



TelstraClear Limited

Submission on the Draft Determination on the Application for Pricing Review for Designated Interconnection Services

PUBLIC VERSION

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2. Executive Summary

2.1 A lower final TSLRIC price best satisfies s.18

1. In its judgements on the correct parameter values to apply, the Commission should opt for values that result in a lower, rather than higher, TSLRIC price because this best satisfies s.18:
 - a. a lower TSLRIC price will result in lower prices to end-users;
 - b. a lower TSLRIC price will promote competition by strengthening the ability of Access Seekers to compete;
 - c. by strengthening competition, a lower TSLRIC price will promote innovation in the telecommunications industry;
 - d. overseas experience shows that a higher PSTN prices have not had a positive impact on the level of investment in telecommunications¹; and
 - e. a lower TSLRIC price will reduce incentives for inefficient/duplicative investment in alternative networks.

2.2 Telecommunications costs are falling

2. This TSLRIC price determination is being undertaken against a backdrop of falling costs in the telecommunications industry. This is reflected in the reduction in the calculated TSLRIC from 1.03cpm for 2003, to 0.99cpm for 2004 and 0.95cpm for 2005. TelstraClear would expect this trend to extrapolate out beyond 2005. The final TSLRIC price needs to reflect this trend and, therefore, should not be expressed as an averaged charge for the period of the determination.

2.3 The Commission cannot rely on Telecom's calculation of the TSLRIC price

3. Telecom's incentives to overstate TSLRIC have been borne out by their estimate of TSLRIC which is nearly double that of the Commission's. Because of Telecom's incentives to inflate TSLRIC the Commission should reject Telecom's calculation of the TSLRIC price.

2.4 The Commission's interpretation of the treatment of TSO costs in the TSLRIC calculation does not reflect the requirements of the Act

4. Sub-paragraph (b) of the definition of forward-looking common costs, in Clause 1 of Subpart 1 of Part 1 of Schedule 1 of the Telecommunications Act states that the forward-looking common costs to be included in TSLRIC "does not include any costs incurred by the service provider in relation to a TSO instrument".
5. The Commission has stated that "...the TSLRIC modelling should not include those costs recovered through the TSO in the final calculation of the cost of interconnection services".² This position will ensure that there is no "double

¹ Refer Network Strategies, *Trends investment and interconnection prices*, 25 May 2005.

² Paragraph 356 of the Commission's Principles Paper "Implementation of TSLRIC Pricing Methodology for Access Determinations under the Telecommunications Act 2001", 20 February 2004.

counting” of costs between the TSO and TSLRIC. However, the Commission also claims that “Such an approach will ensure that there is no double recovery of costs relating to the TSO...”³

6. This is not correct. A combination of revenue from provision of services to residential customers, and the top-up from the TSO funding mechanism means that the costs of providing the TSO (to all customers) is fully recovered. The inclusion of costs incurred in relation to the TSO will result in an over recovery (“double recovery”) of part of the costs of the TSO, contrary to the Commission’s stated position.
7. The Commission should therefore interpret sub-paragraph (b) of the definition of forward-looking common costs as excluding:
 - a. net losses from CNVCs (if any); and
 - b. any other costs of providing TSO services, whether incremental or common, and whether in respect of CNVCs or commercially viable customers.

2.5 Model Methodology

8. TelstraClear makes the following recommendations in relation to the methodology of the TSLRIC model:
 - a. the Commission should review the mark-ups (which represent housing and land costs) that are applied to switch costs to ensure that they correctly represent the efficient housing and land requirements of the switches being modelled;
 - b. the Commission should ensure that cost sharing has been implemented for the full set of non-voice services;
 - c. the Commission should investigate whether the model is appropriately modelling the allocation of costs between the access and core increments; and
 - d. the Commission should provide more information on the TSO costs that are removed and how this is implemented in the model.

2.6 Model inputs

Adjustment of Capital Costs

9. The Commission has adjusted capital costs with both a tilt and the CPI. This causes inflation to be double counted. Adjustment of capital costs for inflation is limited to application of the tilt only.
10. In addition, the Commission has applied an insufficient period of trend (7 months) to update the costs from the TSO 2001-02 period (20 December 2001 to 30 June 2002) to the interconnect period (5 November 2002 to 4 November

³ Paragraph 356 of the Commission’s Principles Paper “Implementation of TSLRIC Pricing Methodology for Access Determinations under the Telecommunications Act 2001”, 20 February 2004.

2003). A trend of either 10.5 months or 13.5 months should be applied to the data to bring it up to the interconnect period and to ensure that it is consistent with the TSO.

Price Trends

11. A comparison of the Commission's data with publicly available information from the last 5 years on the magnitude of price trends primarily used in regulatory proceedings in other jurisdictions shows that:
 - a. price trends are used at too aggregate a level, ie they are applied to cost categories that are too broad; and
 - b. several price trends seem to be too negative or are not positive enough.
12. The Commission should review the price trends in the Commission's model to ensure that it is consistent with that used recently in regulatory proceedings in other jurisdictions.

Building and land costs

13. An international comparison of building and land costs suggests that the Commission's mark-ups appear high. The Commission should revisit the figures received from Telecom to ensure that the land and building requirements reflect requirements of technology that is consistent with a forward-looking approach.

Time to build

14. The inclusion of a term in the Commission's tilted annuity formula for adjusting the investment cost for the period from payment to commencement of productive service may not be consistent with an efficient forward-looking operator. The Commission review whether the inclusion of this term is consistent with an efficient forward-looking operator and, if it is not, this term should be removed.

Switching costs

15. TelstraClear does not support the inclusion of data relating to Telecom NEAX switching equipment in the model as it does not reflect a forward-looking approach. The Commission should therefore implement NGN architecture within the model as soon as possible and NGN costs should be obtained from operators through a new data request. Given the time required to do this, for this determination the Commission should ensure that its judgements on the parameter values reflect the substantial efficiencies that implementation of an NGN would allow and should make an unweighted determination of the TSLRIC price for each year of the Determination.

Operating costs

16. TelstraClear provides operating cost information obtained from the Telstra PIE II model. A review of this information indicates that the Commission's approach of using averages over many asset categories is inflexible, particular for incorporating factors such as technological change. The Commission should

incorporate the Telstra PIE II data into its model; and use individual operating cost mark-ups for the asset categories.

Traffic

17. TelstraClear recommends the following in relation to traffic:
 - a. actual call traffic data should be used in preference to estimated data where this is available. The base year data for the calendar year 2003 should be supplemented with the equivalent for 2004 and this must include MOU per line, calls per line and line counts, and the data should be at the ESA level.
 - b. The Commission should seek an explanation from Telecom for the reason for discrepancies between the call traffic for the 2003 calendar year used in the Commission's model and that reported by Telecom in its annual and quarterly reports in order to confirm whether that the data used in the Commission model is appropriate.
 - c. The Commission should review whether the information provided by Telecom is an accurate measure of PSTN and non-PSTN traffic. It should also request from Telecom a list of non-PSTN circuits, segmented by type of circuit (retail leased line, interconnection circuit, broadband circuit and so on) showing in each case: the capacity of the circuit, the end points of the circuit in the transmission network and showing where the circuit is used for resilience purposes.

WACC issues

18. The Commission's decisions on WACC input values should incorporate the following:
 - a. insights from the international CAPM should be acknowledged;
 - b. the range estimate of the post-tax market risk premium (PTMRP) should be lowered; and
 - c. the debt premium is too high.

2.7 Calculating the TSLRIC price

19. The Commission calculated the price for each 12 month period, and then derived a weighted average to derive a single price. The Commission should make an unweighted determination of the TSLRIC price for each year of the Determination for the following reasons:
 - a. setting three different prices, rather than using a weighted average, means that the interconnection rates will be more allocatively efficient;
 - b. this will mean prices are adjusted annually, and hence avoid one-off relatively large (3-yearly) shifts in the TSLRIC rate;

- c. this is consistent with the regulation of fixed PSTN interconnection rates internationally, which tend to be based on CPI-X arrangements (ie they decline annually); and
- d. a weighted average using months (rather than unbundling the prices or using minutes as the weight) will either favour the access seeker or access provider, providing them with an unwarranted windfall gain/loss depending on whether PSTN minutes are decreasing or increasing.

