

Telstra's submission in response to the Australian Competition and Consumer Commission's Discussion Paper in respect of Telstra's Undertakings for the PSTN Originating and Terminating Access and Local Carriage Services, dated May 2006

21 June 2006

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A. Introduction

1. On 22 March 2006, Telstra gave to the Australian Competition and Consumer Commission (“Commission”) an undertaking (“the Undertaking”) pursuant to section 152BS of the Trade Practices Act 1974 (“the Act”) in respect of the public switched telephone network (PSTN) originating and terminating access (OTA) services and the local carriage service (LCS). At the same time Telstra provided to the Commission a submission in support of the Undertaking (“the Previous Submission”).
2. On 5 May 2006 the Commission published a Discussion Paper titled “Telstra’s Undertakings for the PSTN Originating and Terminating and LCS Access Services” (“the Discussion Paper”).
3. In this submission Telstra responds to some of the matters raised by the Commission in the Discussion Paper. Telstra has already provided extensive support for the undertaking in the Previous Submission. Accordingly this submission should be read together with the Previous Submission.
4. Telstra is currently preparing a number of expert statements to provide further clarity to some of the questions raised by the Commission in the Discussion Paper. These reports will be forwarded to the Commission once complete.

B. Confidentiality

5. This submission has all of the confidential information deleted and thus may be disclosed publicly.
6. Telstra will provide the confidential version of this submission and the information contained in it to interested parties subject to those parties signing appropriate confidentiality undertakings.
7. The confidentiality undertakings do not limit the extent to which interested parties, and 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. Executive Summary

8. In the Previous Submission, Telstra provided to the Commission its views in support of its PSTN-OTA and LCS Undertaking. In this submission, Telstra does not seek to replicate those submissions, nor respond to each of the questions posed by the Commission in the Discussion Paper.
9. Instead, this submission will respond to what Telstra considers are some of the key issues raised by the Commission, and provide clarification where required.
10. This submission is structured as follows:
 - a) Section D responds to matters raised by the Commission in relation to the appropriate application of the statutory criteria.
 - b) Section E responds to various criticisms of the Pie II model, including transparency, ease of use, and whether the Pie II model represents best in use technology.
 - c) Section F responds to the Commission's discussion on the WACC, including a discussion on the asymmetric costs of mis-estimating the WACC and how regulators around the world deal with this asymmetry.
 - d) Section G responds to the Commission's discussion around the appropriateness of Telstra's volume forecasts in setting the proposed PSTN OTA and LCS charges. In this section, Telstra reinforces that the PSTN volume forecasts are forecasts made independent of the regulatory regime, and are used by Telstra in running its business. Further, Telstra argues that the PSTN volume decline currently being experienced is a world wide phenomenon beyond the control of either Telstra or the telecommunications industry – it is largely the result of shifting customer preferences as to the way in which they communicate.
 - e) Section H deals with some of the issues raised by the Commission in relation to the price structure Telstra has proposed.

D. Reasonableness and section 152AH

11. In the Discussion Paper, the Commission raises questions as to the appropriate application of sections 152BV(2)(d) and 152AH.
12. The Commission must not accept an undertaking unless it is satisfied that the terms and conditions specified in the undertaking are reasonable.¹ Section 152AH sets out the matters to which the Commission must have regard in determining whether the terms and conditions are reasonable. Section 152AB outlines the objectives to which regard must be had when considering one of the criteria enumerated in section 152AH, namely the long term interest of end users.
13. It is the terms and conditions of the undertaking that must be reasonable rather than, for example, any one of the terms or the methodology used to arrive at a term.
14. Developing a price for the purposes of an undertaking invariably will involve estimation and allocation of costs in order to arrive at unit costs. There are a number of steps in the process of deriving such unit costs, which may involve questions of judgment and degree, upon which minds might reasonably differ. It follows, consistent with the findings of the Australian Competition Tribunal in *Re: Application by GasNet Australia (Operations) Pty Ltd* (“GasNet”)², that there will necessarily be a range of methods and approaches reasonably open at each of those various steps. It also follows, as a matter of logic and commercial common-sense, that because the process is one of estimation (not precise calculation) and because there is a range of methods reasonably available for arriving at the estimates, then there will be a range of figures which might be said to reasonably constitute the unit costs estimate.
15. There is no statutory warrant to enquire as to whether the terms and conditions or any methodology to arrive at those terms and conditions is “the appropriate” or “the most appropriate” or “preferred”.
16. Further, the Commission should consider material which demonstrates the effect on the unit costs estimate of adopting one rather than another approach to the numerous steps that constitute the derivation of the unit cost estimate.

¹ Section 152BV(2)(d) of the *Trade Practices Act (1974)* (“the Act”)

² [2003] ACompT 6, particularly at [29].

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17. Whether the terms and conditions of the undertaking are reasonable is a weighing up process. The Commission should consider all of the methodologies employed and determine whether having regard to those methodologies, the terms and conditions of the undertaking are reasonable. If there is a range of reasonable choices, then the analysis should include an examination of that range rather than the point estimate considered most appropriate by the Commission.
18. In the Discussion Paper, the Commission has stated that the statutory provisions mean that having regard to the statutory criteria, the terms and conditions must be consistent with or reflect the likely outcome in a workably competitive market.
19. Telstra disagrees. Whether or not the terms and conditions of an undertaking are consistent with or reflect the likely outcome in a workably competitive market is not one of the criteria set out in the Act. Telstra submits that it may be that an application of the statutory criteria may be consistent with an outcome of a workably competitive market (although views can differ about the outcomes of a workably competitive market). However, the Commission's assessment should not be against that standard but rather the criteria themselves.

The Commission's approach to assessing the Undertaking

20. Telstra is concerned that in the Discussion Paper, the Commission does not appear to be following an approach which is consistent with sections 152BV(2)(d) and 152AH. Further, it does not even apply what it has set out as its own approach. For example, the Commission has asked whether:

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- a) Telstra's estimates of declining use of PSTN services are appropriate;
 - b) alternative demand forecasts should be used to calculate PSTN access charges;
 - c) it is appropriate to set prices for PSTN, OTA and LCS as package as proposed by Telstra;
 - d) it is appropriate that Telstra set access charges on the basis of a partial de-averaged approach;
 - e) Telstra's proposed pricing structure with respect to its flag fall and permanent charge elements is appropriate;
 - f) the RMRC pricing principle is an appropriate basis for setting the LCS undertaking charge; and
 - g) Telstra's application of the RMRC pricing principle and its use of regulatory account data is appropriate.
21. Telstra submits that the manner in which the Commission is apparently conducting its enquiry is not consistent with the statutory criteria in section 152AH of the Act, nor with the Commission's own statements as to the correct application of those criteria. The Commission's questions indicate that it is proceeding on the basis that it is to determine whether one method or estimate is a more appropriate method or estimate, rather than whether the terms and conditions of the undertaking are reasonable. In asking whether an estimate or method is "appropriate", the Commission is in essence searching for an alternative, preferable estimate or method.
22. Telstra submits that there is no basis for such an approach and that such an approach is contrary to the decision of the Tribunal in GasNet. Further Telstra submits that the existence of an approach that is preferable or superior to Telstra's approach will provide no guidance as to whether the terms and conditions of the undertaking are or are not reasonable.

