

# TELSTRA'S CONFIDENTIAL SUBMISSION IN RESPONSE TO THE CCC SUBMISSIONS DATED 5 MAY 2006 (PUBLIC VERSION)

## A INTRODUCTION

- 1 On 23 December 2005, Telstra gave to the Australian Competition and Consumer Commission ("**Commission**") two undertakings for the Unconditioned Local Loop Service ("**ULLS**") pursuant to section 152BS of the *Trade Practices Act 1974* ("**Act**") ("**ULLS Undertakings**"). The ULLS Undertakings relate to the 6 month period from 1 January 2006 to 30 June 2006 and the 2006/07 and 2007/08 financial years. At the same time Telstra provided the Commission a submission in support of the ULLS Undertakings ("**the ULLS submission**").
- 2 On 31 January 2006 the Commission published its discussion paper in respect of Telstra's Undertakings for ULLS ("**Discussion Paper**").
- 3 On 14 March 2006 Telstra provided the Commission with "*Telstra's Confidential Submission in Response to the Australian Competition and Consumer Commission's Discussion Paper in respect of ULLS dated January 2006*" ("**Telstra's Discussion Paper Response**").
- 4 The Competitive Carriers Coalition has provided a submission to the Commission in response to the ULLS Undertakings entitled "*Submission in Response to Telstra Undertakings for the ULLS*" dated 5 May 2005 ("**CCC Submission**") attaching a report of Marsden Jacob and Associates and Europe Economics ("**MJA/EE**") entitled "*Comments on Discussion paper, Telstra's Undertakings in relation to the ULLS*" dated 3 May 2005 ("**MJA/EE Comments**").
- 5 In this submission Telstra responds to the matters raised in the CCC Submission and the MJA/EE Comments. Telstra has prepared this response by adopting the headings in the CCC Submission and the MJA/EE Comments.

## B CONFIDENTIALITY

- 6 This submission and all the information contained in it is confidential to Telstra and may only be disclosed by the Commission to persons approved of in writing by Telstra who have signed confidentiality undertakings that are acceptable to Telstra.
- 7 Telstra will provide this submission and the information contained in it to interested parties upon those parties signing appropriate confidentiality undertakings.

8 The confidentiality undertakings do not limit the extent to which interested parties, including the Commission, can analyse and comment on the content of this submission. Rather they are intended to prevent the distribution and use of the confidential material contained in this submission for purposes other than participating in the Commission's public inquiry relating to the Undertakings.

**C CCC SUBMISSION**

9 The CCC states that the Commission should reject the ULLS Undertakings on the grounds that they contain prices that are the output of the PIE II model which is "clearly deficient". Telstra however does not only rely upon the efficient costs estimated using the PIE II model. It also relies upon a comparison of the proposed prices to Telstra's own historic and current costs, as well as upon a comparison with the network costs produced by the Commission's n/e/r/a model to demonstrate the reasonableness of the ULLS Undertakings.

10 Further, the fact that the PIE II model may not be the "best" model is irrelevant to the Commission's consideration as to whether the ULLS Undertakings are reasonable pursuant to the statutory criteria set out in Part XIC of the Act. If certain aspects of the PIE II model could be improved upon, that is one matter to be taken into account when assessing whether the ULLS Undertaking are reasonable. It does not follow that the PIE II model cannot be relied upon at all or that the price based on costs calculated by the PIE II model are unreasonable.

11 The CCC submits that the PIE II model is not a forward looking cost model in that it "takes no account of the transition to next generation network technologies" ("**NGN**") as it "contemplates a network designed and deployed around a legacy circuit switched paradigm". Whilst these arguments may be relevant to the costs of the IEN, they are not relevant to the customer access network ("**CAN**"). Further, the CCC overlooks the fact that ULLS is a copper-based service and therefore a forward-looking model using other than copper technology is irrelevant to an analysis of the costs of ULLS (as MJA/EE have themselves acknowledged).

12 The CCC states that "*the greatest economic and operational efficiencies are obtained when the NGN technology, in this instance fibre, is pushed all the way to the customer premise, not the street-side Node, as Telstra intends*". Again, the CCC overlooks the fact that ULLS is a copper-based service.

## **D MJA/EE COMMENTS**

### **D1 Preface**

13 MJA/EE state that a reoccurring critique of the PIE II model has been its lack of transparency, and that “without transparency, it is difficult to gain faith in the workings of the model.” In support of this argument MJA/EE cites the model’s lack of an ideal user interface, its poor documentation, that manipulation of the model is “practically impossible (at least for a new user)”, and that “much of the model’s key workings are hidden in Visual Basic code making it difficult and time consuming to audit”. Even if one were to accept the criticism that the PIE II model’s documentation is poor and the PIE II model is not transparent, these criticisms do not mean that the PIE II model does not provide a reasonable estimate of ULLS network costs. Further, it appears that MJA/EE have had no trouble in accessing the PIE II model and have provided a detailed report critiquing the PIE II model.