2.8 Expiry of the Determination

- 20. The Commission records its preliminary view that the expiry date of the pricing review determination should be the date of public notice of the final pricing review determination. TelstraClear concurs with that decision.
- 21. The Commission should also clarify that the roll-over clause of TelstraClear's and Telecom's Interconnection Terms will recommence its application from 19 July 2005, when the determination expires, and will operate for a period of up to three years from that date in accordance with clause 5.4 of Schedule 2 of the parties' Interconnection Terms.

2.9 Mechanism for Recovery of Overpayments

- 22. In relation to the present Pricing Review for Designated Access Services, the parties have given final undertakings to the High Court of New Zealand in CP177/02 (Auckland Registry) to refund overpayments with interest at an agreed rate. These undertakings are binding on the parties and the Commission's determination regarding refund of any overpayment is, in this particular case, not required. However if it appears, either from Telecom's submissions or from discussions with Telecom, that it has a different view on this issue, TelstraClear reserves the right to make further submissions on this point.

3. Introduction

23. TelstraClear welcomes the opportunity to make a written submission on the Commerce Commission’s “Draft Determination on the Application for Pricing Review for Designated Interconnection Services”, (“TSLRIC Draft Determination”), dated 11 April 2005.
24. Please find attached the following reports which are part of TelstraClear’s submission:

Figure 1: Consultancy Reports that accompany TelstraClear’s written submission

Author		Report Name	Date	Public Version	Restricted Version
Network Strategies	1	Trends in investment and interconnection prices	25 May 2005	✓	x
	2	Pricing review for designated interconnection services: A review of the 2005 Draft Determination	24 May 2005	✓	✓
Marsden Jacob Associates	3	Comments on the TSLRIC model for designated interconnection services: Commerce Commission Draft Determination 11 April 2005	23 May 2005	✓	✓
	4	Comments on the cost of capital for Designated Interconnection Services: Commerce Commission Draft Determination 11 April 2005	20 May 2005	✓	x

25. This public version of TelstraClear’s submission and the public versions of the attached reports have had removed from them:
- TelstraClear-designated Restricted Information (TCLRI);
 - Telecom-designated Restricted Information (TCNZRI); and
 - Commerce Commission-designated Restricted Information (CCRI).

The material comprising TCLRI, TCNZRI and CCRI was provided to the Commission in accordance with clause 10 of the Commission’s Confidentiality Order dated 11 May 2004, and is categorised as financial, cost/price and customer and customer related information.

26. The balance of this submission is structured as follows:
27. **Section 4** provides general observations, noting that: costs in the telecommunications industry are decreasing; that Telecom’s incentives to inflate TSLRIC result in Telecom’s TSLRIC calculation producing an inflated result; and the need for the Commission to consider the implications of the

setting of the TSLRIC price for the long-term benefits of end-users, competition and innovation.

28. **Section 5** outlines how a lower final TSLRIC price best satisfies s.18 through lower prices to end users, strengthened competition, promotion of innovation and reduced incentives for inefficient/duplicative investment. This section also discusses international evidence that higher PSTN prices have not had a positive impact on the level of investment in telecommunications.
29. **Section 6** discusses TelstraClear's views on the relationship between the TSLRIC calculation and the TSO and the meaning of avoiding double recovery and costs common to the TSO.
30. **Section 7** discusses issues methodological issues related to the TSLRIC model, including sharing of common costs with the data network and cost allocation between access and the core.
31. **Section 8** provides TelstraClear's views on the appropriate approach to inputs to the model. In particular this section discusses adjustment of capital costs, application of the tilt to ensure consistency with the TSO, price trends, asset lives, mark-ups for building costs, the treatment of time-to-build in the model, concerns that the switching costs in the model do not reflect a forward-looking approach, information from Telstra's PIE II model on operating costs, traffic, network sharing and TelstraClear's view that the Commission has overstated the WACC to be used for the calculation of the TSLRIC price.
32. **Section 9** provides TelstraClear's views on calculation of the TSLRIC price and in particular on whether the Commission's approach of using a weighted average to derive a single price is appropriate.
33. **Section 10** discusses the expiry of the Determination.
34. **Section 11** discusses the mechanism for recovery of overpayments.
35. TelstraClear would be pleased to provide clarification on any of the matters raised in this submission and any further information the Commerce Commission might find helpful.

4. General observations

36. There are a number of observations that TelstraClear would make in relation to the TSLRIC Draft Determination.
37. First, costs in the telecommunications industry are decreasing. This is reflected in the reduction in the calculated TSLRIC from 1.03cpm for 2003, to 0.99cpm for 2004 and 0.95cpm for 2005. TelstraClear would expect this trend to extrapolate out beyond 2005.⁴
38. Second, the Commission's modelling also confirms that the Commission cannot rely on Telecom's calculation of the TSLRIC price. Telecom's incentives to overstate TSLRIC have been borne out by their estimate of TSLRIC which is nearly double that of the Commission's. For example, during the Commission's benchmarking exercise to determine the interconnection rate under the initial pricing principle, Telecom argued that the Commission should maintain the interconnection rate at 2.7cpm. In response to the Commission's section 45 notice of 30 April 2004, Telecom calculated TSLRIC to be 1.86cpm. Yet, Telecom has subsequently stated that the Commission's rate of 1cpm "*is within an acceptable band*".⁵⁶
39. TelstraClear would also emphasise the need for the Commission to consider the implications of the setting of the TSLRIC price for the long-term benefits of end-users, competition and innovation. This is discussed in detail in section 5. In short, TelstraClear considers that the Commission should not repeat its approach of taking a "conservative" approach that it took with the initial price by favouring a higher TSLRIC price but should favour a lower final price, which emphasises promotion of competition. To that end, TelstraClear notes the following:
 - a. The higher interconnection costs are the higher the retail prices that Telecom's competitors will have to set, and the more difficult it will be for them to compete for end-users.
 - b. Overstatement of the TSLRIC price will result in economic rents to Telecom, which will be to the detriment of end users, rather than a benefit.
 - c. Overstatement of the TSLRIC price will also result in unnecessary duplication and wasteful investment in alternative networks – at the expense of infrastructure investment that would have created greater

⁴ This trend is also reflected in the Commission's calculation of the net cost of the TSO which declined from \$65.67m (annualised) in 2001/02 to \$56.78m in 2002/03, despite an increase in the risk-free rate of 1.1%.

⁵ "Telecom disappointed over 1 cent rate", The Line, 13 April 2005.

⁶ This is also borne out by the experience with Telecom's calculation of the net cost of the TSO. Under the Telecommunications Information Disclosure Regulations 1999, Telecom was required to disclose its net cost of the Kiwi Share Obligation (KSO), as the TSO was then known. For the financial year to 30 June 2000, Telecom estimated the net cost to be \$167m. For financial year to 30 June 2001, Telecom estimated the net cost to be \$174m. Under the Telecommunications Act, Telecom subsequently estimated (on an annualised basis) that the net cost of the TSO to 30 June 2002 was \$425m (which Telecom subsequently reduced to \$408m after making minor changes to the methodology requested by the Commission). Telecom has moderated its estimate slightly since then, and has claimed that for the financial year to 30 June 2003 the net cost of the TSO was \$344m.

value add for end-users. This investment problem is exacerbated by the irreversibility of such investment. A decision not to invest because of a possibly overly low TSLRIC price can be readily corrected when the TSLRIC price is reviewed.