E. Criticisms of the PIE-II model

23. In the Discussion Paper, the Commission re-states its reservations with regards to the Pie II model. Among a host of specific questions on the assumptions underpinning the model (for example the WACC and forecast volumes used to populate the model) the Commission also asked,

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- a) Are there faults with the PIE II cost model and how should these faults be addressed?
 - b) Has Telstra improved its PIE cost model?
 - c) Is it necessary to construct an alternative cost model to Telstra's updated PIE II model?
24. The PSTN OTA and LCS prices presented as part of Telstra's undertakings were derived with reference to the efficient inter exchange network ("IEN") costs, estimated via the PIE-II model. The only part of the PIE II model which is relevant to PSTN OTA and LCS is the IEN cost calculations. The PIE-II model generates a robust estimate of the TSLRIC for the IEN based on best in use network technology. Telstra maintains that these estimated costs are clearly reasonable under the statutory criteria. For the purposes of the present undertaking, the model calculations have been updated with revised traffic forecasts for the years 2006/07 and 2007/08.
25. Telstra has already provided the Commission with a significant amount of material in support of the PIE-II model. For completeness, Telstra has aggregated material from previous submissions and it is presented as Annexure A to this submission.
26. As discussed earlier in this submission, Telstra believes the Commission's task is to determine whether the terms and conditions in the Undertaking are reasonable. Telstra does not believe it is appropriate for the Commission to engage in an exercise of "find one costing parameter that can be construed as inconsistent with the criteria and immediately reject the Undertaking". Unfortunately, an impartial reader of the Discussion Paper would conclude that the Commission is engaging in just such an exercise. Telstra does not believe this is appropriate, and the exercise does nothing to assist with industry certainty, a key goal of the undertaking regime.
27. Any model of a hypothetical efficient network must necessarily simplify the myriad of details involved in building and operating a network, whilst seeking to represent the engineering and economic aspects of the network as accurately as possible. The PIE-II model faces the same unavoidable trade-off between detail, tractability, transparency and useability that affect all cost models — particularly those dealing with complex networks, such as in telecommunications.

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28. Given this, many of the criticisms of the PIE-II model seem, at best, disingenuous. For instance the Commission has criticised the PIE-II model for being difficult to use and awkward to manipulate. Necessarily, as the accuracy and complexity of cost models improve, there is a detriment to ease of use. Given the importance of correctly identifying costs as accurately as possible, Telstra believes sacrificing some ease of use is acceptable. Issues pertaining to the manipulation and transparency of the model are discussed in greater detail below.
29. It should be noted that although the PSTN OTA and LCS undertaking prices were derived with reference to the efficient network cost base estimated via the PIE-II model, Telstra has not limited itself to using the PIE-II model in assessing whether the proposed charges are consistent with the statutory criteria. Telstra, in the Previous Submission, presented evidence as to the costs estimated from using alternative methodologies.³
30. Ultimately however, to the extent that the Commission's criticisms of the PIE-II model remain, it is still open for the Commission to judge the terms and conditions of the undertaking as reasonable under the statutory criteria.

Manipulation Of The Model

31. Telstra has provided the PIE-II model to interested parties subject to them signing confidentiality undertakings. The confidentiality undertakings restrict the use of the PIE-II model to the following purposes:
- a) making submissions to the Australian Competition and Consumer Commission ("Commission") in respect of the relevant access undertakings; and
 - b) any application made to the Australian Competition Tribunal ("the Tribunal") under s152CE of the Trade Practices Act for review of a decision made by the Commission in respect of the relevant access undertakings.
32. The confidentiality undertakings also include an undertaking not to manipulate any part of the PIE-II model, but expressly authorise an access seeker to review the code, data queries, table structures, report definitions, user interfaces and structure of the PIE-II model, and to vary the assumptions or variables used in the PIE-II model in order to obtain various outputs from the PIE-II Model.

³Telstra found that replacement costs and historical costs both returned higher cost estimates. Further, Telstra found when it updated the Commission's own n/e/r/a model, the PIE-II results were lower.

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33. The Commission has stated previously that Telstra's requirement that parties sign such an agreement alone prevents the Commission from accepting the model.⁴ For a number of reasons, the Commission's position in this regard and its non-acceptance of the PIE-II model are unsupportable.
34. It is not the Commission's task in determining whether or not Telstra's undertakings are reasonable to reject the PIE-II model because it does not like the manner in which Telstra has presented the PIE-II model for consideration. Rather, the Commission should take any concerns that it has with the PIE-II model into account when weighing up the relevant considerations for the purpose of determining whether or not Telstra's undertaking is reasonable pursuant to the statutory criteria.
35. Telstra has prohibited manipulation of the PIE-II in order to protect the integrity of the model's design. As with any highly complex, inter-related model such as PIE-II, there is a very real risk that uninformed and selective changes to the code or structure may have unintended or undetected consequences, and may generate highly speculative and non-comparable outputs. Moreover, any manipulation would impact on the intellectual property rights which Telstra has in the PIE-II model.
36. Irrespective of these issues, it is also not clear how these manipulated models would assist the Commission given that its role is to assess the reasonableness of Telstra's approach, rather than find the "most reasonable approach". As a corollary, a prohibition on manipulating the PIE-II model does not mean that parties are unable to assess the PIE-II model's reasonableness. On the contrary, parties are able to see the architecture used, test the assumptions employed in the PIE-II model, and comment on its overall appropriateness. This ability is evidenced by the scope, depth and number of submissions provided to the Commission on a full range of parameters and assumptions within the PIE II model as well as the architecture of the PIE-II model.

Provision Of Information And Transparency

37. The Commission has reiterated its concern that the PIE II model lacks transparency.⁵ The Commission has in the past asserted that Telstra has not "provided sufficient

⁴ Commission, *Assessment of Telstra's undertakings for PSTN, ULLS and LCS, Draft Decision*, October 2004, page 83; Commission, *Assessment of Telstra's undertakings for PSTN, ULLS and LCS, Final Decision*, December 2004, page 56; Commission, *Assessment of Telstra's ULLS and LSS monthly charge undertakings, Draft Decision*, August 2005, page 91.

⁵ Commission, *Telstra's Undertakings for the PSTN Originating and Terminating and LCS Access Services Discussion Paper*, May 2006, under the heading *The Use of the PIE II model*.

