entitled to use input parameters and assumptions it sees fit. The same logic equally applies to the ACCC and other access-seekers. To the extent that the ACCC (and access seekers) cannot make significant changes to the input parameters and assumptions as it sees fit and cannot discuss and resolve key differences with Telstra, it remains concerned that the model in its current form is a “take it or leave it” proposition.

Given these concerns in relation to the transparency and manipulability of the model, it is disappointing that Telstra appears to have made no attempt to make appropriate adjustments to the model in response to the identified concerns of industry participants and the ACCC. The PIE II model is now more than four years old and based on technologies in use prior to that time and therefore cannot be considered to be forward-looking. For instance, new wireless access technologies such as WiMAX were not available at the time of PIE II’s construction, however Telstra has made no

⁴⁰ *Trade Practices Act 1974 (Cth)*, sub-sections 152AH(1)(c) and (b).

⁴¹ Telstra’s 2005 Supporting Submission, p.9.

attempt to adjust the model to take account of technological progress of this type in either the access or core networks.

Further, Telstra has chosen to respond in only a limited fashion to concerns regarding the model's network design rules. The ACCC's views on aspects of these responses have been made repeatedly in the past and are reiterated below for completeness.

B.3.2. Network Provisioning

The ACCC has previously stated that it does not agree with Telstra's current approach to network provisioning and that there is an onus on Telstra to show that the assumptions that are used are reasonable.

Telstra's view

Telstra submitted that:⁴²

- The ACCC appears to misunderstand the reasons for dimensioning the network in particular ways, and attributes the need for 'spare capacity' solely to take account of possible increases in demand.
- The ACCC also states that the costs of provisioning for future demand should be recovered from that demand once it eventuates.
- The ACCC says that the level of provisioning claimed by Telstra to be required to meet future demand is excessive. Telstra has previously presented evidence that provisioning need not necessarily be driven by increasing demand and that demand uncertainty and heterogeneity can be drivers of the need for providing for spare network capacity.

Marsden Jacob Associates and Europe Economics view

While MJAEI accept that modelling spare capacity is common for future provisioning, their general assessment is that the cost implications seem to be overestimated. However, in making this judgement, they note that they have not been able to be conclusive in this area because the PIE II dimensioning in this part of the model is highly non-transparent. Their assessment is based on the following views:⁴³

- Two copper pairs on average for each network termination point seems to be excessive.
- The fill factors used in the PIE II model appear to be too low and hence it is unclear to MJAEI if the average fill factors which would result from the PIE II methodology are appropriate.
- It is also unclear to MJAEI how a Year 1 rolling forward approach as adopted in the PIE II model would cater for a correct (i.e. operated according to the

⁴² Telstra's 2005 Supporting Submission, Appendix E, p. 8.

⁴³ Marsden Jacob Associates and Europe Economics, *Comments on discussion paper—Telstra's Undertakings in Relation to the Unconditioned Local Loop Service*, 4 May 2006, p. 20.

principles of economic depreciation) recovery of the investment costs. This is because a rolling forward approach would not explicitly take into account the evolution of traffic volume over the years, especially if the annualisation formula used includes a “tilt” that takes into account only equipment price changes (and not evolution of traffic).

ACCC’s view

The ACCC has in the past disagreed with Telstra on how the costs of provisioning for future demand should be recovered.

Analysys⁴⁴ in its assessment of the PIE II model notes two areas of concern. Firstly Analysys agrees that telecommunication providers tend to overprovision those elements of the network that may be more susceptible to larger statistical demand fluctuations. In recent work undertaken for Ofcom, the UK regulator, on the effect on the annualised cost of spares provisioned in the CAN, Analysys’ findings suggest that the significant changes in the number of spares may have a small impact on costs. Nevertheless, Analysys point out that in rural DAs with fewer than [c-i-c] SIOs the issue may be significant in that Telstra’s dimensioning of [c-i-c] pair cable may be excessive.

The ACCC cannot ascertain with any degree of confidence the impact of network provisioning on network costs. Both MJAE and Analysys have expressed concern in this area. For the ACCC to accept these rules, the onus is on Telstra to show that its assumptions and methodology are reasonable. Further the ACCC is concerned that these provisioning rules may have a substantial impact on cost structures in rural areas as pointed out by Analysys. If this is the case then this has a particular impact under an averaged ULLS approach as suggested by Telstra and may not be reasonable.

B.3.3. Operational and Maintenance Factors

The ACCC has in the past expressed its concern regarding the manner in which operation and maintenance (O&M) cost percentages are calculated within the model. The ACCC believes that Telstra needs to provide further justification as to the manner in which all the proposed cost percentages are determined.

Telstra’s view

In its submission, Telstra refers to the ACCC concerns regarding adjusting these costs for the level of efficiency. Telstra states that:⁴⁵

Telstra does not understand the ACCC’s confusion over the calculation of O&M percentages in PIE II...As for adjusting for the level of efficiency of actual costs Telstra excludes O&M costs related to legacy technology from its calculation of O&M percentages.

Marsden Jacob Associates and Europe Economics view

⁴⁴ Analysys, *Review of Specific Issues in Telstra’s PIE II Model: Report for the Australian Competition and Consumer Commission*, 9 May 2006.

⁴⁵ Telstra’s 2005 Supporting Submission,, p. 10.

MJAEE raise a number of issues regarding the O&M calculations in the PIE II model. Their assessment is that using O&M percentages is likely to overstate direct O&M costs and where this is the case it may also exaggerate indirect O&M costs. The study finds that:⁴⁶

- While applying O&M percentages may be pragmatic, there is concern that the percentages used are aggregates and may not provide a realistic view of O&M costs. MJAEE considers that the approach may overestimate these costs.
- The use of O&M percentages in PIE II implies that the O&M costs in some rural areas will be more than ten times those in urban areas. While it is acknowledged that rural costs would be higher, MJAEE question the extent of the difference.
- Where assets are largely depreciated, the use of O&M percentages applied to the capital costs in the PIE II model would result in an overstatement of costs. This is because this results in the PIE II model using the historical O&M costs incurred by Telstra for these assets. MJAEE notes two issues with this approach. First, it assumes that its O&M costs are efficient and this can be questioned, given Telstra's recent announcement to shed up to 12,000 jobs over the next five years. Further, a study by the Danish regulator on TDC's operating costs showed that these costs were 90% efficient and adjusted O&M percentages accordingly. Secondly, it notes that while copper has not changed substantially over time, the copper lines in the existing Telstra network are unlikely to be of similar quality to that which would be laid today resulting in fewer faults and repairs. This would result in lower costs.

ACCC's view

The ACCC has stated on numerous occasions its concerns over Telstra's calculation of O&M costs in the PIE II model.

Analysys⁴⁷, in assessing the PIE II model, acknowledge that the treatment of O&M in the model constitutes a practical solution to bottom-up modelling of operating costs. However, they conclude that there is a significant risk that O&M costs are overestimated by a factor of over 10% for long lived assets that are treated in a purely top-down fashion. This is because:

- If the network produced by the model is more compact or has less network elements than Telstra's actual network, then a portion of the O&M costs would certainly not be incurred
- The use of O&M for a mixture of technologies is inconsistent with the objective to produce a forward-looking MEA-adjusted cost. For example, some of Telstra's expenses linked to the distribution network may include the maintenance of overhead distribution cables, which the PIE II model does not

⁴⁶ Marsden Jacob Associates and Europe Economics, *Comments on discussion paper—Telstra's Undertaking in Relation to the Unconditioned Local Loop Service*, 4 May 2006, p. 39.

⁴⁷ Analysys, *Review of Specific Issues in Telstra's PIE II Model: Report for the Australian Competition and Consumer Commission*, 9 May 2006.

deploy, and which are typically higher than for buried cable. Bridger Mitchell however argues that the use of a composite O&M percentage for cable will have a small impact on costs. By contrast, Analysys suggest that these costs could be overestimated by around 15 percent.

The ACCC has had reservations on the use of O&M percentages, particularly as applied to long-lived assets. The use of historic O&M costs raises a number of issues. Telstra's historic costs are not necessarily those of an efficient and forward-looking operator. Further, even allowing for adjustments due to the exclusion of legacy technologies, it is not clear these costs reflect those of an efficient forward-looking operator. Accordingly, the ACCC considers that Telstra has failed to demonstrate that the claimed O&M costs are reasonable under the relevant statutory criteria.

B.3.4. Network Planning Costs

The ACCC has stated its views on a number of occasions regarding network planning costs. The ACCC has previously held the view that although recovery of these costs associated with the ongoing maintenance and replenishment of infrastructure is appropriate, any such costs should be appropriately covered by operation and maintenance costs which are allowed for by the ACCC.

Telstra's view

Telstra submits that:⁴⁸

...the Commission believes that these should be excluded from the cost pool, as Telstra's costs of planning its network are long recovered. To include network planning costs would, the Commission says, result in Telstra recovering costs it does not actually incur. This is incorrect. Network planning is not a once-off exercise. Telstra incurs network planning costs on an ongoing basis in the development and maintenance of its network and indeed is currently in the midst of a major assessment and planning exercise. Furthermore, as Telstra has explained a number of times, these costs are not duplicated in the PIE II model as the Commission continues to claim.

Marsden Jacob Associates and Europe Economics view

MJAEE note that the PIE II model includes a percentage relating to network planning costs. However they point out that it is unclear why network planning has achieved such a special treatment as it is common practice to include any network planning within O&M costs.⁴⁹ Further, since the TSLRIC concept implies that a model should cost the optimised network as if it were already in place, this would exclude any major network planning costs relating to building the network.

ACCC's view

It would appear from Telstra's comments that it has not taken into account the ACCC views as outlined in its Final Report 2005.⁵⁰ As outlined in this report, the ACCC is concerned that these costs may already be recovered from O&M costs. While Telstra

⁴⁸ Telstra's 2005 Supporting Submission, p. 10.

⁴⁹ Marsden Jacob Associates and Europe Economics, *Comments on discussion paper—Telstra's Undertaking for the Unconditioned Local Loop Service*, 4 May 2006, p. 42.

⁵⁰ ACCC's 2005 Final Decision.

claims that the ACCC's position is factually incorrect, the ACCC considers that this discrepancy arises primarily due to Telstra's inadequate explanation and lack of transparency in calculating all categories of direct and indirect O&M costs, as discussed above.

Given Telstra's initial justification for the separate inclusion of this cost category, as well as the difficulties associated with Telstra's explanations of its O&M methodology, the ACCC remains concerned that Telstra may potentially be over-recovering its current expenditure on network planning costs.

B.3.5. 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
- 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 other telecommunications carriers and Pay TV operators
- sharing with utilities in new estates.

Telstra's view

Telstra asserts that the ACCC position on trench sharing is not justified. It argues that:⁵¹

- In recent years Telstra has extended the PSTN to provide new services in new estates and these accounts for [c-i-c]⁵² of basic access lines.
- For Telstra to share with third parties, it is necessary that both parties build the infrastructure at the same time. Shared existing closed over trenches with others is impractical, as they would need to be opened.
- Telstra argues that the ACCC's proposal should reflect the assumption that 13 percent of Telstra's network is comprised of new estates, and that therefore the PIE II model should exclude 13 percent of trench costs, is unjustifiable and incorrect because:
 - It is incorrect to assume a cumulative figure of 13 percent on the basis that trenches opened during the last 10 years could be shared with third

⁵¹ Telstra's 2005 Supporting Submission, Appendix E, p. 18.

⁵² Telstra's Submission to the 2006 Discussion Paper, Appendix A, p. 20.

parties

- Such a high figure is an inappropriate input for the PIE II model, as the trench sharing factor is applied to all ESAs in the network, regardless of their location or characteristic. It is clearly unreasonable to assume that 13 percent of CBD inner metropolitan distribution trenching ever formed part of any “new estates”

Marsden Jacob Associates and Europe Economics view

MJAEE argue that the real issue in considering trench sharing lies in the interpretation of “time” in the forward looking concept. For the purpose of modelling, they point out that the network from a technical perspective is built overnight (or instantaneously) but all input parameters (trench sharing, equipment prices etc) are verifiable and reflect the costs of actual network builds.⁵³ That is, sharing of trenches may reflect normal planning and construction activity. Therefore trench sharing and trench sharing in new estates should reflect a cumulative (or historical) trench sharing measure.

ACCC's view

The ACCC notes that the issue of trench sharing in new estates and of sharing between the CAN and IEN is one of how the dynamics of construction is reflected in the PIE II model. While it is valid for Telstra to point out that approximately 1 percent of services are connected in new estates, it is also true that the CAN would not be able to be constructed in one period (or instantaneously). Further, as Analysys⁵⁴ points out, in practice the length of time required to build the network would take several years during which the new entrant could progressively make use of open trenches in new estates. Hence Analysys concludes that a new entrant would be able to access trenches in new estates higher than that currently acknowledged in the PIE II model.

The ACCC therefore continues to believe that trench sharing in new estates should be of the order of 13 percent, reflecting historical trench sharing measures, rather than Telstra's 1 percent of trench costs.

Furthermore, in considering trench sharing between the CAN and the IEN, Analysys point out that based on historical information the PIE II model assumes that 5.6 percent of total IEN length is shared. Analysys argues that a new entrant would be able to optimise the sharing of trenches between the CAN and IEN and therefore reduce the costs in the access network.

⁵³ Marsden Jacob Associates and Europe Economics, *Comments on discussion paper—Telstra's Undertaking for the Unconditioned Local Loop Service*, 4 May 2006, p. 38.

⁵⁴ Analysys, *Review of Specific Issues in Telstra's PIE II Model: Report for the Australian Competition and Consumer Commission*, 9 May 2006.

B.3.6. Network design parameters

The ACCC continues to be concerned that the architecture of the network as devised by the PIE II model is far from optimal. Its concerns relate to the PIE II model use of rectilinear distances and the application of minimum spanning trees.

Rectilinear distance estimation

Trench distances in the PIE II model are calculated using unadjusted rectilinear estimates.

Telstra's view

Telstra in its latest submission argues that:⁵⁵

- The ACCC has concerns with the application of rectilinear distances but has offered no alternative.
- The PIE II model is significantly more sophisticated in several respects than the n/e/r/a model which is still relied on by the ACCC to help gauge the reasonableness of ULLS estimates.
- The ACCC has erred in claiming that an improvement on its own modelling is unreasonable.

Marsden Jacob Associates and Europe Economics view

MJAEE note that the PIE II model uses rectilinear distance with no correction factor.⁵⁶ In urban areas where the geography resembles a grid-like structure an uncorrected rectilinear distance is appropriate. However, when this is not the case, as in rural areas, the accuracy of an unadjusted rectilinear distance is reduced. They concur with Bridger Mitchell when he states that the rectilinear measure could be improved by conducting studies of representative areas and developing correction factors for these areas⁵⁷ and suggest that Telstra should conduct such analysis in less dense areas. Their view is that applying such a correction factor in less dense areas (such as rural areas) would be expected to result in a reduction in trench lengths.

ACCC's view

The ACCC's concerns with the application of rectilinear distances have been noted in previous reports⁵⁸. In this regard it is relevant to consider the advice of CRAI to Telstra on the appropriateness of its use of rectilinear distances in the PIE II model:

In most cost models, one or two estimates are generally considered: Cartesian (direct) distance measures, and rectilinear measures. Some models use only one of the two estimators, others use both and give the model user the *option of choosing*. Irrespective of which metric is used, the measurement formula *must be parameterized with a*

⁵⁵ Telstra's 2005 Supporting Submission, Appendix E, p. 21.

⁵⁶ Marsden Jacob Associates and Europe Economics, *Comments on discussion paper—Telstra's Undertaking for the Unconditioned Local Loop Service*, 4 May 2006, p. 36.

⁵⁷ Mitchell, B.M., *Appropriateness of Telstra's 2005 Cost Modelling Methodology*, December 2005, p. 45.

⁵⁸ ACCC, 2005 Final Decision.

correction factor that reflects local geographic conditions that relate the estimated road distance to actual distance.⁵⁹ (emphasis added)

The ACCC stated in its final decision to reject Telstra's 2004 ULLS monthly charge undertaking that:⁶⁰

The PIE II model does not provide users with a choice of estimation method.

The ACCC considered that it may be appropriate for Telstra to provide users with a choice of the two alternatives, as suggested by CRAI's advice, although Telstra to date has not done so.

Analysys⁶¹ in assessing rectilinear distances as used in the PIE II model agrees that a rectilinear approach may be relevant in urban areas due to street grids but this approach may not be relevant in rural areas. Further, while noting that it would be difficult to assess the impact of this effect, Analysys suggests that there is a real risk of overstating the trench length by a factor of around 2 percent although this estimate would be dependent on Australian geographic conditions.

The ACCC wishes to stress that the issue is whether the network costs as estimated by PIE II are appropriate and reasonable. To the extent that Telstra has not made any adjustments to the model with regards to the appropriate use of rectilinear distance or undertaken further analysis in support of its claim that the rectilinear approach provides reasonable estimates in all geographic areas, the ACCC cannot assess whether these estimates are reasonable.

Minimum spanning trees

The PIE II model utilises a Minimum Spanning Tree (MST) algorithm to estimate trench distances. Previously, the ACCC has expressed concerns regarding the optimality of the approach adopted. In particular, it notes that this algorithm may produce results inferior to other algorithms available. n/e/r/a on behalf of Optus previously noted that the introduction of additional points of connection, called Steiner nodes, was likely to improve the optimality of network design relative to the conventional MST approach preferred by Telstra.

CRAI's recent work for Telstra confirms that this is the case:

While the [MST] approach guarantees the minimum structure cost for building a network assuming that the only points of connection between "tree" branches are the RAUs and POCs, in the real world additional points of connection are feasible and often preferable... Clearly, the Steiner solution will, in general, reduce total distance.⁶²

⁵⁹ Mitchell, B.M, and Kennet, M., *Confidential Commentary on PIE II Model Assumptions—Final Report Prepared for Telstra*, CRA International, May 2005, p. 4.

⁶⁰ ACCC's 2005 Final Decision, p. 101.

⁶¹ Analysys, *Review of Specific Issues in Telstra's PIE II Model: Report for the Australian Competition and Consumer Commission*, 9 May 2006.

⁶² Mitchell, B.M, and Kennet, M., *Confidential Commentary on PIE II Model Assumptions—Final Report Prepared for Telstra*, CRA International, May 2005, pp. 1-2.

Telstra submitted that:⁶³

- The ACCC has overlooked that the use of Steiner nodes also involves additional costs of installing the junction node that has to be traded off against any reduced costs of routing infrastructure.
- without rebuilding the entire model, its impossible to determine whether Steiner nodes results in lower costs.

The ACCC does not agree with Telstra's submission. Indeed, Analysys⁶⁴ point out that the minimum Steiner tree is known to be up to a maximum of 13.4 percent shorter than the minimum spanning tree although in practice it is often within a few percent; this appears to confirm n/e/r/a's⁶⁵ report that there is a possibility of a 5 percent overstatement in the length of trenches. Further, MJAEI agree with Telstra that the Steiner nodes will introduce additional costs for supporting infrastructure. These additional costs however need to be compared with the reduction in trench and conduit length and other savings in support structures eg manholes, distribution points and maintenance costs.

Given the potential improvements in network optimality the ACCC believes that it is not appropriate for Telstra to continue to advocate minimum spanning trees as being optimal without considering alternatives. If the ACCC is to use the results from the PIE II model the onus is on Telstra to justify its case.

B.4. Assessing ULLS Network Costs Using RAF Data

In assessing the reasonableness of Telstra's \$30 claim the ACCC has undertaken two pieces of analysis using historic and cost accounting data as reported by Telstra in its the Regulatory Accounting Framework (RAF). This is also in response to Telstra's own use of such comparisons as part of its justification for its proposed ULLS charges, which is examined separately, see B4.2 below. The ACCC, therefore, has

- estimated the CAN cost pool using the historic and current cost data for the PSTN from which estimates of ULLS costs are obtained, and compared these with estimates from the PIE II model
- examined the ULLS unit costs as set out in the historic and current costs data as assessed by Telstra.

B.4.1. Estimating the CAN Cost Pool using RAF Data

The Regulatory Accounting Framework provides disaggregated data on network categories and services. The ACCC notes that trying to align RAF data and the PIE II model cost estimates requires a number of assumptions regarding the allocation of capital/assets and costs. Further the RAF data provides information on Telstra's existing network while PIE II by contrast is intended to model a hypothetical, efficient and optimised PSTN, including the CAN.

⁶³ Telstra's 2005 Supporting Submission, Appendix E, p. 22.

⁶⁴ Analysys, *Review of Specific Issues in Telstra's PIE II Model: Report for the Australian Competition and Consumer Commission*, 9 May 2006.

⁶⁵ n/e/r/a, *Comments on PSTN Conveyance Costs in PIE II—A Report for Singtel Optus*, March 2004.

The ACCC is therefore cautious in making comparisons between the data sets. However, large differences between the RAF data sets and PIE II may suggest possible areas of concern and the need for further investigation.

Table B.4.1.1 provides a comparison of historic, current cost accounting and the PIE II model. It shows that according to the PIE model the capital cost of constructing the CAN is [c-i-c]. By contrast the historic and current cost accounting data shows the capital cost of the existing CAN network at [c-i-c] and [c-i-c] respectively. Such large differences in the outputs of the PIE II model with regard to CAN capital costs are a concern to the ACCC as the cost of **capital** represents a substantial component of total CAN costs.

Table B.4.1.1 Comparison Historic, Current and PIE II CAN Capital Costs* for 2004/05

Description	Historic	Current	PIE II
Ducts and Pipes	[c-i-c]	[c-i-c]	[c-i-c]
Copper Cables	[c-i-c]	[c-i-c]	[c-i-c]
Pair Gain Systems	[c-i-c]	[c-i-c]	[c-i-c]
Radio Bearer Equipment	[c-i-c]	[c-i-c]	[c-i-c]
Total	[c-i-c]	[c-i-c]	[c-i-c]

**Excludes Buildings and Indirect Capital*

Table B.4.1.1 shows that:

- The current cost data aligns with the PIE II data for ducts and pipes. The ACCC notes that although the costs align in this area, this does not necessarily imply acceptance of these costs as current costs do not necessarily reflect the costs of an optimal and forward-looking operator.
- The current costs and the PIE II data shows significant differences for copper cables and radio bearer equipment capital costs, implying significantly higher levels of copper and radio assets as compared to what is currently in place. The ACCC cannot pinpoint with any degree of confidence the reasons for these differences. However, such differences may reflect the ACCC's concerns regarding the PIE II model's underlying assumptions.

Table B.4.1.2 compares the network costs of the CAN for historic, current cost accounting and the PIE II model. It should be noted that in estimating the CAN cost pool for historic and current cost data, the ACCC has included all the services (retail and wholesale) included in the RAF accounts. To the extent that this set of services are greater than the services included in PIE II, the historic and cost accounting results overestimate the CAN cost pool as compared to the PIE II model.

In estimating the CAN cost pool for current costs, the ACCC has given due consideration to what items in the adjustments should be excluded when calculating costs.⁶⁶ The ACCC has formed the view that all items in the CCA adjustments should

⁶⁶ Telstra in its Submission excludes the following items from its CCA adjustments - holding gains/losses (item 4-4-01-1) and the inflation adjustment (item 4-4-01-4).

be included for the purpose of calculating network costs. This is consistent with the approach undertaken by the Irish regulator.⁶⁷

Table B.4.1.2: CAN Network Costs - Historic, Current and PIE II for 2004/05

(\$M)	Historic	Current	PIE II
CAN Network Costs ¹	[c-i-c]	[c-i-c]	
Cost of Capital ²	[c-i-c]	[c-i-c]	
CCA Adjustment ³		[c-i-c]	
Total	[c-i-c]	[c-i-c]	[c-i-c]

1. Includes All CAN costs for **all services** included in the RAF. Organisational and Product Costs allocated to

CAN costs as a direct proportion of total network costs as reported in the RAF

2. WACC of [c-i-c] used to derive cost of capital

3. All CCA Adjustments are included. CAN CCA adjustments are allocated as a direct proportion of total network costs.

Table B.4.1.2 shows that the PIE II cost pool is approximately [c-i-c] percent higher than the current cost data and [c-i-c] percent higher than historic costs. A significant proportion may be attributed to the difference in the capital cost of construction and in turn to the cost of capital as reported in the RAF and the PIE II model. However, without similarly disaggregated outputs for the PIE II model, the ACCC is unable to assess the cause or causes of these differences.

Estimating ULLS Costs

Estimates of the monthly ULLS costs are derived by dividing the total CAN cost pool by the number of copper lines and then divided by 12 to obtain monthly rates. For consistency, the ACCC has used the [c-i-c] copper lines as provided by Telstra.

In estimating the required CAN cost pool, the ACCC has deleted the costs associated with CAN Radio Bearer Equipment as in the PIE II model. Further, the ACCC has also deleted the costs associated with Pair Gain Systems as this technology may not be used in the provision of ULLS services and it is considered a “broadband blocker”, as noted by Telstra.⁶⁸

Table B.4.1.3 presents the estimated average monthly ULLS costs using historic costs, current costs and the PIE II results as submitted by Telstra. The ACCC notes that the average monthly results for the historic and current costs shown in Table 3 should be treated as indicative and only used as a guide. At this stage, the ACCC cannot be conclusive as to the magnitude and direction of the differences between the historic and current costs and the true cost of ULLS as reflected by TSLRIC. On the one hand, to the extent that pair gain systems are excluded, the results may underestimate the true cost as more copper may have had to be deployed in the absence of

⁶⁷ EIRCOM, *Current Cost and Long Run Incremental Cost Statements For year ended 31 March 2005, Accounting Document*, 12 October 2005. The current cost statements are prepared under the financial capital maintenance convention in accordance with the principles set out in the handbook “Accounting for the Effects of Changing Prices” published in 1986 by the Accounting Standards Committee in the UK.

⁶⁸ Telstra, “Telstra Technology Briefing” ASX announcement, 16 November 2005.

pair gain systems. On the other hand, to the extent that costs are reflective of all services included in the RAF and to the extent that historic and current costs do not reflect the costs of an optimal and forward looking operator, it may be argued that the unit costs shown in Table B.4.1.3 overestimate the true costs.

Table B.4.1.3: Average Monthly ULLS Costs for Historic, Current and PIE II for 2004/05

Historic¹	Current^{1,2}	PIE II³
[c-i-c]	[c-i-c]	[c-i-c]

1. Deletes Pair Gains and Radio and WACC of [c-i-c] percent

2. Includes all CCA Adjustment

3. PIE II estimates are Telstra's estimates

Given these differences between the CAN capital costs and operational costs in the RAF accounts and the PIE II model, and the concerns which the ACCC has expressed with the PIE II model, the ACCC considers that since Telstra wishes to use PIE II to support its network prices, it is incumbent on Telstra to:

- make the model's inputs, outputs and assumptions sufficiently transparent to enable both the ACCC and access seekers to make a well informed decision about the estimates of the model
- explain the cost differences between the results in the RAF database and PIE II at an appropriate level of disaggregation and provide appropriate analysis of any large discrepancies.

If Telstra wants the ACCC to accept the outputs generated by the PIE II model it is incumbent on Telstra to address the ACCC's concerns regarding the model. The ACCC continues to believe that Telstra has not discharged this onus. In coming to this conclusion, the ACCC notes that the factors it previously raised as concerns have not yet been addressed by Telstra, precluding the ACCC accepting the reasonableness of the PIE II model.

B.4.2. ULLS Unit Costs Using Historic and Current Cost Accounting

In justifying the reasonableness of the \$30/month ULLS Undertaking, Telstra has submitted an analysis of Telstra's own historic and current costs. Telstra's analysis is shown in Table B.4.2.1 below.

Telstra argued that the ULLS cost per month is [c-i-c] under the historic costs and [c-i-c] under current cost accounting methodology. In deriving its current cost estimates, Telstra excluded certain items: Holding Gains/Losses on Asset Adjustment (line 4-4-01-1) and the Inflation Adjustment (line 4-4-01-4) from the CCA adjustments, which had the effect of increasing the CCA estimates.

Table B.4.2.1: Telstra's Analysis as in ULLS Undertaking Dec 2005

(\$M)	Historic	Current
Wholesale Costs		
Organisation Costs	[c-i-c]	[c-i-c]
Product and Customer Costs (excludes installation)	[c-i-c]	[c-i-c]
Network Costs		
CAN costs (includes CAN Pair Gain Systems)	[c-i-c]	[c-i-c]
Other Network Costs	[c-i-c]	[c-i-c]
External Wholesale Cost of Capital	[c-i-c]	[c-i-c]
Total External Wholesale Cost	[c-i-c]	[c-i-c]
CCA Adjustments (excludes items 4-4-01 and 04)¹	[c-i-c]	[c-i-c]
Total Adjusted External Wholesale Costs	[c-i-c]	[c-i-c]
(\$/mth)		
Average ULLS SIOs	[c-i-c]	[c-i-c]
Unit Organisational and Product & Customer Costs	[c-i-c]	[c-i-c]
Unit Can Costs	[c-i-c]	[c-i-c]
Unit Other Network Costs	[c-i-c]	[c-i-c]
Unit Wholesale Cost of Capital	[c-i-c]	[c-i-c]
Unit Network Costs	[c-i-c]	[c-i-c]
Unit Total Costs	[c-i-c]	[c-i-c]
Unit CCA Adjustment	[c-i-c]	[c-i-c]
Unit Adjusted total costs	[c-i-c]	[c-i-c]

Source: Telstra

ACCC's Analysis

The ACCC has assessed Telstra's data as set out in Table B.4.2.1. The ACCC notes:

- Telstra estimates divides ULLS Organisational and Product Customer costs by the average number of ULLS lines. The ACCC considers that these costs include indirect O&M costs and ULLS specific costs. As the ACCC does not have disaggregated data on these components, it has chosen to provide an upper and lower bound by dividing Organisational and Product & Customer costs by the number of ULLS lines and by the total number of access lines.
- Telstra's Cost of Capital uses a WACC of [c-i-c] percent. The ACCC has on a number of occasions expressed its concerns with such a high WACC. The ACCC in its analysis has conservatively employed a WACC of [c-i-c] percent.
- The CAN costs include Pair Gains and CAN Radio. It is the ACCC's view that these should be deleted.
- The ACCC considers that all the items in the CCA adjustments should be included as discussed above.