5. A lower final price best satisfies s.18

40. The Commission's draft TSLRIC price for designated interconnection service has been estimated using a bottom-up approach, which seeks, as much as possible, to make calculation of the TSLRIC price in a "scientific" manner. TelstraClear supports this. Inevitably though, there is a significant element of "art" in TSLRIC modelling in that many of the parameter values are based on judgements rather than real world numbers and because the calculation should be forward looking rather than historical. In its judgements on the correct parameter values to apply, the Commission should opt for values that result in a lower, rather than higher, TSLRIC price because this best satisfies s.18. There are several reasons why this is the case, including but not limited to:

- a. a lower TSLRIC price will result in lower prices to end-users;
- b. a lower TSLRIC price will promote competition by strengthening the ability of Access Seekers to compete;
- c. by strengthening competition, a lower TSLRIC price will promote innovation in the telecommunications industry;
- d. higher PSTN prices have not had a positive impact on the level of investment in telecommunications. This is demonstrated by work undertaken by Network Strategies⁷, which is further discussed below; and
- e. a lower TSLRIC price will reduce incentives for inefficient/duplicative investment in alternative networks. In this regard, there is an asymmetry of risk associated with setting the interconnection price too high versus too low. In particular, if it set too low, investment by Access Seekers may be discouraged because they prefer to rely on Telecom. But this can be reversed subsequently by a correction in price. If the interconnection price is set too high inefficient investment in duplicative network may be encouraged, which cannot be reversed even if the interconnection is subsequently corrected.

41. Points a, b and e have been discussed in paragraph 40. This section will focus on points c and d.

5.1 A lower PSTN price will promote innovation in the telecommunications industry

42. The interconnection price has a direct bearing on the level of competition and extent of entry: the higher the interconnection price charged by an incumbent, the higher its competitors' costs and the lower the profits they have to call on to devote to competing with the incumbent. Equally, the higher an entrant's costs and the lower its profits, the weaker the incentives for entry.

43. A lower interconnection price will promote innovation by:

- a. providing more funds for the incumbents' competitors to call upon to devote to innovation;

⁷ Refer Network Strategies, *Trends investment and interconnection prices*, 25 May 2005.

- b. reducing the risk to the incumbents' competitors from innovating. Put another way, a lower interconnection charge means the cost to a competitor of a failed innovation is lower. In making a decision on whether to invest in innovation a business is likely to consider both the potential benefit of success but also the potential cost of failure;
 - c. promoting entry and therefore increasing the size of the pool of potential innovators. The greater the number of competitors, the more solutions that will be developed to meet customers' demands, and the more solutions, the greater the pressure on other entities to develop alternatives to counter their competitor's innovations.
44. Conversely, a higher interconnection price implies greater reliance on the incumbent for innovation. This is because a higher interconnection price will impede entry and therefore limit the pool of innovators. Regardless of the strength of the incumbent in innovating, the consequence of primarily relying on a single entity for innovation will be a single source of ideas on how to meet customer demands. It will also mean that there is less pressure on that entity to continue to innovate because there is a lower risk that a competitor will be in a position to develop an alternative solution that better meets customers demands.
45. In addition, an interconnection price that is set too high will not provide Telecom with sufficient incentive to migrate customers to more cost efficient technology such as NGN offering a range of new and innovative services to long term benefit of end users. Telecom will have incentives to delay because they are earning economic profits on their out dated technology. In other words: Dynamic efficiency reflects the need to make timely changes to technology and products in response to changes in consumer tastes and productive opportunities. Telecoms incentive to roll out NGN as quickly as possible (and hence invest) will be lessened with an interconnection price that is too high. An interconnection price that is too high protects the profitability of their existing inefficient network.

5.2 High interconnection prices do not translate to higher rates of investment

46. Prior to the introduction of the Act, Telecom's interconnection price (2.7cpm) was extremely high by international standards. It follows from Telecom's arguments (that lowering interconnection prices will translate into lower investment) that Telecom's investment levels should have been very high by international standards prior to the introduction of the Telecommunications Act. The reality is that, despite high interconnection prices, Telecom's investment levels (however measured) were low by international standards, over an extended period of time.
47. TelstraClear commissioned Network Strategies to investigate the relationship between interconnection prices and trends in investment.⁸ Despite interconnection prices that are high by international levels, as the Commission's own benchmarking has shown, Network Strategies found New Zealand's level of telecommunications investment is low and declining:⁹

⁸ *ibid.*

⁹ *ibid*, page 19.

“The levels of investment in New Zealand are comparably low for an OECD country and have declined over the period from the mid 1990s. New Zealand’s ranking amongst OECD countries fell from 16 to 22 between 1997 and 2001 (based on OECD investment data) and from 12 to 25 between 1996 and 2000 (based on ITU investment data). Over these periods in New Zealand:

- *the public telecommunication investment per access channel decreased by 26% between 1997 and 2001 (OECD)*
- *the annual telecommunication investment per main line decreased by 42% between 1996 and 2000 (ITU).”*

48. These findings indicate that the Commission should place more weight on the benefits from competition in its decisions on the interconnection price rather than on Telecom’s arguments about the risks to its incentives to invest.

Recommendation

49. TelstraClear recommends that in its judgements on the correct parameter values to apply, the Commission should opt for values that result in a lower, rather than higher, TSLRIC price because this best satisfies s.18 of the Act.

6. Relationship to TSO – Double recovery and costs common to TSO

50. Sub-paragraph (b) of the definition of forward-looking common costs, in Clause 1 of Subpart 1 of Part 1 of Schedule 1 of the Act states that the forward-looking common costs to be included in TSLRIC “does not include any costs incurred by the service provider in relation to a TSO instrument”.
51. TelstraClear agrees with the Commission that, in interpreting this provision:
- a. *“the purpose of not including ‘any costs incurred by the service provider in relation to a TSO instrument’ is to prevent ‘double recovery’ of the net cost of the TSO instrument.”*¹⁰
 - b. *“There should be no double counting of costs under the TSO and TSLRIC regimes”.*¹¹
 - c. *“...a TSLRIC model should not include those costs recovered through the TSO in the final calculation of the cost of interconnection”.*
52. However, for the reasons outlined below, we do not believe that the Commission’s interpretation of “any costs incurred by the service provider in relation to a TSO instrument” correctly reflects and applies these principles.

Types of costs of providing the TSO

53. The costs (any costs) of providing the TSO can be categorised in the manner shown in Figure 2 below. The Figure shows that the costs of providing commercially viable and commercially non-viable customers (CNVCs) are made up of incremental and common costs.

Figure 2: Costs incurred by Telecom in providing the TSO

Costs incurred in providing the TSO	Incremental Cost	Common Costs
Commercially viable Customers	✓	✓
CNVCs	Net cost of the TSO	✓

54. The Commission proposes to deduct the net loss of the TSO, that is the net loss in respect of the CNVCs. The net costs of the TSO are calculated on an incremental basis.
55. TelstraClear’s view is that the exclusion of the TSO costs has a wider scope:
- a. the incremental TSO costs of commercially viable customers (CVCs) should be excluded, as well as the incremental costs for CNVCs because these costs are not incremental to interconnection and, as they are not

¹⁰ Commerce Commission, *Application of a TSLRIC Pricing Methodology – Discussion Paper*, 2 July 2002, paragraph 41.

¹¹ Paragraph 351 of the Commission’s Principles Paper “Implementation of TSLRIC Pricing Methodology for Access Determinations under the Telecommunications Act 2001”, 20 February 2004.

common costs, are not caught by the second limb of the definition of the definition of TSLRIC; and

- b. the effect of the exclusion of “any costs” of the TSO may be to exclude the common costs of the TSO in relation to both CVCs and CNVCs. Where the infrastructure used for TSO services is used for interconnection purposes, it may be that only the incremental costs of its use for interconnection services can properly be taken into account and no allocation can be made of shared costs in the TSLRIC calculation.

Concerns about the Commission’s interpretation of sub-paragraph (b)

- 56. TelstraClear is concerned that the Commission’s interpretation of sub-paragraph (b):
 - a. would result in double recovery of the cost of supplying the TSO (by making already commercially-viable customers more profitable) and increasing Telecom’s economic profits;
 - b. treats avoidance of double counting as being the same as exclusion of double recovery; and
 - c. is inconsistent with the statutory language.