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documentation and justification to other parties so that other parties are able to inform themselves regarding the PIE II model”.⁶

38. Telstra disagrees with the Commission in this regard. Subject to a necessary confidentiality regime, Telstra has provided the PIE-II model and a detailed description of it to all parties who have requested it. In addition, Telstra has in the past conducted a number of industry briefing sessions on the operation of the PIE-II model.
39. By providing a copy of the PIE-II model to other parties, Telstra has gone significantly further than has previously been done. For example, for the purposes of the PSTN OTA undertakings lodged in October 1999, the Commission only allowed Telstra access to the n/e/r/a model for a short period in the Commission’s offices. It did not allow the n/e/r/a model to be taken outside the Commission, nor allow Telstra to change the n/e/r/a model’s underlying architecture, nor provide any documentation explaining the model. This did not prevent the Commission from relying on the n/e/r/a model.
40. The Commission has in the past concluded by noting that “it has always been open to Telstra to provide a simpler model, provide clearer documentation or to help industry to come to a fuller understanding of the model”.⁷ Telstra strongly rejects this criticism. In relation to the notion that the PIE II model should be simpler, the Commission advances no suggestions as to how this could be done. Indeed, the vast majority of the Commission’s suggestions would involve introducing considerably more complexity in the modelling. These suggestions belie the trade-off between complexity and potential accuracy on the one hand, and ease of use and transparency on the other hand, which the Commission itself acknowledges. Telstra believes that it has struck that balance appropriately with the PIE II model. Further, Telstra has provided unprecedented industry assistance to help parties “come to a fuller understanding of the model”.
41. The Commission has criticised the PIE II model on the basis that its understanding and manipulation requires considerable time and expenditure.⁸ This criticism is both

⁶ Commission, *Assessment of Telstra’s undertakings for PSTN, ULLS and LCS, Draft Decision*, October 2004, page 83; Commission, *Assessment of Telstra’s undertakings for PSTN, ULLS and LCS, Final Decision*, December 2004, page 56; Commission, *Assessment of Telstra’s ULLS and LSS monthly charge undertakings, Draft Decision*, August 2005, page 91.

⁷ Commission, *Assessment of Telstra’s undertakings for PSTN, ULLS and LCS, Final Decision*, December 2004, page 58; Commission, *Assessment of Telstra’s ULLS and LSS monthly charge undertakings, Draft Decision*, August 2005, page 93.

⁸ Commission, *Assessment of Telstra’s undertakings for PSTN, ULLS and LCS, Final Decision*, December 2004, page 57; Commission, *Assessment of Telstra’s ULLS and LSS monthly charge undertakings, Draft Decision*, August 2005, page 92.

surprising and contradictory as the Commission cannot require a model of costs to be flexible and cover issues raised by it, but at the same time demand simplicity of the model so that those inexperienced with models of this type and with limited resources are able to understand it. As the Commission knows, the issues are extremely complex and require a detailed understanding of PSTN technologies and network economics. Simply because some access seekers do not have the resources to undertake the necessarily complex analysis, does not alone make the costs estimated by the PIE-II model unreasonable.

42. Further, the fact that Telstra has expended substantial resources in building the PIE-II model in a manner flexible enough to accommodate changes in a number of assumptions, is something that the Commission does not appear to have taken into consideration.

Best in use technology and the PIE-II model

43. TSLRIC principles require that costs be calculated for a hypothetical network that makes use of current-generation technology. In the Discussion Paper, the Commission has queried whether the technology used in the PIE-II model remains ‘best in use’.
44. The best-in-use standard has generally been held to require using technology and equipment that is actually deployed in operating networks and has been proven reliable and cost-effective and can be supported from the perspective of network operations. Therefore technologies that are not yet in commercial use in an access provider’s network would not qualify for inclusion in a TELRIC model. From the ACCC’s Access Pricing Principles — Telecommunications (July 1997)

TSLRIC is based on forward-looking costs. These are the on-going costs of providing the service in the future using the most efficient means possible and commercially available. In practice this often means basing costs on the best-in-use technology and production practices and valuing inputs using current prices. (p.22)

Also, on page 23:

The TSLRIC methodology uses the most efficient technology that is commercially available. In estimating TSLRIC the Commission will not use experimental prototypes as a benchmark for best-in-use technology. Rather it will use the best-in-use technology compatible with the existing network design.

45. The ACCC’s guidelines accord with rulings from US and UK regulatory bodies:

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- The FCC requires that the “technology assumed in the cost study or model must be the least-cost, most efficient, and reasonable technology for providing the supported services that is currently being deployed” FCC’s Universal Service Order, 250 (emphasis added), and be “based on the most efficient technology deployed in the [access provider’s] current wire centre locations” FCC’s Local Competition Order, 685.
- Similarly, Oftel requires that assets in a TSLRIC bottom-up model be valued in terms of “the latest available and proven technology ... the asset which a new entrant might be expected to employ”. The Bottom-Up Model, p. 1. BT’s top down approach recognizes that: “Asset values are adjusted to their value to the business, usually equivalent to their net current replacement cost.” BT’s LRIC Methodology, Section 4.1 (a). When new assets are superior to embedded assets, the cost of the Modern Equivalent Asset is used. BT’s LRIC Methodology, Section 4.2

46. For the purposes of the present undertaking, the relevant technology in the PIE-II model is that modelled in the IEN module. Telstra considers that this technology is the best commercially employed solution to providing PSTN services.⁹

47. An alternative IEN conceptualization based on packet-switched Internet Protocol (IP) technology would not satisfy the best in use technology criteria. IP based technologies have not yet been proven to be capable of delivering the levels of service quality and reliability, necessary to deliver PSTN equivalent services. Although leading large local exchange carriers around the world are beginning to experiment and test the deployment of so-called next generation networks, at this stage and for the life of the undertaking, this type of technology will not represent best in use IEN technology. Even if IP technologies were currently deployable and could achieve the necessary very high levels of reliability and service quality — a full IP based IEN network for voice services has not been standardized and therefore could not be deployed, unlike the type of network architecture used in the PIE-II model for the provision voice-only PSTN services.

⁹ The layout of the model and the underlying technological and other assumptions are detailed in Annexure A to the Previous Submission.

Is there a need for an alternative cost model?

48. In the Discussion Paper, the Commission has asked whether it is necessary to construct an alternative cost model. In its recent draft decision on the local services review the Commission also raised the possibility of developing a new cost model.
49. It is important that the Commission ensures any alternative cost model it develops is at least as advanced as the PIE-II model.. Telstra is happy to work constructively with the Commission and its consultants in developing this alternative cost model if this is viewed as necessary.
50. However, Telstra notes that the development of cost models typically takes 12-18 months. Telstra therefore believes that the PIE-II model should be the model used for the period of the Undertakings, and any alternative cost model developed could potentially be used in the period following the Undertaking.