Table B.4.2.2 provides the ACCC estimates of monthly ULLS based on the historic and cost accounting information after making appropriate adjustments for the above issues.

Table B.4.2.2: ACCC Estimates of Monthly ULLS Costs for 2004/05

(\$M)	Historic	Current
Wholesale Costs		
Organisation Costs	[c-i-c]	[c-i-c]
Product and Customer Costs (excludes installation)	[c-i-c]	[c-i-c]
Network Costs		
CAN costs (exclude CAN Pair Gain Systems)	[c-i-c]	[c-i-c]
Other Network Costs	[c-i-c]	[c-i-c]
External Wholesale Cost of Capital	[c-i-c]	[c-i-c]
Total Wholesale Cost	[c-i-c]	[c-i-c]
CCA Adjustments ¹	[c-i-c]	[c-i-c]
Total Adjusted External Wholesale Costs	[c-i-c]	[c-i-c]
ULLS Lines	[c-i-c]	[c-i-c]
Total Lines (m)	[c-i-c]	[c-i-c]
(\$/mth)		
Unit Organisational and Product and Customer Costs ²	[c-i-c]	[c-i-c]
Unit Can Costs	[c-i-c]	[c-i-c]
Unit Other Network Costs	[c-i-c]	[c-i-c]
Unit Wholesale Cost of Capital	[c-i-c]	[c-i-c]
Unit Network Cost	[c-i-c]	[c-i-c]
Unit Cost Wholesale Cost	[c-i-c]	[c-i-c]
Unit CCA Adjustment	[c-i-c]	[c-i-c]
Unit Cost Adjusted External Wholesale Costs	[c-i-c]	[c-i-c]

1. All items in CCA Adjustments included
2. Specific costs divided by all lines
3. WACC of [c-i-c]
4. Delete Pair Gain Systems and Radio Bearers.

The table shows that lower bounds for ULLS monthly costs using historic and current cost accounting data are estimated at [c-i-c] and [c-i-c] respectively. The upper bounds are estimated at [c-i-c] and [c-i-c] for historic and current cost data if organisation and product and customer costs are divided by ULLS lines. These estimates vary substantially from Telstra's estimates of [c-i-c] and [c-i-c] as shown in Table 4.

Further, using the RAF data in Table 4, Telstra's unit network cost for ULLS is estimated at [c-i-c] and [c-i-c] (including CCA adjustment) for the historic and current cost data respectively. By contrast, the ACCC estimates for network costs are [c-i-c] and [c-i-c] respectively including all the CCA adjustments.

Accordingly, the ACCC does not concur with Telstra that the historic and current cost data substantiates Telstra's Undertaking.

B.4.3. ULLS Geographic Price Averaging

Telstra in its Undertaking has proposed a charge of \$30/month for ULLS averaged across all geographic areas. In assessing the reasonableness of the Undertaking, the ACCC in its examination of the PIE II model concludes that the likelihood of overestimating costs in rural areas is greater than in urban areas. This is because:

- while it is reasonable to use rectilinear distances in urban areas due to street grids, rectilinear distances in rural areas may overestimate costs
- Telstra's engineering rules in country areas without the use of clustering algorithms may overestimate costs in rural areas
- Telstra's PIE II model does not take into account new technologies such as WiMAX in country areas that have the potential to reduce costs.

The ACCC assessment is consistent with its finding in its Final Report in December 2005 where it argued that acceptance of cost estimates provided by the PIE II model would be unlikely to extend beyond Band 2.

To the extent that the ACCC considers that the PIE II estimates are likely to overestimate Band 4 costs, this is likely to lead to a disproportionate impact on geographically averaged prices for ULLS and the cost of providers seeking access to ULLS in Bands 1 and 2. Accordingly, the ACCC considers that an averaged approach, as estimated by the PIE II cost model, across all geographic bands is not appropriate under the statutory criteria.

B.5. ACCC's draft conclusions on network costs

The ACCC acknowledges the difficulties and complexities inherent in any cost modelling process. The ACCC has consistently stated that it does not agree that Telstra has discharged its onus to provide sufficient documentation, and supporting evidence for the assumptions it has employed in its PIE II model.

The ACCC notes, in this regard, that on network costs it has continuously and specifically requested Telstra to provide clarification on a range of issues, or for Telstra to adjust a subset of variables in a manner consistent with the ACCC's view as to the reasonable range for these variables for the purpose of sensitivity testing of Telstra's estimates.

Telstra is entitled to put forward its view as to the appropriate level of network costs, and indeed its PIE II model is constructed for this very purpose. However, the ACCC is guided by the requirements of the statutory criteria, and as such, is bound to independently assess Telstra's claims on their merits.

The ACCC has clearly expressed on numerous occasions that it has difficulty accepting the PIE II model in general, and has raised concerns with respect to specific variables. The ACCC acknowledges, as noted by Telstra, that it is yet to advance its own model in preference to PIE II. The ACCC has clearly outlined on numerous previous occasions why it has continued to rely on a partially-adjusted PIE II model to determine the conservative upper bound of network costs. However, the ACCC continues to believe that, given its strong concerns relating to those aspects of the model which cannot be externally adjusted, PIE II cannot be accepted while Telstra continues to reject recommendations for change or further analysis. To the extent that Telstra continues to submit network cost claims in accordance with its preferred

variables which *can* be adjusted, the ACCC will continue to give consideration to the appropriateness of those variables and will ultimately seek to rely on values it considers appropriate.

Given the continued difficulties regarding the use of the PIE II model, the ACCC chose to appoint an independent external consultant, Analysys, to provide it with expert advice on the PIE II model in relation to the ACCC's assessment of Telstra's undertakings. Analysys was requested to further comment upon and analyse the matters previously examined by the ACCC and found to be of concern and potentially unreasonable. The public version of Analysys' report to the ACCC on the PIE II model is available on the ACCC's website.

The findings of Analysys' report serve to underline the ACCC's concerns with the PIE II model. Further, the ACCC notes the extreme difficulty facing third parties in examining in detail, and quantifying specific aspects of Telstra's model. These matters were clearly noted both by Analysys, and by MJAE, in their expert advice to the ACCC. The difficulties in reviewing and critiquing the PIE II model arise in two particular ways:

- Telstra does not provide third parties with a comprehensive document or user manual outlining the key workings of its code. This makes review and manipulation of the model for the purposes of critiquing it difficult.
- Telstra requires all third parties to sign confidentiality undertakings which, among other restrictions, prohibit third parties from making changes to the model's coding or structure.

The identification of these difficulties reinforces the ACCC's ongoing concerns that the model is not transparent. Further, the restrictions on third parties being able to modify the coding to properly sensitivity test the model severely inhibits expert advisors', and therefore the ACCC's, ability to quantify the concerns identified on the model.

As noted above, the ACCC has previously identified a range of concerns with the model, and reports received in this undertaking assessment act to further reinforce the ACCC's concerns with respect to the PIE II model. As the Australian Competition Tribunal (ACT) noted in its decision on Telstra's Line-sharing service undertaking of June 2006⁶⁹ Telstra bears the onus of affirmatively proving the reasonableness of the terms and conditions of the undertaking. The ACT went on to state that where an access provider seeks approval of an access undertaking, it would be necessary that the access provider establish that its costs are efficient costs. This confirms the ACCC's views, as expressed on numerous occasions, that the onus is on Telstra to demonstrate the reasonableness of PIE II and its underlying assumptions and therefore its costs are efficient. The ACCC remains of the view that Telstra has failed to discharge this obligation in relation to the current ULLS undertaking process.

The ACCC notes that the concerns expressed by both Analysys and MJAE increase in importance as population density within a given exchange area diminishes. This

⁶⁹ Australian Competition Tribunal, *Telstra Corporation Limited* (CAN 051 775 556), [2006] ACompT 4, 2 June 2006.

mirrors the ACCC's previous observations with regards to the model where it has stated that its acceptance of the model was unlikely to extend beyond Band 2.⁷⁰ The importance of these concerns take on increased significance in relation to these undertakings, as Telstra has sought to average its estimates of network costs across all bands. This has introduced significant optimality concerns with regards to PIE II's modelling of low density regions given the impact on prices for Bands 1 and 2.

Given the range of concerns identified with respect to the PIE II model, particularly in relation to low density regions, the ACCC reaffirms that it cannot accept network costs generated by PIE II as reasonable. The ACCC specifically notes that only Telstra can make the recommended changes to the model to quantify these impacts and submit this analysis for review to the ACCC. Alternatively, Telstra can release the ACCC's consultants from the restrictions imposed by its confidentiality undertaking and work collaboratively with the ACCC and its consultants to further examine and quantify these issues raised. In the absence of either action, Telstra will not be able to demonstrate that the cumulative impact of these outstanding matters of concern is unlikely to impact on the overall reasonableness of the model. Accordingly, at this stage the ACCC has no choice but to reject the PIE II model.

Further, the ACCC has used historic and cost accounting data as a guide to the reasonableness of Telstra's claim. The analysis has not supported Telstra's network cost claims.

The ACCC therefore considers that to the extent the price terms and conditions in the undertakings are based on Telstra's claimed network costs, those terms and conditions:

- are unlikely to promote the LTIE, as they will not promote competition and will not encourage the economically efficient use of, or investment in infrastructure
- result in Telstra recovering more than is necessary to promote Telstra's legitimate business interests
- would harm the interest of access seekers, and the persons who have rights to use the service would be limited in their ability to compete
- exceed the direct costs of providing access
- do not have a material effect on the operational and technical requirements necessary for the safe and reliable operation of the service.

⁷⁰ See, e.g., ACCC's 2005 Final Decision, p. 103.

Appendix C. Averaged ULLS charges

C.1. Introduction

Since the ULLS was declared in August 1999, ULLS charges have been based upon a pricing structure that incorporates a mixture of cost reflective pricing (de-averaging) and averaging. While cost reflective pricing encourages economic efficiency in the use of, and investment in, infrastructure, the ACCC acknowledges that it would be an administrative burden to calculate ULLS charges on a line by line or even exchange by exchange basis. It is therefore efficient to have a pricing structure that reflects significant price differentials between different areas, while minimising the administrative burden. To date, Telstra has generally sought to achieve this balance by proposing a banded pricing structure that reflects the different cost of providing ULLS in CBD, metropolitan, regional and rural areas.

The chronological order of Telstra's proposed pricing structures for ULLS network costs has been: a four-band approach proposed in December 1999; a two-band approach proposed in January 2003; a four-band approach with adjustment mechanism proposed in October 2003; a revised four-band approach (without adjustment mechanism) proposed in December 2004; and finally its current averaged approach proposed in December 2005, which has a single ULLS price of \$30 per month.

While there has not been an accepted ULLS undertaking in place, all parties to commercial agreements and regulatory proceedings have previously accepted the de-averaged (4 band) approach proposed in the ACCC's *Final Determination for model price terms and conditions of the PSTN, ULLS and LCS services*, October 2003.

The ULLS pricing debate has been characterised as "averaging vs. de-averaging". However, in fulfilling its statutory duties, the ACCC is required to assess the reasonableness of Telstra's proposed undertaking, having regard to the criteria in s. 152AH of the TPA, rather than conduct a comparative assessment of whether the proposed averaged charge approach is more reasonable than the current de-averaged pricing structure. Nevertheless, the ACCC believes that it is appropriate to apply the "future with and without test", which essentially compares averaging with the current default of de-averaging as an aid to determining whether the proposed undertaking is reasonable against the LTIE criterion.

In this assessment, the ACCC has applied the "future with and without test" only to whether the terms and conditions of Telstra's undertakings promote the LTIE, and thereby pass the statutory criterion in s.152AH(1)(a).

C.2. Telstra's position

In describing the undertakings Telstra states that:

The geographic averaging of the prices ensures an outcome consistent with the long term interests of end users across the nation by balancing the economic efficiency benefits

associated with efficient cost based prices and an equitable distribution of the benefits associated with competition which ULLS declaration was designed to deliver. This is achieved by allowing Telstra and other carriers to deliver voice and DSL prices at equitable retail prices to all Australians.⁷¹

Telstra goes further to state that:

Telstra's analysis of ULLS and the sustainability of cost recovery going forward, indicates that ULLS prices need to be averaged in order for Telstra to continue offering residential customers averaged retail prices, regardless of where those customers reside. Averaged ULLS charges also allow access seekers to viably offer services over ULLS in regional areas of Australia, something that is clearly not possible with de-averaged rates (at least so long as retail prices are required to be averaged).⁷²

Telstra's main argument in favour of averaged monthly network cost charges appears to be a reaction from the Government's retail price parity policy formalised in December 2005. Telstra is now required to offer a basic line rental product, specifically HomeLine Part and BusinessLine Part, at the same price across the country. Telstra claims that the continuation of de-averaged ULLS prices and the resulting increased competition in metropolitan areas will lead to substantial revenue losses for the company. It further claims that these lost revenues coupled with the losses it must endure in providing basic services to regional areas will result in an outcome that is "unsustainable"⁷³. The implication is that an averaged network charge is the company's only viable option.

Telstra's position is further elaborated upon under the discussion of each of the statutory criteria in section C.4.

C.3. Position of other interested parties

In the discussion paper the ACCC noted that there had been little public discussion in the industry over the appropriateness of averaged ULLS prices at that time. The ACCC posed a series of specific questions regarding the reasonableness of averaging network costs under the statutory criteria.

AUSTAR supports the 4-band approach based on population densities. In regards to averaging, AUSTAR notes:

Fully averaged prices are not cost-reflective and do not provide the appropriate incentives to promote the long term interests of end users through development of alternative telecommunications infrastructure.⁷⁴

More specifically, AUSTAR states:

Artificially (through averaging) low charges for ULL services in regional areas may stimulate provision of some DSL based services, prompting localised services based DSL competition in some areas, but potentially at the expense of development of viable, longer term alternative infrastructure in those and other regional areas.

⁷¹ Telstra's 2005 Supporting Submission, p. 5.

⁷² *Ibid.*, p. 31.

⁷³ Telstra's Submission to the 2006 Discussion Paper, p. 7.

⁷⁴ AUSTAR, *Response to ACCC Discussion Paper – Telstra's Undertakings for the Unconditioned Local Loop Service*, March 2006, p. 4.

Artificially (through averaging) high charges for ULL services in urban areas is likely to retard competition in urban areas that might otherwise be stimulated by the comparatively lower ULL prices in those areas that could be expected if de-averaged pricing was used.⁷⁵

AUSTAR believes the effect of an averaged ULLS charge on an access seekers' ability to compete "would be generally detrimental".⁷⁶ AUSTAR notes that whilst Telstra may be under an obligation to provide a basic line rental service at an averaged price Australia wide, it is not required to provide broadband services and is unlikely to do so where this is not commercially viable or funded by subsidies. Under an averaged ULLS price, where artificially low rural prices provide a disincentive for wireless providers to roll-out infrastructure, an averaged price is likely to lead to a lower provision of broadband for rural customers than would be the case under de-averaged pricing. This is because:

...ULL is not a viable competitive infrastructure in many regional and rural areas.

In regional Australia, wireless broadband can potentially reach many more prospective customers than ULLS, due to the distance constraints on DSL over copper services.⁷⁷

AUSTAR also notes that it cannot comment on the appropriateness of the actual network costs due to the limited amount of information available to it. This is a common theme throughout the submissions. The Western Australian DoIR notes that:

DoIR believes that the discussion paper released for comment contains insufficient information for interested parties to assess the appropriateness of Telstra's proposed pricing schedule. This lack of information highlights one of the major issues with Telstra; a lack of transparency of costs and availability of information needed to identify suitable infrastructure investment opportunities within our state [Western Australia].⁷⁸

The only substantive comment the DoIR is able to make therefore is:

As it stands, there is a risk that the pricing arrangements proposed by Telstra may limit competition and market contestability.⁷⁹

A similar sentiment on the inability to obtain crucial information (and in a timely manner) from Telstra has been echoed by the Competitive Carriers' Coalition (CCC). The CCC comments that:

The CCC has been constrained in its ability to respond effectively to this process by virtue of what it believes is a continuation of Telstra's pattern of gaming and abuse of the regulatory rules and arrangements.⁸⁰

⁷⁵ *Ibid.*, p. 5.

⁷⁶ *Ibid.*, p. 7.

⁷⁷ *Ibid.*

⁷⁸ Western Australia Department of Industry and Resources, *Telstra's Unconditioned Local Loop Service Monthly Charge Undertaking, Submission to the ACCC*, March 2006, p. 2.

⁷⁹ *Ibid.*

⁸⁰ Competitive Carriers' Coalition, *Submission in Response to Telstra Undertakings for the ULLS*, 28 March 2006, p. 2.

However the CCC did commission Marsden Jacob Associates (MJA) to provide an expert report on the issue of averaging versus de-averaging. MJA's main findings are as follows:

Unconditioned local loop (ULL) prices should be de-averaged (or cost based) to ensure that distortions to the market are minimised. Averaging will bias the investment decision faced by entrants and discourage investment that would allow for more efficient supply of services in lower density areas and encourage inefficient infrastructure in high density areas;

In terms of inconsistency between retail and wholesale prices, Telstra argues that the principle of competitive neutrality is violated by the current regime. We find their reasoning misguided. We also note that inconsistencies between retail and wholesale prices are not uncommon and exist in other markets;

While the European experience is inconclusive, the experience from the US clearly illustrates that geographical de-averaging is regarded as important and necessary in the provision of unbundled elements and this can be implemented on a large scale; and

The move to averaged prices is anti-competitive and contrary to the intentions of regulation. In particular, a significant rise in the price of ULL in urban areas is not in the long-term interests of end users and the impact on competition in markets for downstream services is detrimental.⁸¹

MJA also contends that averaged ULLS prices could leave competitors in metropolitan areas in what it describes as a 'blind spot':

i.e. with an average price that is too high to make it commercially viable to use ULLS and too low to promote alternative infrastructure competition.⁸²

As stated above, Telstra cites its recently added burden of retail price parity as a principle reason behind its move towards ULLS network cost averaging. In relation to this issue, Optus states:

Optus believes there is very strong evidence to suggest that the retail pricing parity obligation will not impose any burden on Telstra.⁸³

Optus believes there are very good reasons to support de-averaged ULLS prices. De-averaging ensures that prices are best aligned with cost, with in turn promotes efficient investment. In addition, Optus states:

...such [de-averaged] pricing will inherently recognise that copper is not suitable for providing broadband service in many rural areas and that other technologies ought to be promoted.

In contrast, Telstra's proposed imposition of averaged prices will serve only to protect Telstra from the likely impact of future competition in the local loop. Such an outcome would be inconsistent with the LTIE...

In summary, all of the submissions received from interested parties that have stated a definitive opinion on the issue have indicated support for de-averaged ULLS network cost charges. The common argument against averaging is that it is not cost-reflective,

⁸¹ Marsden Jacob Associates, *Averaging vs. De-averaging—A Report Prepared by Marsden Jacob Associates for the Competitive Carriers' Coalition*, 28 March 2006, p. 1.

⁸² *Ibid.*, p. 7.

⁸³ Optus, *Optus Submission to Australian Competition and Consumer Commission on Telstra's ULLS Undertakings – Public Version*, March 2006, p. 5.

distorts competition, is not in the LTIE, and does not promote the efficient or sustainable investment in infrastructure, especially in rural areas.

C.4. ACCC's draft assessment of averaged ULLS charges

C.4.1. Long term interests of end users

As mentioned in Section 4, the ACCC considers that particular terms and conditions will promote the long-term interests of end users if they are likely to contribute towards the provision of goods and services at lower prices, higher quality, or towards the provision of greater diversity of goods and services in the long-term.

Subsection 152AB(3) of the TPA restricts the ACCC to have regard to three objectives alone when assessing whether an undertaking is in the LTIE. The ability of averaged ULLS charges to achieve each of these objectives is discussed in turn.

The objective of promoting competition in markets for carriage services and services supplied by means of carriage services

In determining the extent to which an undertaking is likely to promote competition in markets for listed services, the TPA obliges the ACCC to have regard to the extent to which the undertaking will remove obstacles to end-users of listed services gaining access to listed services. However, the ACCC is not limited to this and may consider other matters in determining whether an undertaking will promote competition.

In considering the potential effect of averaged ULLS charges on competition, it is appropriate to consider two broad areas: firstly, CBD and metropolitan areas, where averaged ULLS charges would be above efficient costs; and, secondly, regional and rural areas, where averaged ULLS charges would be below efficient costs. The ACCC has considered the competitive effects of averaged ULLS charges in both of these distinct areas.

The ACCC considers that higher ULLS charges in CBD and metropolitan areas, above efficient costs, would negatively impact on the business case for ULLS based infrastructure and, as has already been seen in the market, the roll-out of ULLS based competition would slow, if not halt, in these areas. This outlook is confirmed by Optus, which argues that:

It would not be financially viable for Optus and its competitors to roll-out ULLS-based networks to the same extent as it possibly could under de-averaged pricing.

In the longer term, competitors would not develop the scale necessary to enter into more sustainable forms of competition, not only for line rental, but for a range of bundled services including broadband internet, pay TV, and other value added services, such as video on demand, IPTV and voice-over-internet-protocol (VoIP) services. The ACCC considers that competition would be limited to resale competition, which provides limited scope for effective or sustainable competition, and would entrench Telstra's dominance in providing fixed line services. This would then lead to a reliance on more extensive regulation at both the wholesale and retail levels.

Telstra claims that averaged ULLS charges would promote ULLS-based competition in rural areas. However, the Commission considers that the extent to which ULLS-based competition would be promoted is limited by the inability of DSL technology to deliver broadband beyond approximately 5 km of an exchange. Further, ULLS-based competition in rural areas is limited by the inability of access seekers to

achieve sufficient economies of scale in low density exchanges to viably compete through the ULLS. Given the limited ability to utilise ULLS to offer bundles of services in rural areas that include broadband, and the lack of sufficient scale from greater urban deployment because of higher overall pricing, it is likely that ULLS-based competition in this market will remain limited even with averaged ULLS prices.

It is important to note that ULLS-based competition is not the sole form of competition that the ACCC is required to consider. The impact of averaging on the incentives for infrastructure-based competition via the deployment of alternative technologies is also a relevant consideration with respect to the promotion of competition.

Within rural areas, there may be some overlap between services that could be delivered via ULLS or via a wireless alternative. As indicated by a study undertaken for the ACCC by UK telecommunications research firm, Analysys, the cost of wireless technology (WiMAX) in rural areas is significantly below ULLS network costs in band 4.⁸⁴ However, if ULLS charges were averaged to \$30 per month, this would understate the actual costs to a level below even wireless alternatives. In DSL capable rural areas, the result would be to discourage competition that could otherwise be achieved through bypass onto alternative wireless networks, which may be more efficient in these areas and may deliver a greater range and quality of services than ULLS.

In summary, the ACCC considers that Telstra's proposed averaged ULLS charges will not promote competition in markets for carriage services and services supplied by means of carriage services, and neither will it remove obstacles to end users gaining access to these services. Consequently, the ACCC considers that averaged ULLS charges are not in the long-term interests of end users.

The objective of achieving any-to-any connectivity in relation to carriage services that involve communication between end users

The averaging of network costs does not have any relevance under this sub-criterion.

The objective of encouraging the economically efficient use of, and economically efficient investment in:

- ***the infrastructure by which carriage services and services provided by means of carriage services are supplied; and***
- ***any other infrastructure by which listed services are, or are likely to become, capable of being supplied***

Telstra argues that above cost access prices in metropolitan areas will encourage some access seekers to deploy their own infrastructure rather than using ULLS, leading to facilities-based competition which, it argues, is the ACCC's long-term goal. However,

⁸⁴ Preliminary results from Analysys indicate that the cost of wireless technology in rural (B4) areas is less than half the copper network cost estimated by Telstra's PIE II model in these areas. See Analysis, *Comparative Costing of Wireless Access Technologies—Final Report for the ACCC*, 5 May 2006.

the ACCC only seeks to promote facilities-based competition where it is likely to encourage the *efficient* use of, and investment in, infrastructure.

Due to economies of scale in metropolitan areas, the ULLS is generally considered to be a lower cost option than a fully duplicate network for providing voice and high bandwidth carriage services in large parts of these mass market areas. Averaged ULLS prices would be above underlying costs in metropolitan areas, and hence would discourage access seekers from utilising the ULLS, thereby distorting allocative efficiency. Instead, averaged ULLS charges could encourage inefficient bypass of the 'last mile' of Telstra's copper network onto other, potentially higher cost, networks. Averaged charges would therefore be inefficient in a productive sense, since competitors using the ULLS service would not be able to provide telephony and broadband services at the lowest possible cost. In order to achieve dynamic efficiency, there should be a reduction in costs over time, which clearly would not be the case in metropolitan areas.

The expert report submitted by the Competitive Carriers' Coalition similarly considers that above-cost metropolitan charges could lead to inefficient bypass of Telstra's network.

From an efficiency point of view averaged prices bear a risk of distorting investment decisions, causing inefficient bypass in low-cost areas and under-investment in high cost areas.⁸⁵

Telstra has indicated that in response to such bypass threats, it would reduce wholesale access charges. In a report prepared by Henry Ergas and presented by Telstra with its previous ULLS undertaking in relation to the Access Deficit Contribution (ADC),⁸⁶ Ergas stated:

...to the extent to which by-pass would strand Telstra's assets, Telstra itself has an incentive to deter it ... Telstra could and likely would do so by reducing [wholesale access prices] where the alternative was the stranding of assets.⁸⁷

In a subsequent submission, Ergas stated:

...if Telstra did not lower wholesale prices, then inefficient bypass would occur leading to competition forcing lower retail prices and Telstra would lose both wholesale and retail revenues. If more realistically, Telstra lowered wholesale prices to the level where inefficient bypass was no longer attractive, competition would still force down retail prices, but at least Telstra would lose only the difference between the original and the subsequent wholesale prices, rather than the entire wholesale price.⁸⁸

⁸⁵ Marsden Jacob Associates, *Averaging vs. De-averaging—A Report Prepared by Marsden Jacob Associates for the Competitive Carriers' Coalition*, 28 March 2006, p. 4.

⁸⁶ The effect of the Access Contribution Deficit (ADC) in metropolitan areas would have been similar to the effect of Telstra's currently proposed averaged ULLS pricing construct. In both cases the effect in metropolitan areas is that ULLS charges are above cost. Hence some of the concerns surrounding the effect of the ADC on encouraging access seekers to make inefficient investment decisions are also relevant in relation to averaged ULLS charges.

⁸⁷ Ergas, H., *Expert Report on Access Deficit*, CRA International, May 2005, p. 11.

⁸⁸ Ergas, H., *Response to inaccurate citations by the ACCC of previous expert reports by Henry Ergas – public report*, CRA International, September 2005, p. 6.

This strategy to reduce wholesale prices in the face of an inefficient bypass threat demonstrates the fundamental incompatibility of averaged prices with efficient investment signals.

Even if Telstra did allow by-pass to occur, the expert report submitted by the Competitive Carriers' Coalition states that in the long run it is not sustainable to encourage inefficient investment in low-cost areas by charging above-cost prices.

In particular, there is a risk that the incumbent over time can leverage on its true lower costs, reducing prices and ultimately forcing competitors whose infrastructure investment is less efficient (but who have been encouraged to enter because of false higher price signal) out of the market.⁸⁹

In addition, investments in alternative network infrastructure in metropolitan areas run the risk of being possibly duplicated by Telstra with its own fibre to the node investment.

If competitors did not have a credible bypass threat and instead wanted to compete via the ULLS, then a higher ULLS price would deter efficient investment in DSLAM infrastructure and efficient usage of the ULLS. Instead, competitors would be forced to rely on Telstra's resale service.

Telstra argues that averaged ULLS prices will encourage facilities-based competition in rural areas. However, as discussed in the previous section, DSL technology, and therefore ULLS based competition have a limited effectiveness in rural areas. In those rural areas where ULLS based competition is technically viable, averaged ULLS charges, below actual network costs, will discourage allocative and productive efficiency, which could otherwise be achieved through bypass onto alternative wireless networks.

In summary, the ACCC considers that because Telstra's proposed averaged ULLS charges do not reflect the underlying costs of the ULLS, they would distort allocative efficiency. Access seekers' build – buy decisions would be affected, distorting dynamic efficiency, and leading to inefficient bypass in metropolitan areas and underinvestment in efficient alternatives in regional and rural areas. The ACCC therefore concludes that the proposed average ULLS charges are not in the LTIE.

Overall LTIE assessment

The ACCC considers that particular terms and conditions will promote the long-term interest of end users if they are likely to contribute towards the provision of goods and services at lower prices, higher quality, or towards the provision of greater diversity of goods and services in the long-term. The ACCC does not believe that this would occur under Telstra's averaged ULLS charges. In the ACCC's view, averaged ULLS charges would be both unnecessary and unreasonable having regard to the long-term interests of end users. Such an approach would jeopardise facilities-based competition in metropolitan areas, and the roll-out of alternative technologies in rural areas, to the detriment of consumers.

⁸⁹ Marsden Jacob Associates, *Averaging vs. De-averaging—A Report Prepared by Marsden Jacob Associates for the Competitive Carriers' Coalition*, 28 March 2006, p. 5.