Exclusion of Costs of Commercially Viable Customers

- 57. The costs to Telecom (or an efficient service provider) of providing the TSO are recovered in at least two ways: (i) residential telephony revenues (such as the revenue allowed under the price cap in the TSO); and (ii) contributions through the TSO funding mechanism in the Act.¹²
- 58. The introduction of the TSO funding mechanism in the Act ensures that Telecom receives at least sufficient revenue from its residential telephony customers to recover the cost of providing the TSO (including cost of capital). This is depicted in the following equation:

$$R_{\text{TSO}} + R_{\text{TSO Contributions}} \geq C_{\text{TSO}}$$

Where:

R = Revenue

C = Cost

TSO = Telecommunications Service Obligation

- 59. In the case of CVCs, by definition Telecom receives sufficient (or more than sufficient) revenue from residential telephony revenues to recover the cost of supplying those customers. No TSO contributions are required under the TSO funding mechanism.

¹² The Commission appear to only consider the latter, in expressing the view that “...a TSLRIC model should not include those costs recovered through the TSO in the final calculation of the cost of interconnection.”

60. In the case of CNVCs, revenue earned from supplying these customers is not sufficient to recover the cost of supplying these customers. The TSO funding mechanism provides additional contributions to make up any shortfall.
61. For either set of customers, no additional revenue is required to contribute to the cost of the TSO. Any additional revenues would simply act as a 'windfall' to Telecom, thereby increasing Telecom's economic profits. As this windfall is derived from Telecom's competitors (raising their costs) the direct effect will be to lessen competition.
62. The Commission, however, has interpreted the exclusion in sub-paragraph (b) as relating only to the net cost of supplying CNVCs, rather than all customers. This will mean that TSLRIC will include (as part of the forward-looking common costs) a contribution to the cost of the TSO in relation to CVCs. This contribution will add to the economic profits that Telecom receives from these customers. This is depicted in the following equation:

$$R_{\text{TSO}} + R_{\text{TSO Contributions}} + R_{i/c} > C_{\text{TSO}}$$

Where:

i/c = interconnection.

63. The broader scope of the costs excluded under Schedule 1 than the costs recouped through the TSO levy is evident from a comparison of the statutory language:
 - a. sections 83 and 84 require calculation of the "net cost", which is defined as the "unavoidable incremental costs of providing the service required by the TSO instrument to commercially non-viable customers";
 - b. by contrast, sub-paragraph (b) of the definition of forward-looking common costs refers to "any costs" of the TSO, without limiting the costs to CNVCs.
 - c. clearly, Parliament understood the difference between the costs of the TSO to CVCs and CNVCs. It carefully limited the TSO levy to recovery of a sub-set of the total TSO costs, being the costs of CNVCs, but when Parliament came to Schedule 1 it referred to any costs of the TSO without limiting those costs to CNVCs. On statutory interpretation principles, the omission of the reference to CNVCs when referring to the TSO costs for the purposes of the TSLRIC calculation must be treated as deliberate.

Double Recovery Concerns

64. The Commission has stated that "...the TSLRIC modelling should not include those costs recovered through the TSO in the final calculation of the cost of interconnection services".¹³ This position will ensure that there is no "double counting" of costs between the TSO and TSLRIC. However, the Commission also

¹³ Paragraph 356 of the Commission's Principles Paper "Implementation of TSLRIC Pricing Methodology for Access Determinations under the Telecommunications Act 2001", 20 February 2004.

claims that “Such an approach will ensure that there is no double recovery of costs relating to the TSO...”¹⁴

65. The discussion in the proceeding section shows this is not correct. A combination of revenue from provision of services to residential customers, and the top-up from the TSO funding mechanism means that the costs of providing the TSO (to all customers) is fully recovered. The inclusion of costs incurred in relation to the TSO (that relate to CVCs) will result in an over recovery (“double recovery”) of part of the costs of the TSO, contrary to the Commission’s stated position.

Exclusion of Common Costs

66. The literal wording of the Schedule 1 definitions also raises the issue of whether common costs should be excluded for both CVCs and CNVCs.
67. The Commission has, in effect, treated “any costs” in sub-paragraph (b) of the definition of forward-looking common costs as meaning “the incremental costs of supplying CNVCs”. Presumably the Commission has done this because the TSO calculation is incremental in nature.
68. However, common costs cannot, by definition, include incremental costs. That these two cost categories are intended to be mutually exclusive is evident from a comparison of the sub-paragraphs (a) in the definitions of forward looking common costs and TSLRIC. Whereas common costs are those costs “not directly attributable” to the relevant service, TSLRIC costs are those costs which “are directly attributable” to the service.
69. Sub-paragraph (b) of the definition of TSLRIC requires inclusion of an allocation of those costs which are properly considered common costs. Sub-paragraph (b) is not a deeming provision which changes the fundamental character of costs.
70. Therefore, the incremental costs taken into account in calculating the TSO would never have come into the common costs limb of TSLRIC in the first place. Sub-paragraph (b) of the definition of forward looking common costs must be taken as doing some other work. Sub-paragraph (b) of the definition of forward looking common costs must be directed at costs which otherwise would fall into sub-paragraph (a), that is to exclude costs which are not incremental.
71. This is further reinforced by comparing these definitions with the statutory language used in the TSO provisions. Section 84 requires the “net cost” of the TSO to be calculated. Net cost is defined as the “unavoidable net incremental costs” of providing services to commercially non-viable customers. By contrast, sub-paragraph (b) of the definition of forward looking costs refers to “any costs”.
72. Hence, the costs which are caught by the TSO exclusion under the definition of forward looking common costs must be or include common costs associated with the provision of the TSO services.

¹⁴ Paragraph 356 of the Commission’s Principles Paper “Implementation of TSLRIC Pricing Methodology for Access Determinations under the Telecommunications Act 2001”, 20 February 2004.

73. The consequence seems to be that the costs of infrastructure which is shared between TSO services and interconnection services is excluded from the TSLRIC calculation, other than the amount which is incremental to the interconnection service. If the facility would have had to be built for the TSO services, the cost of the facility is fully attributable to the TSO and the interconnection service is not required to bear an allocation of the costs which otherwise would have been incurred for the TSO. To take an example, the costs of a trench used for a cable which carries both TSO and interconnection traffic is fully attributed to the TSO because the trench would have had to be dug for the TSO even if there was no interconnection traffic. This explains why the exclusion of the TSO costs in sub-paragraph (b) is for “any costs ...in relation to the TSO”.
74. This seems to be consistent with the purpose of sub-paragraph (b):
- a. The Government has stated that the TSO funding mechanism was introduced to ensure that interconnection charges excluded contributions to the TSO. In a media release, for example, the Minister of Communications stated:¹⁵

‘Industry currently contribute to the costs through a premium on interconnection. The proposed mechanism will replace this. It will be more transparent and competitively neutral, and will give the Telecommunications Commissioner the final decision over the calculation of costs and cost contributions.
 - b. Any other interpretation would result in an increase in Telecom’s over-recovery of the cost of supplying the TSO, resulting in a reduction in competition and an increase in Telecom’s economic profits.
 - c. Any other interpretation would result in a TSLRIC price that fails to provide an adequate approximation of the marginal cost of supplying PSTN interconnection services, resulting in a less allocatively efficient outcome.

Recommendation

75. TelstraClear recommends that the Commission interpret sub-paragraph (b) of the definition of forward-looking common costs as excluding:
- a. net losses from CNVCs (if any); and
 - b. any other costs of providing TSO services, whether incremental or common, and whether to CNVCs or commercially viable customers.

¹⁵ Minister of Communications “Telecommunications: Questions and Answers”, 22 December 2000.