F. The Weighted Average Cost of Capital

51. In its discussion paper, the Commission asks a series of questions on how the WACC should be calculated, specifically:
- a) Having regard to the regulatory criteria in s152AH of the Act, and to Telstra's supporting submissions, are there any reasons why the ACCC should alter its views on appropriate WACC?
 - b) Should different WACCs be set for network costs in different years or one WACC for the whole period of the undertakings?
 - c) How should the WACC parameter point estimate be calculated?
 - d) How should the WACC parameter standard deviation be calculated?
 - e) Are there any other issues concerning the appropriate WACC, which the ACCC should consider?
52. In Telstra's view, the starting point for a robust calculation of the WACC is to consider each of the normal WACC component parameters in turn and to estimate point values for each that are consistent with the statutory criteria. These should then be compounded together to estimate the WACC using a set of by now fairly standard and agreed formulas. To Telstra's knowledge the Commission agrees that the formulas proposed and used by

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Telstra are reasonable and no carriers have contested the appropriateness of these formulas.

53. As articulated elsewhere in this submission Telstra considers that use by the Commission of its best point estimate alone is not consistent with the statutory criteria given the existence of asymmetric consequences of mis-estimating the WACC. The best point estimate (assumed near the mean of a properly constructed WACC distribution) leaves considerable risk that the significant negative consequences of under-estimating the WACC will emerge.
54. The “vanilla” WACC values that Telstra has calculated for each of the years of the term of the Undertaking, and the values assigned to the various component parameters of the WACC are set out in detail in a report prepared by Professor Bowman submitted as Annexure B to Telstra’s Previous Submission. Telstra submits that the WACC employed in the PIE II model used to calculate the network costs associated with PSTN OTA and LCS is consistent with the statutory criteria for the reasons set out in the report prepared by Professor Bowman submitted as Annexure B to the Previous Submission.

Asymmetric costs of incorrectly estimating the WACC

55. In the Discussion Paper, the Commission asked whether there are asymmetric costs to mis-estimating the WACC and, if so, are the steps taken by Telstra to mitigate against this asymmetry reasonable:

Having regard to the regulatory criteria in s152AH of the Act, are the costs of under estimating the WACC greater than those of over estimating the WACC (i.e. are there any asymmetric costs)?

56. Section 152AH of the Act requires the Commission to balance a number of competing objectives when considering the merits of a particular undertaking and the access prices proposed in it. NECG summarise this regulatory conundrum as follows:

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Ideally, access pricing of bottleneck facilities would involve prices low enough to protect access seekers and end customers from the exercise of monopoly power, but also high enough to support the investments needed to deliver the essential services at efficient levels of quality and quantity.¹⁰

57. There is likely a natural tendency for regulators to over-weight their decisions on those issues, tending towards lower access prices to forestall monopoly effects including higher than necessary prices, associated efficiency losses and impediments to otherwise efficient competitive entry.¹¹ However, the significant costs of this bias necessitates that the regulatory balance is shifted toward the assurance of infrastructure provision in the long-term and the necessary intermediate focus on appropriate investment incentives and sufficient returns on prudently incurred investments.
58. Telstra contends that the social costs of under-estimating the WACC are significantly higher than those of over-estimating the WACC. If the estimated WACC is too low, the access provider will be unable to recover the efficient and prudently incurred costs of providing access including network construction. This reduces the incentive for the access provider to properly maintain the network and to re-invest in the network where appropriate and efficient. Consequently, future investment in the network will not occur

¹⁰ NECG “Submission to the Productivity Commission Inquiry into Part IIIA”, January 2001, p16

¹¹ This tendency for regulators to err on the side of the access seeker has long been recognised by economists. Dixit and Pindyck provide an excellent summary of how even the best intentioned regulators can unduly and asymmetrically truncate the expected returns of regulated firms:

The natural competitive dynamics of an industry in the face of ongoing uncertainty will have phases when a ‘snapshot’ of the industry has features that the static [economic] theory would interpret as deviations from competitive behaviour. ... Suppose such an industry comes to the attention of policy authorities at an instant when the price is between the Marshallian long-run level [long-run average cost] ... and the equilibrium threshold [price that is above cost and at which new firms enter the market under industrywide uncertainty] ... They see established firms making supernormal profits, but no new entry taking place. Using conventional microeconomics or industrial organisation theory, they would suspect the presence of monopoly power or entry barriers, and might take antitrust action. That would be wrong; the process viewed as a whole is fully competitive, long-run expected returns are normal, and the equilibrium is socially optimal. (Dixit and Pindyck 1994, pp. 292–3)

The asymmetric risk of regulatory error will have implications for the behaviour of firms :

“... asymmetric treatment of uncertainty — by which losses by the firm are treated differently by the regulator than extraordinary profits — leads to distortions in the firm’s actions that operate against optimality ... asymmetry can actually induce the firm to make decisions in a way that ultimately works against the goals of the regulator and the welfare of customers.” (Train 1991, pp. 96–7)

“... if competition creates downside risks and tight rate of return regulation eliminates profits above the cost of capital, then pipelines cannot earn fair profits on average. Consequently, investment in the natural gas pipeline industry will eventually be retarded and biased towards safe activities. Risky investments necessary to provide reliable service will be discouraged.” (Kolbe, Tye and Myers 1993, p. 139)

“The incentive to invest ex ante may be reduced or become absent altogether because the returns of a sunk investment cannot be guaranteed due to the lack of [regulator] commitment. The commitment problem is especially critical in a deregulatory environment, in which regulators may be charged with the responsibility of promoting competition, and tempted to reduce the regulated firm’s price after it has made the investment.” (Biglaiser and Ma 1999, p. 216)

and the entire benefit to society of the additional output that investment would have permitted is foregone. These negatives affect all current and prospective end-users.

59. The fact that these problems can gestate for years without being obvious makes it difficult to identify that allowed rates of return (or WACC) have been set to low. The Productivity Commission also acknowledges this point and the associated inability to readily establish that regulation has hindered investment¹².

“In expressing this view, the Commission acknowledges that it is not possible to categorically establish that investment has been deterred by uncertainty created by regulatory diversity, or by the basis on which regulated prices are currently set. (Equally, evidence that spending on infrastructure has been growing strongly in sectors such as gas does not prove that there has been no deterrent or distortionary effect.)”

60. On the other hand, if the overall return on capital were set too high, the main effect is to increase the prices paid by access seekers and possibly ultimate consumers. Although this over-pricing results in an allocative inefficiency (consumption reduced from the optimal volume implied under perfect competition), it does not have the same negative implications for network provision, innovation and quality of service.

61. In recent years regulatory authorities have become aware of the potential deleterious effects that result from ignoring this asymmetry. For example, the New Zealand Commerce Commission (NZCC) specifically recognised this asymmetry:¹³

“The Commission notes concerns about the asymmetric nature of errors in assessing WACC, i.e., underestimation is the more serious error because it may lead to underinvestment by the regulated companies.”

62. Telstra agrees that this is an unreasonable risk for the regulator to take given the centrality of these assets (and the services they enable) to the long term interests of end users.

Accounting for asymmetries

63. In the Discussion Paper, the Commission goes on to ask that if there are asymmetric costs to WACC estimation, is Telstra’s proposed method of accounting for those asymmetries appropriate.