The ACCC considers that acceptance of the undertaking would, as compared to the situation likely to occur if it were rejected, be less likely to promote the LTIE. Moreover, in the event of rejection of the undertaking, the ACCC considers that access seekers would be more likely to reach reasonable terms and conditions through the ACCC's arbitration of an access dispute, based on the ACCC's model terms and conditions, than provided for under the undertakings.

C.4.2. Telstra's legitimate business interests

Consideration of an access provider's legitimate business interests encapsulates an assessment of the access provider's ability to recover costs from its investments and achieve a normal risk-adjusted rate of return. Hence, the ACCC has had regard to the effect of averaged ULLS charges on Telstra's ability to recover its investment costs from the CAN, and its ability to achieve a normal risk-adjusted rate of return on its investment.

Telstra argues that averaged ULLS charges are in its legitimate business interests, as they allow sustainable cost recovery, given the high costs of servicing rural areas and the Government's retail parity requirements. Telstra's argument hinges on its view that de-averaged wholesale ULLS prices will lead to increased ULLS-based competition in metropolitan areas and as a result, Telstra will be forced to reduce its retail line rental rates substantially in order to avoid losing market share. Telstra claims that these revenue losses will impede its ability to maintain retail line rental parity between metropolitan and rural areas, which is an unsustainable outcome.

The deficit that Telstra claims it incurs in providing line rental and local call services at uniform prices across Australia is not solely the result of the Government's retail pricing parity obligations, but may also be attributable to Telstra's commercial decision to price these services below cost. Whatever its basis, this claimed deficit in rural areas existed before ULLS-based competition and is independent of any ULLS regulation or pricing approach. The ACCC considers that it is not in Telstra's *legitimate* business interests to alter ULLS pricing so as to raise additional revenue to cover a claimed deficit that, to the extent it is considered of a material nature, is better dealt with more directly through means such as direct subsidies..

Any changes to keep ULLS pricing well above efficient costs in metropolitan areas will severely constrain facilities-based or quasi-facilities-based competition. This would hinder the prospect of more sustainable benefits to end-users such as better quality, more innovative and more keenly priced telecommunication/information services in both urban and rural areas. It would also reinforce Telstra's dominant position and require more intrusive regulation for longer

The ACCC also disagrees with Telstra's claim that there will be any significant loss in retail revenue in metropolitan areas as a result of de-averaging in the proposed period⁹⁰. Rather, the ACCC considers that any potential revenue reduction would be the result of a more competitive environment underpinned by regulatory processes

⁹⁰ In the ACCC's view, the stated losses in metropolitan areas from cost-based ULLS pricing claimed by Telstra have not been substantiated and its key assumptions regarding the size of the underlying rural deficit that needs to be recovered, based on rural PIE II model estimates, is unreliable for reasons noted in Appendix B above .

that more closely align access charges with efficient costs. As noted below in C.4.4, the ACCC does not consider that Telstra should be compensated for the effects of competition or regulatory processes which promote more competitive outcomes. Such regulatory processes could, over time, also lead to a progressive reduction in any average ULLS charge, as the costs on which the average is based are brought closer to an efficient level. Hence, Telstra could still incur some revenue reduction over time under an averaged ULLS charge approach.

In summary, the ACCC considers that Telstra's proposed averaged ULLS charges are not in its *legitimate* business interests, since they would allow it to be inappropriately compensated for the effects of competition and regulation, and hence earn an above normal return. The ACCC considers that Telstra's ability or otherwise to meet the costs of providing services in rural areas is a matter better dealt with through more direct means, such as subsidies than through the ULLS pricing mechanism.

C.4.3. Interests of persons who have rights to use the declared service

In most cases, access seekers' interests are best served by cost reflective prices, which provide efficient signals for their decisions whether to compete via reselling Telstra's wholesale products; using their own DSLAM technology and Telstra's network (ULLS); or investing in their own alternative networks (such as wireless, cable or fibre).

Telstra claims averaged network costs are in the interests of access seekers as:

...a ULLS price of \$30 per month substantially improves the viability of providing services in Band 3 areas compared with de-averaged prices.⁹¹

Whilst it is true that any lower access charge in regional areas (band 3) may improve the viability of ULLS investments in these areas, this will only be in the interests of access seekers if ULLS is the best platform for delivering services in these areas. It also depends on whether there is sufficient demand for such a service as to make it worthwhile.

It is actually in the mass market metropolitan areas (band 2), rather than regional areas (band 3) where access seekers are interested in rolling out ULLS based infrastructure. It is therefore likely that any benefits that access seekers gain from any lower access charges in band 3 may be outweighed by the detriment they face as a result of access charges that are above efficient costs in metropolitan areas.

In any case, under a de-averaged approach, Band 3 prices may not be significantly different from the proposed averaged price of \$30.⁹² This means the claimed benefits noted by Telstra for band 3 areas under a \$30 charge are likely to exist without the need to average across all bands and impact detrimentally on access seekers' ability to compete in metropolitan areas.

On balance, the ACCC considers that averaged ULLS charges are not in the interests of persons who have rights to use the declared service.

⁹¹ Telstra's Submission to the 2006 Discussion Paper, p. 8.

⁹² Because of the impact of higher rural costs as estimated by the PIE II cost model, Telstra's derived average network cost figure is relatively close to the likely de-averaged Band 3 network cost.

C.4.4. Direct costs of providing access

Direct costs are those costs necessarily incurred (caused by) the provision of access. As stated in an explanatory memorandum to the TPA:

...the '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.⁹³

This means that an access price should not be inflated to recover any profits the access provider (or any other party) may lose in a dependant market as a result of the provision of access.

One of Telstra's principle arguments in support of averaged ULLS prices is that it is necessary from a cost recovery perspective. Telstra argues that de-averaged prices would stimulate competition in metropolitan areas and that as a result it would lose revenue, resulting in an inability to sustain retail price parity across Australia. The explanatory memorandum above clearly shows that Telstra's argument is not reasonable under this statutory criterion, since competition effects should not be taken into account in determining the reasonable costs that an access provider incurs in providing access.

In addition, the ACCC considers that an averaged ULLS charge is not reasonable under the direct costs criterion because it causes access seekers to bear more than the efficient costs of provision in metropolitan areas, and less than the efficient costs of provision in rural areas. The appropriate prices should be consistent with the prices that would occur if the access provider faced the threat of being displaced as a supplier.⁹⁴ If an alternative copper local loop provider existed, Telstra would not be able to charge prices that are substantially above cost in metropolitan areas, as it is proposing in its undertakings with averaged ULLS charges. An averaged ULLS pricing structure is therefore not held to be reasonable under the direct costs criterion of s. 152AH(1)(d).

C.4.5. Operational and technical requirements necessary for safe and reliable operation

Telstra has stated that the averaging of network costs has relevance to the operational requirements necessary for the safe and reliable operation of the ULLS. Specifically, Telstra states that under averaged ULLS charges, it:

...will be able to fully recover network costs which will ensure ongoing investment in infrastructure and allow safe and reliable operation of the ULLS. A deaveraged ULLS price would undermine Telstra's ability to recover its costs.⁹⁵

The ACCC agrees with Telstra that averaged ULLS charges, which are based on efficient network costs, would provide sufficient revenue to fund the operational and investment requirements necessary for the safe and reliable operation of the ULLS.

⁹³ *Trade Practices Amendment (Telecommunications) Bill 1996 Explanatory Memorandum*, p.46.

⁹⁴ ACCC, *Access Pricing Principles – Telecommunications*, July 1997, p. 14.

⁹⁵ Telstra's Submission to the 2006 Discussion Paper, p. 7.

However, the ACCC rejects Telstra's claim that de-averaged ULLS charges would undermine its ability to recover its costs. So long as ULLS charges, whether averaged or de-averaged, are based on a recovery of efficient network costs, then this would ensure that Telstra can invest in infrastructure that ensures the safe and reliable operation of the network. Therefore, the ACCC concludes that averaged ULLS charges would not have a material effect on the operational and technical requirements necessary for the safe and reliable operation of telecommunications services and the telecommunications network.

C.4.6. Economically efficient operation

The ACCC has already had regard to this criterion under the LTIE criteria in section C.4.1 of this appendix. In summary, the ACCC considers that above-cost ULLS prices in CBD and metropolitan areas will discourage efficient demand for ULLS lines and encourage inefficient bypass decisions, such as the roll-out of cable, fibre or wireless by competitors. Such investments would generally be considered higher cost options compared to ULLS in CBD and metropolitan areas, which exhibits economies of scale.

In those rural areas where ULLS based competition is technically viable, averaged ULLS charges, below actual network costs, would discourage efficient bypass onto alternative wireless networks, which may be more efficient in these areas.

The ACCC therefore concludes that averaged ULLS charges are not reasonable when assessed in terms of the economically efficient operation of a carriage service, telecommunications network or facility.

C.5. ACCC's draft conclusions on averaged ULLS charges

Based on its consideration of the statutory criteria set out in s. 152AH of the TPA, the ACCC considers that the averaged ULLS charges proposed by Telstra are not, on balance, reasonable. The ACCC has decided to reject the averaged ULLS charge proposed in Telstra's undertakings on the grounds that an averaged charge:

- would not promote the LTIE, as it would not promote competition, nor encourage the economically efficient use of, and investment in infrastructure
- would result in Telstra recovering more than necessary to promote its legitimate business interests
- would harm the interests of persons who have rights to use the declared service, through higher charges in mass market areas where access seekers are most interested in using the ULLS
- would exceed the direct costs of providing access in metropolitan areas
- would not have a material effect on the operational and technical requirements necessary for the safe and reliable operation of telecommunications services and the telecommunications network.

Appendix D. Weighted Average Cost of Capital (WACC)

D.1. Introduction

The ACCC uses a post-tax vanilla WACC in its assessment of Telstra's proposed ULLS undertakings. The WACC is employed primarily as an input into Telstra's PIE II model to estimate the annualised network costs of providing a range of services, including the ULLS.

For the purposes of these undertakings, Telstra has relied upon a series of WACC estimates recommended by Professor Robert G Bowman. Professor Bowman recommends two potential values for the WACC, which he refers to as the 'Low' and 'High' WACC. Similar to other aspects of Telstra's undertakings, it is not clear to what extent they rely upon either of these WACCs for the purposes of determining prices across the undertakings periods.

The ACCC's analysis of Telstra's preferred WACCs is set out in sections D.5 and D.6 below, which deal with Telstra's preferred input parameters and the arguments presented regarding asymmetric social outcomes respectively.

D.2. ACCC's draft view

The ACCC's draft view is to reject Telstra's proposed WACCs. The ACCC is not satisfied that the proposed WACCs are reasonable when assessed against the statutory criteria set out in s. 152AH.

Specifically, the ACCC is not satisfied that the techniques used by Professor Bowman lead to an accurate conclusion on the WACC. The ACCC notes that expert advice commissioned by third parties to this proceeding was critical of Professor Bowman's methods for determining the values of specific parameters as well as the parameter estimates adopted from the application of these methods.

On the basis of its own assessment, the ACCC is particularly concerned with the foundation and methodology used by Professor Bowman in advocating the appropriateness of accounting for what he claims to be an asymmetry in social outcomes arising from over- or underestimating the WACC. As outlined in further detail below, it appears that Professor Bowman is implicitly arguing that the ACCC should weight different criteria under s. 152AH differently when determining access prices. Professor Bowman's argument is that, by doing so, the LTIE is likely to be better served. However, Professor Bowman has not provided sufficient theoretical or empirical evidence to support his claims regarding asymmetric outcomes from erring on the low side of the 'correct' WACC relative to the high side. Accordingly, the ACCC is not satisfied Professor Bowman's approach is appropriate.

Following his qualitative statements on asymmetric outcomes, Professor Bowman makes no attempt to demonstrate that his proposed adjustments (increasing the point estimates by one 'standard deviation') deal appropriately with the problem he has sought to identify. Further, in advancing his estimates Professor Bowman states that:

... although I do not fully develop and defend ranges for each of the parameters in this report, I discuss all of the parameters, provide some further information on the critical

parameters and give my preliminary estimates of appropriate ranges to reflect one standard deviation.⁹⁶

Thus Professor Bowman's position in favour of an adjustment for asymmetric social consequences can be characterised as follows:

- He has not sufficiently demonstrated the theoretical and empirical basis for an asymmetry in social outcomes
- He has acknowledged that determining the appropriate confidence interval to take account of asymmetry is difficult, and has not attempted to undertake such an exercise
- Despite this, he has proposed mark-ups, which he acknowledges are not fully developed or justified, to many parameters and this in his view appropriately and accurately deals with the contended asymmetry.

In the context of any undertakings assessment, the onus remains with Telstra to demonstrate to the ACCC that its proposed prices are reasonable within the meaning of s. 152AH. It is the ACCC's view that Professor Bowman (and therefore Telstra) has not provided sufficient proof to demonstrate that asymmetry of outcomes exists, that the statutory criteria are better served by adjusting the WACC to take account of it, and that his proposed adjustment appropriately performs this adjustment function. Accordingly, it is the ACCC's draft conclusion to reject this aspect of Telstra's proposed WACC claims.

Further, the ACCC notes that it has never accepted as appropriate a separate WACC for ULLS and LSS specific assets. The recent ACT decision to reject Telstra's LSS undertaking, and more specifically its preferred cost allocation methodology, acts to reaffirm the reasoning behind the ACCC's position. The ACCC therefore considers that a separate WACC for ULLS and LSS specific assets, as proposed by Telstra for the purposes of these undertakings, is not appropriate.

Accordingly, the ACCC is not satisfied that Telstra's preferred WACC estimates used for the purposes of estimating network costs, particularly Telstra's 'High' WACCs, are reasonable. Therefore, to the extent that the price terms and conditions of the undertakings seek to impose a charge based on Telstra's preferred WACCs, they are rejected.

D.3. Telstra's submission

Telstra commissioned Professor Bowman to estimate a series of WACCs for ULLS network costs, including WACCs adjusted upward by one standard deviation to take account of claimed asymmetry in social outcomes.

Professor Bowman (and therefore Telstra) argue that WACC components are estimated with error, and therefore WACC is estimated with error. Further, Telstra argues that the consequences of estimation error in the WACC are asymmetric and

⁹⁶ Bowman, R.G., *Report on the Appropriate Weighted Average Cost of Capital for the ULLS Network—Prepared for Telstra*, December 2005, p. 29.

that long-term social costs of under estimating the cost of capital are higher than the long-term social costs of over estimation.

In choosing a WACC that balances these claimed asymmetric costs, Professor Bowman proposes that a WACC should be calculated by increasing the WACC parameter point estimates by one standard deviation. To do so, Professor Bowman has determined what he believes to be appropriate WACC parameter point estimates and estimated on a preliminary basis what he considers to be the standard deviations in relation to specific WACC parameters. He then adds the two to arrive at WACC parameters one standard deviation higher than his own point estimate. These are combined to determine the appropriate post-tax nominal (vanilla) WACCs for 2005-06, 2006-07 and 2007-08.

In its 2005 Supporting Submission, Telstra argues that it is appropriate that separate WACCs be estimated for ULLS network and ULLS-specific costs. Telstra argues that the network assets and ULLS-specific assets entail different risks and therefore demand different cost of capital.⁹⁷

D.4. Submissions to discussion paper

AAPT has submitted a report by Associate Professor Neville Hathaway that reviews the WACCs estimated by Professor Bowman on behalf of Telstra.⁹⁸ Optus' submission considered for the purposes of this draft decision commented only briefly on the WACC.

D.5. Inputs

In this appendix WACC input parameters which are in contention in these undertakings are examined in further detail. Input parameters which are not the subject of contention are noted, but not examined in detail.

D.5.1. Gearing Ratio

$$\frac{D}{V} \text{ \& \; } \frac{E}{V}$$

Gearing ratios measure the proportion of an entity's finance that is raised through either debt or equity. There are several variations as to how the debt and equity values can be measured.

Telstra's position

Professor Bowman disagrees with the ACCC's past approach of determining an optimal instead of Telstra's target debt equity ratio:

Although regulators may have views about capital structure for a firm, they do not have to face the economic consequences of their views. It seems presumptuous for a regulator

⁹⁷ Telstra's 2005 Supporting Submission, p. 20.

⁹⁸ Hathaway, N., *Telstra's WACCs for Network ULLS and the ULLS and SSS Businesses—Review of Reports by Prof. Bowman*, Capital Research, 15 March 2006.

to set policy based on an assumption that the management of a company does not know how to make capital structure decisions that are in the best interests of the company.⁹⁹

Professor Bowman acknowledges that the optimal leverage ratio is the correct measure for determining the capital structure in assessment of the WACC but asserts that the ratio is very difficult to assess. Consequently, Professor Bowman proposes a financial leverage of 20 per cent for the CAN on the basis of Telstra's market-measured target debt ratio of [c-i-c] per cent.

Submissions to discussion paper

Associate Professor Hathaway (AAPT) accepts Professor Bowman's argument for the network gearing. On the whole, Associate Professor Hathaway believes the gearing ratios are reasonable but without reasonable justification for its value. However, he also considers Professor Bowman's claimed gearing of 16 per cent for Telstra is probably too low.¹⁰⁰

The ACCC's View

Since the ACCC's 2000 assessment of Telstra's second PSTN undertakings¹⁰¹, the ACCC has held the view that a debt ratio (D/V) of 40 per cent and an equity ratio (E/V) of 60 per cent are reasonable. In determining this ratio, comparisons were drawn against observed gearing estimates of competitors and other regulatory decisions.¹⁰²

The ACCC holds the view that the WACC is not highly sensitive to the debt and equity ratios. Professor Bowman holds a similar view:

...the WACC becomes flat over a wide range of leverage. Where the WACC curve is flat, there is little advantage to changes in the level of debt.¹⁰³

The ACCC has preferred a debt ratio of 40 per cent in previous assessments. Comparisons against several overseas regulatory decisions indicate that Professor Bowman's proposed debt ratio is on the lower end of the range. Specifically, a recent Ovum report demonstrates preferred debt ratios of European regulatory bodies in the range of 25 to 50 per cent:

⁹⁹ Bowman, December 2005, Appendix C, pp. 2-3.

¹⁰⁰ Hathaway, op. cit., p. 19.

¹⁰¹ ACCC, *A Report on the Assessment of Telstra's Undertaking for the Domestic PSTN Originating and Terminating Access Services*, July 2000.

¹⁰² ACCC, *A Report on the Assessment of Telstra's Undertaking for the Domestic PSTN Originating and Terminating Access Services*, July 2000, p. 77.

¹⁰³ Bowman, December 2005, Appendix C, p. 2.

Figure 1. – European fixed line regulators’ appropriate debt ratios¹⁰⁴

Source	Estimate
Denmark	35-50%
France	40%
Italy	25-40%
UK	30-35%
Germany	39.7%
Average of fixed line regulators	37.4%

The ACCC has previously preferred a different gearing ratio. Professor Bowman says the optimal leverage ratio is the correct measure to use in the WACC calculation but due to asserted difficulties in obtaining this number chooses to use the target debt ratio as a proxy. Professor Bowman also says:

I also see no basis for predicting that the target debt ratio will change going forward.¹⁰⁵

It is noted that Telstra’s target debt ratio may change with any future change in the level of government ownership. It is also noted that this target debt ratio is generally low compared with other Australian infrastructure companies and international fixed line telecommunication companies. It may not be reasonable to assume that the optimal leverage ratio for Telstra will continue to be this low.

While the ACCC sees no reason to depart from its previous position on the gearing ratio, it notes that the WACC is not highly sensitive to this assumption. The ACCC considers that for the purposes of assessing these undertakings, Telstra’s target gearing ratio is not a material consideration.

D.5.2. Return on Debt

The cost of debt is calculated as the risk-free rate-of-return plus a debt premium. The debt premium is added to cover investors for the specific debt risk of the firm in question. As with the risk-free rate-of-return, the cost of debt should reflect the current cost of debt rather than a historical rate.

Telstra’s position

Professor Bowman proposes the inclusion of debt issuance costs to the return on debt, such that:

$$R_d = R_f + DP + DIC$$

Where: R_d is the cost of debt

R_f is the risk-free rate

¹⁰⁴ Bieler, D. and Nicoletti, S., *Regulation of Cost of Capital in the European Fixed-line Telecoms Sector*, Ovum, 22 February 2006.

¹⁰⁵ Bowman, December 2005, p. 15.

DP is the debt risk premium and

DIC is the issuance cost of debt.

The specific inputs, risk free rate, debt risk premium and debt issuance costs, are each separately detailed in their respective subsections.

D.5.3. Risk-free rate

Telstra's position

Professor Bowman recommends using a 10-year government bond rate without averaging when estimating the cost of equity capital for the ULLS-network.

Submissions to discussion paper

Associate Professor Hathaway considers the risk free rate of 5.11 per cent for the CAN proposed by Professor Bowman to be acceptable.

The ACCC's view

The ACCC agrees with Telstra's proposal to use a 10 year duration in calculating the risk-free rate in the WACC for the purposes of the assessment of Telstra's Undertakings.

Since Telstra's 1999 second PSTN undertaking, the ACCC has used rates for the 10 days leading up to the start of the regulatory periods. This is to address any potential concerns regarding day-to-day market volatility. Professor Bowman states that, in his opinion, there is sufficient liquidity in the market to obviate the need for any such averaging.¹⁰⁶ However, Professor Bowman advances no evidence to support this statement, and the ACCC therefore considers that in the absence of this evidence Professor Bowman's position should not be accepted.

Further, the ACCC has concerns regarding the choice of dates by Professor Bowman for calculating the risk-free rate. It is not appropriate to seek to apply TSLRIC notional modelling assumptions in the manner Professor Bowman has with regards to the 'overnight' rebuild assumption. Issues regarding Professor Bowman's partial application of bottom-up TSLRIC modelling assumptions to the CAPM are discussed in further detail in section D.5.9 below.

The undertakings do not commence until 1 January 2006, and as such Professor Bowman should further justify why a risk-free rate for 1 January 2006 to 30 June 2006 should appropriately be calculated with reference to the rate applicable on 30 June 2006. Further, Professor Bowman has calculated the 'current' rate to be applied to future periods from the rate applicable on 31 October 2005. Professor Bowman's submission was not finalised until December 2005, and the undertakings themselves were not submitted to the ACCC until 23 December 2005. Given the availability of far more 'current' information to Professor Bowman and Telstra prior to the submission of the undertakings, it is not clear why they have sought to rely upon these rates in the WACC for these undertakings given that Professor Bowman has clearly stated that:

¹⁰⁶ Bowman, December 2005, p. 10.

In my opinion, the current interest rate conditions support the view that the best estimate of future interest rates for the fiscal years 2006/07 and 2007/08 is the current interest rate.¹⁰⁷

Accordingly, the ACCC is not satisfied that it is appropriate to accept Telstra's proposed estimates of the risk-free rate as inputs into the WACC for the purposes of these undertakings.

D.5.4. Debt Premium

This value typically represents the value added to the risk free rate to account for debt specific risk in estimating the return on debt.

Telstra's position

Professor Bowman uses the difference between Telstra's 10 year debt and the government's 10 year debt as at 30 June 2005 to calculate the debt risk premium to arrive at a value of 1.06 per cent. He then proposes an increase to 1.15 per cent for the second and third periods. Using the same methodology, debt risk premiums of 0.81 per cent and 0.93 per cent are proposed for ULLS specific costs.

Submissions to discussion paper

Associate Professor Hathaway finds that the debt risk premium proposed for the businesses appears to be reasonable. However, Associate Professor Hathaway suggests that the debt risk premium proposed for the network is inconsistent with one of Professor Bowman's previous comments in the target gearing analysis that the network is less risky than Telstra as a whole. The basis for this claim is that the network's proposed debt risk premium is higher than the businesses' proposed debt risk premium. Associate Professor Hathaway argues that the debt risk premium and the sensitivity premium for the network are both too high.

The ACCC's view

A firm's debt premium will vary with its credit rating and its level of gearing. Generally, given Telstra has had both an excellent credit rating and a very low gearing ratio, a small debt premium has been appropriate. Theoretically, the debt risk premium is estimated for asset-specific costs rather than Telstra as a whole. In practice, the ACCC has believed that the debt premium observed in the market for Telstra bonds gave the best measure of the premium required by investors, as it would be based on their assessment of Telstra's credit rating. In recent years, a debt risk premium of 0.8 per cent has been preferred. In arriving at this estimate, the ACCC has noted that this figure may be altered as conditions change.

¹⁰⁷ *Ibid.*, p. 17.

Telstra's proposed DRP for the years 2006-07 and 2007-08 are different from premiums inferred from corporate debt rates sourced from Bloomberg. The ACCC agrees with Professor Bowman's preferred method of estimation but is unable to verify that the proposed rates for 2006-07 and 2007-08 are correct. Further, as above in relation to the risk-free rates, the proposed dates for calculation for all periods are subject to question.

The inconsistency noted by Associate Professor Hathaway appears significant. It is unlikely that Telstra's positions on both the relative levels of gearing and on the relative levels of debt risk premium for the network versus Telstra as a whole can be held to be consistent.

At this stage, the ACCC is not satisfied that Telstra's forecast debt risk premiums are appropriate.

D.5.5. Debt Issuance Cost

The debt issuance costs are costs to the firm for raising debt, such as underwriting, management fees, accounting fees and legal fees.

Telstra's position

The basis for the inclusion of debt issuance costs to the cost of debt is that the ACCC has accepted, in some instances, the inclusion of such a cost in the context of gas transmission. Professor Bowman has estimated the issuance cost of debt to be 0.2 per cent for the regulatory period. This is based on his assumption that debt offerings would be in the \$1 billion range. An approximation is calculated through a weighted average of publicly issued debt costs and private placements costs. The sources for these percentage costs are Lee, Lochhead, Ritter and Zhao (1996)¹⁰⁸, Brealey and Myers (2003)¹⁰⁹ and Hays, Joehnk and Melicher (1979)¹¹⁰. Professor Bowman proposes a conversion of the total issuance cost to an annualised cost of capital rate for a ten-year maturity:

The ACCC recently allowed debt issuance costs of the order of 10.5 to 12.5 basis points to be recovered in electricity and gas decisions. Furthermore, the Australian Competition Tribunal allowed 25 basis points in its determination on the GasNet Access Arrangement, increasing the allowance in the earlier ACCC decision. As the principle has now been accepted, the issue is to estimate the appropriate amount for the costs in this particular context.¹¹¹

Submissions to discussion paper

Associate Professor Hathaway asserts that, because debt issuance costs are typically episodic at best, they should be included, if at all, in the appropriate cash flow.

¹⁰⁸ Lee, I., Lochhead, S., Ritter, J. and Zhao, O., *The Costs of Raising Capital*, Journal of Financial Research, Spring 1996., pp. 59-74, table 2.

¹⁰⁹ Brealey, R. and Myers, S., *Principles of Corporate Finance* (7th ed), McGraw-Hill/Irwin, Boston, 2003, p. 714.

¹¹⁰ Hays, P., Joehnk, M. and Melincher, M., *Determinants of Risk Premiums in the Public and Private Bond Market*, Journal of Financial Research, Fall 1979, pp. 143-152.

¹¹¹ Bowman, December 2005, p. 18.

Further, he contends that the only forward looking costs to be recognised are rollover or re-issuance costs of debt. In particular, he concludes that:

The appropriate cost of capital is an opportunity cost (as described above in section E) so it does not have to include all the historical or sunk costs of raising a new tranche of debt. It would be quite inappropriate for the ACCC to recompense a regulated business like Telstra for costs it would no longer have to incur.¹¹²

Associate Professor Hathaway's additional comments are that if the debt issuance cost is included, the value of the proposed 0.2 per cent rate is acceptable. However, he believes that the range is too high (0.15 per cent) and he personally estimates the cost at 0.1 per cent with a 0.05 per cent range.

The ACCC's view

The ACCC has also previously accepted the inclusion of debt issuance costs in the return on debt in a situation where these costs were not able to be placed in the cash flows:

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.¹¹³

The Allen Consulting Group (ACG) has recommended the inclusion of debt issuance costs in a consultancy report prepared on behalf of the ACCC in the context of decisions made regarding gas and electricity companies:

Given that transaction costs associated with debt would continue to be incurred for the whole value of the investment, we consider that the most appropriate means of making this allowance is through either an addition to the estimated weighted average cost of capital, or as a direct allowance to operating expenses.¹¹⁴

ACG's benchmark costs are appropriate in the context of recovering costs of refinancing Telstra's debt relating to a regulated asset, the CAN or PSTN. Through Telstra's 2005 annual report and also a recent accounting separation report¹¹⁵, it can be assumed that because the CAN is approximately 40 per cent of all assets and Telstra's total book value of debt is \$12,011, the debt refinancing costs will fall under the range of greater than \$1050 million for benchmark debt issuance costs. It then follows that the debt issuance cost are 8 basis points per annum.¹¹⁶

In summary, Telstra's 0.2 per cent is much higher than even ACG's highest benchmarked rate of 0.104 per cent but this may be because Professor Bowman is

¹¹² Hathaway, op. cit., p. 21.

¹¹³ ACCC, *Final Determinations for Model Price Terms and Conditions for the PSTN, ULLS and LCS Services*, October 2003, p. 39.

¹¹⁴ The Allen Consulting Group, *Debt and Equity Raising Transaction Costs – Report to the Australian Competition and Consumer Commission*, December 2004, p. xiii.

¹¹⁵ ACCC, *Current Cost Accounting Report relating to accounting separation of Telstra for the half year June 2005*, ACCC website, p.18.

¹¹⁶ The Allen Consulting Group, *Debt and Equity Raising Transaction Costs – Report to the Australian Competition and Consumer Commission*, December 2004, p. xiii.

estimating debt issuance rather than refinancing costs. Further explanation is required from Professor Bowman on these calculations. At this stage, the ACCC's position on the basis of the advice given to it by ACG on this matter is to reject Telstra's proposed debt issuance costs parameter as being inappropriate.