14 MJA/EE argue that: *“As with most models, there is also a risk of error. In the PIE II model in particular, there would appear to be more than a thousand pages of source code. This greatly increases the risk of error. Hence, even if we did agree with every dimensioning and costing decision made in the model, we would still be reluctant to rely on the results without a more formal audit of the source code”*. First, whilst code is used in the construction of the PIE II model, the length of the code is more in the order of thousands of lines than thousands of pages. Second, simply because MJA/EE chose not to conduct an audit, does not mean that the costs estimated by the PIE II model cannot be relied upon. Third, the PIE II model has been subject to intense industry scrutiny. Finally, MJA/EE have acknowledged that PIE II model is fairly advanced.

### **D2 Introduction and summary**

15 MJA answer a number of questions posed by the Commission. Curiously, they do not address question 8 - *“Should the ACCC accept the PIE II Model for the calculation of network costs?”*.

### **D3 Summary of findings**

16 Telstra relies on the Report of Bridger Mitchell entitled “ULLS Commentary on Marsden Jacob Associates and Analysis Submissions” dated August 2006 (“**Mitchell MJA Report**”).

### **D3.1 Overall model considerations**

17 MJA/EE state that they would expect the access network “to contain a mix of copper, fibre and radio. In addition, any changes in the specification of the core network may have effects on the access network.” Further, MJA/EE claim that although the PIE II model encompasses the majority of technology options, it should also include some of the newer radio technologies as this would be “likely to result in less copper and fibre in DAs in rural areas and lower costs.” Again MJA/EE overlooks the fact that ULLS is a copper-based service and therefore a forward-looking model using other than copper technology is irrelevant to an analysis of the ULLS Undertakings (as MJA/EE have themselves acknowledged). In addition, simply because the use of newer technologies would reduce the amount of copper and fibre used in the PIE II model does not mean that such an approach would result in a lower network cost estimate or be a preferable model.

### **D3.2 Bridger Mitchells’ comments**

18 MJA/EE mistakenly imply that Telstra relies solely upon the PIE II model: “While regulatory models in numerous countries adopt a bottom-up approach (often using a top-down model for verification), we know of no other jurisdiction that relies solely on the incumbent’s bottom-up model (like PIE II). Such an approach can limit transparency and confidence in the independence of the estimates.” As set out above, Telstra also relies on historic and current costs, as well as upon a comparison of the network costs produced by the Commission’s n/e/r/a model to demonstrate the reasonableness of the ULLS Undertakings.

19 MJA/EE state that: “While the line card may be the appropriate point of demarcation between access and core for most of the network, it is inappropriate for leased lines and other “advanced” systems. It is unclear if adequate account has been taken of leased lines or other services that use the access network.” The PIE II model divides a basket of costs across all services provided using copper reticulation such as leased lines.

20 MJA/EE state that “It is unclear whether the current provisioning rules reflect efficient practices and would appear to result in inefficient over provisioning when account is taken of modularity, i.e. the model would appear to allow for a minimum of two copper pairs for each SIO on average. This level of provisioning is excessive.” Telstra relies on the statement of [c-i-c] dated 4 August 2006 which states that provisioning of 2 copper pairs per SIO constitutes good engineering practice and is reasonable.

- 21 MJA/EE state that *“it is unclear how a Year 1 rolling forward approach, as the one adopted in PIE II, would cater for a correct recovery of investment costs as a rolling forward approach would not explicitly take into account the evolution of traffic volumes 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).”*
- 22 While the PIE II model estimates the efficient level of provisioning for spare capacity, Telstra’s method of rolling forward the PIE II model does not explicitly adjust that level of provisioning to account for changes in demand. However, this is not likely to bias the estimate of network costs for the following reasons:
- (a) the provisioning rules adopted in the PIE II model have regard to future changes in demand forecast over a long timeframe. Those forecasts also account for short-term changes in demand, such as those that were forecast to occur over the period that the PIE II model was rolled forward. Hence, to the extent that changes in volumes were forecast, they are already considered by the current provisioning rules;
  - (b) MJA/EE’s comment might refer to changes in demand over the roll forward period that were not forecast at the time the provisioning rules were applied in the PIE model. To the extent that changes in demand over the roll forward period were not forecast, they will have an insignificant affect on the provisioning rules, since those rules are long term in nature, insensitive to short term fluctuations.
- 23 MJA/EE state that life of [c-i-c] for distribution conduit in the PIE II model is too short compared with international experience. An appropriate estimate according to MJA/EE should be 40 years. The report of PriceWaterhouseCoopers titled *“Telco Network Service Lives”* dated March 1999 which has been provided to the Commission, [c-i-c]. As Telstra uses [c-i-c] for main conduit, the use of [c-i-c] for distribution conduit is reasonable.
- 24 Similarly, MJA/EE consider that the asset life for main cable in the PIE II model seems too short and should be increased to at least 20 years. Telstra relies on the statement of [c-i-c] dated 9 August 2006. Further MJA/EE call for new technologies to be deployed in the CAN, which would further shorten the lives of main cable. In any

event, MJA/EE acknowledge the asset lives for certain transmission equipment, and to a lesser degree, fibre cable are long compared with international data.