¹² Productivity Commission, *Review of National Competition Policy Reforms*, February 2005, page 298

¹³ New Zealand Commerce Commission, “Gas Control Inquiry Report”, November 2004, para 9.92

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64. This section proceeds on the basis that there are asymmetric consequences of mis-estimating the WACC and discusses how the regulator should proceed in that situation. Essentially the task for the regulator is to balance the competing objectives of eliminating monopoly elements in the access prices and simultaneously ensuring that the access provider earns sufficient returns so as to enable ongoing investment at adequate and socially optimal levels. As explained in the earlier section, the downside consequences of basing access prices on a WACC that is too low are significantly greater than the downside consequences of setting access prices using a WACC that is too high. Consequently, the task for the regulator moves from simply balancing the different views on the WACC (and its component parameters) and becomes how to balance or trade-off the potential implications of setting the WACC too low or too high.
65. The existence of asymmetries requires the Commission to err on the side that lessens the likelihood of the situation associated with the more pronounced downside consequences. This requires the regulator to use a WACC that is higher than the best CAPM-based point estimate of the WACC to guard against the possibility of the more significant downside consequences of using a WACC that is too low.
66. There is emerging regulatory precedent of regulators using WACC estimates upwards of their best point estimate to ensure adequate investment incentives and directly recognising the asymmetric consequences of WACC mis-estimation.
67. An early example of an upwards adjustment by a regulator was in respect of access arrangements for gas pipelines operated by GasNet and VenCorp. In this context the Commission adjusted the equity beta above its preferred point estimate to partly reflect the perceived lack of statistical rigour in the estimate but also to reflect a preference to err on the side of ensuring adequate investment incentives into the long-term.
 - a) “The Commission recognises that given the market evidence currently available this may be viewed as a conservative position which confers some benefit upon EAPL. However, the Commission considers that until more observations become available and the equity beta estimates become more statistically reliable, it is appropriate to adopt this conservative approach. This reflects the Commission’s view that it is better to err on the side which ensures that there are sufficient investment incentives. To take a contrary position

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would risk deterring investment in the pipeline (section 8.1(d)) and jeopardise other aspects of the service such as the safe and reliable operation of the pipeline (section 8.1(c)).”

68. Another more recent example is the decision by IPART to use a real, pre-tax rate of return of 7.3% based on a range from 5.5% to 8.0%. The point estimate adopted is above the simple mid-point of the valid range traditionally adopted by regulators. The rationale for this is clearly based on the principle of erring on the high side and to “create an environment where efficient investment in network capacity and/or performance is encouraged.”¹⁴ This perspective was supported not only by the access provider in that context but a number of access seekers are on record as supporting the view that any regulatory bias must be towards the infrastructure owner and thus the assurance of long-term investment incentives. Clearly these access seekers recognised sustainable investment in network capacity by the access provider as critical to their long-term business viability.
69. Generally these approaches are both ad hoc and partial. The upwards adjustment of the beta implemented by the Commission in the gas pipeline context, whilst a sensible partial approach, fails to account for the potential for mis-estimation of the other WACC parameters. Most of the other WACC parameters are also difficult to quantify precisely as evidenced by the sizeable range of recommended values for each parameter. As such there is considerable potential for mis-estimation of the other WACC parameters to result in an overall point estimate WACC that is below the “true” WACC and hence dis-incent ongoing investment at adequate levels.
70. Although the directional bias of the IPART decision is clear the specifics around the determination of the enhanced point estimate are not detailed (although it appears that there was consensus around a range of 7.1% to 7.5% upwards differentiated from the mid-point of the basic CAPM-driven mid-point of around 6.75%).
71. The New Zealand Commerce Commission (NZCC) appears the first regulator to specifically take into account the distributional properties of the estimated WACC in determining a margin above the traditional point estimate WACC¹⁵. In its decision around gas control the NZCC adopted the 75th percentile in a range of WACC values specifically to provide some protection against the significant downside consequences

¹⁴ IPART, Report on the Determination of Remaining Mine Life and Rate of Return”, May 2005, page 14

¹⁵ New Zealand Commerce Commission, *Gas Control Inquiry Final Report, (Final Report)* November 2004

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of under-estimating the WACC. In the NZCC's view the 75th percentile WACC adequately balances the asymmetric downside consequences of mis-estimating the WACC.

72. Telstra supports the use of statistical techniques in addressing these issues. Statistical analysis can assist by providing insight into the distributional properties of the estimated WACC reflecting the estimation uncertainty inherent in each of the WACC component parameters. This distributional information can then be used to assist the Commission in determining where within the distribution it should use to balance the asymmetric consequences of mis-estimating the WACC. For instance, if the Commission chose the mid-point WACC (analogous to but not necessarily consistent statistically with the CAPM-based point estimate) there would be a 50% chance that the WACC was too low and hence significantly damaging versus a 50% chance that it was too high with the attendant minor downside consequences. If the Commission had a lower tolerance towards accepting and being responsible for the risk of significant long-term socially undesirable consequences it would choose a WACC above the mid-point. This would reduce the risk of the more significant negative consequences associated with under-estimating the WACC.
73. Monte Carlo analysis can be used to estimate a distribution of the WACC based on the estimated/assumed distribution characteristics of the component parameters and potentially but not necessarily maintaining the integrity of the CAPM relationships. The Monte Carlo analysis can also be undertaken assuming independence between the CAPM variables, ie not capturing the inter-relationships between the WACC parameters. Essentially Monte Carlo analysis involves multiple (generally 100,000 samples for each variable) random sampling for each of the WACC component parameters from their individual distributions which are then compounded together consistent with the CAPM and WACC equations to form 100,000 estimates of the WACC. This then constructs a distribution for the WACC from which distribution statistics (including standard deviation) can be calculated.
74. The quality of the constructed distribution for the target variable (ie WACC) is highly dependent on identifying or assuming robust descriptive distributions for the component parameters. Invalid specification of the distributional characteristics of the component parameters will distort the constructed distribution of the target variable. This would be problematic if regulatory decisions designed to lessen the risk

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of under-enumerating the WACC are based on flawed or distorted WACC distributions. This could potentially result in a greater than intended potential for under-estimating the “true” WACC than if the margin above the WACC point estimate was based upon a robust distribution of the WACC.