D.5.6. Return on Equity

A widely accepted method of determining an appropriate return on equity is the use of the capital asset pricing model (CAPM). The CAPM states that:

$$R_e = R_f + \beta e(R_m - R_f)$$

Telstra has proposed that the return on equity also include equity issuance costs. Under this proposal the return on equity can be expressed as:

$$R_e = R_f + \beta e(R_m - R_f) + EIC$$

Where: r_f is the risk-free rate of return

β is the firm's Beta coefficient

r_m is the required equity market return and

$(r_m - r_f)$ represents the market risk premium (the premium required by equity investors to compensate them for bearing systematic risk).

D.5.7. Equity beta (β_e) and Asset beta (β_a)

$$\beta_e = \beta_a + (\beta_a - \beta_d) \left(1 - \left[\frac{R_d}{1 + R_d} \right] (1 - \gamma) T_e \right) \cdot D / E$$

Where: β_e is the equity beta

β_a is the asset beta

β_d is the debt beta (defined and valued below at zero)

γ is the imputation factor

T_e is the effective tax rate

r_d is the return on debt and

D/E is the debt to equity ratio.

The method favoured by the ACCC in determining the WACC is de-levering and levering using the Monkhouse formula relating asset beta and equity beta. In the past, the ACCC has deemed that a direct estimation of the equity beta through economic returns of Telstra's could not be used as it has only been listed for a short period of time¹¹⁷. Accordingly, the practice employed was to benchmark the firm's equity beta through the examination of other companies or sectoral averages.

¹¹⁷ ACCC, *A report on the assessment of Telstra's undertaking for the Domestic PSTN Originating and Terminating Access services*, July 2000, p. 89.

Telstra's position

Professor Bowman takes three approaches in determining the equity and asset beta for Telstra's ULLS network. First, a direct estimation is approximated using one of many possible measurement intervals of Telstra's historical data. Second, first principles analysis is applied to a selection of overseas studies on income elasticities and results in a range of 0.4 to 0.9 for the asset beta. Third, an adjustment is made by Professor Bowman to a weighted average of selected comparable companies within the same industry.

In summary, an asset beta value of at least 0.7 is proposed, accompanied with a standard deviation range of at least 0.3. After conversion to an equity beta, Professor Bowman's final recommendation for a forward-looking equity beta is 0.873.¹¹⁸

Figure 2. – Telstra and Professor Bowman's estimates for Equity and Asset Beta

Telstra's Asset Beta (for the CAN/PSTN)	Range	Estimate
Direct Estimation approach (for Telstra as a whole)		0.74 asset 0.8 equity
First Principles approach	0.4-0.9 asset	
Benchmark approach		0.8 asset
Asset Beta	Standard deviation of 0.3	0.7
Equity Beta		0.873

Submissions to discussion paper

Associate Professor Hathaway estimates an equity beta of 0.53 through the direct estimation approach.¹¹⁹ In contrast, Professor Bowman estimates 0.8. Associate Professor Hathaway finds Professor Bowman's use of a Scholes-Williams estimate less than compelling and believes that the choice of 0.8 for equity beta is at the upper end of a range. Another objection to Professor Bowman's analysis is that since Telstra has recently adopted a large dividend payment strategy, the share price provides a misleading view of the relative performance of the stock to the market.

Associate Professor Hathaway estimates an asset beta for the network, using an infrastructure index risk against the all ordinaries market risk, to be 0.47, compared to Telstra's proposed asset beta of 0.7.¹²⁰

The ACCC's view

The overall WACC is highly sensitive to equity and asset beta values. The use of three different methods for estimating beta by Professor Bowman has the tendency of exaggerating the size of the range of reasonable point estimates for beta.

¹¹⁸ Bowman, December 2005, p. 22.

¹¹⁹ Hathaway, op. cit., p. 37.

¹²⁰ *Ibid.*

Direct estimation method

It is not clear whether or not it is appropriate to rely primarily on a direct estimation method to determine the equity beta of Telstra. In general, difficulties which may arise in the adoption of a direct estimation method may include:

- A relatively short time for which price and returns data is available.
- Low free float of share capital affecting the volatility of returns.
- Lack of a suitable reference market.
- The selection of inappropriate or unrepresentative timeframes or data frequency for analysis.

At this stage, and given the concerns identified by Associate Professor Hathaway with regards to Professor Bowman's direct estimation technique, it is not clear that the estimates proposed by Professor Bowman can be considered appropriate.

First principles analysis

Given the availability of alternative methods to estimate the asset beta, it is not clear why Professor Bowman has proposed a first principles analysis. A first principles approach is not commonly used by regulators or finance practitioners. It is clear from Professor Bowman's statement that this analysis is qualitative, and as such is unacceptably subjective in the matters examined and the outcomes reached relative to available alternatives. The ACCC does not consider that this technique is useful or relevant, and it should therefore be excluded from the overall estimation procedure for the beta.

Benchmark Approach/Comparable Companies

The use of benchmark betas is prevalent among regulators and finance practitioners. It is unlikely that an assessment of equity beta would be considered complete if it did not include some comparison with comparable companies.

The use of benchmark companies to provide the primary starting point for beta estimation depends on the availability of suitable benchmark companies or assets. The closer the comparators are to the base asset the better the beta estimate. Most benchmark comparators will differ in some element such as asset nature, time period or relevant geographic market. The significance of the nature of the difference needs to be assessed.

Draft view

The ACCC does not accept that a first principles analysis should be undertaken for beta estimation. The ACCC does not reject the direct estimation technique, however it does note that there have been concerns raised with Professor Bowman's estimates using this method, and thus at this stage it cannot conclude that Professor Bowman's estimates are appropriate. The ACCC remains of the view that benchmarking is still a useful approach for beta estimation.

The ACCC consider that it remains appropriate to rely on the benchmarking approach it has adopted in previous proceedings. The Regional Bell Operating Companies (RBOCs) were identified as being close to having CAN/PSTN only services in the 1997-1998 PSTN undertaking. Today, the RBOCs are more integrated with services

in long distance, mobile and data, etc. Previous RBOC beta estimates can still provide an appropriate comparator for the riskiness of the CAN/PSTN, however current estimates are likely to represent a different asset mix and therefore are likely to be less appropriate.

Factors used to determine previous equity betas were international comparisons from UK and Canadian regulators as well as values taken from the US RBOCs presented to the ACCC by Telstra¹²¹. From the 1997-98 PSTN undertaking, a range of 0.6 to 0.8 has been the ACCC's default value for the equity beta. Further, based on estimates from Telstra, OFTEL, IPART, PBSA and Ibbotson Associates¹²², a range of 0.4 to 0.8 was considered appropriate for the asset beta¹²³. Adjusting for a lower systematic risk relative to Telstra as a whole, the position since then has been an asset beta value of 0.5. On the basis of this analysis, the ACCC is not satisfied that the adoption of a beta estimate different from 0.5 is appropriate.

D.5.8. Market Risk Premium

Under the CAPM models, the return on equity required by investors must take account of the risk of investing in the market. That is, in order to encourage investors to invest in assets that carry risk (such as the CAN), they must receive a return over and above that offered on risk-free assets. The extent of the difference between the rate investors could earn by investing generally in the market and that on a risk-free government bond is referred to as the market risk premium (MRP) or equity risk premium (ERP).

While the concept of the WACC and its application to determine regulated revenue streams is unambiguously forward looking, estimates of the future cost of equity are not readily available. In practice, therefore, applications of the CAPM rely on analysis of historical measures of the returns to equity to estimate the MRP. Whilst a historical measure may not always give the most appropriate forward-looking estimate, the past is often the best available indicator of the future. This is especially the case where MRPs are based on expectations of the future and historical measures can influence future expectations.

Telstra's position

Professor Bowman takes two approaches in estimating the MRP; a historical approach and a benchmark approach. A selection of historical estimates of the Australian MRP is provided and then a mid-point of 7.0 per cent is chosen. Professor Bowman asserts that the 6.0 per cent rate the ACCC prefers is inconsistent with historical data and that

¹²¹ Telstra Corporation Limited, *Submission in support of the Undertaking for Domestic PSTN Originating and Terminating Access – Part A: Economic Submission*, 6 May 1998, p. 30.

¹²² Updated US unlevered adjusted betas from Ibbotson are 0.47 (median) and 0.68 (SIC composite) for the Transportation, Communications, Electric, Gas and Sanitary Services, Cost of Capital 2006 Yearbook, Data Through March 2006.

http://www.ibbotson.com/download/valuation/sample/SIC_4.pdf

¹²³ ACCC, *A report on the assessment of Telstra's undertaking for the Domestic PSTN Originating and Terminating Access services*, July 2000, p. 90.

the ACCC has not presented a credible defence of such a view. This is accompanied with a caveat:

This is not necessarily a deficiency as the MRP is to be a forward-looking estimate.¹²⁴

The basis for Professor Bowman's final 7.0 per cent rate is the benchmark approach. Importantly, he does not believe the historical approach is a valid basis for estimation of the MRP. Referencing his own previous work he makes an assumption that there is an absence of relevant historical data for the purposes of deriving the market risk premium for Australia¹²⁵. The primary explanation is that the Australian market was segmented from the world market prior to de-regulation from 1984 to 1992.

A number of sources, including academic literature and an online poll, are then provided by Professor Bowman to establish that his estimate of the long-horizon US MRP is 5.5 per cent. Then, to estimate the appropriate MRP in Australia, considerations to differences in taxation, equity markets and indices, and country risk are made with adjustments to the US MRP. Professor Bowman argues that no differences between the United States and Australia are great enough to warrant an adjustment from taxation systems, whilst an adjustment is deemed appropriate due to differences in markets. In Professor Bowman's opinion, the average beta of Australian firms listed on the S&P500 would have a range of 1.2-1.5:

An incomplete list of factors that would support a higher MRP in Australia include being a smaller market, with less liquidity, smaller companies, less diversity and fewer risk management opportunities.¹²⁶

The foundation for this methodology is cited as "one of the best-known books on valuation"¹²⁷. Therefore, the benchmark approach gives rise to a MRP range of 6.6 per cent to 8.25 per cent with a mid-point value of 7.43 per cent. However, ultimately he prefers a 7.0 per cent rate.

Finally, Professor Bowman utilises a simple test to discern the reasonableness of the ACCC's position by graphing the ten year equity premium in Australia. The indication of an increasing MRP is provided to demonstrate that an argument for a forward-looking MRP lower than the historical average is difficult to accept.

Submissions to discussion paper

Associate Professor Hathaway is in disagreement with the calculation of Professor Bowman's MRP. In particular, he believes the 1.8 per cent premium that is added to the US MRP is not justified. Associate Professor Hathaway comments that the evidence contradicts Professor Bowman's analysis:¹²⁸

(1) The empirical Australian MRP has been declining in recent years towards a value of 5 per cent.

¹²⁴ Bowman, December 2005, p. 11.

¹²⁵ Bowman, R.G., *Estimating the Market Risk Premium*, JASSA, issue 3, Spring 2001, pp 10-13.

¹²⁶ Bowman, December 2005, Appendix B, p. 4.

¹²⁷ McKinsey and Company, Ltd, *Valuation: Measuring and Managing the Value of Companies*, 2000 (John Wiley & Sons: New York) University 3rd edition.

¹²⁸ Hathaway, op. cit., p. 13.

(2) The long run real return on the Australian market is 7.6 per cent post World War 2 which implies an MRP of about 5 per cent.

(3) The Australian market is systematically *less* risky than the world markets (beta = 0.7) and as it is only systematic risk that is captured in the CAPM then we could not assert that the Australian equities collectively would have higher betas but that they also have less portfolio risk. It is not consistent.

Associate Professor Hathaway further comments that:¹²⁹

- Telstra's proposition that Australia has a higher risk than the US market because it is a higher risk resource based economy is incorrect. Associate Professor Hathaway provides an example depicting a decrease in representation of resource based companies from 1973 to 2005.

- Professor Bowman states he uses the same approach applied to estimate the Market Risk Premium as UBS. Contrary to Professor Bowman's positive adjustment, Capital Research highlights the fact that UBS' estimate of a MRP for Australia is 4.8 per cent, a negative adjustment of 0.2 per cent.

- There is a difference between institutional international and personal international investors when determining the marginal investor. Associate Professor Hathaway draws links to practitioners advising institutional investors as they are preferred as the marginal investor. A table of practitioner's valuation reports, including estimates of MRP, is provided and indicating Australian MRP values are in the range of 4.5 per cent to 6 per cent.

- Professor Bowman has confused the difference between statistical uncertainty in historical estimates and uncertainty in the ex ante MRP. Associate Professor Hathaway demonstrates the problem from an implication of Professor Bowman's assertion and proposes that the expectation of the MRP could not be as high as that implied by a standard deviation of 2.5 per cent. He notes:

We have no established theory on how the expected MRP is formed in the market place.

Instead of using the volatility of the historical market data as the source of inherent uncertainty in the MRP we can examine the uncertainty in the ex ante estimates reported by practitioners.

- In relation to a ULLS specific WACC, Associate Professor Hathaway argues that since cost of capital valuations are in perpetuity, the same MRP should be used due to consistency.

The ACCC's view

In its decisions to date, including decisions in various other processes and industries, the ACCC has determined that the appropriate MRP for determination of the regulatory WACC is 6 per cent. This view was reached and upheld through numerous processes with various submissions made to the ACCC arguing for either an increased or decreased MRP.

Similarly, in this process, Professor Bowman has advanced an argument in favour of increasing the MRP to 7 per cent. In contrast, Associate Professor Hathaway has

¹²⁹ Hathaway, op. cit., p. 18.

critically evaluated the basis on which Professor Bowman has formed this view, and identified numerous difficulties with his assumptions and methodologies. Associate Professor Hathaway presents a contrary set of analyses which would support an MRP of 5 per cent, and also points to a survey of broker MRP estimates in the range of 4.5 per cent-6.0 per cent.¹³⁰

On the basis of the evidence presented to the ACCC in this undertaking assessment, it is of the draft view that an MRP of 7 per cent is not likely to be acceptable as an appropriate input for the purposes of estimating the WACC.

D.5.9. Tax Rate

The ACCC has chosen to adopt a post-tax nominal WACC (“vanilla WACC”) for the purposes of this undertaking assessment. Under this approach, tax payments will be treated as an on-going cost of business and will be passed through to Telstra on a cash flows basis.

As a result of this, the WACC does not need to be as high to cover for taxation payments, as investors will receive enough revenue to cover taxation payments in their cash flows. The WACC will, however, still need to be adjusted for taxation as the rate-of-return on debt is usually expressed in a pre-tax form, and the rate-of-return of equity is usually expressed in a form which does not account for the impact of imputation credits.

In this form of the WACC, the tax rate will only appear in the levering of the asset beta or the de-levering of the equity beta. However, the major consideration between an effective or statutory tax rate is dependent upon the ability of access provider to utilise accelerated depreciation. This allows a firm to claim higher tax deductions in the early years of an asset’s life. Allowing for the time value of money, this can mean that the effective rate of taxation is lower than the statutory rate.

Telstra’s position

In weighing up the two general approaches to the tax rate—the corporate statutory rate or the effective tax rate—Professor Bowman opts for the statutory rate partially due to changes in tax law and also because under TSLRIC assumptions, all assets are put in place at the beginning of the fiscal year being estimated. This implies that no accelerated depreciation is possible. In his opinion, it is reasonable to assume that the effective tax rate would approximately equal the statutory tax rate for the ULLS-network and ULLS specific assets.

Submissions to discussion paper

Associate Professor Hathaway believes the statutory corporate tax rate of 30 per cent to be appropriate.

¹³⁰ *Ibid.*, p. 17.

The ACCC's view

The explanation for the ACCC's historical application of an effective tax rate can be found in the 2000 PSTN undertaking report, specifically in appendices 3, 4 and 6.¹³¹ An effective tax rate of 20 per cent has been preferred by the ACCC since the 2000 final decision.

Most of Telstra's assets were in place before the Ralph reforms and were able to take advantage of accelerated depreciation:

Depending on the asset life and tilt factor for an asset, the estimated effective tax rate can range from anywhere between 9.7 and 26.5 per cent. For the vast majority of estimates, however, the effective tax rate lies between 13 and 26 per cent.¹³²

It was noted at the time that modifications to the model may be required in the future:

In subsequent assessments, an increasing proportion of the assets will indeed be ineligible for accelerated depreciation provisions, and these will have to be treated appropriately when making revenue assessments. This may require a modification to the cost model.¹³³

Professor Bowman has not made an attempt to measure the effective tax rate and states that it is in his opinion reasonable to assume that the effective tax rate approaches the statutory rate. The ACCC considers that Professor Bowman's reliance upon Telstra's preferred modelling approach to determine forward-looking economic costs is not a suitable defence for his position. The determination of TSLRIC can be accomplished in many different ways, primarily through either a bottom-up engineering/economic cost model or top-down model by adjusting current cost accounts. The fact that Telstra has chosen a bottom-up method does not automatically imply that the modelling assumptions used, in an abstraction from reality, can be exported to calculations such as these. The difficulty with Professor Bowman's statements can be demonstrated by assuming that Telstra had instead taken a top-down modelling approach to TSLRIC. If this optimisation method had been chosen, it is far less clear that Professor Bowman could claim that the statutory rate is appropriate.

Setting aside Professor Bowman's argument on those grounds, the relevant question for the ACCC is whether it is appropriate to continue to apply a rate which differs from the statutory rate. Both Professor Bowman and Associate Professor Hathaway are in agreement that it is likely to be appropriate to apply the statutory rate. Earlier decisions on this matter by the ACCC noted that, over time, the rate would tend towards the statutory rate in the absence of further taxation reforms. However, it is noted that changes to depreciation allowances were made in the most recent

¹³¹ ACCC, *Assessment of Telstra's Undertaking for the Domestic PSTN Originating and Terminating Access Services – Final Decision*, July 2000

¹³² *ibid.*, p. 84.

¹³³ *ibid.*, p. 84.

Commonwealth Budget.¹³⁴ These changes potentially have implications for the ACCC's previous statements with respect to a likely convergence between the statutory and effective tax rates over time. The ACCC therefore remains of the opinion that the effective rate of taxation should be used in estimating the WACC. As a result, the ACCC is not satisfied that Professor Bowman's proposal to adopt the statutory tax rate is appropriate.

D.5.10. Imputation Factor

The value of the imputation factor depends on:

- the extent to which the firm pays franked dividends (the amount of imputation credits distributed)
- the value of franked dividends in the hands of equity investors.

Telstra's position

Whilst Professor Bowman believes recent empirical evidence supports an imputation factor of zero he has agreed that, given the considerable uncertainty associated with this component of the WACC calculation, a factor of 0.50 is an acceptable position.

Submissions to discussion paper

Associate Professor Hathaway considers that Telstra's imputation factor of 0.5 is too high, and recommends the use of an imputation factor of 0.35. Detailed theoretical analysis is supported by his and R. Officer's recent and previous empirical results.¹³⁵ Discussion relating to practical issues, practitioners' application of the imputation factor, and empirical evidence in company buy-backs is presented in Associate Professor Hathaway's report.

The ACCC's view

The ACCC agrees that further examination of the imputation factor may be required to update the research of the past preferred position, with both Professor Bowman and Associate Professor Hathaway perceiving the value to be lower than 0.5. Despite this, Professor Bowman deems the ACCC's past preferred value as acceptable due to the uncertainty surrounding the imputation factor.

However, there is considerable uncertainty associated with the value of gamma [imputation factor].¹³⁶

The ACCC notes that Associate Professor Hathaway's range for the imputation factor is from 0.25 to 0.45. The ACCC also notes that Associate Professor Hathaway's practitioner survey reflects imputation factor values closer to and higher than 0.5.

¹³⁴ P Costello (Treasurer) and N Minchin (Minister for Finance and Administration), *2006-07 Budget Paper No 1 - Budget Strategy and Outlook 2006-07*, Commonwealth of Australia, Canberra, 9 May 2006, p. 1-11.

¹³⁵ Hathaway, N. and Officer, R., *The Value of Imputation Tax Credits*, manuscript, University of Melbourne, 1992, also Hathaway, N. and Officer, R., *The Value of Imputation Tax Credits—Update 2004*, Capital Research, November 2004.

¹³⁶ Bowman, December 2005, Appendix E, p. 5.

Accordingly, the ACCC is of the view that an imputation factor of 0.5 remains appropriate.

D.5.11. Debt Beta

In some regulatory models, a debt beta term is included in order to calculate the return on debt component of the WACC. Just as the equity beta term tries to capture the risk faced by equity holders, the debt beta term tries to capture risk faced by debt holders.

Telstra's position

Professor Bowman follows the convention amongst Australian regulators and past ACCC decisions and assumes a value of zero for the Debt Beta.

Submissions to discussion paper

Associate Professor Hathaway does not agree with a debt beta value of zero as it attributes all equity risk into the asset risk, hence implying the debt premium to be zero.

ACCC's view

Since the final decision of Telstra's 1999 2nd PSTN undertaking, a value of debt beta value of zero was preferred from a range of 0.0 per cent to 0.6 per cent. Other ACCC decisions for the debt beta have also varied¹³⁷. The ACCC considers that a value of zero remains appropriate.

A report prepared by the Allen Consulting Group for the ACCC considered this information and suggested that an appropriate range for the debt beta would be between 0 and 0.15.¹³⁸

Professor Bowman and Telstra's proposed debt beta is within the ACCC's preferred range, and is therefore considered to be appropriate.

D.5.12. Equity Issuance Cost

Telstra's submission

By referencing an ACCC decision that includes an equity issuance cost, Telstra and Professor Bowman propose to include a similar cost in Telstra's undertaking:

In its Final Decision on GasNet¹³⁹, the ACCC decided GasNet's access arrangement should (page 151) "include an allowance for equity raising costs of 0.224 per cent of regulated equity, to be recovered as an annual non-capital cost cash flow."¹⁴⁰

Professor Bowman estimates an equity issuance cost of 0.15 per cent for all three years in the regulatory period. He makes this assessment based on predominantly the same sources as the debt issuance cost estimation; Lee, Lochhead, Ritter, Zhao

¹³⁷ ACCC, decision for *Statement of principles for the regulation of electricity transmission revenues-background paper*, 2004, p.107

¹³⁸ The Allen Consulting Group, *Empirical evidence on proxy beta values for regulated gas transmission activities, final report for the ACCC*, July 2002, pp. 28-29.

¹³⁹ ACCC, *Final Decision for NSW and ACT Transmission Network Revenue Cap TransGrid 2004-05 to 2008-09*, 27 April 2005

¹⁴⁰ Bowman, December 2005, p. 23.

(1996), Brealey and Myers (2003), Vernimmen, Quiry, Dallochio, Fur and Salvi (2005) and Dechow, Sloan and Soliman (2004)¹⁴¹. A conversion is also made on the percentage of offering size to an annualised cost of capital rate.

Submissions to discussion paper

Associate Professor Hathaway is adamant that these costs are not appropriate:

The appropriate cost of capital is an opportunity cost (as described above) so it does not have to include all the potential costs of running a minor IPO nor should it include historical costs. It would be quite inappropriate for the ACCC to recompense a regulated business for costs that it most unlikely would never incur. The only cost to include would be any forward looking new equity placement which would be nothing like the costs implicit in these Reports.¹⁴²

The ACCC's view

The ACCC views the inclusion of equity issuance costs in the WACC as being inappropriate. It is more appropriate to recover equity issuance costs through a specific allowance as and when they arise, rather than through the WACC. Accordingly, the ACCC rejects the proposed equity issuance costs as being inappropriate.

D.6. Social Consequences of over or under estimating WACC

D.6.1. Telstra's submission

Professor Bowman contends that there is an asymmetry in social consequences from over or under estimating the WACC. On the basis of this contention, Professor Bowman proposes to adopt a WACC value which is greater than his best estimate. Overall, Professor Bowman contends that 'the consequences of estimation error in the WACC are very asymmetric.'¹⁴³

To adjust for the effects of his contention, Professor Bowman proposes increasing his best point estimate, by one standard deviation. He proceeds to comment on each of the input parameters and provides ranges when he concludes they are necessary. Telstra's proposed WACC values for the years 2005-06, 2006-07, 2007-08 are 13.05 per cent, 14.06 per cent and 14.26 per cent respectively.

D.6.2. Submissions to discussion paper

Associate Professor Hathaway does not comment on this matter other than to state that:

He has justified using estimates of the WACC parameters that make an allowance for regulatory risk by adding on this estimate of the 'upper' estimate of the parameters. In some important cases, he has added ranges that are far too wide to be justified in any rational manner.¹⁴⁴

¹⁴¹ Bowman, December 2005.

¹⁴² Hathaway, op. cit., p. 38.

¹⁴³ Bowman, December 2005, p. 27.

¹⁴⁴ Hathaway, op. cit., p. 39.

D.6.3. The ACCC's view

The ACCC is not satisfied that Professor Bowman's claims regarding the potential existence of an asymmetry in the social consequences of over or under estimating the WACC are valid.

Professor Bowman states that:

It is widely agreed that in a regulatory environment, the long-term social costs of under estimating the cost of capital are higher than are the long-term social costs of over estimation.¹⁴⁵

However, Professor Bowman provides no references to economic or financial literature to support this contention. Further, and more importantly, Professor Bowman makes no attempt to relate this general statement to the matters specifically under consideration in these undertakings, nor does he advance any quantitative evidence to support his claim of asymmetry in consequences.

Professor Bowman qualitatively claims that, if the WACC is set too high:

... there will be a cost imposed on the ultimate consumers, but this is unlikely to have a detectable welfare effect on individual consumers. The provider of the services will have sufficient incentives to engage in maintenance of the service and its quality and to invest in innovation and improvements in the service assets.¹⁴⁶

The basis for Professor Bowman's contention that the cost of excessive pricing will be offset by quality improvements is not clear. Firms, regardless of whether they are subject to regulation, are likely to behave in a profit-maximising manner. Professor Bowman has stated that in his view, these services are regulated because they are offered in a market with few or no alternative suppliers and which is characterised by high barriers to entry.¹⁴⁷ It is not clear why, in these circumstances, a profit-maximising firm would be relatively more likely to invest in higher service quality, or innovate where it was being offered an excessive rate of return compared to a situation in which it was offered a non-excessive rate of return. The firm is likely to undertake profit-maximising investments and service improvements in either case. Professor Bowman has not demonstrated theoretically or empirically the validity of his contention that the incentives to do so increase under excess returns, nor has he attempted to quantify any such effects.

Accordingly, where the WACC is set too high, there would only be the negative welfare effects flowing from the requirement to pay prices in excess of efficient costs with no offsetting quality benefits; resulting in an unambiguous welfare loss as against his claimed absence of a 'detectable welfare effect'.

Professor Bowman claims that, if the WACC is set too low:

¹⁴⁵ Bowman, December 2005, p. 26.

¹⁴⁶ *Ibid.*

¹⁴⁷ *Ibid.*

... there will be short-run benefits to the ultimate consumers of the service, but there will also be disincentives for the provider of the service to invest or to properly continue maintenance or service quality.¹⁴⁸

Again, the basis for Professor Bowman's contention is not clearly specified. It is conceivable that a firm, subject to the identified market conditions, may engage in this form of behaviour. However, the firm may also seek to improve its efficiency in service delivery rather than quality degradation. The ACCC also notes that undertaking periods are generally short, and Telstra is presented with frequent and regular opportunities to demonstrate empirically that service degradation is taking place and the link between this and under-compensation through the WACC, if it could be found to exist.

Thus, while the ACCC notes that there is potential for undesirable outcomes in terms of the statutory criteria of *both* over and under estimating the WACC, it is not clear that there is any asymmetry in outcomes and therefore that one or the other is relatively more likely to promote the LTIE and deviations from the best estimate of the WACC could be made to account for it.

Setting aside the theoretical basis upon which Professor Bowman has recommended an adjustment for asymmetry, he has subsequently stated that:

It is more sensible and defensible to address the asymmetry using statistical methods. In my opinion, this asymmetry should be dealt with using confidence intervals. That is, the ACCC should choose a confidence level that reflects the relative long-term costs of under or over estimating the WACC.¹⁴⁹

However, Professor Bowman goes on to acknowledge that:

The difficult issue is to determine the appropriate confidence level that reflects the relative costs to society of over and under estimating the WACC.¹⁵⁰

Professor Bowman's submission has not sought to quantify the relative costs of incorrectly estimating the WACC, and therefore has not addressed this 'difficult issue'. Despite this, Professor Bowman proceeds to give estimates to take account of this unquantified relativity:

... although I do not fully develop and defend ranges for each of the parameters in this report, I discuss all of the parameters, provide some further information on the critical parameters and give my preliminary estimates of appropriate ranges to reflect one standard deviation.¹⁵¹

Thus Professor Bowman's position in favour of an adjustment for asymmetric social consequences can be characterised as one where:

- he has not sufficiently demonstrated the theoretical and empirical basis for an asymmetry in social outcomes

¹⁴⁸ *Ibid.*

¹⁴⁹ *Ibid.*, p. 28.

¹⁵⁰ *Ibid.*

¹⁵¹ *Ibid.*, p. 29.

- he has acknowledged that determining the appropriate confidence interval to take account of asymmetry is difficult, and he has not attempted to undertake such an exercise
- but despite this, he has proposed mark-ups to many parameters which he acknowledges are not fully developed or justified.

In the context of any undertakings assessment, the onus remains with Telstra to demonstrate to the ACCC that its proposed prices are reasonable within the meaning of s. 152AH. It is the ACCC's view that Professor Bowman (and therefore Telstra) has not provided sufficient proof to demonstrate that asymmetry of outcomes exists, that the statutory criteria are better served by adjusting the WACC to take account of it, and that his proposed adjustment appropriately performs this adjustment function. Accordingly, it is the ACCC's draft conclusion to reject this aspect of Telstra's proposed WACC claims.