- 25 MJA/EE state that they infer that a pillar is located near the centre of the distribution area (“DA”) and it is unclear that such a placement strategy is optimal. Telstra relies on the statement of [c-i-c] dated 4 August 2006 which supports the placement of a pillar in the middle of a DA.
- 26 MJA/EE state that they would expect the accuracy of the unadjusted rectilinear distance to decline the further one moves towards rural areas, where a grid-shaped layout is less common. Telstra relies on the Mitchell MJA Report. In addition, the approach in PIE II to trench lengths, which is a key driver of costs, is conservative because it does not take into account return paths, curves around geographic features in the landscape, waterways, lakes, sacred sites etc.
- 27 MJA/EE state that they consider that the operational and maintenance (“O&M”) costs used in the PIE model overestimate efficient O&M costs for two main reasons. First the model uses historic costs which are assumed and not demonstrated to be efficient; and second, newly laid copper lines are unlikely to require as much maintenance as older wire. The PIE II model assumes an optimal network rebuild, which minimises capital asset cost and is an efficient solution. The O&M costs are estimated as a percentage of the new capital expenditure cost rather than a percentage applied to the historic capital expenditure. The percentage is determined from cost studies based on the new and old copper. It would be incorrect to base the percentage on only new copper because the cost needs to be determined on the basis of the total life cycle of the asset. The O&M cost in PIE II represents the average cost over the existing profile of the asset age.
- 28 MJA/EE note that building and land costs are based on a direct input derived from Telstra’s estimates which may need adjustment, reflecting, for example, where land and building have a bigger footprint than needed for efficient equipment placement. It is impractical to subdivide sites where Telstra buildings are located as they are generally the same size as standard suburban blocks in the street. Reducing building sizes by a small number of square meters is unlikely to have a material effect on the costs because building costs are not directly proportional to size.

### **E.3.5 Historic Costs**

29 MJA comments that:

*According to the TSLRIC benchmark the costs of all long-lived assets such as trench and copper cables should be re-estimated and re-optimised and charged to ULLS users. However, if value is attributed to fully depreciated assets the incumbent may be allowed to 'double dip', ie to levy an annualisation charge on assets where the full costs of depreciation may already have been passed on to end-users.*

and

*Settling a competitive benchmark such as TSLRIC may therefore not be appropriate. Instead it may be socially optimal to set ULLS prices at the lowest possible price that still allows the incumbent to finance its activities, ie to efficiently operate and maintain the network and upgrade its investment where necessary.*

30 MJA continue by suggesting several costing approaches adopted for water suppliers as support for their conclusions.

31 Telstra submits that incentives for new entrants to invest in infrastructure and optimised by signalling to those new entrants that they are able to recover the cost of their investments. Setting prices to levels that reflect an incumbent's fully depreciated asset base will likely eliminate any prospect of new entry in the short term and the long term.

32 Not allowing Telstra to recover the costs of fully depreciated assets will remove any incentive for Telstra to invest in replacement infrastructure, unless the cost of those assets are explicitly added to the cost base.

33 Adding the costs of new investments into the asset base would impose enormous regulatory burden, particularly if the regulator was required to assess and decide on each of those investment decisions. While such regulatory burdens might be acceptable in regulated markets such as water delivery, they are unacceptable in the telecommunications markets which are subject to rapid technological change [c-i-c]. In particular, the delay in obtaining regulatory approval for new investment would:

- (a) risk the introduction of new services if the regulator incorrectly disallows investment;

- (b) delay the introduction of new services as the regulator assesses the investment; and
- (c) prevent Telstra from meeting its USO obligations if necessary investments are delayed or refused by the regulatory body.

34 For these reasons, Telstra submits that MJA’s proposal to adopt a costing approach that does not allow forward-looking costs to be recovered would not promote the long term interests of end users.

#### **E4 Modelling parameters and assumptions—Bridger Mitchell’s 2005 advice**

##### **E4.1. Best-in-use technology**

35 MJA/EE state that they see no problems in expanding the PIE II model with different technologies. Modelling various scenarios to replicate alternative technological configurations is a resource intensive process. The PIE II model is based around best-in-use technology and is not constructed to assess alternative configurations. To do so would require the construction of a new model.