75. The “fitted” distributions of each of the WACC component parameters should ideally reflect only estimation uncertainty and exclude variations in estimated parameter values dependent on different methodological approaches. For instance, in certain circumstances the riskfree rate could arguably be based on 5 or 10 year maturities and the regulator would need to make a decision about the approach given the context. However, it would not be appropriate to construct a distribution descriptor for the riskfree rate that straddled both the 5 year and 10 year maturities. This would involve an uncertain combination of different values due to different approaches (5 or 10 year maturities) as well as estimation uncertainty around the appropriate value for each maturity. The errors around the “true” values of the riskfree rate are likely to be different for those of the 5-year maturity than those of the 10-year maturity. The appropriate approach in a Monte Carlo perspective is for the regulator to identify a preferred maturity and then to identify the distribution characteristics of that maturity only.
76. The issues involved in determining the appropriate distribution descriptor for each WACC component parameter are discussed in Annexure B. The rest of this section considers the method of determining where in the constructed Monte Carlo distribution for the WACC the regulator should rest.
77. The Commission has undertaken some Monte Carlo analysis in its recent deliberations on the WACC. The purpose of the Commission analysis was to assess the appropriateness of various WACC estimates and has not been used to assist in any published consideration of the asymmetric consequences of mis-estimation of the WACC. As noted above Telstra considers that the application of the Monte Carlo technique in the WACC context can be twofold:

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- a) First, the Monte Carlo approach can assist in an evaluation of the unadjusted point estimate WACC to see whether it is statistically robust. That is, where within the constructed distribution does the preferred unadjusted WACC estimate sit? The Commission has previously used Monte Carlo analysis with this focus and Telstra agrees that this is a valid application;
- b) Secondly, the Monte Carlo approach can be used to assist in mitigating the asymmetric consequences of mis-estimating the WACC by understanding the distributional properties of the WACC and thus limiting the risk that the regulated WACC actually is too low with the attendant lack of adequate investment incentives and resultant significant downside consequences. Currently, the Commission does not use Monte Carlo analysis for this purpose;

78. The Commission should apply the results of any Monte Carlo analysis to assist in developing a response to the asymmetries associated with mis-estimating the WACC. It seems prudent that any decision to move above the unadjusted point estimate should be educated by an understanding of the distributional properties of the WACC and thus an understanding of the risk of under-enumeration of the WACC with the associated significant negative consequences. There are a number of potential resting points for the Commission in this context:

- a) Identifying a particular percentile at which it would establish the WACC for application in its costing. For example, using the 75th percentile WACC (as used by the NZCC) would mean there was a 75% likelihood that the true WACC was not above the applied WACC;
- b) Using standard statistical metrics such as standard deviation to identify a WACC one or possibly 2 standard deviations above the constructed mean WACC value. For example, using the plus one standard deviation WACC would imply an 83% likelihood that the true WACC was not above the applied WACC;
- c) Using the normal confidence levels conventionally applied in scientific and research contexts (generally 90% plus) would imply using the 90th percentile WACC. Using the 90th percentile WACC would mean there was a 90% likelihood that the true WACC was not above the applied WACC;

79. The above decisions depend critically on the risk tolerance of the regulator. If the regulator was a risk taker it could persist with the unadjusted WACC (analogous to but not necessarily the same as the mean in the WACC distribution) and accept a 50% chance that the WACC was below the “true” WACC and ultimately be responsible if under-investment

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and the attendant significant negative consequences ensued at some point in the long-term future. The regulator would also be accepting a 50% possibility that the “true” WACC was actually above its preferred WACC although the downside of that decision was significantly lower. Given the asymmetries in consequences therefore, the regulator cannot be indifferent about mis-estimating the WACC if it uses the mean or unadjusted WACC estimate.

80. The regulator should be aiming to select a WACC metric which balances the expected consequences if the actual WACC was different. On this basis the regulator would choose a WACC such that the probability that the WACC was too high compounded by the consequences of such over-enumeration was counter-balanced by the probability that the WACC was too low compounded by the consequences of such under-enumeration. At this point the regulator would be (somewhat) indifferent about mis-estimating the applied WACC.
81. If the plus one standard deviation approach were adopted there would be an 83% chance that the WACC was too high. This should be compounded with the long-term negative consequences of such over-enumeration. There would also be a 17% chance that the WACC was too low. This should be compounded with the long-term negative consequences of such under-enumeration.
82. From a theoretic perspective, the analysis by NECG which outlined the theoretical construct around dimensioning the long-term consequences of mis-estimating the WACC¹⁶ could be useful in this context. The welfare loss NECG identify as associated with monopolistic pricing is analogous to the regulator over-enumerating the allowed WACC whilst that associated with under-pricing is analogous to under-enumerating the allowed WACC. A regulator seeking to equalise the weighted likelihood of these welfare losses would clearly need to err on the high-side of the WACC distribution given the relative size of the estimated welfare loss of under-estimating WACC. This would equalise the probability weighted welfare loss if the allowed WACC was too high with the probability weighted welfare loss if the WACC was too low.
83. Telstra is not necessarily suggesting that regulators actually attempt to empirically estimate or construct long-run average cost and demand curves as the informational demands of achieving sufficient rigour in this are daunting. Instead Telstra considers that

¹⁶ See NECG “Submission to the Productivity Commission Inquiry into Part IIIA” January 2001, pages 22-23, available at <http://www.pc.gov.au/inquiry/access/subs/sub039.pdf>

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the approach of regulatory indifference and the statistical analysis both point to the regulator significantly increasing the allowed WACC into the high-side of the WACC distribution as consistent with prudent regulatory practice cognisant of the long-term implications and consequences of regulatory decisions and inherent potential for error.

84. Central banks around the world regularly adopt a policy of “least regret”¹⁷ which, despite the radically different issues at risk, may be loosely informative for regulators of network industries. The policy of least regret essentially countenances the potential for error in policy decisions around the appropriate stance of monetary policy. That is, recognising the potential for error, which policy stance has the least dire consequences for the economy and/or inflation (assuming inflation targeting as an explicit or implicit objective for the central bank agency). The central bank agency will then tend towards implementing the policy of “least regret”. If the network regulator accepts that there is a significant risk of error in estimating the WACC, the policy of least regret suggests that the regulator should err on the upside as this would have the least regrets for the regulator in terms of downside effects for society.

Calculating a separate WACC for each year of the undertaking

85. Telstra has used different WACC estimates for each year covered by the undertaking. The Commission questions the applicability of multiple WACC’s (see question below).

Should different WACCs be set for network costs in different years or one WACC for the whole period of the undertaking?

86. One of the fundamental tenets around the specification and calculation of the WACC is that it must be internally consistent with the construct of cashflows and/or asset values with which it is to be compounded. The PIE II modelling approach has been to calculate updated TSLRIC-based asset bases for each year covered by the undertaking. In each case the updated TSLRIC value reflects forecast values of demand, asset prices and input prices¹⁸. The asset values so constructed are essentially as at the beginning of the year, (1 July) covered by the undertaking.

¹⁷ RBA, Glenn Stephens, Economic Conditions and Prospects, Address to the Australian Business Economists and the Economic Society of Australia (NSW Branch), 17 September 2003,

¹⁸ For more detail regarding the approach to annual asset values see Bridger Mitchell “*Appropriateness of Telstra’s Cost Modelling Methodology*.”