7. Model Methodology

7.1 Sharing of common costs with data network

76. For the 2002-03 TSO Determination TelstraClear recommended that the Commission “implement cost sharing in both the core and access networks to reflect international best-practice”.¹⁶ The Commission’s TSLRIC model has implemented infrastructure sharing for between voice and data networks. TelstraClear welcomes this approach. Network Strategies indicates that this approach has resulted in sharing being implemented for fibre, structure and electronics (SDH equipment) but not for switching costs, such as power, air conditioning, housing and land.¹⁷
77. Because power and air conditioning costs are built into the switch costs it is not necessary to implement sharing for these costs.
78. Housing and land costs have been implemented as a mark up on the switch costs. Network Strategies comments that this means that these costs are therefore directly related to the investment to which they are applied. These mark-ups should represent the costs of the housing and land required for the switch being modelled and not Telecom’s actual costs for housing and land. Telecom’s actual costs are not appropriate because in most cases the housing and land were built or purchased for previous generation switches that were much larger. The mark-ups used in the model for housing and land costs should therefore be checked to ensure that they represent efficient housing and land costs for the switches being modelled.
79. Network Strategies points out that it is not clear which data services have been included in the model: in particular, whether only leased lines have been included or whether other data services have also been included by modelling them as leased line equivalents. In relation to the 2002/03 TSO determination TelstraClear recommended¹⁸ that the Commission should accept Network Strategies’ recommendation to model a comprehensive set of non-voice services, including:
- a. DSL (on voice line);
 - b. DSL (on dedicated line);
 - c. ISDN (BRI and PRI);
 - d. DDS (digital data services) and Megalink leased lines;
 - e. Frame relay;
 - f. ATM; and

¹⁶ TelstraClear, *Submission on the Draft Determination for TSO Instrument for Local Residential Service for period between 1 July 2002 and 30 June 2003*, paragraph 134

¹⁷ Network Strategies, *Pricing review for designated interconnection services: A review of the 2005 Draft Determination*, page 36.

¹⁸ TelstraClear, *Submission on the Draft Determination for TSO Instrument for Local Residential Service for period between 1 July 2002 and 30 June 2003*, paragraph 134

- g. Analogue Data Services.
80. TelstraClear remains of the view that cost sharing should be implemented for the full set of services as services other than leased lines may share costs such as network switches. Not implementing cost sharing would mean that costs would be overstated which would result in access seekers facing a higher interconnection price than is efficient.

Recommendation

81. TelstraClear recommends that:
- a. the Commission review the mark-ups (which represent housing and land costs) that are applied to switch costs to ensure that they correctly represent the efficient housing and land requirements of the switches being modelled.
 - b. the Commission ensure that cost sharing has been implemented for the full set of non-voice services, including:
 - i. DSL (on voice line);
 - ii. DSL (on dedicated line);
 - iii. ISDN (BRI and PRI);
 - iv. DDS (digital data services) and Megalink leased lines;
 - v. Frame relay;
 - vi. ATM; and
 - vii. Analogue Data Services.

7.2 Cost allocation between access and core

82. Marsden Jacobs Associates (MJA) have noted that the Commission's principles for allocation of costs between the access and core increments, as outlined in the TSLRIC principles paper, are broadly in line with international experience but that their review of the Commission's model "indicates the results of the Commission's calculation differ markedly from international experience."¹⁹
83. MJA's examination of the Commission's model suggests that "[] CCRI of the total remote switch costs are allocated to core, the remaining [] CCRI are access related (termed line related costs)"²⁰.
84. By contrast, MJA note Danish and UK models show 17% of costs are core related while in the Swedish Hybrid model this percentage is 51%.²¹
85. MJA conclude on this issue as follows:²²

¹⁹ Marsden Jacob Associates, *Comments on the TSLRIC Model for Designated Interconnection Services: Commerce Commission Draft Determination 11 April 2005*, paragraph 66, page 20.

²⁰ *ibid*, paragraph 67, page 20.

²¹ *ibid*, paragraph 67, page 20.

“To summarise our benchmarked figures suggest that the Commission’s model is treating line and traffic driven costs in a fundamentally different manner that that observed in other cost models. We therefore recommend that this be investigated by the Commission. If the access/core split is more in accordance with that suggested by other costing models the cost of interconnection would be expected to be lower.”

Recommendation

86. TelstraClear recommends that the Commission investigate whether the model is appropriately modelling the allocation of costs between the access and core increments.

7.3 TSO costs

87. Network Strategies makes the following comment about how the CostPro model removes the cost of the TSO before calculating the interconnect price:²³

“CostPro removes the cost of TSO before calculating the interconnect price. This calculation is performed in the final reporting of the model. However, we are not able to verify exactly what costs 'related to the TSO instrument' are removed, and whether this process has been carried out correctly because of the lack of transparency and documentation. We request that the Commission provide more information on the exact costs that are removed and how this is implemented.”

88. It is important that the method for removing the TSO costs is transparent given the impact of TSO costs on the interconnect price. If the Commission accepts TelstraClear’s recommendation regarding the treatment of TSO costs in section 6 the approach that the Commission uses to remove TSO costs may need to be changed.

Recommendation

89. TelstraClear recommends that the Commission provide more information on the costs that are removed and how this is implemented in the model.

²² *ibid*, paragraph 72, page 21.

²³ Network Strategies, *Pricing review for designated interconnection services: A review of the 2005 Draft Determination*, page 37.

8 Model inputs

8.1 Capital costs

Adjustment of capital costs

90. Because the capital costs used in the model are based on TSO 2001-02 costs, which ran from 20 December 2001 to 30 June 2002, the Commission has had to adjust the capital costs to bring them in line with the relevant period in the interconnection determination (e.g. period 1 is 5 November 2002 to 4 November 2003). The approach used is as follows:

- a the tilt of each item is applied; and then
- b inflation in the form of the CPI is applied.

91. As Network Strategies comments:²⁴

“Since price trends written into contract price lists cannot be adjusted for inflation after the fact, and because the labour component of many of the costs are minor, we believe that these tilts are in fact actual observed price tilts and the term ‘real’ is used to mean the ‘actual’ tilts applied to Telecom’s actual prices. ... With this in mind, applying the CPI (representing inflation) explicitly in addition to tilt causes inflation to be double counted.”

92. This approach is also used for other periods, ie capital costs are adjusted with both a tilt and the CPI. However, all that is required to adjust for inflation is to apply the tilt to capital costs.²⁵

Recommendation

93. TelstraClear recommends that adjustment of capital costs for inflation is limited to application of the tilt only.

Date at which the tilt is applied

94. Network Strategies points out that the Commission has applied an insufficient period of trend (7 months) to update the costs from the TSO 2001-02 period (20 December 2001 to 30 June 2002) to the interconnect period (5 November 2002 to 4 November 2003).²⁶

95. Telecom has indicated that the cost data provided for the TSO, which is also used for this model, is for March 2002. If this data is indeed for March 2002 (and this is the first time TelstraClear has been informed this) then it is inconsistent with the TSO period. A 7-month adjustment would indeed bring March 2002

²⁴ *ibid*, page 5.

²⁵ Network Strategies also identify that the approach of applying the CPI to items that have already had a tilt applied is inconsistent with the approach in the TSO and accordingly recommend the following: “If the Commission chooses to adopt this new interpretation of tilt for interconnection, then the logical implication is that the Commission should recalculate the TSO for 2001-02 and 2002-03, requiring Telecom to refund the difference to liable persons, and also apply it in the next TSO round. To simply apply the new interpretation of tilt in the next round of TSO without refunding would lead to a windfall gain to Telecom at the expense of liable persons.” *ibid*, page 7.

²⁶ *ibid*, page 4.

data up to the TSLRIC starting point but this is inconsistent with the TSO. The two must be consistent.

96. Network Strategies recommends that a trend of either 10.5 months or 13.5 months be applied to the data to bring it up to the interconnect period and to ensure that it is consistent with the TSO.

Recommendation

97. TelstraClear recommends that the Commission follow Network Strategies' recommendation that a trend of either 10.5 months or 13.5 months be applied to the data to bring it up to the interconnect period and to ensure that it is consistent with the TSO.

Price trends

98. MJA have identified the following concerns with the price trends in the Commission's model:²⁷
- a. price trends are used at too aggregate a level, ie they are applied to cost categories that are too broad; and
 - b. several price trends seem to be too negative or are not positive enough.
99. MJA based its conclusions on a comparison of the Commission's data with publicly available information from the last 5 years on the magnitude of price trends primarily used in regulatory proceedings in other jurisdictions.²⁸ MJA provide evidence for this conclusion as follows:²⁹

"While the table indicates that there is some dispute on the price trend for fibre cable there is general agreement on a positive price trend in the benchmarked data for duct and trench.