##### **E4.2 The modelled services**

36 MJA/EE state: *“In our review of the PIE II model we have been unable to identify this level of detail in access services. We have consulted tables in the following databases: ULLS Analysis, Demand Scenarios, Demand Cube, and SIO Demand.”* The list of services that makes up the access network can be found in the SIO Demand module.

37 MJA/EE state: *“to the extent Telstra utilises radio technologies or fibre to provide access services, these should be included in the PIE II model”*. All of the services listed by MJA/EE are included in the PIE II model. However, ULLS is a copper based service. Therefore, to the extent that radio technologies or fibre is used to provide an access service, these are excluded from the calculation when determining the costs of ULLS.

##### **E4.3 Annualisation of capital costs**

38 In relation to the price trends used, Telstra relies on the statement of [c-i-c] dated 21 July 2006.



39 As to the asset lives used, Telstra relies on the report of Ernst & Young titled “*Global Telecom Depreciation Survey*” dated October 2002 and PriceWaterhouseCoopers titled “*Telco Network Service Lives*” dated March 1999 and the statement of [c-i-c] dated 9 August 2006.

#### **E4.4 Operating and maintenance expenses and common support expenses**

40 MJA/EE state that use of O&M mark-ups in PIE II implies that the O&M costs in some rural areas will be more than ten times those in urban areas. The O&M cost is a very small proportion of overall costs - less than [c-i-c]. The allocation between rural and urban is based on trench distance which is the main driver of costs.

41 MJA/EE state that:

- (a) the PIE II model simply aggregates costs and demand of different services and calculates the unit costs on the basis of these totals; and
- (b) the result is therefore an average cost across all services using the copper assets in question but each service using the assets may use the asset differently.

The last statement is wrong. In the access network a service is a connection between the customer premises and a network terminating point so the most efficient allocation principle is by volume of service, as is done in the PIE II model. Costs in the CAN are driven by demand for copper lines rather than the amount of traffic on the line. In the access network, different services do not use the line so differently such that they generate different cost.

42 MJA/EE state that different services may use a different number of pairs and hence it would be appropriate to adjust the SIO metric accordingly. The primary rate ISDN is assumed to use fibre and the basic rate ISDN is assumed to use copper. The model does not assume one EIO uses one copper pair. The product managers in Telstra have advised on the number of services that originate and terminate on leased lines. There is a table within the PIE II model that details where leased line services begin and end within the same ESA or another ESA. That table is used to determine the number of copper pairs required to be deployed for this service type.

## **E6 Technological choices**

43 As to the technologies used in the PIE II model, Telstra relies on the statement of [c-i-c] dated 4 August 2006.

## **E.7 Rolling forward**

44 MJA consider that a preferable alternative to the roll forward model adopted by Telstra would be to use the PIE II model to estimate the efficient costs for 2005, and calculate the annualised costs for the following three years based on the efficient asset base in year 1.

45 Telstra submits that such an approach differs from the past practices adopted by Telstra and the Commission on the basis that it does not take into account inefficiencies associated with the year-1 asset base that might arise in years 2 to 4.

46 Telstra also considers that MJA/EE's preferred approach is likely to result in higher costs, since:

- (a) Additional assets would be included in the early years of the model to account for the fact that new customers sign up in later years. The provisioning rules in the PIE II model would not account for all the necessary assets required to supply such customers. For example, the PIE II model does not provision for additional copper pairs that are required for new houses that will be connected in future years.
- (b) The rapid pace of technological change in telecommunications services and the assets used to provide telecommunications services will mean that the cost of supplying services decreases over time. This is reflected in Telstra's roll-forward model. However, it is not clear from MJA/EE's discussion that this is reflected in its preferred approach.

47 For these reasons, Telstra submits that its approach, compared to MJA/EE's preferred approach, is better at estimating the efficient costs of supplying ULLS services and, therefore, is reasonable.

## **E.8 Historic costs**

48 MJA/EE opine that a competitive benchmark such as TSLRIC may not be appropriate, instead proposing that "*it may be socially optimal to set ULLS prices at the lowest*

*possible price that still allows the incumbent to finance its activities, i.e. to efficiently operate and maintain the network and upgrade its investment where necessary.”* Telstra fails to see the relevance of considering what is “socially optimal” for the purposes of assessing the Undertakings, when it is clear the Commission must only consider whether the Undertakings are reasonable pursuant the statutory criteria set out in Part XIC of the TPA.

49 Telstra has responded to the remainder of the submission in this section in section E.3.5 above.

**F CONCLUSION**

50 For the reasons contained in this submission, Telstra submits that the Commission should not have regard to the CCC submission or the MJA/EE comments and rely on the PIE II model in considering the reasonableness of the ULLS undertaking.

**Dated: 9 August 2006**