87. The capital costs generated by the PIE II model relate to these updated asset bases for each particular year of the undertaking. Consequently, the estimate of an appropriate commercial return¹⁹ on the assets employed (or risk adjusted opportunity cost of the assets employed) as at 1 July of each year of the undertaking requires an estimate of the WACC also as at the same date. This means that the opportunity cost is educated by the combination of an estimate for the market value of the asset on the relevant day (1 July) and the WACC as at the same date. This essentially mimics the market decision that the asset owner has on that day as to whether to sell the asset and realise the market value effective on that date or hold the asset and forego risk adjusted opportunity returns commensurate with the WACC as at that same date.
88. Unless this correspondence of WACC and asset base is maintained the internal consistency of calculating the appropriate commercial return (opportunity cost) with contemporaneous WACC and asset values is compromised. For instance, to use the (single) WACC as at the beginning of the undertaking period and apply that to asset values as at the beginning of each subsequent undertaking year applies a commercial return (or opportunity cost) which is likely unavailable in the market. It is unlikely that the opportunity return foregone by selling an asset at the beginning of the second year of the undertaking is the same as if the asset was sold at the beginning of the first year of the undertaking. This approach mixes asset values and opportunity returns not simultaneously available in the marketplace and thus not truly indicative of the underlying opportunity cost of the assets at the relevant dates.

G. Forecasts of PSTN use

89. In the Discussion Paper the Commission raised several question pertaining to the accuracy and reasonableness of the PSTN usage forecasts that underpin the PIE-II model. Specifically the Commission asks,
- a) Are Telstra's estimates of declining use of PSTN services appropriate?
 - b) Should alternative forecasts be used to calculate PSTN access charges?
90. Telstra considers that at the heart of these queries are concerns about two key aspects of the volume estimates;

¹⁹ In dollar terms.

- a) are Telstra's forecasts calculated in an un-biased, reasonable manner; and
- b) are the estimated forecasts reasonable.

91. As outlined in the Previous Submission, for the purposes of correctly dimensioning the IEN module, the PIE II model relies on traffic volumes associated with all calls that use the PSTN. These volume forecasts are sourced from the Telstra Forecasting System ("TELFOR"). TELFOR is a centralised repository for Telstra's physical volume and revenue forecasts.

92. These forecasts are used throughout Telstra. They provide a basis for the product, marketing and price decisions of the various Telstra Business Units. As such, their accuracy is critical to the investment decisions and commercial operations of Telstra. Further, Telstra is not aware of the Commission having previously queried the use of Telstra's forecasts as an input to the calculation of access prices.

Causes of falling call volumes and access lines on the PSTN

93. The Discussion Paper spends some time examining the implications of falling PSTN volumes, and also briefly examines the causes for those falling volumes. As Telstra has previously said, falling PSTN volumes is a global phenomenon, and is driven largely by factors outside any operators' control, such as changing consumer preferences in the way they choose to communicate.

94. Telstra has made repeated public statements to this effect several times in recent years.²⁰ Independent Analysts, such as GoldmanSachs JBWere have also concluded that the decline in PSTN volumes is real and due to factors exogenous to Telstra's PSTN-OTA pricing decisions — including fixed-to-mobile substitution, broadband and cable competition (GoldmanSachs JBWere 29 March 2006)). The declines in volumes are being

20 For instance, on 9 February Telstra CEO Sol Trujillo in reporting Telstra's 2005/06 Half Year results explained that,

"...the PSTN decline had accelerated slightly faster than expected, with PSTN products revenue falling by 7.6 per cent or \$313 million for the half year, compared with a decline of 3.4 per cent for fiscal 2005. Further migration to mobiles and the internet saw volume reductions across most call types and reduced yields. Since June 2005, Telstra has lost 180,000 retail lines, of which 80,000 churned to wholesale."

Similarly, Telstra Chief Financial Officer, Mr John Stanhope on 11 August 2005 commented that,

"... the second half [of 2004/05] saw accelerating declines in PSTN voice revenues and significant product substitution emerging. Customers are increasingly shifting usage from higher margin PSTN services to lower margin services such as mobiles and broadband. We expect this trend to continue."

Indeed, similar comments and supporting evidence have been consistently made by Telstra in its submissions to the ACCC on several recent inquiries and regulatory matters including the Fixed Network Services Review (2006) and the Local Services Review (2006)

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experienced at both the wholesale and retail level. Similarly, international consulting firm Ovum considers that PSTN decline is largely inevitable:

“... Telstra's latest results confirmed the now-conventional wisdom that traditional voice is going the way of the dinosaur.” (Ovum, *Telstra: A look to the long-term future* March 9, 2006).

95. Australia is by no means alone in the reduced demand for traditional PSTN voice services is being felt in markets world-wide. For instance, the UK regulator Ofcom recently observed that:

“The total number of fixed exchange lines in the UK continues to decline, reflecting growth in mobile-only homes and a fall in the number of second lines for dial-up internet access” (Ofcom, *The Communications Market: interim report* February 2006 p. 42).

96. Importantly, it is clear that factors exogenous to PSTN-OTA pricing are driving this trend. The growth of broadband internet and the continued migration towards mobile telephony are the major factors reducing the call volumes and the number of access lines on the PSTN.

Impact of broadband

97. The substitution from dial-up to broadband internet is a major cause of declines in PSTN calling volumes and fixed-line services in Australia. Historically, most internet access was through dial up, which involved an internet user making a local call on the Telstra network each time they accessed the internet. Over recent years, however, the uptake of broadband has increased. Most new customers for broadband are former dial up customers. Accordingly, the accelerated uptake of broadband has had a corresponding decline in dial up internet access, and thus the volume of local calls being carried on the network.

Impact of mobile telephony

98. Substitution to mobile telephony is another major causal factor in the observed decline in PSTN call minutes and access lines. As well as for reasons of convenience, a major factor in this substitution has been the narrowing difference between the cost to consumers of

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calls from fixed lines and calls from mobile phones. This narrowing has occurred through market innovations, such as capping plans for mobiles. Mobile capped plans have grown in popularity in recent years, and act to decrease the apparent marginal cost of mobile calls to zero to consumers. It is no surprise, given this, that fixed to mobile substitution is a key factor in explaining the decline in PSTN volumes.

99. The impact of broadband migration and fixed to mobile substitution is well understood, and was noted by the Commission's Chairman Graeme Samuel in a recent speech to the Australian Telecommunications User Group:

"The first is the decline in high-margin voice revenues across the industry. It appears that the underlying drivers were increased substitution between fixed and mobile networks as well as within fixed-networks, for example some migration from dial-up to broadband services. The ACCC is examining substitution issues in its review of fixed line services, but it is clear that all fixed network operators, not just Telstra, recorded declines in voice connections and call traffic made purely on fixed line networks." (Graeme Samuel, 2006 ATUG Annual Conference, 7 March 2006, p. 3)

100. Telstra believes it is reasonable for industry as a whole to deal with the shift in usage away from the PSTN via slightly higher OTA charges. Industry enjoyed the lower access charges that resulted from increased volumes over the past six years, and must similarly share the burden of lower volumes. Importantly, maintaining this relationship between network volumes and access prices ensures that the objectives of competitive neutrality and efficient investment in the network are preserved.