However, in the Commission's model, for example, the price trend for the asset category buried fibre is negative. While this at first sight may appear to compare well with the findings in the table above, the USOA category is applied to plant types: buried trench and buried fibre. While fibre cable may have a negative price trend, international evidence suggests that trenching has a positive price trend. Hence the comparison highlights two potential problems:

- *the Commission's model does not specify price trends at a sufficiently detailed level; and as a consequence*
- *some of the aggregate price trends do not take appropriate account of offsetting components and may be too negative.*

²⁷ Marsden Jacob Associates, *Comments on the TSLRIC Model for Designated Interconnection Services: Commerce Commission Draft Determination 11 April 2005*, paragraph 13, page 5.

²⁸ Refer table 1, *ibid*, page 6.

²⁹ *ibid*, paragraphs 17-19, page 7.

Further, even without these problems a comparison with the international benchmarks suggests that the Commission's price trends are too negative or not positive enough. When this is the case the depreciation rate will be increased and interconnection costs overstated."

Recommendation

100. TelstraClear recommends that the Commission review the price trends in the Commission's model to ensure that it is consistent with that used recently in regulatory proceedings in other jurisdictions.

Asset lives

101. MJA have reviewed the asset lives values used for the model and have noted what appear to be inconsistencies between categories. For example, the asset life for USAO category "Conduit" has an asset life more than double that of "UndergroundFiber" and "Buriedfibre" and the same applies to "UndergroundTrench" versus "Buriedtrench".

102. Marsden Jacobs continues:³⁰

"More generally, these apparent inconsistencies are similar to those noted above for price trends and are due to an inappropriate aggregation of cost categories. A TSLRIC model may be very accurate at estimating equipment numbers and hence gross replacement costs. However, this is only one step in the modelling process. These costs have to be converted into annual costs. If the model makes to no attempt to also accurately model the economic characteristics of the specific assets by applying economic asset lives and price trends at a sufficiently detailed level, the original detailed modelling of the underlying equipment numbers is discounted. The same argument applies to the operating cost mark-up approach currently in the Commission's model which also in our opinion is too aggregate."

Recommendation

103. TelstraClear recommends that the Commission review the asset lives used in the model to ensure that the categorisation and use of asset lives categories are consistent i.e. similar cost items within different categories have the same or similar asset lives.

International comparison suggest that the Commission's mark-ups for building and land costs appear high

104. The Commission has requested additional information on building and land values. MJA state that in their view "buildings and land should be valued at their market value, consistent with TSLRIC principles"³¹. However, they also state:³²

"For specialised land and buildings, the market value may need to be adjusted. This is especially the case where values are received from Telecom.

³⁰ *ibid*, paragraph 27, page 9.

³¹ *ibid*, paragraph 58, page 18.

³² *ibid*, paragraph 60, page 18.

For example, there will be vacant space in many exchange buildings, often reflecting the fact that they were built to accommodate older switching equipment, which has a larger footprint than new equipment. However, there may also be a case for some spare capacity (in terms of space), where the provision of additional space represents an economically sensible contingency, e.g. due to future demand for say co-location space. However, inefficient vacant space is not part of TSLRIC.”

105. MJA suggest that, rather than using the Commission’s mark-up approach to incorporating land and building costs into the model, that a bottom-up approach be used.³³ This approach would:
- a. seek to estimate the space associated with the exchange equipment modelled; and then
 - b. use the space requirements and market value per square metre to calculate the value of the building and land.
106. MJA calculate building and land costs as percentage of switching equipment costs (gross replacement costs) in the Danish and Swedish cost models and compare these costs against the Commission’s mark-ups.³⁴ A summary of these findings is presented below in figure 3:

Figure 3: Building and land cost (combined) as a percentage of switching equipment costs in Danish and Swedish Hybrid Cost Models compared with Commission model

	Danish Model	Swedish Model	Commission
Weighted average mark-ups including common site costs	15.4%	12.9%	[]CCRI

107. This comparison suggests that the Commission’s value may be overstated. However, MJA note that country and equipment specific differences may account for the variance and these should be investigated. MJA recommend the following approach, which TelstraClear supports:³⁵

“We therefore suggest that the Commission revisit the figures received from Telecom. In particular, we suggest that the footprint of each site building be measured (or at least a selection) and the size of each major unit (in square metres) be determined. This should allow the Commission to determine the space allocated to different equipment types and also if there is any inefficient space that should be excluded. Further, the market value of each site (or again a selection) should be requested including the cost of additional site components such as power supply, air conditioning etc.”

³³ Refer to paragraph 61, *ibid*, page 18.

³⁴ Refer to table 4, *ibid*, page 19.

³⁵ *ibid*, paragraph 64, page 19.

Time to build

108. MJA identify a concern around the inclusion of a term in the Commission's tilted annuity formula for adjusting the investment cost for the period from payment to commencement of productive service. MJA makes the following comment:³⁶

"If the cost of capital is larger than the price trend and there is positive time lag between payment and commencement of productive service the annualised cost will be increased compared with a situation where this adjustment was not made. While we accept that there is an opportunity cost of having paid for but not taken into service a particular piece of equipment, such costs fall within what we term working capital costs.

Based on our examination of the model we have not been able to identify if working capital costs are separately accounted for. Assuming they are not we suggest this factor may be appropriate, as working capital costs are a legitimate cost item that would need to be recovered...

However, we would still question whether the additional costs implicitly suggested by the Commission's approach would in fact constitute part of an efficient forward-looking operator/cost concept. An operator should have incentive to minimise such costs and make the appropriate arrangements and contracts with equipment suppliers to minimise the time of payment to the date of commencement of productive service. Indeed the converse is also likely and there are cases where equipment is used before it is paid for."

Recommendation

109. TelstraClear recommends that the Commission review whether the inclusion of the term within the tilted annuity formula for adjusting the investment cost for the period from payment to commencement of productive service is consistent with an efficient forward-looking operator and, if it is not, this term should be removed.

Switching costs do not reflect a forward-looking approach

110. The Commission specifically requested data for Telecom's NEAX switching equipment. TelstraClear has several concerns about this.
111. First, because the data request was specific to the equipment used by Telecom, TelstraClear was unable to provide any information in relation to it. The Commission has therefore used the data provided by Telecom but there has been no independent scrutiny of it. It is important that this data is scrutinised to confirm that this data reflects efficient costs.
112. Second, TelstraClear agrees with Network Strategies that: "Telecom's NEAX equipment is very old."³⁷ TelstraClear considers it does not fit in the category of being MEA. As Network Strategies points out, Telecom began rolling out its next generation network (NGN) during the course of the TSLRIC calculation

³⁶*ibid*, paragraphs 28-30, page 9.

³⁷ Network Strategies, *Pricing review for designated interconnection services: A review of the 2005 Draft Determination*, page 8.

period.³⁸ TelstraClear first implemented a softswitch in its network in late 2003. It is therefore not appropriate to include antiquated switching equipment in a model that is supposed to be forward looking.

113. NGN switches enable achievement of significant efficiencies.³⁹ This means that the model's inclusion of old switching equipment has the effect of inflating costs significantly above that of an efficient operator. These inefficiencies will in turn be imposed on access seekers in the form of a higher interconnection price, with flow-on efficiency losses as a result of weakened competition and higher prices.
114. The Commission has decided to adopt a scorched node approach for modelling the network. TelstraClear is concerned that this approach may be preventing the full application of the MEA requirement within the model. MJA make the following comment in this regard:⁴⁰

“Given the Commission’s scorched node constraint states that the location of core network nodes is taken as given and this is interpreted as each nodal location in the Telecom network should contain equipment, we acknowledge that the Commission’s assumption may put restrictions on the modelled costs. The optimum number of nodes in a packet switched world is likely to be less than the number of circuit switched exchanges due to the economies of scale with large routers and lack of loop distance constraints (if copper is extended by digital transmission to an edge router).”