Appendix E. ULLS specific costs

E.1. Introduction

The ‘specific’ costs of the ULLS are those costs incurred by Telstra to allow for supply of the declared service. It has previously been asserted that these costs consist of:

- IT system development and operational costs
- ULLS connection group costs
- Wholesale management costs
- Indirect costs

At the time the ULLS was initially declared and pricing principles first developed, the ACCC agreed to Telstra recovering specific costs directly from those access seekers making use of the ULLS. However, as early as its 2003 Model Price Terms & Conditions Determination, the ACCC determined that a continuation of specific cost recovery in this way was not reasonable under the statutory criteria. Rather, the ACCC concluded that the statutory criteria were only able to be met by cost recovery across a broader range of services:

... 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...¹⁵²

The specific cost component of the ULLS monthly charge is significantly impacted by the choice of cost recovery base. For example, choosing to recover specific costs for 2005/06 over active ULLS services only would result in dividing the pool of specific costs over less than [c-i-c] SIOs.¹⁵³ On the other hand, choosing to recover specific costs for the same period over all CAN lines would result in dividing the pool by as many as 10 million SIOs.

As the choice of cost recovery base is so significant in determining the specific cost component attributed to each ULLS service, the focus of this section will be on analysis of the arguments for and against the various options, which include:

- *all* active CAN lines¹⁵⁴
- *all* active ADSL lines

¹⁵² ACCC, *Final Determinations for Model Price Terms and Conditions of the PSTN, ULLS and LCS Services*, October 2003, p. 80.

¹⁵³ Based on demand forecasts in Telstra’s 2005 Supporting Submission. The ACCC uses these forecasts for illustrative purposes only, and does not necessarily accept their correctness.

¹⁵⁴ This could be either all CAN lines or only those where the ULLS is a broadly viable service.

- all lines which have ever been ULL services
- only those lines which are current active ULL services being used by access seekers.

E.1.1. The ACCC's previous position

In its 2005 Final Decision, the ACCC concluded the following in relation to recovery of ULLS specific costs:

- regardless of the method of cost recovery chosen, Telstra's costs were below the proposed price, thus the proposed prices were unreasonable
- if the recovery of specific costs was from the largest customer base possible – including Telstra's customer base – prices proposed by Telstra would have allowed for a recovery of costs more than 200 times greater than the efficient level of ULLS specific costs, and were therefore not reasonable
- even if it were not appropriate to recover the costs from the largest possible customer base and the costs were recovered from all ADSL services, Telstra's prices would still have recovered an amount over 10 times the efficient level of ULLS specific costs, and were therefore not reasonable
- while it would be desirable to recover specific costs from a larger customer base than that proposed by Telstra (see below) even if it were not appropriate to recover costs from all services, and they were recovered only from all ULLS related lines (lines that have been taken as a ULLS or LSS service) Telstra's prices would have over-recovered ULLS specific costs, and were therefore not reasonable.

The ACCC did not come to a definitive view on the cost-recovery base at the time of the 2005 Final Decision, as having regard to the relevant legislative criteria, under any method chosen, the proposed charges as set out in the undertaking were not reasonable.

E.2. ACCC's draft assessment of ULLS specific costs

E.2.1. The long-term interest of end users

Promotion of competition

The ACCC recognises that competition is a process of rivalry and that the degree to which it is promoted by a particular pricing principle is difficult to observe. Consequently, in assessing the impact on competition, the ACCC tends to have regard to the *outcome* of competition from the consumer's perspective.¹⁵⁵ That is, the ACCC will assess the prices and qualities likely to prevail in the market under different pricing principles. The pricing system likely to lead to an outcome most closely

¹⁵⁵ See for example, ACCC, *Declaration of Local Telecommunications Services*, July 1999, p. 74.

approximating a contestable market will be deemed to promote competition to the greatest extent.¹⁵⁶

To see this, consider the case where the ULLS specific costs are \$ x and line costs are \$ y . Suppose further that there are 10 ULL lines and 100 CAN/DSL lines. If ULLS specific costs are spread over the 10 ULL lines, then the cost per line for Telstra will be \$ y while the costs per line of access seekers will be \$ $y + x/10$. Competition will, at best, push prices down to \$ $y + x/10$ and Telstra will earn a profit of \$ $x/10$ per line. However, if ULLS specific costs are spread across all CAN/DSL lines, then access seeker average costs and Telstra average costs will be the same and equal to \$ $y + x/100$. Thus the limiting competitive price will be \$ $y + x/100$.

The all lines approach therefore leads to an outcome which more closely approaches a competitive outcome and it is possible to conclude that spreading ULLS specific costs over all lines or all DSL lines will have a greater impact on price competition than spreading it only over ULLS lines. Applying the ‘future with or without’ test, it is the ACCC’s view that if the undertaking were accepted then access seekers’ costs would be higher relative to Telstra’s than if it were rejected. That is, competitive neutrality would be lessened with the acceptance of the undertaking.

The ACCC notes the view expressed in the ACT LSS decision on this issue:

We consider that Telstra’s method of cost allocation is not likely to achieve the objective in s. 152AB(2)(c) of promoting competition in markets for listed services. Rather, the opposite is likely to be achieved. Telstra’s cost allocation method has the effect of raising rivals’ costs and puts its rivals and competitors who are in the market for the supply of retail DSL services at a competitive disadvantage.¹⁵⁷

It remains to show that spreading ULLS specific costs across all DSL or all lines will have a greater or equal impact on quality of services that are able to be provided than will spreading specific costs only over ULLS and that it is preferable to not declaring the service. In assessing the likely effect on quality, it is sufficient to note that there is no compelling evidence to conclude that the ULLS lines approach will lead to a higher level of innovation. There are two conflicting incentives at work.¹⁵⁸

Under the all/DSL lines approach, average costs for Telstra and access seekers are equal or closer together than with the ULLS lines approach. Consequently, an innovation by one group threatens the ongoing profitability of the other. This market structure is likely to lead to innovation as all market participants wish to avoid the

¹⁵⁶ This discussion uses a test more closely related to perfect contestability. That is prices should be as close to average cost as possible, but no less than average cost.

¹⁵⁷ Australian Competition Tribunal, *Telstra Corporation Limited* (ACN 051 775 556), [2006] ACompT 4, para 148..

¹⁵⁸ For the purposes of this discussion it is assumed that quality increases when a firm ‘innovates’ - that is, takes an existing idea and spends the money to implement it. This is to be differentiated from a process of invention, where a firm may spend large amounts on developing new technologies. It seems unlikely that Telstra or other providers are spending substantial amounts on developing their own technology.

costs of being left behind. Under the ULLS lines approach, Telstra has lower average costs. This implies that it is able to ‘wait and see’— avoid innovating and wait instead to observe the actions of others, using its profits as a buffer. These facts tend to indicate that the all/DSL lines approach is superior in encouraging innovation.

Conversely, under the ULLS lines approach, Telstra will be insulated from the potential losses associated with innovation. Consequently it may find it easier or less risky to engage in innovation. This would suggest that the ULLS lines approach better encourages innovation.

Weighing these two effects is likely to be complicated and speculative. It is, therefore, impractical to weigh the two approaches based on consideration of innovation and quality issues. The ACCC does not apply the ‘future with or without’ test here, but notes that either approach is unlikely to have a negative effect on innovation and quality.

Finally, competition will be promoted by the ULLS if end user prices are lower than they would be without declaration so long as they do not fall below cost. The example above shows that either approach will lead to prices which are at or above cost. So long as $y + x/10$ is below the monopoly price, competition will be promoted by either approach.

Any to any connectivity

The ACCC does not consider that this criterion is directly relevant to the consideration of ULLS specific cost recovery approaches.

Use of and investment in infrastructure

Efficient investment will occur so long as efficient projects earn a reasonable market return, the investor has the appropriate incentives to invest efficiently and the market is characterised by the requisite degree of certainty.

Telstra claims that the ULLS lines approach will provide equivalent long run investment incentives for both it and its competitors. The ACCC notes that either of the ULLS lines or all lines pricing approaches will lead to a market or greater return on Telstra’s investment in ULLS specific systems.

In addition, the all/DSL lines construct will give Telstra stronger incentives to invest in efficient technology. Suppose Telstra has $x\%$ of customers, then, for every one hundred dollars saved in ULLS specific costs, Telstra will make a saving of $\$x$. Given that x is likely to be high, this is a high powered incentive scheme. If, however, the ULLS lines construct is used, then there is an incentive for Telstra to increase its specific costs to be recovered by access seekers. As demonstrated above, Telstra will make a *minimum* per line profit which is equal to the average ULL-specific cost which the ACCC accepted ($x/10$ in the previous example) and consequently, the higher is x the higher is Telstra’s profit.

The ACCC notes that the proportion of IT O&M costs attributed to ULLS specifically by Telstra has increased markedly compared to previous undertakings. Telstra has explained that this reflects the greater proportion of ULLS related IT O&M work which flows from increasing demand for the service. While this may be a fair and

accurate reflection, the ACCC has no way of auditing such attributions and notes that under the ULLS lines approach Telstra has an incentive to inflate such costs. In contrast, the all lines approach provides an incentive for Telstra to reduce such costs as it will not benefit from an increased cost pool.

Further, the all lines method creates a greater degree of pricing certainty. The total number of CAN lines is both relatively stable and large in comparison to the ULLS specific costs. Even the use of all DSL-capable lines provides greater certainty in this regard. Thus, the access price will remain relatively stable using the all/DSL lines method. The number of ULL lines by contrast is small and unstable and a small percentage change in the number of lines will lead to a large change in the price. As it is well recognised that certainty is important for investment, the all/DSL lines method is likely to promote access seeker investment in alternative infrastructure. This incentive will extend to nearly all investment in infrastructure based competition, and even to Telstra. This is because greater certainty in ULLS pricing will mean that it is easier for all investors to assess the relative strength of different investment proposals.

Consequently the all/DSL lines methodology will lead to more efficient investment by Telstra in the ULLS specific project and to more efficient investment by access seekers in DSLAM roll-outs and alternative technologies. In addition, Telstra's build decisions and incentives to invest in alternative technology and infrastructure, such as deeper fibre deployment or wireless, will not be prevented or inhibited by the all/DSL lines approach. In contrast, to the extent that Telstra earns a higher (or monopoly) profit from the ULLS lines construct, it may have fewer incentives to invest in alternative platforms.

The ACCC notes that recent amendments to s. 152AB of the TPA require that:

...in determining incentives for investment, regard must be had to the risks involved in making the investment.¹⁵⁹

The ACCC does not consider that the risks involved in any investment in ULLS related infrastructure are likely to be significantly impacted by the approach taken to recovery of ULLS specific costs. As noted above, both the all lines and the ULLS lines approaches will result in full recovery of Telstra's costs, including a reasonable return on investment.

Conclusion

In the ACCC's view, Telstra's approach to recovery of ULLS specific costs will not promote the long-term interests of end-users, as it:

- will not promote competition, as access seekers' costs of service provision will be higher than Telstra's
- will not provide appropriate investment incentives, as it will give Telstra an incentive to increase specific costs.

¹⁵⁹ Subsection 152AB(7A), inserted by Act 119, 2005 s. 3 and Sch 9, item 6.

The ACCC's preferred all/DSL lines approach will better promote competition and appropriate investment, while having similar outcomes to the ULLS lines approach in terms of quality of service, innovation and any-to-any connectivity.

E.2.2. Telstra's legitimate business interests

The ACCC has determined that legitimate interests extend to earning a normal, risk-adjusted return on investment but do not extend to continuation of monopoly profits. A normal commercial return will be guaranteed by the all/DSL lines construct. The ULLS lines construct on the other hand will essentially push a wedge between Telstra's costs and other operators' costs and will cause or maintain the ability of Telstra to earn a return greater than a normal commercial return. In such a case, the increased return will not necessarily be related to any greater efficiency.

Further, in the ACT LSS decision, it was noted that Telstra's legitimate business interests do not extend to imposing all specific costs on access seekers while bearing none of those costs itself.

Applying the 'future with or without' test, Telstra's legitimate business interests will be met under either cost allocation methodology, but acceptance of the undertaking will extend the benefit to Telstra beyond a legitimate interest. Consequently Telstra's approach goes beyond what is necessary to ensure that Telstra's legitimate business interests are protected.

E.2.3. The interests of those who have the right to use the declared service

Access seekers have the right to use the ULLS service. Part of this right must extend to the reasonable belief that they can compete through the use of the service. As shown in the example above, under the ULLS-lines construct Telstra will face average service costs significantly below the access seeker. Consequently, Telstra could price at a point below the average costs of the access seeker while still making a profit. This would have the effect of forcing the access seeker out of business even if it is otherwise more efficient than Telstra in providing the service.

The all lines construct on the other hand would mean that Telstra could not pursue such a strategy without pricing below its own average costs and consequently making a short term loss. It seems, therefore, that the all/DSL lines construct will make it less likely that the access seeker's ability to use the service will be hampered in this way.

In this regard, the ACT LSS decision states:

The interests of ... access seekers are served by an access price that enables them to compete on their merits (that is, on the basis of their own efficiency) in downstream markets. The ability of an access seeker to compete on its merits is unlikely to be served by a cost allocation method that spreads relevant costs only over LSS lines.¹⁶⁰

Further, it seems reasonable to argue that access seekers have a right to be free of unnecessary risk. In this context, the access price generated by the ULLS lines

¹⁶⁰ Australian Competition Tribunal, *Telstra Corporation Limited* (ACN 051 775 556), [2006] ACompT 4, para 138..

method is sensitive to demand estimates – the higher the demand the lower the price. This creates unnecessary risk for the access seeker. First, the profitability of any investment will depend, to a greater extent than is usual, on the actions of other competitors. For example, were no other access seekers to take up ULL it would tend to inflate the price and reduce profitability. Second, it means that the access seeker is, more than usual, open to actions taken by Telstra. Were Telstra to take steps to reduce the demand for ULL through non-price behaviour, this would impact negatively on the access seeker.

The ACCC notes Telstra's claim that:

... total TSLRIC estimates are not as sensitive to ULLS take-up as in previous periods, as ULLS-specific costs on a per unit basis comprise a relatively small proportion of the total ULLS unit cost estimate.¹⁶¹

While increased demand over the coming years may reduce the incremental impact of an additional ULLS SIO on the access price, the all/DSL lines methodology still leads to a price which is more stable over time and provides greater certainty for the access seeker.

Applying the 'future with or without' test, it appears that acceptance of Telstra's ULLS specific cost claim would not be in the interests of those who have rights to use the declared service. Telstra's approach is not competitively neutral, and would expose access seekers to unnecessary risk. For these reasons, the all lines approach is preferred and Telstra's approach would have a undue negative effect on the interests of access seekers.

E.2.4. The direct costs of providing the service

Telstra has submitted that ULLS specific costs are solely attributable to ULLS and no other service. Telstra argues that, under the statutory criteria, the ACCC must have regard to the direct costs of providing the service, and that ULLS specific costs are the direct costs of providing the ULLS. In its submission in response to the ACCC's 2005 Discussion Paper, Telstra relied on a report prepared by Henry Ergas,¹⁶² which stated:

I understand the ULLS specific costs are caused by ULLS alone. As a result, economic efficiency and the statutory criteria require that they be recovered from ULLS lines alone.¹⁶³

In its 2005 Final Decision, the ACCC rejected the above assertions of Telstra and of Ergas. The ACCC does not consider that its position should be revised in light of Telstra's recent submissions.

¹⁶¹ Telstra's 2005 Supporting Submission, p. 23.

¹⁶² Ergas, H., *Expert Report on Recovery of ULLS specific Costs*, CRA International, May 2005.

¹⁶³ *Ibid*, p. 1.

The ACCC continues to believe that it is far from clear that the ULLS specific costs claimed by Telstra are strictly caused by end users of ULLS services. When the ACCC declared the ULLS in 1999, it indicated that the declaration would lead to an increase in competition and consequently an increase in allocative efficiency. It was the ACCC's view that this would occur because of the tendency for competition to lead to lower prices. It is implicit in this argument that, in the absence of ULLS, Telstra's monopoly over the local access loop allows it to price above cost. In this regard, the ACCC sees some merit in Optus' argument that:

Telstra's claimed ULLS specific costs are not costs caused by supplying ULLS but are costs caused by the monopolistic nature of the local loop and the need to regulate access to it to correct a market failure.¹⁶⁴

It also sees some merit in the argument made by AAPT in response to the 2005 Discussion Paper:

[Specific costs] are unavoidable costs of running the monopoly CAN, not optional costs from providing an incremental service.¹⁶⁵

In the ACCC's view, the benefit of the ULLS is it provides the conditions under which a reduction in prices can occur, and the beneficiaries are *all* consumers whose prices are reduced because of the process.¹⁶⁶ Consequently, economic efficiency requires that all consumers (beneficiaries) bear the cost.

Ergas' response to the ACCC's views as expressed above stated:

My paper makes reference to those who *cause* the ULLS specific costs to be incurred bearing the costs, as occurs in any effectively competitive market, not the (possible) *beneficiaries* of a service bearing the costs. The ACCC appears to have mixed the concepts of causation and benefit in drawing its conclusions from my report.¹⁶⁷

The ACCC has not mixed up the concepts of cost causation and benefit. The ULLS specific costs have not been incurred by Telstra as a result of access seekers using the ULLS. These costs have been imposed as a result of the declaration of the ULLS. Further, the majority of these costs, such as development of IT systems, and even the base number of staff, would still be incurred even if no ULLS services were actually supplied. The ULLS has been declared in order to provide benefits to users of telecommunications services. Therefore, the concepts of cost causation and benefit are linked.

¹⁶⁴ Optus, *Optus Submission to Australian Competition and Consumer Commission on Telstra's ULLS Undertakings*, March 2006, p. 7.

¹⁶⁵ AAPT, *Submission by AAPT Limited to the Australian Competition and Consumer Commission in Response to Telstra's Unconditioned Local Loop Service and Telstra's Undertakings for the Line Sharing Service Discussion Papers*, March 2005, May 2005, p. 5.

¹⁶⁶ To the extent that price caps were, at that time, restraining Telstra's pricing, the benefit of the ULLS, when used to its optimal extent, would be that competition would constrain pricing, allowing the removal of the price cap regime.

¹⁶⁷ Ergas, H., *Response to Inaccurate Citations by the ACCC of Previous Expert Reports by Henry Ergas*, September 2005, p. 3.

In a report provided to the ACCC on 29 May 2006 and assessing the ACCC's 2005 Final Decision, Professor Joshua Gans expressed his support of the ACCC's position as explained above:

...there is an important sense that it is the declaration decision itself that caused these costs as it was from that time on that Telstra would have to incur them ... The demands of users subsequent to declaration cannot be said to be causing these costs.¹⁶⁸

Consequently, the ACCC considers that it would be consistent with the regulatory criteria for Telstra to spread ULLS specific costs over all those lines which benefit from the declaration of this service. Having regard to the matters under section 152AH, the ACCC concludes that spreading the costs over the range of lines proposed by Telstra would not be reasonable. The ULLS may have competitive effects in two distinct areas. First, if ULLS is used to provide both voice and data, the beneficiaries will be the users of *all* telephone services. This characterisation suggests that the specific costs should be spread over all lines. Second, ULLS may only or primarily provide for competition in broadband services. If this is the case, then the beneficiaries are all broadband users and the specific costs should be spread across all xDSL enabled lines.

In his report, Professor Gans supported the broader cost recovery base, stating:

...it is appropriate to view ULLS and LSS-specific (sic) costs as similar to the Universal Service Obligation on Telstra that comes from its ownership of the CAN. In that sense, for Telstra, it is "a cost of doing business." In that regard, it should be treated like all CAN costs and should be 'recovered' from all CAN users.¹⁶⁹

The ACCC does not consider that the 'future with or without' test is relevant in this context. The ACCC's draft conclusion is that an undertaking based on Telstra's approach of spreading ULLS specific costs over only existing ULLS customers will not result in charges that are commensurate with the direct costs of providing access to the ULLS, and that a broader recovery base would be more consistent with this statutory criterion.

E.2.5. Operational and technical requirements

The ACCC does not consider that there are any issues relating to operational and technical requirements that require consideration in this context.

E.2.6. The economically efficient operation of a carriage service, a telecommunications network or a facility

Allocative efficiency

Allocative efficiency is achieved when consumer prices are set at marginal cost.¹⁷⁰ As this is not possible in the current context two principles can be applied. First, prices

¹⁶⁸ Gans, J., *The Treatment of ULLS Specific Costs: A Report on Behalf of the ACCC*, CoRE Research, 29 May 2006, p. 8.

¹⁶⁹ *Ibid.*

¹⁷⁰ The ACCC interprets 'marginal cost' in terms of TSLRIC, rather than some short-run notion.

should deviate as little as possible from marginal cost and second, if possible, price deviations should be concentrated on market segments where demand elasticity is low—the Ramsey-Boiteux pricing approach.

As shown above, the ULLS lines approach leads to a situation where *all* prices deviate from cost by a greater amount than the all lines approach. Equally, the ULLS lines approach is no more likely than the all lines approach to implement Ramsey efficient pricing.

It can further be argued that the smallest reduction in consumer surplus will be achieved where the costs of the ULLS specific investment are spread over the widest possible group of consumers – that is, all CAN lines should bear a share of the costs.

Telstra consistently suggests that allocative efficiency requires that the consumer taking a ULL pay the costs of the ULLS specific investment because they are the ones who ‘caused’ it and they are the ones who ‘benefit’ from it. As discussed above, the consumer using a ULL does not benefit to any greater or lesser extent than do all market participants. The ‘cause’ of the ULLS specific costs is the regulatory regime which deems it necessary to correct for market failure.

It is therefore possible to conclude that the all lines approach is superior from the perspective of allocative efficiency to a ULLS lines approach.

Productive efficiency

Productive efficiency is achieved when the relevant service is produced at its lowest costs. As noted above, the all lines approach has a superior incentive structure and will likely lead to greater productive efficiency. In fact, the ULL lines construct is likely to be highly inefficient and to encourage not only over expenditure but also considerable rent seeking.¹⁷¹

In this regard, the ACT states that under Telstra’s preferred allocation approach:

Telstra will have a reduced incentive to find the least cost way of providing the LSS both now and in the future. This is because any reduction in the costs of providing the service will increase the extent to which access seekers are able to compete with Telstra in downstream markets (where access prices are based on costs). This would not be in Telstra’s interests.¹⁷²

Dynamic efficiency

As noted above, there is little difference between these approaches in terms of innovation and new services. If anything, however, the buffer provided by the ULLS lines approach may lead to delayed investment by Telstra.

¹⁷¹ In fact, this rent seeking can already be observed in the amount of time and effort Telstra has put in to arguing for a higher ULL specific cost.

¹⁷² Australian Competition Tribunal, *Telstra Corporation Limited* (ACN 051 775 556), [2006] ACompT 4, para 146.

Conclusion

Applying the ‘future with or without’ test, the ACCC considers that acceptance of the undertaking would result in lower consumer surplus and allocative efficiency than would otherwise exist. In addition, acceptance of the undertaking would compromise productive efficiency.

For these reasons, the ACCC considers that Telstra’s ULLS specific cost claim would have a detrimental effect on the economically efficient operation of the ULLS.

E.3. Other issues

E.3.1. Tax/subsidy argument

In its submission to the 2006 Discussion Paper, Telstra claims that it:

...acknowledges the attraction to the Commission of delivering short-term price reductions to consumers and transferring profits to access seekers by reducing Telstra’s profitability.¹⁷³

The ACCC’s preferred method of ULLS specific cost recovery does not subsidise profits earned by access seekers. Pooling all costs relevant to delivery of lines, as suggested by the ACCC, provides a competitively neutral and equivalent input into producing downstream services. In Appendix F to its 2005 Final Decision, the ACCC provided detailed analysis of Telstra’s arguments against the all/DSL lines approach. This analysis showed that the ACCC’s preferred approach would allow for increased competition between providers of retail services, which would in turn reduce prices, reduce the potential for producers to earn supernormal margins, increase consumer surplus, and reduce society’s deadweight loss. These benefits do not accrue to access seekers, but benefit all end users of telecommunications services.

E.3.2. Costs to be distributed

If the all lines approach to cost recovery was to be adopted, it would not be appropriate to recover only access seekers’ ULLS specific costs over the entire pool of CAN lines. Telstra claims that it incurs costs as a result of provisioning network services for its retail services. These relate to Telstra’s “STS interface” costs which are, according to Telstra, comparable but different from the ULLCIS interface, which is used when ULLS access seekers order and provision ULLS services.

The ACCC accepts that if Telstra faces corresponding costs that are not recovered elsewhere, these need to be added to the pool of costs to be distributed over all lines to ensure cost recovery. In this case, Telstra’s own costs of provisioning network services to its retail services should be combined with the ULLS specific costs and distributed over all lines. However, Telstra has not attempted to justify or quantify these costs.

First, while Telstra asserts that these costs exist, it does not state whether they are or are not already recovered as part of network costs. If any addition to the cost pool of

¹⁷³ Telstra’s Submission to the 2006 Discussion Paper, p. 34.

ULLS specific costs is to be made for similar costs faced by Telstra, Telstra should have demonstrated to the ACCC that these costs exist and are not recovered as part of network cost (and are not included in the PIE II model). If it is accepted that these costs exist, it is relevant to ask the question how Telstra has been recovering these costs to date. It is the ACCC's reasonable expectation that, given Telstra has stated that these costs are not 'retail' costs, they have been included by Telstra as part of its general O&M expenditure mark-ups in the PIE II model. As a result, Telstra is already recovering these costs through network costs – and in doing so, will be recovering a proportion of these internal costs from external ULLS access seekers through network cost charges.

Second, while Telstra asserts that these costs exist, it does not quantify them. If Telstra believes that the ACCC's preferred approach is deficient because it does not account for these costs, it should quantify the costs so that they can be combined with ULLS specific costs and distributed over all lines. If the resulting per line monthly charge, when combined with network charges, amounted to Telstra's proposed undertaking charges, the ACCC would be less likely to have concerns over competitive neutrality and efficiency of Telstra's proposed charges.

It is noted that the ACT considered this issue in its Determination, and stated that:

[Telstra] submitted that it incurred the same type of costs as were incurred by other access seekers who sought access to the LSS. However, there was no evidence to support the submission and we are not satisfied that this is so.¹⁷⁴

Telstra has not provided sufficient information to the ACCC to convince it that its characterisation of Telstra's and access seekers' costs is incorrect. Further, Telstra has not demonstrated that any "corrected" characterisation of costs would yield an outcome where Telstra's undertakings could be accepted as reasonable.

Finally, with regard to ULLS specific costs, and its own provisioning costs, Telstra states that:

If access seekers are equally efficient at ordering and provisioning ULLS from Telstra Wholesale as Telstra Retail is at ordering and provisioning network services from TIS and TTIP then, all other cost elements being equal, there is no reason for the Commission to conclude that Telstra's average costs are below those of access seekers.

However, even if Telstra's average cost of network service ordering and provisioning were below access seekers' average contribution to ULLS specific cost, it would be because Telstra's internal supply was more efficient than supply to access seekers.¹⁷⁵

Telstra, however, should note that it is not access seeker's efficiency that is in question. It is Telstra who chose the method of ordering and provisioning services to itself, and it is Telstra who chose the method of ordering and provisioning services to access seekers. Therefore, it is not access seeker's efficiency that is in question, but

¹⁷⁴ Australian Competition Tribunal, *Telstra Corporation Limited* (ACN 051 775 556), [2006] ACompT 4, para 137.

¹⁷⁵ Telstra, *Telstra's Response to the ACCC's Draft Decision on Telstra's ULLS and LSS Monthly Charge Undertakings*, 23 September 2005, Annexure B, p. 16.

rather, the relativities of Telstra's own efficiency of supplying services to itself or access seekers.

Telstra further claims that:

...the Commission's claim implies that entry through ULLS is inefficient in a productive sense. That is, ULLS entry requires more resources than direct supply. If this is the case, then it is in the interest of economic efficiency to dissuade access seekers from purchasing ULLS and to provide incentives for them to build their own competitive infrastructure.¹⁷⁶

It is true that additional costs need to be incurred in order to provide ULLS. However, these costs are substantially outweighed by a reduction in the deadweight loss caused by Telstra pricing.¹⁷⁷ The costs associated with provision of the ULLS will be incurred regardless of whether Telstra's or ACCC's preferred method of cost recovery is used. The ACCC's mandate, therefore, is to ensure that the costs are recovered using the method which is most likely to reduce deadweight loss and produce benefits to end-users. As indicated above, Telstra's proposed ULLS lines method is inefficient. While ACCC's preferred method eliminates more deadweight loss than Telstra's, it does not result in any more cost than Telstra's.¹⁷⁸

E.3.3. Recovery of previously unrecovered costs

Telstra argues that ULLS-specific costs which it had not recovered prior to 1 January 2006 should be included in the calculation of new prices, stating that:

It would be inconsistent with the statutory criteria to allow access seekers to escape contributing to the recovery of costs incurred on their behalf merely because those costs were arbitrarily allocated to periods when demand was low, even though those costs yielded benefits which continued into periods when demand was high...¹⁷⁹

In its submission to the 2006 Discussion Paper, Telstra argues that it was prevented from recovering ULLS-specific costs in previous periods because the ACCC used demand estimates which were overly optimistic. Telstra suggested that:

In a competitive market, Telstra would have set prices in a manner consistent with its own demand forecasts and if these forecasts were incorrect then it would have borne the risk associated with that...¹⁸⁰

In the 2005 Final Decision, the ACCC did not accept that the historic profits or losses associated with ULLS supply should be factored into the forward-looking access price.

In its report, the ACCC noted that considering historic profits or losses when determining the price for the ULLS was inconsistent with the *ex ante* approach

¹⁷⁶ *Ibid.*, pp. 16-17.