Falling volumes and adjustment to the PIE-II asset base

101. The Commission goes on to question whether the PSTN asset base should be adjusted to reflect this fall in volumes:

To what extent should the PSTN asset base be commensurably adjusted to reflect the lower traffic volumes being assumed?

102. When the PIE II model is run for each year it uses the forecast traffic volumes for that year. As such the model optimises the dimensions of the IEN annually, in response to changing traffic conditions. It is clear that in the prevailing environment in which volumes are declining, this approach is more conservative and will lead to lower overall costs.

103. Although the IEN asset base has been adjusted for lower volumes, as the Commission would be aware, network costs are relatively inelastic with respect to volumes. The largely fixed aspect of IEN costs means that in the presence of falling volumes, unit costs will increase. In order to maintain competitive neutrality between Telstra and access seekers, these rising unit costs need to be reflected in the prices access seekers pay for access to the PSTN.
104. In summary, Telstra has fully adjusted the PSTN asset base to reflect lower volumes, and has done so on an annual basis for the period of the Undertaking.

H. Telstra's proposed access prices and price structure

105. Telstra has already provided a detailed explanation in the Previous Submission on how it translated its cost base into a series of access charges, and why Telstra believes those charges are reasonable under the statutory criteria. Telstra does not intend to go over this ground again in this section of its submission. However, the Commission has raised some issues to which Telstra is happy to respond.

The OA two-part tariff

106. In the Discussion Paper, the Commission asks whether end users will benefit from the proposed OA two part tariff?
107. As part of its Undertaking, Telstra has structured the PSTN OTA price as a two-part tariff so that a share of costs are recovered on a per customer basis, with a corresponding reduction in the level of costs being recovered on a per minute basis. This structure reduces the relative variable charges associated with using the PSTN to a level that more closely reflects the variable cost of usage and hence encourages more efficient use of the PSTN. As a result, Telstra submits that the proposed access charges will improve allocative efficiency and, as a result, end-users will benefit as retail prices will more closely reflect the cost of providing the services they demand.
108. The two-part tariff price structure adopted by Telstra ensures the long term interests of end users by seeking to minimise the distortion of retail call volumes whilst making sure that overall cost recovery is met, and the consequent continued efficient operation of and investment in the network.

Are there any issues with charging different access prices for preselected PSTN OA versus PSTN OT and non preselected OA?

109. Telstra is constrained in terms of the price structure it is able to implement. Although economic efficiency would dictate that a two part tariff be levied on all originating access traffic, this is not in practice possible. As many of the minutes utilising the PSTN are not directly associated with a customer on whom a fixed charge can be levied, there is no practical way to levy a fixed charge on a per customer basis. This is the case with all terminating minutes on the PSTN and originating minutes for over-ride and special services (One3, 1300, 1800, 181x and 190). For example, for traffic that originates on mobile networks and terminates on the PSTN, it would be impossible to charge the mobile operators a two-part tariff, as there is no sensible measure on which the fixed component of terminating access could be levied. Therefore, in these cases, the proposed PSTN OTA prices continue to be fully variable.
110. The two-part tariff is proposed for PSTN originating traffic, where that traffic belongs to the same access seeker that is the pre-selected carrier. In these cases, there is a clear basis on which a fixed charge per customer can be levied, namely the volume of preselected lines. Therefore, in the Undertaking price structure, Telstra differentiates between the structure of prices for:
- a) PSTN TA and non-preselect OA; and
 - b) PSTN preselect OA.
111. Telstra has set the OA preselect and OA override charges in such a way that on average they are equivalent.
112. In summary, the pricing approach taken is not perfect, because a “perfect” solution is simply not achievable in a practical sense, but by implementing a two-part pricing structure where practical, efficiency will be improved compared to retaining a completely variable structure of charges in all cases.

Fixed and variable charges for pre-select customers

113. In the Discussion Paper, the Commission asked whether Telstra’s 50:50 allocation of fixed charges versus per minute charges for preselected PSTN OA is reasonable.

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114. This question refers to the conversion of the 2.18 cent per minute headline rate to two-part tariff price for PSTN pre-select OA traffic, by allocating the fixed component of the charge between a per customer per month charge and a per minute charge.
115. As stated in the Previous Submission, Telstra's choice of a 50:50 allocation of common costs to a 'fixed' per customer charge per month and a per minute charge is based on an assessment of what it believes is a reasonable structure of charges. Although it would be possible to allocate a much smaller share (or even no share at all) of the common costs to the per minute charge, this would have the impact of significantly increasing the per service charge.

Imputation testing of the Undertaking

116. Telstra notes that the Undertaking prices provide substantial margin for access seekers providing the full bundle of PSTN services.
117. As outlined in the Previous Submission, Telstra has modified the imputation test constructed for Limb 2 of the Accounting Separation Framework to reflect the proposed undertaking prices and the ACCC's mobile termination rate glidepath. The results of this further testing is that undertaking prices for residential customers only reduce the bundled margin by [c-i-c] percent. This decrease is more than offset by the mobile termination rate decline.²¹ The margin for business customers is substantially higher than reported in Telstra's September quarter Limb 2 results. Of this [c-i-c] percentage point improvement, [c-i-c] of a percentage point is attributable to the proposed Undertaking prices, while the remainder is due to the decline in mobile termination rates. Therefore an equally efficient access seeker to Telstra can match Telstra's prices and still enjoy a significant positive margin from the supply of the relevant retail services.
118. The imputation test conducted by Telstra using Limb 2 is conservative because it tests whether the margin between the wholesale and retail prices is sufficient to cover Telstra's average rather than avoidable costs. Avoidable costs are the costs that would be avoided if Telstra did not supply the relevant retail service, and therefore do not include costs that are incurred jointly with the supply of other services. By contrast, average costs include a contribution to the joint costs of supply and therefore will be larger than the avoidable costs of supply (i.e. the margin between

²¹ Telstra, *Telstra's submission in support of its undertakings*, 22 March 2006, para.112.

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the retail and wholesale prices will need to be greater to cover the higher average costs of supply).

119. An imputation test should test whether the margin between retail and wholesale prices is sufficient to cover the avoidable costs of supply because any price that enables recovery of avoidable costs will provide the access seeker with a positive contribution to profits from the supply of that service.²² Therefore, as long as the retail-wholesale margin is equal to or greater than the avoidable costs of supply, an equally efficient access seeker will be better off supplying the service than exiting from the market, and would not be foreclosed from supply of the relevant retail services.

Conclusion

120. Given the matters set out above, Telstra urges the Commission to accept the Undertaking.

Dated: 21 June 2006

²² And even when the price only just recovers the avoidable costs of supply, an equally efficient access seeker still recovers the costs of supplying the service.