115. The key determinant of the impact of a scorched node approach is how it is applied. As the Commission noted in the Principles Paper:⁴¹

“... the application of new technology in a forward-looking network design may result in, for example, the replacement of small remote concentrators or switches with customer access transmission systems. It is possible, therefore, that the equipment at some network nodes would change in a forward-looking view, affecting whether or not that element would be included in the TSLRIC calculation.”

116. However, as MJA note, it is not clear from this statement whether forward-looking technology can cause a network node to become an “empty shell’ under the Commission’s scorched node approach. TelstraClear’s view is that the MEA requirement means that the scorched node approach should allow for empty node sites if this is efficient.
117. The Commission should therefore be proactive and replace the data in the CostPro relating to NEAX switches with next generation switches that truly reflect the requirement of being MEA.
118. In relation to transmission, MJA note that the scorched node assumption adopted by the Commission does not seem to put any constraints on optimisation and that transmission costs have dropped dramatically in recent

³⁸ *ibid*, page 8.

³⁹ For an outline of the efficiency gains of implementing an NGN see paragraph 103 below.

⁴⁰ Marsden Jacob Associates, *Comments on the TSLRIC Model for Designated Interconnection Services: Commerce Commission Draft Determination 11 April 2005*, paragraph 77, page 24.

⁴¹ Commerce Commission, *Implementation of TSLRIC Pricing Methodology for Access Determinations under the Telecommunications Act 2001, Principles Paper*, 20 February 2004, p 20.

years and continues to fall. They note that this has the following impacts on network design:⁴²

- *“only a few optical fibre cables are need to produced a vast capacity – and a low cost per unit (per Mbit/s and per Mbit/s.km);*
- *lower transmission costs makes the option of using more transmission to reduce switching costs more attractive (switch systems costs have not fallen as rapidly as transmission costs); and*
- *optical technology enables long distances to be covered. A network design therefore can have intelligent switching centres remotely placed, as the cost of getting there is not prohibitive.”*

119. MJA have reviewed the transmission structure used in the Commission’s model. Their comments are as follows:⁴³

“Our review of the transmission structure used in the Commission’s model suggests that it would not be unreasonable to conclude that it is optimal within the total costing framework and technology choices within the model. However, given that the nature of the switching technology were allowed to change there would be knock-on implications for the transmission design....

“If we relax the requirement to model circuit switched technology we suggest that Commission’s network is unlikely to be optimal.”

120. The Commission should therefore update the switching and network technology in the model so that it reflects the MEA requirement. In TelstraClear’s view, in order to ensure that the technology in the model is MEA the Commission should implement NGN as soon as possible and NGN costs should be obtained from operators through a new data request. Implementing the NGN will affect the following costs, which should be reviewed as soon as possible:

- a. switching (because of smaller and fewer switches, with many switches being replaced by concentrators);
- b. transmission (because of the tighter integration of voice and data networks);
- c. operations and maintenance (because of the lower operating costs of NGN equipment)
- d. switch housing, land and power costs (because of lower space requirements).

121. TelstraClear understands, however, that it would take several months to implement NGN in the model. The Commission should therefore ensure that its judgement on the parameter values to apply for the TSLRIC Determination reflect the substantial efficiencies that implementation of an NGN would allow.

⁴² *ibid*, paragraph 80, page 25.

⁴³ *ibid* paragraphs 81 and 85, pages 25 and 26.

This implies favouring parameter values that would result in a lower TSLRIC price.

122. In addition, this issue emphasises the importance of the Commission making an unweighted determination of the TSLRIC price for each year of the Determination, as discussed in section 9 below. This would allow the Commission to reflect increasing importance of NGN technology in its final determination.

Recommendation

123. TelstraClear recommends that the Commission should:
- a. implement NGN in the model as soon as possible;
 - b. obtain NGN costs from operators through a new data request;
 - c. ensure that its judgement on the parameter values to apply for the TSLRIC Determination reflect the substantial efficiencies that implementation of an NGN would allow;
 - d. make an unweighted determination of the TSLRIC price for each year of the Determination, as discussed in section 9 below.

Operating Costs

124. We have obtained the following operating cost information from Telstra's PIE II model:

Figure 4: PIE II operating costs as a percentage of capital investment

Asset category	Operating cost (%)
Radio transmission	[] TCLRI
Optical fibre	[] TCLRI
Network management	[] TCLRI
Land and buildings	[] TCLRI
SDH transmission	[] TCLRI
Local switching	[] TCLRI
Signalling transfer point	[] TCLRI
Transit switching	[] TCLRI
Main conduit	[] TCLRI
Distribution cable	[] TCLRI
Distribution conduit	[] TCLRI
Pair gain systems	[] TCLRI
Customer radio	[] TCLRI
Main cable	[] TCLRI
Miscellaneous transmission	[] TCLRI

125. Network Strategies make the following comments on this data:⁴⁴

“While the applying Telstra’s costs has negligible effect on the interconnect price– less than [] CCRI for period 1 – using averages over many asset categories is inflexible. If the operating cost of one category were to change, such as through the introduction of a new technology, the Commission will need to calculate a new average and apply it to all the categories using that average. We recommend the Commission use individual operating cost mark-ups for the asset categories.”

Recommendation

126. TelstraClear recommends that:

- a. the Commission incorporate the Telstra PIE II data into its model; and
- b. use individual operating cost mark-ups for the asset categories.

8.2 Traffic

Actual traffic data should be used in preference to estimated

127. The Commission has used Telecom call traffic data for the calendar year 2003 as the base data and from this have estimated call traffic for 2004 and 2005. However, as Network Strategies points out:⁴⁵

“The forecasting of call traffic is a complex issue, as traffic may be influenced by many factors, such as:

- *changes or growth in the access line market*
- *characteristics of the economic and demographic environment*
- *movements in call prices*
- *demand shifting, through the stimulation of offpeak usage*
- *changes in calling behaviour due to the availability of other forms of communication, such as mobiles and the Internet.”*

128. For these reasons, it is very difficult to forecast call traffic accurately and actual data should be used in preference to estimate data where this is available. Actual data for 2004, at least, should be available for incorporation into the model prior to the final determination.

Recommendation

129. TelstraClear recommends that the Commission use actual call traffic data for the 2004 calendar year, with data at the ESA level, and that this must include:

⁴⁴ Network Strategies, *Pricing review for designated interconnection services: A review of the 2005 Draft Determination*, page 9.

⁴⁵ *ibid*, page 22.

- a. growth rates in MOU per line;
- b. calls per line; and
- c. line counts.

Discrepancy in base year data

130. Network Strategies have identified discrepancies between the call traffic for the 2003 calendar year used in the Commission's model and that reported by Telecom in its annual and quarterly reports.⁴⁶ TelstraClear recommends that the Commission seek an explanation from Telecom for the reason for this variation in order to confirm whether that the data used in the Commission model is appropriate.

Assumptions for traffic data

131. Network Strategies has reviewed the assumptions for individual call types and makes the following conclusions:⁴⁷

"...the problem of developing reasonable call traffic forecasts in a competitive environment is a complex task. This is clearly recognised by the Commission:

The nature of the data available to the Commission and the presence of external factors limited the ability of the Commission to derive meaningful results from quantitative analysis. [Draft Determination, Appendix I, paragraph I.3]

Yet the Commission has chosen to use assumptions that are not supported by the available data. Our sensitivity testing on call traffic volumes (section 4.3) found that changes in the overall traffic volumes result in significant changes in the estimated interconnect price. The evidence we have presented above suggests major problems with the Commission's traffic assumptions.

We believe that the ideal solution would be to supplement the base year data for the calendar year 2003 with the equivalent for 2004: this must include MOU per line, calls per line and line counts, and the data should be at the ESA level. This should provide a far better indication of appropriate growth rates for 2005 data than the growth rates used by the Commission. While we acknowledge that there is a risk that extending a single year's growth rates to the next year may project some anomalous behaviour, we consider that capturing growth rates at the ESA level is more critical to the outcome of the model. Note that we do not know what effect this will have on the interconnection price, as we have no information on the growth rates at the ESA level – it depends upon how sensitive the model is to variation at a small geographic area level. Our recommendations aim to devise a methodology that could be supported for this and future determinations, rather than one that is fundamentally flawed."