¹⁷⁷ See the ACCC's 2005 Final Decision, pp. 116-118 for detailed analysis.

¹⁷⁸ *Ibid.*, p. 116.

¹⁷⁹ Telstra's 2005 Supporting Submission, p. 20.

¹⁸⁰ Telstra's Submission to the 2006 Discussion Paper, March 2006, p. 32.

adopted by both the ACCC and Telstra. Further, including historic profits or losses would shift all the risk of demand forecast errors onto access seekers, potentially creating a ‘self-fulfilling prophecy’ whereby high ULLS costs lead to low ULLS take-up, which in turn results in continued high ULLS costs and so on.

Telstra’s submission to the 2006 Discussion Paper suggests that both the ACCC and the ACT have previously endorsed the principle of historic cost recovery. In support of this claim, Telstra cites the example of the ACCC’s inclusion of costs associated with acquiring FOXTEL’s installed base of analogue customers (known as IBAC costs) in the digital access price.

In its final decision on the Digital Pay TV Anticipatory Exemption application lodged by FOXTEL,¹⁸¹ the ACCC explained the reasoning behind its decision to allow for the recovery of IBAC costs in the digital access price:

The Commission accepts that an IBAC reflecting the efficient costs of developing the customer base over the analogue period, and from which the digital access provider, as well as digital access seekers, will benefit, is appropriate. In the absence of this expenditure, Foxtel (or a hypothetical digital STU provider) would need to incur significantly larger costs (in money and time) in order to generate a customer base of equivalent size and loyalty. Viewed from this perspective, the IBAC represents an element of an efficient forward-looking replacement cost approach to determining the asset base of a digital STU provider in the absence of a pre-existing analogue STU network.¹⁸²

Telstra wishes to recover claimed historic losses which it argues resulted from prior regulatory decisions. Clearly this was not the basis for the ACCC’s decision to allow the recovery of IBAC costs, and as such neither the ACCC nor the ACT can be said to have endorsed Telstra’s line of argument.

Generally speaking, Telstra’s 2005 Supporting Submissions and its submission to the 2006 Discussion Paper rely on the same arguments for the inclusion of historic losses as its submissions to the 2004 Undertaking process. For the reasons discussed above, and consistent with its previous views, the ACCC does not consider that historic profits or losses should be included in the *ex ante* calculation of an access price for ULLS.

E.3.4. Time period for cost recovery

The ACCC considers that, consistent with its previous approach, ULLS-specific costs should be annualised over a 5 year period commencing the year after the costs were incurred. As such, the ACCC would expect Telstra to annualise costs incurred in 2004/05 and claimed in this undertaking using forecast demand for 2005/06 to 2009/10. Costs claimed which are to be incurred in 2005/06 should be annualised over forecast demand for 2006/07 to 2010/11, and so on. Telstra’s ULLS-specific cost model does not currently handle costs in this way, instead beginning to recover

¹⁸¹ ACCC, *Section 152ATA Digital Pay TV Anticipatory Individual Exemption Application lodged by Foxtel Management Pty Limited*, December 2003.

¹⁸² *Ibid.*, p. 52.

costs immediately they are incurred. Under Telstra's ULLS lines approach to recovery of costs, this results in an overestimation of specific costs because the annualisation is performed over lower demand figures than if the correct method was used.

The ACCC notes, however, that under its preferred all lines approach to cost recovery the choice of specific years over which costs are annualised is less significant, as demand across the entire CAN is not expected to vary substantially from year to year. In this regard, the ACCC notes that the ACT gave a strong endorsement of the ACCC's preferred cost recovery base (i.e. broader than ULLS lines only) in its recent LSS decision:

...it follows from our analysis that a reasonable approach to cost allocation should go beyond allocating the costs of providing the LSS to LSS lines alone, and that any method should allocate costs at least over active DSL lines.¹⁸³

Given the significantly similar nature of LSS and ULLS specific costs, the ACCC interprets the ACT's view as relevant to the current assessment. For this reason, Telstra's incorrect implementation of the 5 year cost recovery period does not have a significant impact on the outcome of the undertaking assessment.

E.3.5. Appropriateness of using CMPI/AAS costs model

Telstra argues that the ACCC should not rely on the CMPI/AAS assessment of ULLS specific costs (CMPI/AAS Report), primarily because it was conducted in 2001 and was not based on actual experience and cost information in relation to ULLS. In addition, Telstra rejects specific elements of the CMPI/AAS Report including the WACC estimate and the indirect O&M percentage.

Further, Telstra notes that it has not had access to the CMPI/AAS model, and suggests that if such access is not granted then the model should not carry the same weight as Telstra's PIE II model which is available for public scrutiny.

As explained in the 2005 Final Decision, the ACCC does not consider that the CMPI/AAS Report should be disregarded merely because it was prepared before actual ULLS costs were incurred. The ACCC notes that the CMPI/AAS Report sought to estimate the efficient costs of provision and also adjusted for initiatives which could not be reasonably allocated to the ULLS. The ACCC considers that Telstra has not presented evidence that it has incurred efficient costs, or adjusted for non-ULLS initiatives, in its ULLS specific cost calculations.

In the course of the 2004 Undertaking assessment process, Telstra criticised the CMPI/AAS Report approach to connection group costs.¹⁸⁴ Telstra rejected the suggestion that an efficient ULLS provider could handle up to 200,000 connections per year with only 10 or 20 staff. Telstra instead quotes its current connection

¹⁸³ ACT Determination, p. 54.

¹⁸⁴ Telstra, *Public Version of Telstra's Submission in Response to the ACCC's Discussion Paper in Respect of ULLS Received March 2005*, May 2005, p. 10.

processes where Telstra's connection group make [c-i-c] connections per staff member per day.¹⁸⁵ This is closer to the half an hour per connection estimated by CMPI/AAS when there is 'extensive manual processing'.¹⁸⁶ However the ACCC considers that Telstra's figures ignore the efficiencies of greater automation that CMPI/AAS submitted an efficient provider would incur.

Telstra also criticised the CMPI/AAS Report finding that wholesale product management costs would fall over the life of the ULLS project.¹⁸⁷ Telstra argued that:

product management work activities for any product are typically influenced by the particular life cycle stage of the product. ULLS is currently on the cusp of the growth stage.¹⁸⁸

However the ACCC notes firstly that this qualitative position about cyclicalities is not supported by Telstra's quantitative modelling, which indicates a constant level of product management costs of [c-i-c] per annum for all years. Secondly the ACCC notes that Telstra has provided little updated information¹⁸⁹ to that provided to CMPI/AAS at the time of the CMPI/AAS Report.¹⁹⁰

Overall, the ACCC does not consider that the issues raised by Telstra cause the ACCC to change its position in relation to the CMPI/AAS Report. The ACCC does not consider that Telstra has presented any submissions that cause the CMPI/AAS report recommendations to be invalid.

E.3.6. Demand estimates

Telstra has submitted updated demand estimates for the calculation of unitised ULLS specific costs. The demand estimates are based on actual SIOs from previous years, which have been extrapolated for the duration of the undertaking.

Optus argues that Telstra has a strong incentive to underestimate demand levels, as this will result in a higher ULLS specific cost per service, which will in turn suppress growth. Optus also notes that the choice of cost recovery base has a significant impact on the sensitivity of the per service ULLS specific cost to demand, with Telstra's preferred ULLS lines approach resulting in the highest level of sensitivity. In contrast, if the all lines approach were used, the per service ULLS specific costs would not be highly sensitive to demand.

¹⁸⁵ *Ibid.*, also [c-i-c], *Statement of [c-i-c]*, 25 May 2005, p. 7.

¹⁸⁶ CMPI and AAS, *Review of Telstra's ULLS-specific Costs – Draft Report*, 2001, p. 28.

¹⁸⁷ Telstra, *Public Version of Telstra's Submission in Response to the ACCC's Discussion Paper in Respect of ULLS Received March 2005*, May 2005, p. 11.

¹⁸⁸ *Ibid.*

¹⁸⁹ While Telstra provided the [c-i-c] statement, that statement is largely descriptive in relation to wholesale product management costs.

¹⁹⁰ CMPI and AAS, *Review of Telstra's ULLS-specific Costs – Final Report*, 12 October 2001, p. 20.

The ACCC notes that under its preferred all lines approach to ULLS specific cost recovery, the forecast uptake of ULLS services is insignificant in determining the specific cost to be allocated to each service. As noted above, the ACT has provided a clear indication that it believes Telstra's preferred approach to recovery of specific costs is not reasonable. The affirmation by the ACT of the need for a broader cost recovery base means that it is unnecessary for the ACCC to examine Telstra's demand estimates in detail in the course of assessing this undertaking.

E.3.7. ULLS specific WACC with 'asymmetry of risk' adjustment

Telstra submits that it is appropriate for a separate WACC to be estimated in relation to ULLS specific costs. Telstra argues that network assets and ULLS specific assets entail different risks and therefore demand different costs of capital.

The ACCC has previously expressed its view that recovery of network costs and ULLS specific costs should not be differentiated – they should both be recovered through the same cash flows.¹⁹¹ The ACCC maintains that this is appropriate, and accordingly believes that a general ULLS WACC should be calculated and applied to both network and ULLS specific costs.

Telstra has argued that there is an asymmetry of risk when it comes to setting the WACC, such that the detriment to society is greater if the WACC is underestimated than if it is overestimated.¹⁹²

The ACCC continues to believe that its previous position on the WACC parameters is appropriate, and a WACC estimate higher than that based on input parameters the ACCC considers justified is unreasonable. At any rate, the ACCC does not accept that there is an asymmetry of risk.

The ACCC sets a WACC which defines a rate of return which will be earned by Telstra if the demand and cost estimates are accurate. To the extent that these estimates are *ex post* inaccurate then Telstra will earn either a higher or lower rate of return (ROR). This variation in the rate of return will, assuming accurate demand and cost estimates, be symmetric about the expected rate of return. In fact, Telstra's demand estimates consistently turn out to be too low, giving Telstra a ROR above that which the ACCC 'allows'. If anything then the distribution is skewed toward the upside.

E.3.8. Capital and operating costs claimed by Telstra

Capital costs

Telstra has sought to claim capital costs incurred in 1999/00 through 2002/03 as well as capital costs incurred in 2004/05 and 2005/06. As discussed earlier, the ACCC

¹⁹¹ See the ACCC's 2005 Final Decision, p. 77.

¹⁹² Bowman, R. G., *Report on the Appropriate Weighted Average Cost of Capital for ULLS and SSS*, Prepared for Telstra, December 2005, pp. 30-41.

does not accept that historic profits or losses from a given undertaking period should be accounted for in the next undertaking period.

Telstra is claiming capital costs for 2004/05 and 2005/06 in relation to the following projects:

- New ULLS deployment classes and PCMS codes
- ULLS enhancements
- SSS to ULLS connection process
- Enabling the provision of SSS on ULLS upper spectrum

Optus argues that the costs associated with these projects are excessive, and that Telstra has not at any rate provided sufficient detail regarding the nature of the costs it has had to incur. Optus suggests that this lack of detail may result in Telstra over-recovering some of its costs, as it currently charges additional fees to access seekers for eventualities which should be covered by the projects listed above (e.g., when there is a change of deployment class).¹⁹³

The ACCC agrees with Optus' sentiment that it is very difficult to determine whether the capital costs claimed by Telstra are reasonable and necessary or not, given the absence of detailed information in relation to the projects above. However, the ACCC makes several observations at this point.

First, the extent of work that Telstra has been required to undertake to comply with the ACIF code¹⁹⁴ is unclear to the ACCC based on information provided to date. In its submission to the 2005 Discussion Paper, Telstra explained:

In order for Telstra to meet its obligations, the project described above will facilitate integration of the new deployment classes into various Telstra systems, including the ULL Carrier Interface System¹⁹⁵

The ACCC does not have sufficient information on which to determine whether Telstra's claimed costs in this respect are reasonable. The ACCC requires further information from Telstra as to the nature of the work undertaken to comply with the ACIF code before it can properly assess the cost claim.

Second, Telstra should not be double-recovering the costs associated with ULLS enhancements. If Telstra charges an additional fee for certain enhancements as Optus has claimed, Telstra should not seek to recover the costs associated with these enhancements in the access price.

¹⁹³ Optus, *Optus Submission to Australian Competition and Consumer Commission on Telstra's ULLS Undertakings*, March 2006, p. 18.

¹⁹⁴ ACIF C559:2005 Unconditioned Local Loop Service (ULLS) Network Deployment Rules

¹⁹⁵ Telstra, *Submission in Response to the Australian Competition and Consumer Commission's Discussion Paper in Respect of ULLS Received March 2005*, 27 May 2005, p. 8.

Third, it does appear reasonable for Telstra to claim capital costs for the development of SSS to ULLS connection processes and to enable the provision of SSS on upper ULLS spectrum, provided that access seekers have requested this functionality.

Operating costs

Telstra has claimed [c-i-c] in operating costs associated with the 2004/05 and 2005/06 capex projects. Optus argues that there should not be any incremental O&M costs associated with these projects, and that only capex should be required.

In its response to the 2005 Discussion Paper, Telstra explained:

The 2005/06 O&M costs sought by Telstra are the costs of maintaining the system changes associated with the additional capital expenditure in 2005/06.¹⁹⁶

The ACCC accepts that the 2004/05 and 2005/06 operational costs associated with the capex projects are likely to be reasonably incurred by Telstra. It must be noted, however, that Telstra has provided the ACCC with insufficient basis on which to assess whether the quantum of costs claimed are reasonable.

IT O&M costs

IT operating and maintenance (O&M) costs make up the majority of ULLS specific costs claimed by Telstra. Telstra's IT O&M costs are claimed to include:

- Mainframe and mid-range production processing
- Maintenance labour
- Maintenance processing
- ULLCIS maintenance costs.

Optus has claimed that Telstra's costs are excessive. In particular, Optus argues that mainframe and mid-range processing costs are completely avoidable because the volume of ULLS transactions does not require such processing power. Optus asserts that the efficient provision of ULLS should only require personal computers and an NT server.¹⁹⁷

The ACCC requested further information from Telstra in relation to the substantial increase in IT O&M costs from 2004/05 to 2005/06 by means of a s. 152BT request on 23 March 2006.¹⁹⁸ Telstra responded that the substantial increase was due to the greater proportion of ULLS transactions expected from 2005/06 onwards in comparison to other transactions performed on the relevant systems. Under Telstra's

¹⁹⁶ *Ibid.*, p. 9.

¹⁹⁷ Optus, *Optus submission to Australian Competition and Consumer Commission on Telstra's ULLS undertakings*, March 2006, p. 20.

¹⁹⁸ Section 152BT(2) provides that, when a carrier or carriage service provider has given the ACCC an ordinary access undertaking, the ACCC may request further information in relation to the undertaking.

cost model, this increased volume of ULLS transactions leads to more costs being allocated to ULLS specifically.

The ACCC has several concerns in relation to Telstra's IT O&M cost claim. First, it is not clear to the ACCC that the provision of ULLS requires the use of mainframe and mid-range systems as claimed by Telstra. The ACCC requires further information from Telstra to support this claim, in light of Optus' argument to the contrary.

Second, the ACCC is concerned that Telstra may over-recover its costs by increasing the amount allocated to ULLS in accordance with increased demand. This is because Telstra should already be recovering the IT O&M costs associated with the relevant systems through its broader cost model (i.e., the costs should be factored into PIE II). As such, increasing the costs allocated to ULLS specifically would only be reasonable if there was a corresponding decrease in the amount allocated to other related O&M costs in PIE II. The ACCC does not have sufficient information to determine whether these O&M costs are already being sufficiently recovered through the PIE II model, and requires such information in order to determine whether Telstra's approach is reasonable or not.

This raises a broader cost allocation issue. Given the difficulties associated with identifying how certain costs are accounted for in the PIE II model, the ACCC is unlikely to be able to fully audit Telstra's claims. The ACCC's preferred all lines approach to cost recovery would mitigate this problem, as pooling ULLS specific costs with Telstra's internal costs and recovering them over the entire CAN subscriber base would lessen the impact of any misallocation of costs.

Front of house connection group and wholesale product management costs

The ACCC has rejected Telstra's claims in relation to front of house connection group and wholesale product management costs on several occasions, on the basis that the Draft CMPI/AAS Report indicated that Telstra's claimed costs were significantly higher than efficient costs in this area.¹⁹⁹

CMPI/AAS suggested that Telstra connection group staff should be able to perform a significantly larger number of ULLS connections per day than what was (and continues to be) claimed by Telstra, and that greater automation should further increase this efficiency, to the extent that:

Above 25,000 connections, increased automation should lead to further efficiencies so that it would be reasonable to assume a gradual increase in total staff numbers to 10 as connections grow to 100,000 per annum.²⁰⁰

In addition, CMPI/AAS did not accept Telstra's claim that the equivalent of two full-time project managers (at [c-i-c] plus indirect costs per manager per annum) would be required on an ongoing basis. Rather, CMPI/AAS suggested that project management

¹⁹⁹ CMPI and AAS, *Review of Telstra's ULLS-specific Costs – Draft Report*, 2001, pp. 27-29.

²⁰⁰ CMPI and AAS, *Review of Telstra's ULLS-specific Costs – Draft Report*, 2001, p. 29.

activities should be scaled down significantly after the early phases of ULLS implementation. In this regard, the ACCC notes that Telstra's current Undertaking does not claim costs for project management, but claims identical costs for "two full-time product managers."²⁰¹ It is not clear whether 'project manager' and a 'product manager' refer to the same role.

Telstra has not made any arguments which would cause the ACCC to reconsider its position in relation to connection group and wholesale product management costs – that Telstra's claimed costs are excessive compared to a reasonable estimate of efficient costs.

Conclusion

The ACCC has a number of concerns in relation to the reasonableness of Telstra's claimed capital and operating costs. In particular, the ACCC has regard to the advice of CMPI/AAS as provided in its 2001 report, which questions the efficiency of a number of Telstra's claimed costs.

It is important to note that the ACT's recent Determination, which found that Telstra's proposed cost recovery base was unreasonable, means that Telstra's undertaking is unreasonable even if the ACCC accepts all of its cost claims.

E.4. ACCC's draft conclusions on ULLS specific costs

The ACCC considers that the most significant issue in relation to ULLS specific costs remains that of the appropriate cost recovery base. Even if the ACCC accepted Telstra's claims in relation to the appropriate cost pool, the recovery of specific costs over all CAN lines or all ADSL lines would result in a per service charge substantially below that proposed by Telstra. As such, the ACCC concludes that the price terms and conditions:

- are unlikely to promote the LTIE, as they will not promote competition and will not encourage the economically efficient use of, and investment in infrastructure
- will result in Telstra recovering more than is necessary to promote its legitimate business interests
- would harm the interest of access seekers and the persons who have rights to use the service
- exceed the direct costs of providing access.

Accordingly, the ACCC's draft decision is to reject the ULLS specific costs as claimed by Telstra. The ACCC considers that price terms and conditions based on such costs are not reasonable.

²⁰¹ Telstra's 2005 Supporting Submission, p. 18.

Appendix F. USO Adjustment

F.1. Introduction

Under the *Telecommunications (Consumer Protection and Services Standards) Act 1999* (TCPSS Act), the Universal Service Obligation ensures that all people in Australia have reasonable access, on an equitable basis, to the standard telephone service and payphones²⁰². An industry levy is imposed to create a fund referred to in this section as the Universal Service Fund (USF) to support the cost of the USO, estimated as the Net Universal Service Cost (NUSC).

In the past, deriving the value of the NUSC has been a contentious issue for the Department of Communications, Information Technology and the Arts (DCITA) and the Australian Communications Authority (ACA), (now the Australian Communications and Media Authority (ACMA)). Under the TCPSS Amendment Act (No.2) 2000, a previously fundamental element of USO calculation, avoidable cost less revenue forgone, was not included in the amended legislation. Currently, the Minister for DCITA sets subsidies having regard to the advice of ACMA. More importantly, the technology mix from the NUSC model which Telstra has cited for the USO adjustment is not currently applied to estimate the USF²⁰³.

A single technology mix has been chosen, consisting of copper cable, global system for mobiles (GSM) and satellite solutions, which is the most cost efficient mix over the three year period.

Telstra fulfils its Universal Service Obligation through different types of technologies and as actual statistics are not available, it is necessary to estimate the amount attributable to the network on which ULLS operates, the CAN.

In considering the matters it must have regard to in reaching its decision the ACCC's decision was largely influenced by the following seven main criteria and sub-criteria:²⁰⁴

- whether the terms and conditions promote the long-term interests of end-users
- achieving more efficient use of telecommunications infrastructure
- achieving more efficient investment in telecommunications infrastructure
- having regard to the legitimate business interests of access providers
- the promotion of competition
- the interests of persons who have rights to use the declared service
- the direct costs of providing access

²⁰² DCITA, http://www.dcita.gov.au/tel/fixed_telephone_services/industry_issues/the_universal_service_obligation_uso

²⁰³ ACA, *Universal service subsidies for 2005-08 to 2007-08 proposal paper*, November 2004, p. 7.

²⁰⁴ The other main criterion, achieving any-to-any connectivity, is neither enhanced nor reduced by the USO adjustment and is therefore not relevant to this debate.

The following criteria and sub-criteria were not considered significant to the analysis of whether the price terms and conditions were reasonable (to the extent they required an USO adjustment):

- achieving any-to-any connectivity.
- the operational and technical requirements necessary for the safe and reliable operation of a carriage service, a telecommunications network or a facility.

F.2. Telstra's position

In order to avoid over-recovery of network costs, Telstra has calculated the network costs to be recovered in ULLS access charges as the total estimated CAN costs less the costs of radio based access technologies, inclusive of costs incurred in USO areas, less the value of the USF attributable to copper-based CAN SIOs. It is Telstra's view that an adjustment is appropriate because Telstra receives a subsidy from the Government for costs in providing universal service and therefore access prices need to be adjusted accordingly to avoid over-recovery.

Telstra considers that to attain the USO adjustment relevant for the undertaking, the USF should be pro-rated to the CAN. In order to determine the percentage which should be attributed to the copper CAN, Telstra has relied upon the Australian Communications Authority's (ACA) estimation of the NUSC for 1997-1998. The ACA's estimates for 1997-98 are shown in Table 1 below.

Figure 1. ACA Net Universal Service Cost Assessment for 1997-98

Cost component	Share of total USO cost
Copper CAN	23.1%
Other CAN	49.8%
Bearer	5.3%
Operating Expenses	16.2%
Switch	4.0%
Payphones	1.6%
Claim preparation	0.1%

Although the government has announced the USO subsidies for the years 2005-06, 2006-07 and 2007-08, there are potential difficulties with their use as they do not estimate costs by technology. Consequently, Telstra relies upon these older figures as it believes that:

The last detailed estimate of the net cost of the USO that allows these individual elements to be identified was undertaken by the Australian Communications Authority ("ACA") for 1997/98.

Through Telstra's response to the ACCC's discussion paper, Telstra indicates that it believes the USO adjustment is the only appropriate adjustment to ULLS network cost due to subsidies received. Additionally, Telstra believes their calculation is appropriate.

If more recent information were available then this would be more appropriate to use. However, given the USO contributions bear no relation to the underlying costs of providing the USO, Telstra believes the methodology it has used is the most accurate available.²⁰⁵

F.3. Position of other interested parties

No other interested parties commented on the USO adjustment.

F.4. Potential issues with ACA's 1997-98 report

Further consideration of Telstra's cited report used in the calculation raises a concern with the value of the CAN USO adjustment. Telstra argues that it is the last detailed estimate that identifies the individual technological elements. However, the validity of these numbers is compromised by a number of factors.

Criticisms associated with continued use of the 1997-1998 NUSC model to cost the USO have been documented in a 2004 Department of Communications, Information Technology and the Arts (DCITA) report²⁰⁶.

For example, it was suggested that the sample size used by the NUSC model to determine the subsidy was originally too small and has not changed since the original 1997-98 determination. Similarly, the report emphasised that no account has been taken of how the number of services in operation (SIOs) in specific areas may have changed over time, and the sample is now criticised as unrepresentative.

The model can also be criticised as lacking a well-defined cost function based on distance, density, and terrain in the sampled net cost areas (NCA). The original NUSC sample attempted to encapsulate costs as a function of density and the number of SIOs, ignoring distance and terrain.

The ACA 1997-98 report qualifies its estimates, stating:

"The NUSC amount is very sensitive to changes in key data inputs such as the opportunity cost of capital, technology choice, installation costs and depreciation rates. Minor changes to these variables will significantly affect the NUSC amount."

As mentioned in the introduction of this chapter, significantly, the original interpretation of the USO subsidy, and specifically the formula (avoidable cost less revenue forgone), has been amended since that ACA report has been written. The change in methodology in setting the NUSC may have negative implications on the integrity of the method of calculation. Furthermore, due to a government cap, the actual value determined in the 1997-98 period is different from the amount estimated in the ACA 1997-98 report.

F.4.1. Comparison of models

There are problems associated with comparing the ACA/ACMA models for the periods 1997-98, 2005-08 and Telstra's PIE II model. Due to an inability on the part of Telstra's PIE II model to report on the way in which it constructs Telstra's 'forward-looking' network in USO regions, comparisons between these models are

²⁰⁵ Telstra's Submission to the 2006 Discussion Paper, p. 35.

²⁰⁶ DCITA, Attachment H, *Universal Service Obligation and Customer Service Guarantee Review*, 17 June 2004, p. 251.

difficult and should be taken as indicative only. The ACCC does not necessarily prefer one model to another but the differences between the two models do need to be examined, given that Telstra has relied upon both models in estimating its efficient costs of providing the ULLS for the purposes of this undertaking.

Currently, the USO subsidies set by the government are based on ACA /ACMA recommendations and using a new calculation methodology. Although the estimations do not identify individual elements, it does break the USF into areas and also between payphones and standard telephone services. To give an example of the changes in technology estimation since the ACA 1997-1998 report, a percentage breakdown of current government announced USO subsidies is presented in figure 2. It should be noted that DCITA's 2005-06, 2006-07, 2007-08 figures are trended.

Comparing tables 1 and 2, payphones represent 7.72% of DCITA's USO subsidies in 2005-06 and only 1.8% for ACA's report in 1997-98. This raises concerns about the representativeness of the proposed data source.

Figure 2. A percentage breakdown of DCITA's USO subsidies

	2005–06	2006–07	2007–08
Payphones	7.72%	8.59%	9.55%
Standard Telephone Service	92.28%	91.41%	90.45%
TOTAL	100%	100%	100%

F.4.2. Telstra's PIE II model technology mix assumptions

In response to the ACCC's request for further information relating to the USO adjustment, Telstra stated that the PIE II model was incapable of providing such information. Telstra did, however, separately provide some information as part of the same request that does allow the ACCC to examine the issue to a more limited extent. This information is about technology assumptions inherent in the PIE II model, detailing SIOs by technology type across bands.

For the purposes of the following analysis the ACCC has conservatively compared PIE II's Band 3 & 4 regions in aggregate, with USO areas as modelled by the NUSC model. As shown in table 3, in moving from band 3 to band 4 there is an increase in SIOs in other technologies in the PIE II model of [c-i-c] to [c-i-c].

However, in the ACA model the total number of SIOs connected via technologies other than fixed copper and/or fibre is 211,037²⁰⁷. Given that this total is greater than the total of bands 3 and 4 ([c-i-c]) in the PIE II model, it appears that if the area in bands 3 and 4 are conservatively comparable to the USO area, the PIE II model deploys significantly less alternative technologies in its construction of the CAN. The implications are that the USO adjustment attributable to copper-based connections will be less under the ACA's assumptions than that which would be attributable to copper-based connections in Telstra's PIE II model. As Telstra relies on the PIE II model for estimating the costs of the copper CAN for the purposes of ULLS pricing, it

²⁰⁷ This can be calculated from ACA's 1997-98 technology mix in table 4.

is reasonable to conclude that the use of proportions from this model for attribution of the USF to the ULLS would lead to lower access prices.

Finally, a comparison is made between the average USO subsidy per SIO for a technology in ACA's 1997-98 model and also for Telstra's PIE II model. From Telstra's information, if the USO area is a subset of bands 3 and 4, the maximum number of radio and satellite SIOs in USO areas can only be [c-i-c] and [c-i-c] respectively. Assuming that the total number of USO SIOs in ACA's 1997-98 model remains the same, then attributing subsidies to different connection types employed in the PIE II model in accordance with the ACA's proportions gives rise to a [c-i-c] subsidy per satellite SIO, [c-i-c] per radio SIO and [c-i-c] for copper SIOs. This compares to the ACA's estimated subsidy of [c-i-c] per satellite SIO, [c-i-c] for microwave and WLL and [c-i-c] for each copper SIO.

From the analysis, the additional aggregated information indicates there are substantial and material differences in attribution of costs between the ACA 1997-98 report and Telstra's own PIE II model.

Figure 3. Technology mix for Telstra's PIE II model

Services in Operation (SIOs) by technology	Copper Lines		Other Technologies		Total
	Copper from the NU	AGH/SCAD (fibre)	Radio	Satellite	
Basic Access – Band 3	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]
Basic Access – Band 4	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]	[c-i-c]

Figure 4. ACA's 1997-98 technology mix²⁰⁸

Services in Operation (SIOs) by technology	Copper Lines	Other Technologies			Total
		WLL	Point-to-multipoint microwave	Satellite	
USO area	206,549	58,140	36,284	115,613	416,586

²⁰⁸ ACA, 1997-1998, p. 11.

Figure 5. Average USO per SIO – actual ACA and Telstra’s effective estimate

Average USO subsidy per SIO	ACA 1997	# of SIOs	Telstra PIE II	Maximum Satellite and Radio	# of SIOs
Copper	[c-i-c]	206,549	Copper and fibre	[c-i-c]	[c-i-c]
WLL	[c-i-c]	58,140	Copper	[c-i-c]	[c-i-c]
Microwave	[c-i-c]	36,284	Radio	[c-i-c]	[c-i-c]
Satellite	[c-i-c]	115,613	Satellite	[c-i-c]	[c-i-c]

The substantial differences in the amount of subsidy which would be attributed to the copper-based CAN and therefore the ULLS if the PIE II model were to be used in a way consistent with the calculation of network costs, rather than the NUSC model, are not surprising. The substantial differences in the way PIE II deploys copper relative to the NUSC model were identified by DCITA in 2004:

...the technology mix that PIE II uses is not the same as the NUSC mix, PIE II using more copper and fibre in non-urban areas as it builds out the customer access network (CAN) from distribution areas (DAs) or pillars using a minimum spanning tree algorithm, rather than a sampling approach...

According to Telstra's briefings on PIE II, the model does not use satellite until an exchange service area (ESA) has less than 15 services in operation in total, although this is a parameter to the model that can be changed. On the basis of the current parameter setting of 15 services in operation, PIE II is likely to arrive at a higher USO subsidy than the NUSC model as it is likely to place more copper and fibre based DAs in non built-up areas where the NUSC model would potentially use satellite and mobile technology.²⁰⁹

Given that the substantial differences between the NUSC model and the PIE II model have long been a matter of public record, the onus is upon Telstra to explain why, given these differences, it is appropriate to rely upon the technology mix employed by the NUSC model to estimate the appropriate amount of the USF to attribute to the copper-based CAN and therefore the ULLS. The ACCC requested such a reconciliation and justification from Telstra through a s. 152BT request, which for several reasons Telstra declined to provide. Accordingly, given the range of difficulties identified above, and the absence of further information supporting Telstra’s preferred approach, the ACCC cannot be satisfied that the amount of the USF attributed to the ULLS by Telstra’s USO adjustment is reasonable.

²⁰⁹ DCITA (7 April 2004), *Review of the operation of the Universal Service Obligation and Customer Service Guarantee*, Attachment K, p. 273.

F.5. ACCC's draft assessment of the USO adjustment

F.5.1. Long-term interests of end-users (LTIE)

This criterion can be interpreted as generally promoted by sustainable lower prices, higher quality of service and a greater choice of products. For the purposes of assessing the LTIE it was found the use of the 'future with and without' test was an appropriate analytical aid to assist the ACCC's assessment.

The promotion of competition

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

An appropriate adjustment to take account of the availability of the USF to Telstra is likely to promote competition. That is, the USF subsidy is available to Telstra on an ongoing basis, and thus the 'net' cost to Telstra for serving a given SIO in a USO region will be less than the economic cost of serving that SIO.

As outlined above in section F.4, it is the ACCC's view that while it considers that an appropriate adjustment will be likely to promote competition, it cannot be satisfied that Telstra's proposed adjustment is appropriate.

Accordingly, the 'with' scenario in this case is characterised by a USO adjustment which is not reasonable, and likely to insufficiently take into account the availability of the USF to Telstra. However, the 'without' scenario in this instance is more complicated, with two potential alternatives. That is, an averaged price construct may be in place going forward, but with an appropriate USO adjustment. More likely, de-averaged prices for the ULLS will continue to prevail in the market going forward, in which case any USO adjustment which may be adopted will be limited to those bands which incorporate USO regions.

Regardless of which pricing construct prevails in the market going forward, it is the ACCC's view that competition is more likely to be promoted without the undertakings.

Any-to-any connectivity

The criterion for any-to-any connectivity was not considered significant to the analysis of whether the price terms and conditions were reasonable (to the extent they required a USO adjustment).

Achieving more efficient use of, and investment in telecommunications infrastructure

This criterion comprises of three interdependent elements of productive efficiency, dynamic efficiency and allocative efficiency.

Productive efficiency refers to the extent to which industry-wide costs are minimised whilst dynamic efficiency represents the improvement in productivity and lowering of costs over time. Both productive and dynamic efficiency are promoted through an access price that encourages entry and competition in supply of services. Access prices that encourage dynamic efficiency should not affect the "build or buy" decision from competitors.

As outlined in section F.4, it is the ACCC's view that while it considers that an suitable adjustment would be appropriate, it cannot be satisfied that Telstra's particular proposed adjustment is appropriate.

Productive efficiency is not served by this adjustment because Telstra is likely to be more than compensated for efficient costs and thus has relatively fewer incentives to achieve productive efficiency. Similarly, access seekers are likely to be less able to compete with Telstra's retail services, reducing the ability of competition in the market for retail services to drive productive efficiency gains. However, were the adjustment to be appropriate, and/or were de-averaged prices to prevail in the market going forward, it is relatively more likely that productive efficiency would be promoted.

Allocative efficiency refers to the allocation of resources that provide maximum benefit to society. A condition for allocative efficiency is setting access prices such that they at least reflect the value that society places on the next best alternative products and services. An averaged price for the ULLS inclusive of an appropriate adjustment for the USF would be relatively less likely to distort allocative efficiency to the same extent as the inappropriate adjustment currently proposed by Telstra. Similarly, a de-averaged price for the ULLS would be more likely to promote allocative efficiency than the price proposed by Telstra in these undertakings.

Dynamic efficiency is also unlikely to be served by an inappropriate USO adjustment as Telstra will be overcompensated by ULLS prices, and therefore relatively less likely to seek to maintain productive efficiency over time.

Overall assessment of long-term interests of end-users

The ACCC's analysis of Telstra's proposed USO adjustment (i.e. the future with the accepted undertaking), relative to the proposed scenarios without the undertaking, has demonstrated that the proposed adjustment is not likely to promote the LTIE.

Regardless of whether averaged or de-averaged prices for the ULLS prevail in the market, it is clear from this assessment that any adjustment for the USF available to Telstra must, at a minimum, be correctly determined. It is the ACCC's view that Telstra's proposed adjustment is not correctly determined, and that therefore the LTIE will not be promoted by these undertakings to the extent that they seek to impose this USO adjustment.

F.5.2. Telstra's legitimate business interests

Telstra's legitimate business interests would generally be served by access prices which reflected efficient costs, inclusive of a normal commercial return on prudent investments, without taking advantage of market power and or a lack of supply competition. 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, while not allowing Telstra to pursue interests which are not considered legitimate, such as monopoly pricing.

The ACCC and Telstra are both in agreement that the presence of funding sources external to wholesale and retail arrangements, such as the USF, should be accounted for by access prices which appropriately deviate from efficient costs. In this case, Telstra's legitimate business interests will instead be served by access prices which reflect efficient costs, less an appropriate attribution of the USF to the ULLS.

As discussed in section F.4, it is the ACCC's view that it cannot be satisfied that Telstra's proposed USO adjustment attributes an appropriate proportion of the USF to

the ULLS, and accordingly that the USO adjustment does not reflect only Telstra's legitimate business interests.

F.5.3. The interests of persons who have rights to use the declared service

The ability of an access seeker to compete in the supply of a service in a dependent market should be based on the cost and quality of its service relative to its competitors²¹⁰.

An access price which is not appropriately adjusted for the availability of external funding sources to Telstra is clearly not in the interests of persons who have rights to use the declared service. As discussed in section F.4, the ACCC cannot be satisfied that the adjustment proposed by Telstra attributes an appropriate proportion of the USF to the ULLS, it is the ACCC's view that the interests of persons who have rights to use the ULLS are not served by these undertakings.

F.5.4. Direct costs of providing access

This criterion requires that direct costs of providing access should cover the direct incremental costs of providing the access service and no more.

The availability of the USF to Telstra effectively leads to a violation of this criterion. That is, the direct costs of providing access should reflect the efficient costs of the ULLS, absent cross-subsidies. Strictly speaking, therefore, any adjustment to take account of the presence of the USF would lead to access prices which do not reflect the direct costs of providing access.

Accordingly, any adjustment to access prices, appropriate or not as the case may be, will lead to access prices which deviate from this narrow definition of direct costs. On balance, however, the need to satisfy all other criteria through the use of an appropriate adjustment to access prices will make any deviation from direct costs insignificant in the overall assessment of the USO adjustment.

F.5.5. Operational and technical requirements

This criterion relates to access prices not leading to arrangements that may encourage unsafe or unreliable operation of a carriage service, telecommunications network or facility.

It is the ACCC's view that the proposed USO adjustment has no implications for this criterion.

F.6. ACCC's draft conclusions on the USO adjustment

From a theoretical perspective, the ACCC considers that a USO adjustment is reasonable given Telstra's proposed pricing structure. However, the implementation of the proposed adjustment appears to suffer from practical difficulties due to substantial differences in the way in which PIE II builds the network in USO areas relative to the NUSC model upon which Telstra has relied for the adjustment.

In assessing the USO adjustment, the ACCC noted that Telstra employs PIE II to estimate its network costs and uses proportions from ACA's 1997-98 NUSC to adjust

²¹⁰ ACCC, *Access Pricing Principles – Telecommunications*, 1997, p. 9.

PIE II's costs. It was found that the networks designed by the two models vary substantially, leading to significant distortions when attempted to be used together in the fashion proposed by Telstra. As a result, the ACCC has little confidence that the proposed adjustment is reasonable, relative to an adjustment which could be made on the basis of the network as designed by PIE II. An adjustment based on PIE II would both be more likely to reflect the way in which PIE II builds the network, as well as consistent with Telstra's estimation of network costs.

Accordingly, while a USO adjustment is reasonable in general, the ACCC's view is that Telstra's proposed adjustment is unreasonable as it:

- is unlikely to promote the LTIE, as they will not promote competition and will not encourage the economically efficient use of, or investment in infrastructure
- will result in Telstra recovering more than is necessary to promote Telstra's legitimate business interests
- would harm the interest of access seekers, and the persons who have rights to use the service would be limited in their ability to compete
- will exceed the direct costs of providing access

does not have a material effect on the operational and technical requirements necessary for the safe and reliable operation of the service.

Appendix G. Network Modernisation

G.1. Introduction

This appendix contains the ACCC's assessment as to whether the non-price terms and conditions relating to network modernisation are reasonable.

G.1.1. Content of the network modernisation clauses

The network modernisation provisions in the undertaking largely require the ULLS access seeker to agree that Telstra has a right to maintain and upgrade its network and acknowledge that such a maintenance and upgrade may result in the ULLS being truncated or no longer being able to be supplied. Access seekers are also required to acknowledge that in some cases access seeker points of interconnection may have to be moved. Telstra undertakes to provide at least 15 weeks notice of any network modernisation upgrade that will affect the supply of the ULLS.

These provisions are notably different to the network modernisation provisions in Telstra's previous ULLS undertakings.²¹¹

In the ACCC's discussion paper, it separated the changes into two groups based on the nature of the conditions that the access seeker accedes to.²¹²

The first group of changes relates to the conditions that the access seeker "agrees to":

- Previously the access seeker agreed that provision of ULLS did not prevent, limit or restrict Telstra from modernising its network in accordance with agreed terms and conditions
- The revised clause states that the access seeker agrees that:
 - Telstra has the right to maintain and upgrade its network
 - provision of the ULLS does not prevent, limit or restrict Telstra from maintaining or upgrading its network
 - maintenance and upgrade includes a wide variety of activities, including remediation, reconfiguration, enablement, augmentation, maintenance and repair, and specifically includes decommissioning copper and replacing it with fibre optic cable.

The second group relates to the conditions that the access seeker "acknowledges":

- Previously the access seeker acknowledged that any modernisation may include installing RIMs or CMUXs closer to end users than traditional exchanges, and that access seekers' ULLS might be truncated, that POIs might move to those RIMs or CMUXs and that the deployment class of access seeker equipment might change.
- The revised clause now states that the access seeker acknowledges that:
 - a network upgrade might include installation of a TCAM (Telstra customer access module)²¹³ closer to end-users than an exchange

²¹¹ These previous undertakings were submitted to the ACCC on 13 December 2004.

²¹² ACCC's 2006 Discussion Paper, p. 22.

²¹³ A TCAM is a Telstra device that provides dial tone, ring current and power to the end user, and includes RSS, RSU and IRIM.

- such an upgrade might require truncation of a ULLS, that new access seeker POIs might have to be established at the new TCAMs and that the deployment class of access seeker equipment might change
- a network upgrade might mean that ULLS can no longer be supplied or may adversely affect the quality of the ULLS
- Telstra will provide not less than 15 weeks notice where a ULLS needs to be moved to a new POI or a ULLS can no longer be supplied. An exception is “Emergency network upgrades” for which Telstra does not give a minimum guaranteed level of notice.²¹⁴
- if a network upgrade is such that the access seeker needs to establish a new POI and it does not do so, or if a network upgrade means that a ULLS can no longer be supplied, Telstra has the right to terminate the ULLS and the access seeker must comply with a notice for hand-back.

The ACCC notes that the revised provisions do not contain references to modernisation occurring in accordance with “agreed terms and conditions”, which was contained in the network modernisation provisions of the previous Telstra ULLS undertaking. In response to an ACCC information request, Telstra confirmed that this was a reference to terms and conditions in access agreements between Telstra and access seekers and relate to matters such as the description of the service, term of supply, applicable pricing, obligations on the access seeker and network modernisation.²¹⁵ That response also confirms that Telstra does not intend that the absence of this reference in the current undertakings means that the undertaking is intended to override the provisions and accordingly at this stage the ACCC does not consider that the omission is significant. The ACCC notes Telstra’s comment that the agreed terms and conditions contain the same terms and conditions relating to network modernisation as are contained in the undertaking.

However the ACCC must not simply consider the changes from the previous undertaking. Rather it must consider the current provisions as a whole against the statutory criteria. The ACCC’s discussion paper and Telstra’s submission in response have focused on comparing the current provisions to the provisions from the previous undertaking. However, the fact that the ACCC did not conduct a detailed assessment of the provisions in previous undertaking assessments, where network modernisation was not a significant issue and/or where rejection of the undertaking on other grounds meant that detailed assessment was not required, does not mean that the ACCC accepted those provisions as reasonable.

G.1.2. Relevance of the network modernisation provisions

As noted by both Telstra²¹⁶ and Optus²¹⁷, network modernisation provisions in previous ULLS undertakings have not received substantial discussion. Interested parties also

²¹⁴ An emergency network upgrade is defined as “a network upgrade that is required to protect the security or integrity of Telstra’s Network or the health or safety of any person”

²¹⁵ Telstra, *Response to request by Commission under section 152BT of the Trade Practices Act 1974 (Cth)*, 13 April 2006, p. 10.

²¹⁶ Telstra’s Submission to the 2006 Discussion Paper, p. 35.

did not typically raise the provisions as a significant concern. To some extent this may reflect the fact that substantial network modernisation by Telstra was not considered likely at the time of assessing those undertakings.

However, the ACCC considers that network modernisation in the context of the current undertaking assessment is a more significant consideration. In particular, this is because Telstra has raised the prospect of upgrading its current network to a fibre-to-the-node (FTTN) network.²¹⁸ There is currently discussion between government, Telstra and the ACCC about the appropriate regulatory environment and treatment for such an upgrade.²¹⁹ Accordingly, the ACCC considers that the proposed clauses in Telstra's undertaking have particularly been revised in order to fit in with plans for a FTTN upgrade.

Telstra has stated that a FTTN upgrade will provide ongoing maintenance cost savings and also allow the provision of faster internet services to customers.

However it should be noted that network modernisation may have significant implications for access seekers. In particular, a number of access seekers have installed or are installing equipment, such as DSLAMs, in Telstra exchanges to be used in conjunction with the ULLS to provide broadband and/or voice services. This equipment relies on connections on Telstra's main distribution frame (MDF) to the copper ULLS lines from end-user premises.

The risk of network modernisation is that under a FTTN network structure, this equipment is effectively "stranded"—that is, fibre will replace part of the copper ULLS lines from end-user premises and the DSLAM will no longer be usable. Access seekers will either need to abandon the DSLAM, obtain the use of lines from the nodes to the exchange or, if possible, move the DSLAM to an interconnect point at the node.

Modernisation may also require that access seekers will, if there is available room at the nodes, have to install equipment in *each* node, which would require significantly larger rollout than has taken place to the present.

Given the prospect of a rollout and its possible implications, the ACCC considers that the network modernisation provisions in this undertaking will require more scrutiny than in the past. However the ACCC notes that the network modernisation provisions do not relate exclusively to Telstra's announced plans, and would also apply to more "ad hoc" modernisation activities.

The ACCC notes that a fibre rollout by Telstra may have further implications such as a need for access by access seekers to fibre between Telstra's nodes and access seeker interconnection points in Telstra exchanges or to install infrastructure at nodes, and consequent consideration of issues such as the need to modify the ULLS service

²¹⁷ Optus, *Optus submission to Australian Competition and Consumer Commission on Telstra's ULLS undertakings*, March 2006, p. 28.

²¹⁸ A summary of plans relating to FTTN announced by Telstra can be found in ACCC, *A strategic review of the regulation of fixed network services—an ACCC discussion paper*, December 2005, p. 48.

²¹⁹ See Telstra, "Fibre-to-the-node" ASX announcement, 21 December 2005.

description or declare a node-to-exchange backhaul or bitstream service. However the ACCC considers that within the context of this undertaking assessment it would be inappropriate to pre-empt fuller consideration of such issues and that it should confine its consideration to the undertaking provisions.²²⁰

The ACCC understands that ACIF may be examining multi-lateral solutions to issues relating to network modernisation in the context of Telstra's proposed FTTN upgrade. However the ACCC considers that, while potentially valuable, any outcomes that may come from ACIF processes do not relieve the ACCC of its obligations under the TPA to assess Telstra's undertaking.

G.2. Telstra's position

Telstra has submitted that the changes to the provisions:²²¹

...assist access seekers by promoting clarity and certainty around their investment decisions and that the network modernisation provisions, as a whole, strike an appropriate balance between Telstra's need to maintain and update its network and the interests of access seekers in having sufficient notice of changes that will affect them.

Telstra has also submitted that "none of [the] changes place the access seeker in a worse position than that under the network modernisation provisions of previous ULLS undertakings"²²² and that the inclusion of an explicit notice period in the current undertaking in particular places the access seeker in a better situation than it would have enjoyed under previous undertakings.

G.3. Position of other interested parties

The only other interested party to make comment on the network modernisation provisions of the undertaking was Optus.

Optus submitted that the network modernisation provisions were inconsistent with the reasonableness criteria of the TPA.²²³ Optus submitted that the proposed provisions gave too much weight to Telstra's business interests above the other regulatory criteria, and allowed Telstra to make network changes without regard to access seekers rights. Optus also submitted that the provisions were against the long-term interests of end-users and would undermine competition since they would allow Telstra to contract out of its right to supply the declared ULLS.

Optus submitted that rather than the proposed clauses, Telstra should be required to ensure continuity of service for the ULLS or else make alternative access services available, and that modernisation should only be allowed to occur when "absolutely" necessary. Optus submitted that the clauses created an unacceptable level of uncertainty for Optus at a time when it is rolling out ULLS services.

²²⁰ The ACCC's Strategic Review of the regulation of fixed network services is considering such issues in more depth: ACCC, *A strategic review of the regulation of fixed network services—an ACCC discussion paper*, December 2005, p. 48.

²²¹ Telstra's 2005 Supporting Submission.

²²² Telstra's Submission to the 2006 Discussion Paper, p. 38.

²²³ Optus, *Optus submission to Australian Competition and Consumer Commission on Telstra's ULLS undertakings*, March 2006, p. 27.

G.4. ACCC's draft assessment of network modernisation

In this section, the ACCC considers the network modernisation provisions in light of the reasonableness criteria in section 152AH of the TPA.

G.4.1. Interests of persons who have rights to use the declared service

The ACCC considers that the persons who have rights to use the ULLS will typically be access seekers using the ULLS as an input to supply telecommunications services to end-users. Access seekers have an interest in being able to compete on their relative merits for these end-user customers. Provisions in an undertaking that favour certain service providers over others will consequently harm those interests. Access seekers have also made investments in equipment such as DSLAMs on the basis of having access to the ULLS. They therefore have an interest in those assets not being stranded and in not being denied the necessary access to Telstra's copper network to allow those assets to be used.

In considering this criteria, the ACCC considers that the "with or without test" can be a useful aid and has employed it as an aid in the following assessment.

Notice period

The ACCC considers that the notice period provided for in the network modernisation provisions is a significant consideration. Clause 6.3 provides that Telstra will provide an access seeker with not less than 15 weeks prior notice of a network upgrade, although the notice period may vary depending on the type of upgrade required.

In its model non-price terms and conditions, the ACCC considered the appropriate model terms relating to relocations of facilities.²²⁴ The ACCC's final determination considered that an appropriate model clause would provide that an access provider may relocate a facility if:²²⁵

- it gives access seekers an **equivalent notice** to that which it gives itself (and in any case gives not less than 120 business days)
- it consults with the access seeker in **good faith** about any reasonable concerns
- relocation may only occur when it is **reasonably necessary** to do so.

Although at the time of drafting the model non-price clause a large scale network modernisation was less likely than it is now, the ACCC considers that it is appropriate to consider Telstra's proposed network modernisation provisions in light of the model terms.

In particular, the ACCC notes its conclusion that access seekers should receive equivalent notice to the access provider, which is not mirrored in Telstra's proposed provisions providing for 15 weeks minimum notice. Furthermore, the ACCC also notes that in any case Telstra's proposed notice is less than the model terms' minimum notice period of 120 business days (or approximately 24 weeks).

²²⁴ ACCC, *Final determination—model non-price terms and conditions*, October 2003, p. 34.

²²⁵ Ibid, p. 71

It is arguable that the inclusion of any notice period in Telstra's undertaking, compared to previous undertaking's network modernisation clauses, is beneficial to access seekers. At this stage, the ACCC does not have details on how Telstra's proposed 15 weeks notice compares to the equivalent notice that Telstra would itself have of its modernisation activities.²²⁶ However, in the context of a large scale upgrade such as Telstra's proposed FTTN rollout, the ACCC would expect Telstra to have more than 15 weeks notice of modernisation activities. The ACCC considers that, in the context of a possible major network upgrade, the interests of access seekers are likely to be harmed by the fact that Telstra's undertaking does not state that access seekers will receive the same notice period as Telstra itself receives.

This is because, if the current network provisions were accepted, Telstra would be likely to only provide access seekers of any upgrades 15 weeks in advance. While the clause states that 15 weeks is the minimum notice, the ACCC considers that Telstra would be unlikely, in the absence of a clause in the undertaking itself, to provide more notice than the stated minimum. The wording of the provisions gives a strong incentive to Telstra to not give any more notice than the stated 15 weeks. Clause 6.4 of the proposed network modernisation provisions requires access seekers to agree that if they do not take the necessary action (such as move their points of interconnection) specified in a notice within the notice period, they must hand back the customer to Telstra. It is in Telstra's interests to recover end-user customers from its competitors. Telstra therefore has no incentive to give more notice than 15 weeks as this would make it less likely that it will win back the end-user customer.

The ACCC considers that this shorter 15 week notice period would place access seekers at a significant disadvantage compared to Telstra. Access seekers would be expected to require significant forward planning to move infrastructure such as DSLAMs, or to build new infrastructure such as links to Telstra's new nodes. Given the large scale nature of the planned FTTN rollout, it would be expected that Telstra would itself plan its upgrades and associated product marketing significantly in excess of 15 weeks ahead. The ACCC considers that access seekers would therefore be disadvantaged as they may not have sufficient time to make the necessary upgrades to ensure continuity of their service or respond to new Telstra offerings. This would in turn have significant impact on access seekers' ability to compete for end-users and negatively affect their interest in not having their assets stranded.

Accordingly, access seekers will be relatively disadvantaged compared to Telstra, which will have greater time to plan infrastructure purchases, technical staff allocations and end-user marketing of new services. The ACCC would expect that an access seeker would be capable of some element of forward planning before it received notification of modernisation activities from Telstra. However the ACCC also considers that large portions of planning would need to take place after notification, given that the geographic location of the network modernisation would be significant.

²²⁶ However it notes that the 15 weeks is less than the model terms minimum notice period of 120 business days when facilities are relocated.

The ACCC also notes that Telstra's right to receive handback of the ULLS and the end-user customer from access seekers applies as long as the access seeker has not complied with the requirements in the time specified in the notice of network modernisation activities. This would apply equally to access seekers who have commenced but not completed works as it would to access seekers who do not respond to a notice. In such a case, infrastructure which the access seeker had commenced building could be totally stranded.

The ACCC considers that Telstra would have strong incentives to frustrate such infrastructure from being built, as it would negatively affect the competitiveness of access seekers. It could achieve this given that, to complete rollout of infrastructure, access seekers would be required to interconnect with Telstra's network and Telstra has significant control over how this is done and how long it takes to complete. While access seekers could possibly have recourse to court action for compensation against such activity, the behaviour would appear to be facilitated by the terms of the undertaking, and could have significant implications for the competitiveness and capital expenditure of access seekers.

Comparatively, if the undertaking was not accepted, access seekers would be able to seek ACCC arbitration of non-price issues such as the notice period for network modernisation activities. The ACCC would be likely to arbitrate notice period issues in accordance with the equivalent notice in its model non-price terms such that access seekers' ability to compete for end-user customers was not damaged.

The ACCC notes that alternatives may exist to its preferred equivalent notice, which may be a difficult concept to realistically assess. It may be more realistic to assess what a reasonable length of time would be for access seekers to be able to make alternative arrangements to the current ULLS arrangements which is based on links to exchanges, and then simply enforce this minimum notice period. The fallback position of 24 weeks in the ACCC's model terms recognises this issue. The ACCC considers that 15 weeks would appear to be an insufficient period of time, and also considers that even the back-up notice of 24 weeks in the model terms might be insufficient in the context of major infrastructure builds.

The ACCC understands that Telstra currently requires access seekers to provide 84 days notice of managed network migration activities for the ULLS.²²⁷ The ACCC would expect that such connection work, which does not require the relocation of infrastructure, could be expected to require significantly less notice than where infrastructure is moved in the context of an FTTN upgrade. However it notes that the difference between this notice period and Telstra's proposed network modernisation clause notice period is three weeks. The ACCC also notes that Telstra has submitted in the past that the standard length of time for a ULLS is 2 years.²²⁸ While the ACCC does not consider that Telstra would necessarily be expected to provide this length of notice, it notes that this emphasises that use of this service tends to be long term.

²²⁷ Evidence to Senate Environment, Communications, Information Technology and the Arts Legislation Committee, Parliament of Australia, Canberra, 24 May 2005, 101 (Denis Mullane).

²²⁸ Telstra, *Telstra's submission in support of the ULLS connection charges undertaking dated 13 December 2004*, February 2005, p. 4.

Good faith consultation with access seekers and necessity of modernisation

An issue raised by Optus is the risk that network modernisation might be “implemented for the purpose of sabotaging access plans to use the [ULLS]”.²²⁹ The ACCC considers that the risk of this during a large-scale FTTN rollout is probably small. However, it would be open for particular upgrades as part of a large-scale FTTN rollout, or for more ad hoc modernisation activities, to be made such that they provided greater impact to access seeker interests. This could occur through the manipulation of the timing and geographic deployment pattern of the rollout to target areas where access seekers infrastructure has been employed in Telstra exchanges. The ACCC notes again that clause 6.4 of the proposed network modernisation provisions states that, if an access seeker does not comply with a Network upgrade notice, Telstra has the right to terminate the ULLS.

The ACCC notes that this type of concern prompted the inclusion in the ACCC’s model terms of the clauses requiring that the access provider “consult with the access seeker and negotiate in good faith in relation to any reasonable concerns of the access seeker” and that “the access provider may re-locate a facility only where it is reasonably necessary to do so”.²³⁰ Such requirements would allow Telstra the flexibility to make upgrades for reasons of cost savings or improved services, but not allow upgrades made for the purpose of harming competitors. The ACCC considers that any network modernisation should be conducted in a way that meets the legitimate interests and plans of the access provider, but does not actively aim to damage competitors’ interests.

The ACCC considers that, were the undertaking accepted, Telstra may be able to use network modernisation in a way that would actively work against access seeker interests. For example, this might involve all modernisation occurring first in areas where there is the greatest number of ULLS lines currently being taken by access seekers. This would clearly have significant effects on access seeker’s ability to compete and on their interest to not have their investments stranded. The terms of the proposed provisions are not premised on any consultation taking place with the access seeker. Rather, the clauses are based on Telstra informing the access seeker of modernisation activities and the access seeker either making the necessary changes to its network infrastructure or the ULLS being cancelled.

In such a situation, it would be open to the ACCC to take action against Telstra under Part XIB or Part IV of the TPA to prevent such anti-competitive conduct. In that sense, it could be argued that the threat of legal action by the ACCC is sufficient to negate the need for “good faith negotiation” or “reasonably necessary” provisions in the terms of the undertaking. However, the ACCC notes that such legal action may not be timely and considers that it would be more appropriate to have such clauses in the undertaking. The ACCC also does not consider that action under Part XIB or Part IV should be used to correct defects in accepted undertakings – rather the undertaking itself needs to be consistent with the legislative criteria. This view equally applies to consideration of the notice period in the undertaking.

²²⁹ Optus, p. 28.

²³⁰ ACCC, *Final determination—model non-price terms and conditions*, October 2003, p. 71.

If the undertaking was not accepted, the ACCC considers that it would be able to arbitrate network modernisation issues between Telstra and access seekers. The ACCC would be likely to arbitrate consistent with its model non-price terms and conditions, and include clauses along the lines of those listed above. In a practical sense, it may be difficult for the access seeker to enforce an obligation to negotiate in good faith or that modernisation activities must only occur when reasonably necessary. However the ACCC considers that inclusion of such clauses would be a superior outcome to having no obligation to at least consult with access seekers before network modernisation takes place.

Exemptions from notice periods

Related to both the notice requirements and the issue of good faith is the issue of emergency network upgrades. Telstra's proposed provisions do not commit Telstra to any notice period for "emergency network upgrades". An emergency network upgrade is defined in the undertaking as:

...a Network Upgrade that is required to protect the security or integrity of Telstra's Network or the health or safety of any person.²³¹

Telstra has submitted that such a carve out "reflects industry standard practice in that such an extensive notice period simply cannot be given in the event of an emergency".²³² The ACCC considers that it is appropriate that there be certain network upgrades where Telstra cannot practically give as much notice as it would typically provide, particularly to the extent that the upgrade is needed to protect the health or safety of any person.²³³ However it notes that the exemption from notice requirements of any upgrade "required to protect the security or integrity of Telstra's Network" appears to be fairly loose wording and may detract from the interests of access seekers.

If the undertaking was accepted, the ACCC considers that it may be open to Telstra to exploit this exception in a way that damages competition. Given that the concept of the integrity of Telstra's network is not defined in the undertaking, the ACCC considers that the undertaking may introduce strong incentives on Telstra to classify all upgrades as ones that protect the integrity of its network and hence relieve it of its obligation to provide the appropriate notice of the upgrades. The ACCC considers that this would clearly have an impact on the ability of access seekers to compete, given that services could be cut off without notice. This is particularly true given that any upgrade can, due to the operation of the proposed Clause 6.4, result in hand-back of the ULLS to Telstra. The ACCC considers that Telstra at this stage has not

²³¹ Undertaking, Service schedule x167, p. 2.

²³² Telstra's Submission to the 2006 Discussion Paper, p. 38.

²³³ The ACCC has recognised the need for such an ability in its model non-price terms and conditions – see ACCC, *Final determination—model non-price terms and conditions*, October 2003, p. 72.

presented evidence to satisfy the ACCC that the currently proposed emergency network upgrade exception is appropriate.²³⁴

Comparatively, were the undertaking not accepted, the ACCC considers that it would be able to arbitrate network modernisation issues between access seekers and Telstra. The ACCC considers that, while it is appropriate that Telstra be able to conduct emergency work, the current clause would appear to be inappropriate and it would be unlikely to arbitrate consistent with Telstra's proposed clause.

The ACCC notes that it has model terms that deal with suspension and termination of services during an emergency situation.²³⁵ While providing that the access provider may suspend or terminate a service in case of emergency, that clause provides greater detail about the nature of the events that allow such termination or suspension and also introduces assessments of reasonableness into assessing whether such events have occurred. The ACCC considers that it would be more likely to arbitrate consistently with the model non-price terms and that this would more appropriately protect the interests of access seekers.

G.4.2. Telstra's legitimate business interests

The ACCC conventionally assesses Telstra's legitimate business interests as being its ability to recover the costs (including a normal commercial cost of capital) of efficiently incurred investments. In considering the non-price network modernisation provisions in Telstra's undertaking, however, the ACCC considers that Telstra's legitimate business interests in the context of network modernisation are more relevantly thought of as its reasonably free ability to perform upgrades to its network. The ACCC considers that it is appropriate that Telstra have the flexibility to alter the underlying structure of its network and that it is not unduly restricted to legacy network arrangements. Upgrades should be allowed both as part of a large-scale FTTN rollout and on a more ad hoc basis.

In considering this criteria, the ACCC considers that the "with or without test" can be a useful aid and has employed it as an aid in the following assessment.

Notice period

To the extent that Telstra's legitimate business interests relate to its ability to make a normal commercial rate of return on its efficient investments, the ACCC considers that the length of notice given to access seekers will be unlikely to have an effect. The ACCC considers that notice requirements would only harm Telstra's interest in making a commercial rate of return if a prescribed notice period to access seekers was so long that Telstra was limited in the extent to which it could make and use its modernised investments. However, the ACCC has proposed that access seekers should receive equivalent notice of network modernisation to that received by Telstra. Accordingly, the ACCC considers that Telstra's legitimate business interests will not

²³⁴ The ACT has stated that a party submitting an undertaking bears an "onus of affirmatively proving the reasonableness of the terms and conditions of the undertaking": Australian Competition Tribunal, *Telstra Corporation Limited* (ACN 051 775 556) [2006] ACompT 4, paragraph 20.

²³⁵ ACCC, *Final determination—model non-price terms and conditions*, October 2003, p. 72.

be harmed in that it does not have to give any more notice that it already has itself for its planning purposes.

To the extent that Telstra's legitimate business interests extend to being relatively free to perform upgrades to its network, the major limitation in the network modernisation provisions on Telstra is the 15 week notice period for those upgrades that will require an access seeker to take some action to continue to use the ULLS or will prevent the access seeker from obtaining the ULLS at all. The ACCC considers that this notice period is not a particularly onerous restriction on Telstra, given that network modernisation provisions would be expected to be planned a significant period of time beforehand. The ACCC accordingly considers that, were the undertaking accepted, Telstra's legitimate business interests would not be harmed.

However, the ACCC considers that the fact that this is the only restriction on Telstra's ability to upgrade its network, and that there is no promise to consult in good faith or only undertake necessary upgrades, may mean that Telstra's network modernisation provisions go beyond what is necessary for the protection of Telstra's legitimate business interests.

In particular, the ACCC considers that, were the undertaking rejected, access seekers might be able to negotiate a different period of notice, or seek ACCC arbitration if they could not come to an agreement with Telstra. As stated above, in such a case the ACCC would be likely to arbitrate in accordance with the principles of its model non-price terms and conditions, requiring that Telstra provide parties with an equivalent notice to that which it provides itself. The ACCC considers that this would be likely to be more than the 15 week minimum notice period included in the undertaking.

The ACCC does not consider that such an obligation would negatively affect Telstra's legitimate business interests. This is because Telstra's network modernisation activities would be free to go ahead at the planned time, and so its interests in conducting a relatively unfettered modernisation would not be affected. However it would have to provide a more appropriate notice period to access seekers, which as stated above would better balance the interests of access seekers and the interests of Telstra

Other restrictions proposed by Optus

As noted in section G.3, Optus proposed further restrictions that it considers should apply were the undertaking not accepted.²³⁶ While consideration of alternative access services is beyond the scope of this assessment, Optus' other points can be briefly considered.

The ACCC considers that the requirement that upgrades only be allowed to occur when "absolutely" necessary would derogate from Telstra's legitimate business interests that might preclude Telstra from modernisation to provide new services, and only allow modernisation where existing infrastructure was faulty. As discussed above the ACCC considers that "reasonably" necessary would be a better benchmark.

²³⁶ Optus p. 28

The ACCC considers that, in the context of a FTTN upgrade, a requirement to ensure continuity of service would be inappropriate, given that the nature of the upgrade may necessitate a break in the service. To the extent that requiring continuity might mean minimising outage time for services, the ACCC considers that such a requirement might be appropriate. However it considers that, as in any case, Telstra has an incentive to minimise outages for its own end-user customers, and legislative and undertaking clause obligations to treat access seekers in a non-discriminatory way in respect of technical and operation issues, this is unlikely to be a significant issue.

Accordingly the ACCC considers that Optus' proposed restrictions would be unlikely to be enforced by the ACCC in an arbitration.

Whether modernisation activities might be stalled

The ACCC also considers that, as long as notice periods are appropriate and the upgrade is made for a legitimate purpose, it is in Telstra's legitimate business interests to be able to perform its network modernisation in accordance with its plans and not be unduly delayed in those plans. The ACCC's model terms contain a provision stating that:²³⁷

G.11 Notwithstanding any negotiations between the access provider and the access seeker, a re-location proposed by the access provider shall come into effect at the time stated in clause G.9(a), unless the access provider and the access seeker agree otherwise.

where clause G.9 contains the notice provisions.

The ACCC considers that this is an appropriate principle to apply in this case as well. To require agreement between the access provider and potentially affected access seekers as to all timings for network modernisation activities could potentially stymie any such upgrades indefinitely. The ACCC considers that, as long as sufficient notice is provided, upgrades should be allowed to proceed as planned.

Accordingly, the ACCC considers that clause 6.1 of the proposed network modernisation provisions, which requires the access seeker to agree that Telstra has the right to maintain and upgrade its network, and the provision of the ULLS does not prevent it from doing so, is appropriate to protect Telstra's legitimate business interests and achieves an appropriate balance between Telstra's and access seekers' interests.

In the absence of an equivalent clause, the ACCC considers that Telstra's rights would be restricted unduly and its ability to modernise would be unduly restricted. In the absence of the undertaking, and if the ACCC was called on to arbitrate in relation to this matter, it would be likely to arbitrate in accordance with its model terms in order to protect Telstra's legitimate interest to perform upgrades. However, it notes that it considers it appropriate that Telstra engage in good faith discussions with access seekers about their reasonable concerns.

²³⁷ ACCC, *Final determination—model non-price terms and conditions*, October 2003, p. 72.

G.4.3. Long term interests of end-users

In determining whether particular terms and conditions in an undertaking promote the long-term interests of end-users (LTIE), the TPA requires the ACCC to consider the extent to which the undertaking terms result in achieving the following:

- the objective of promoting competition in markets for listed carriage services
- the objective of achieving any-to-any connectivity in relation to carriage services that involve communications between end-users
- the objective of encouraging the economically efficient use of, and economically efficient investment in
 - the infrastructure by which listed services are supplied
 - any other infrastructure by which listed services are, or are likely to become, capable of being supplied.²³⁸

The ACCC has published a guide explaining how it interprets the LTIE in conducting declaration inquiries²³⁹ and considers that similar interpretations could be applied in the context of undertaking assessments. However it notes that there have been amendments to the definition of the LTIE since that guide was published.

The ACCC's broad view is that terms and conditions promote the long-term interests of end-users if they are likely to contribute towards the provisions of services at lower prices and/or higher quality, or contribute to a greater diversity and services being available to end-users.

In considering the LTIE criteria, the ACCC considers that the “with or without test” can be a useful aid and has employed it as an aid in the following assessment.

Promotion of competition

Competition is a process of rivalry. The degree to which competition will be promoted by a decision to accept or not accept an undertaking is therefore difficult to forecast. The ACCC accordingly tends to consider the likely effect of competition on such matters as the price, quality and availability of services to end-users. The ACCC considers that in its assessment of the network modernisation provisions it is appropriate to consider to what extent the provisions may improve these outcomes from the end-user's perspective.

As stated above, the proposed network modernisation provisions could have implications for competition in that they appear to give Telstra significantly more notice compared to its competitors of when network modernisation upgrades are likely to occur. To the extent that 15 weeks is insufficient to allow access seekers to plan new infrastructure builds or negotiate new access arrangements, competition will suffer as access seekers will be unable to guarantee the provision of services to end-

²³⁸ The TPA was recently amended to provide for consideration of the efficient investment in any other infrastructure by which listed carriage services are, or are likely to become, capable of being supplied. See the *Telecommunications Legislation Amendment (Competition and Consumer Issues) Act 2005*.

²³⁹ ACCC, *Telecommunications services— declaration provisions*, July 1999.

user customers, reducing their reputation and viability in the market place for end-user customers.

The ACCC also notes its concern that the proposed network modernisation provisions have no restriction on the reasons for Telstra's modernisation activities, potentially creating incentives for Telstra to target areas where competitors have significant customer numbers. This could also have significant detrimental effects on competitors, who would be unable to provide competing services to end-users. In fact, it would be likely that competition would be reduced in areas which had seen the greatest competition to date.

Large scale network modernisation activities such as Telstra's proposed FTTN upgrade may bring benefits to end-users in the form of improved services. However this will not occur if the provisions in the undertaking prevent a sufficient level of competition developing. Telstra has said that its FTTN network would be capable of providing 12Mbps to all end-users within the network, which is potentially significantly higher than the current lowest entry-level speed in the market of 256Kbps. It has also said that it would achieve reduced maintenance costs. However end-users will only achieve these benefits if competition is sufficiently strong that Telstra is under an incentive to provide higher speeds and lower prices. The ACCC has stated above its concern that Telstra's proposed network modernisation provisions may inhibit competitors' ability to compete for end-user customers. Without adequate notice periods to allow access seekers to negotiate alternative access or roll out necessary infrastructure, or if Telstra can target competitors infrastructure, access seekers would be unable to successfully provide competing services. At least some of the benefits of a FTTN rollout could accordingly be largely lost to end-users if the undertaking were accepted.

Comparatively, if the undertaking was not accepted, and parties were to negotiate, or the ACCC was to arbitrate, more appropriate notice periods and terms for network modernisation, the ACCC considers that the potential benefits of FTTN rollout would be more readily achieved. This is because competitors would be in a position where they could respond to the more competitive products being supplied by Telstra, and Telstra would have an incentive to actually make those products available. The ACCC also considers that a greater notice period would have no effect on the speed of services that Telstra could deliver under a FTTN structure. Accordingly, the ACCC considers that, if the undertaking was not accepted, and longer notice periods were negotiated or arbitrated by the ACCC, the products potentially available over the FTTN network would be the same as if the undertaking were accepted.

Any-to-any connectivity

The ACCC considers that it is relevant to consider the potential effect of the undertaking on any-to-any connectivity.

In the context of a FTTN upgrade made while the undertaking was operational, Telstra has two main options to maintain any-to-any connectivity between Telstra's own customers and end-users currently receiving services via access seeker ULLS. Firstly, it could maintain the current copper loops to the exchange so that the access seekers can maintain their current POIs. Alternatively, it can require access seekers to move their POIs to the new nodes, or force the access seekers to hand back the ULLS and the end-user customer to Telstra if the access seeker cannot move their POIs. However the ACCC would expect that based on the terms of the undertaking and its

understanding that a significant benefit of FTTN comes from the need to no longer maintain separate copper links, that the second of these possibilities would be more likely. The ACCC has considered the competition implications of this above.

In the absence of any hand-back procedure, it is unclear that end-user customers of access seekers would have their connectivity maintained.

Accordingly, it would seem to the ACCC that any-to-any connectivity would be preserved by the operation of a hand back mechanism, and that a clause such as that in the undertaking may be appropriate to ensure that any-to-any connectivity is maintained. However it notes its conclusions in other parts of this assessment that such a provision must be accompanied by appropriate provisions relating to matters such as notice periods.

Economically efficient use and investment

The ACCC considers that consideration of the economically efficient use of infrastructure is a concept more relevant to pricing matters, where it is possible to consider whether the price of the ULLS is close to marginal costs of production. However it is possible to consider investment issues in the context of non-price matters such as network modernisation.

The ACCC's assessment of this criterion typically considers the desirability of Telstra making economically appropriate investments to its infrastructure and ensuring that access seekers face appropriate build/buy decisions in acquiring the ULLS. However, in the context of non-price provisions, build/buy issues (which largely rely on cost) are less directly relevant. The ACCC considers that it is therefore difficult to assess whether economically efficient investment will occur in a consideration of non-price provisions. As such, the ACCC considers that its consideration of this criterion must remain reasonably high level.

Infrastructure by which listed services are supplied

In this undertaking assessment, the ACCC considers that the infrastructure by which listed services are supplied relevantly includes the ULLS and the infrastructure, such as DSLAMs and MSANs, used by service providers with the ULLS. The ACCC understands that this infrastructure is infrastructure that could be used to provide listed services under a FTTN architecture, albeit possibly with different POIs or additional access services or in certain areas only.

The ACCC recognises that network modernisation provisions which favour Telstra's interests will tend to impede the rollout of infrastructure such as DSLAMs by access seekers, who will be reluctant to run the risk of assets being stranded. Comparatively, provisions which better protect access seeker interests will encourage the rollout of infrastructure such as DSLAMs.

The ACCC, as stated above, considers that acceptance of the proposed network modernisation provisions may unnecessarily harm access seeker interests and go beyond what is necessary to ensure Telstra's legitimate business interests. Accordingly, the ACCC considers that were the undertaking accepted, the investment by access seekers in competing broadband infrastructure might be inhibited. If the undertaking was not accepted, the ACCC considers that this would be less likely to occur. The ACCC considers that more appropriate notice periods and protection from upgrades not made in good faith would encourage rollouts by access seekers. This is

because access seekers rolling out infrastructure now would be less likely to have assets stranded and lose end-user customers if they had adequate notice periods to allow them to move existing infrastructure, install additional infrastructure or make alternative access arrangements.

Any other infrastructure by which listed services are, or are likely to become, capable of being supplied

In this undertaking assessment, the ACCC considers that the infrastructure by which listed services are, or are likely to become, capable of being supplied relevantly includes Telstra's proposed FTTN infrastructure.

Network modernisation provisions which favour Telstra's interests will tend to encourage FTTN investment by Telstra. The ACCC has stated above that the provisions of the undertaking create incentives for Telstra to rollout FTTN infrastructure not only for the reasons of cost savings and improved services, but also for inhibiting competition. Accordingly, it could be argued that the provisions provide strong incentives to Telstra to roll out FTTN infrastructure.

If the undertaking was not accepted, as stated previously, the ACCC considers that in an arbitration it would be likely to arbitrate consistently with its model terms and conditions. The ACCC considers that such an arbitral decision would better recognise access seeker interests but would not detract from Telstra's interest in performing upgrades to its network. Accordingly, the ACCC does not consider that not accepting the undertaking would inhibit the rollout of FTTN infrastructure. While certain of Telstra's incentives may be reduced, the ACCC considers that the rollout would be prevented.

G.4.4. Direct costs

The ACCC does not consider that this criterion is relevant to consideration of non-price terms and conditions.

G.4.5. Operational and technical requirements

The ACCC does not consider that this criterion is particularly relevant to consideration of the network modernisation provisions. However, it notes that the reliable operation of access seeker services could be affected if access seekers have insufficient notice periods to allow them to build appropriate infrastructure or negotiate appropriate access arrangements.

G.4.6. Economically efficient operation

The ACCC considers that consideration of this criterion is the same as consideration of the economic efficiency criteria in its consideration of the LTIE.

G.5. ACCC's draft conclusions on network modernisation

The ACCC has considered Telstra's proposed network modernisation provisions against the regulatory criteria and has made the following draft conclusions:

- the undertaking provisions would appear to unduly negatively affect the interests of access seekers in that:
 - Telstra provides only 15 weeks notice to access seekers, which leaves access seekers with limited ability to plan infrastructure purchases, technical staff

allocations and end-user marketing of new services, and negatively affects access seekers' interests in not having existing assets stranded

- the absence of good faith obligations and the presence of a wide emergency upgrade exception would appear to allow Telstra to target areas where access seekers are most competitive
- the provisions would appear to go beyond what is necessary to protect Telstra's legitimate business interests in being able to modernise its network
- the provisions do not promote the long-term interests of end-users in that:
 - competition will be damaged if access seekers do not receive adequate notice of modernisation activities and if Telstra is able to modernise in a way that targets access seekers
 - access seeker investment in infrastructure will be impeded.

It is necessary for the ACCC to consider each of its conclusions on the regulatory criteria in determining whether it considers that the network modernisation provisions are reasonable or not.

The ACCC considers that at this time it cannot be satisfied that the network modernisation provisions in the undertaking are reasonable. It considers that Telstra has not satisfied the "onus of affirmatively proving the reasonableness of the terms and conditions of the undertaking" relating to network modernisation.²⁴⁰ Provisions requiring the access seeker to acknowledge Telstra's rights to modernise its services, requiring the access seeker to make changes to POIs and infrastructure, and requiring hand-back of services in certain circumstances are not unreasonable per se and could reflect an appropriate system for modernisation of a telecommunications network. However the ACCC retains concerns that the details of the provisions submitted by Telstra mean that the ACCC cannot be satisfied that the network modernisation provisions are reasonable.

²⁴⁰ Australian Competition Tribunal, *Telstra Corporation Limited* (ACN 051 775 556), [2006] ACompT 4, paragraph 20.

Appendix H. Section 152CGA Specification of Documents

For the purposes of section 152CGA, the documents that the Commission examined in the course of making its draft decision are specified in this section.

Below is a list of submissions that have been submitted to the ACCC and were examined by the ACCC as part of this undertaking assessment.²⁴¹

Many of these documents contain confidential information. Where this is the case, the document title has been marked with an asterisk (*). In most cases public versions of documents are available, and confidential versions may be accessed subject to appropriate confidentiality undertakings with the owner of the information.

H.1. Telstra submissions in support of the undertaking

(*) Bowman, R. G., *Report on the Appropriate Weighted Average Cost of Capital for ULLS and SSS, Prepared for Telstra*, Annexure C to Telstra's Supporting Submission, December 2005.

(*) Bowman, R. G., *Report on the Appropriate Weighted Average Cost of Capital for the ULLS Network, Prepared for Telstra*, Annexure C to Telstra's Supporting Submission, December 2005.

(*) Mitchell, B.M., *Appropriateness of Telstra's 2005 Cost Modelling Methodology*, Annexure D to Telstra's Supporting Submission, December 2005.

Telstra, *Attachment A to the Undertakings – Service Schedule x167 – Telstra Unconditioned Local Loop Service – Definitions*, December 2005.

(*) Telstra, *Telstra's Submission in Support of the ULLS Monthly Charges Undertakings Dated 23 December 2005*, 23 December 2005.

H.2. Submissions in response to the ACCC's discussion paper

The following submissions were received in response to the ACCC's discussion paper which was released on 31 January 2006.

H.2.1. AAPT

Hathaway, N., *Telstra's WACCs for Network ULLS and the ULLS and SSS Businesses—Review of Reports by Prof. Bowman*, Capital Research, 15 March 2006.

H.2.2. Austar

Austar United Communications Limited, *Response to ACCC Discussion Paper—Telstra's Undertakings for the Unconditioned Local Loop Service*, March 2006.

²⁴¹ These submissions may refer to other submissions to earlier core services undertaking assessments or model price determinations. Although not necessarily be listed here, public versions of these documents are likely to be available on the ACCC's website.

H.2.3. Competitive Carriers Coalition

CCC, *Submission in Response to Telstra Undertakings for the ULLS*, 28 March and 5 May 2006.

Marsden Jacob Associates, *Averaging vs. De-averaging—A Report Prepared by Marsden Jacob Associates for the Competitive Carriers Coalition*, 28 March 2006.

(*) Marsden Jacob Associates and Europe Economics, *Comments on Discussion Paper—Telstra’s Undertaking in Relation to the Unconditioned Local Loop Service*, 4 May 2006.

H.2.4. Optus

(*) Optus, *Optus Submission to Australian Competition and Consumer Commission on Telstra’s ULLS Undertakings*, March 2006.

H.2.5. Telstra

(*) Bowman, R.G., *Confidential Report on WACC in Response to ACCC Draft Decision on ULLS and SSS, Prepared for Telstra Corporation Limited*, September 2005.

(*) Ergas, H., *Response to Inaccurate Citations by the ACCC of Previous Expert Reports by Henry Ergas*, CRA International, September 2005.

(*) Mitchell, B.M., *Commentary on Network Costs Section of ACCC Draft Decision*, 29 September 2005.

(*) Sidak, G., *Expert report of J. Gregory Sidak*, 22 September 2005.

(*) Telstra, *Telstra’s Response to the ACCC’s Draft Decision on Telstra’s ULLS and LSS Monthly Charges Undertakings*, 23 September 2005.

(*) Telstra, *Telstra’s Confidential Submission in Response to the Australian Competition and Consumer Commission’s Draft Decision on Telstra’s ULLS and LSS Monthly Charges Undertakings, Annexure A, Background*, 23, September 2005.

(*) Telstra, *Telstra’s Confidential Submission in Response to the Australian Competition and Consumer Commission’s Draft Decision on Telstra’s ULLS and LSS Monthly Charges Undertakings, Annexure B, ULLS and LSS Specific Costs*, 23 September 2005.

(*) Telstra, *Telstra’s Confidential Submission in Response to the Australian Competition and Consumer Commission’s Draft Decision on Telstra’s ULLS and LSS Monthly Charges Undertakings, Annexure D, Network Costs*, 23 September 2005.

(*) Telstra, *Telstra’s Confidential Submission in Response to the Australian Competition and Consumer Commission’s Draft on Telstra’s ULLS and LSS Monthly Charges Undertakings, Annexure F, Response to Access Seekers Submissions*, 10 October 2005.

(*) Telstra, *Telstra’s Confidential Submission in Response to the Australian Competition and Consumer Commission’s Draft Decision on Telstra’s ULLS and LSS Monthly Charges Undertakings, Annexure G, Previous Submissions*, 23 September 2005.

(*) [c-i-c] *Second Statement of [c-i-c]*, 20 September 2005.

(*) [c-i-c] *Statement of [c-i-c]* 29 September 2005.

(*) [c-i-c] *Statement of [c-i-c]*, 29 September 2005.

(*) [c-i-c] *Second Statement of [c-i-c]*, 23 September 2005.

(*) Telstra, *Telstra's Submission in Response to the Australian Competition and Consumer Commission's Discussion Paper in Respect of ULLS Dated January 2006*, 14 March 2006.

H.2.6. Western Australian Department of Industry and Resources

Western Australian Department of Industry and Resources, *Telstra's Unconditioned Local Loop Service Monthly Charge Undertaking*, March 2006.

H.3. Past ACCC reports and decisions

ACCC, *Access Pricing Principles – Telecommunications*, July 1997.

ACCC, *Access Arrangement by Transmission Pipelines Australia, Final Decision*, October 1998.

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

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

ACCC, *NSW and ACT Transmission Network Revenue Caps 1999/00-2003/04 – Decision*, 25 January 2000.

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

ACCC, *Final Decision on GasNet Australia Access Arrangement Revisions for the Principal Transmission System*, 13 November 2002.

ACCC, *Telecommunications Market Indicator Report 2002-03*, June 2004.

(*) ACCC, *Final Determinations for Model Price Terms and Conditions for the PSTN, ULLS and LCS Services*, October 2003.

ACCC, *Final Determination—Model Non-Price Terms and Conditions*, October 2003.

ACCC, *Section 152ATA Digital Pay TV Anticipatory Individual Exemption Application lodged by Foxtel Management Pty Limited*, December 2003.

ACCC, *Decision: Statement of Principles for the Regulation of Electricity Transmission Revenues- Background Paper*, 8 December 2004.

(*) ACCC, *Assessment of Telstra's undertakings for PSTN, ULLS and LCS – Draft Decision*, October 2004.

(*) ACCC, *Assessment of Telstra's undertakings for PSTN, ULLS and LCS – Final Decision*, December 2004.

ACCC, *Telstra's Undertakings for the Unconditioned Local Loop Service—Discussion Paper*, January 2005.

ACCC, *Final Decision for NSW and ACT Transmission Network Revenue Cap, TransGrid 2004-05 to 2008-09*, 27 April 2005.

(*) ACCC, *Assessment of Telstra's ULLS and LSS Monthly Charge Undertakings—Draft Decision*, August 2005.

(*) ACCC, *Assessment of Telstra's ULLS and LSS Monthly Charge Undertakings—Final Decision*, December 2005.

ACCC, *A strategic review of the regulation of fixed network services—an ACCC discussion paper*, December 2005.

ACCC, *Current Cost Accounting Report Relating to Accounting Separation of Telstra for the Half Year to June 2005*, December 2005.

Allen Consulting Group, *Empirical Evidence on Proxy Beta Values for Regulated Gas Transmission Activities, Final Report for the ACCC*, July 2002.

Allen Consulting Group, *Debt and Equity Raising Transaction Costs – Report to The Australian Competition and Consumer Commission*, December 2004.

(*) Analysys, *Review of Specific Issues in Telstra's PIE II Model: Report for the Australian Competition and Consumer Commission*, 9 May 2006.

CMPI and AAS, *Review of Telstra's ULLS-specific Costs – Draft Report*, 2001.

CMPI and AAS, *Review of Telstra's ULLS-specific Costs – Final Report*, 12 October 2001.

Gans, J., *The Treatment of ULLS Specific Costs—A Report on Behalf of the ACCC, CoRE Research*, 29 May 2006.

H.4. Past Telstra submissions and reports

(*) Ergas, H., *Expert Report on Access Deficit*, CRA International, May 2005.

(*) Ergas, H., *Expert Report on Recovery of ULLS Specific Costs*, CRA International, May 2005.

Telstra, *Submission in support of the Undertaking for Domestic PSTN Originating and Terminating Access – Part A: Economic Submission*, 6 May 1998.

(*) Telstra, *Telstra's Submission in Support of the ULLS Connection Charges Undertaking dated 13 December 2004*, February 2005.

(*) Telstra, *Submission in Response to the Australian Competition and Consumer Commission's Discussion Paper in Respect of ULLS Received March 2005*, 27 May 2005.

Telstra, *Annual Report as at 30 June 2004*, August 2005.

(*) Mitchell, B.M. and Kennet, M., *Confidential Commentary on PIE II Model Assumptions: Final Report Prepared for Telstra*, CRA International, May 2005.

H.5. Additional information examined by the ACCC

The following is the list of additional information examined by the ACCC in reaching the draft decision on Telstra's ULLS monthly charge undertaking.²⁴²

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- ACA, *Universal service subsidies for 2005-08 to 2007-08 proposal paper*, November 2004.
- ActewAGL, *Response to Draft Report (ICRC)*, 24 December 2003.
- (*) Analysys, *Comparative Costing of Wireless Access Technologies—Final Report for the ACCC*, 5 May 2006.
- (*) Analysys, *Comparative Costing of NGN Fibre Access Networks in Australia—Final Report for the ACCC*, 5 May 2006.
- Australian Competition Tribunal, *Application by GasNet Australia (Operations) Pty Ltd, [2003] ACompT 6*, 23 December 2003.
- Australian Competition Tribunal, *Telstra Corporation Limited (ACN 051 775 556), [2006] ACompT 4*, 2 June 2006.
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²⁴² This may not necessarily be a complete list of information provided to the ACCC or information referred to by the ACCC. Other information may be referred to in the body of the decision itself.

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