⁴⁶ refer Exhibit 3.8, *ibid*, page 23.

⁴⁷ *ibid*, page 33.

Recommendation

132. TelstraClear recommends that the Commission adopts Network Strategies recommendations to supplement the base year data for the calendar year 2003 with the equivalent for 2004 and this must include MOU per line, calls per line and line counts, and the data should be at the ESA level.

International comparisons suggest amount of non-PSTN traffic may be underestimated

133. A TSLRIC model needs to account for all the services that use a network including traditional voice services, leased lines, data services and other services. If the model does not include all services the network will be under-dimensioned and costs will increase for those services that are included in the model because costs will be allocated to fewer services.
134. MJA indicate that their review of the model suggests that the approach adopted to modelling PSTN and non-PSTN services appears reasonable. However, they indicate that they have been unable to review the more detailed numbers provided by Telecom to confirm whether they are appropriate. MJA suggest that, to assist in such a review, the Commission request from Telecom a list of non-PSTN circuits, segmented by type of circuit (retail leased line, interconnection circuit, broadband circuit, etc) showing in each case: the capacity of the circuit, the end points of the circuit in the transmission network and showing where the circuit is used for resilience purposes.
135. MJA indicate that this data will also enable assessment of whether the amount of transmission costs allocated to the PSTN is reasonable. In this regard, MJA make the following comment:⁴⁸

“We are concerned that the TSLRIC model would appear to allocate a very high proportion of total transmission capacity to PSTN compared to what we would expect in the light of other models. This has been prompted by Telecom comments on sharing between data and PSTN...”

“These [i.e. Telecom’s] proportions seem high compared with other cost models we have reviewed.”

136. MJA compare Telecom’s data with Danish and Swedish data⁴⁹. They conclude:⁵⁰

“While the data presented by Telecom is presented in another dimension both evidence from Denmark and Sweden suggest that amount of non-PSTN traffic may be underestimated. If this is the case, interconnection costs will be overestimated.”

Recommendation

137. TelstraClear recommends that the Commission:

⁴⁸ Marsden Jacob Associates, *Comments on the Cost of Capital for Designated Interconnection Services: Commerce Commission Draft Determination 11 April 2005*, 20 May 2005, paragraphs 49 and 50, page 15.

⁴⁹ Refer to tables 2 and 3, *ibid*, pages 16 and 17.

⁵⁰ *ibid*, paragraph 55, page 17.

- a. review whether the information provided by Telecom is an accurate measure of PSTN and non-PSTN traffic; and
- b. request from Telecom a list of non-PSTN circuits, segmented by type of circuit (retail leased line, interconnection circuit, broadband circuit and so on) showing in each case: the capacity of the circuit, the end points of the circuit in the transmission network and showing where the circuit is used for resilience purposes.

8.3 Network Sharing

138. TelstraClear is pleased to see that the Commission has implemented network sharing in the core network by implementing sharing with the access network and sharing with other operators.
139. However, as Network Strategies points out, only structure costs are shared, whereas in an efficient network other costs such as cable sheath sharing and switch housing may also be shared.⁵¹ Network Strategies indicates that switch housing is implemented through a mark-up in the model meaning that sharing does not need to be explicitly modelled, though they have been unable to check whether the mark up used is appropriate. Cable sheath sharing has not been implemented.
140. Implementing cable sheath sharing in the model where an efficient operator would use it would further improve the model. Doing this would be consistent with Telecom's practice in its network.⁵² It also assumes greater importance as the Commission implements NGN and voice and becomes just one of many applications on the IP network.

Recommendation

141. TelstraClear recommends that the Commission implement cable sheath sharing in the model.

8.4 WACC issues

142. MJA has advised TelstraClear on the appropriate value of the WACC to be used for the calculation of the TSLRIC price. In summary, MJA are in broad agreement with many of the Commission's judgements (risk-free rate, gearing, corporate tax rate, investor tax rate). However, there are a number of areas where MJA disagree with the Commission. The net effect is that MJA consider that the Commission has overstated the WACC to be used for the calculation of the TSLRIC price. A summary of MJA's views is provided below:⁵³

“While in broad agreement with the Commission’s judgements, improved judgements can be made in several areas. These include:

⁵¹ Network Strategies, *Pricing review for designated interconnection services: A review of the 2005 Draft Determination*, page 20.

⁵² Draft Determination, Appendix G-A, paragraph 31.

⁵³ Marsden Jacob Associates, *Comments on the Cost of Capital for Designated Interconnection Services: Commerce Commission Draft Determination 11 April 2005, 20 May 2005*, paragraph 4, page 1.

- *insights from the international CAPM should be acknowledged. New Zealand is a small open economy. The use of a purely domestic CAPM provides higher estimates of the WACC than would result from using an international CAPM. Ideally, both domestic and international models should be used and the estimate of the WACC used should lie in the range suggested by these models. However, as an alternative, account should be taken of insights from the international model by either adjusting the WACC parameters or the final WACC itself;*
- *the range estimate of the post-tax market risk premium (PTMRP) should be lowered. The PTMRP is a forward-looking concept as is the CAPM. We suggest that this be specifically acknowledged by the Commission by placing significantly more weight on forward-looking or adjusted historical estimates than on a pure historical estimate... Based on our analysis this will lead to a downward shift in the current estimate range used by the Commission. Further, the Commission should acknowledge that, and make adjustments for the fact that, an arithmetic averaging of historical estimates will result in estimates that err on the high side;*
- *the debt premium is too high. International evidence suggests a lower range for the debt premium even when account is taken of debt-raising costs.”*

143. A comparison of the Commerce Commission’s and MJA’s parameter estimates and WACC estimates is provided in Figure 5.

Figure 5: Comparison of Commission and MJA WACC and WACC input values

	Draft Determination			MJA		
	Low	High	Mid-point	Low	High	Mid-point
Risk-free Rate	5.87%	5.87%	5.87%	5.87%	5.87%	5.87%
Post-Tax MRP	6.0%	8.0%	7.0%	5.0%	7.0%	6.0%
Equity Beta	0.714	1.143	0.929	0.571	1.143	0.857
Asset Beta	0.5	0.8	0.65	0.4	0.8	0.6
Cost of Equity	8.22%	13.08%	10.43%	6.79%	11.93%	9.08%
Debt Premium	1.20%	1.80%	1.50%	0.90%	1.30%	1.10%
Cost of Debt (pre-tax)	7.07%	7.67%	7.37%	6.77%	7.17%	6.97%
Gearing	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%
Corporate Tax Rate	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
Investor Tax Rate	33.0%	33.0%	33.0%	33.0%	33.0%	33.0%
Post-tax Nominal Cost of Capital	7.17%	10.69%	8.78%	6.11%	9.79%	7.75%

* Grey cells are input values.

Recommendation

144. TelstraClear recommends that the Commission select the WACC and WACC input values for the TSLRIC calculation recommended by MJA:

- a. Post-tax MRP = 6% (range 5 – 7%)
- b. Equity beta = 0.857 (range 0.571 – 1.143)
- c. Asset beta = 0.6 (range 0.4 – 0.8)
- d. Cost of equity = 9.08% (range 6.79 – 11.93%)
- e. Debt premium = 1.10% (range 0.90 – 1.30%)
- f. Cost of debt (pre-tax) = 6.97% (range 6.77 – 7.17%)
- g. WACC = 7.57% (range 6.11 – 9.79%)

9. Calculating the TSLRIC Price

145. The Commission notes (para 149 of the Draft Determination) that to calculate the TSLRIC price, the Commission calculated the price for each 12 month period, and then derived a weighted average to derive a single price. The Commission then (paras 150 on of the Draft Determination) details various options deriving the weighted average.
146. The Commission does not explain why it considers there is a need to calculate a weighted average price. TelstraClear considers that the Commission should (based on the Draft Determination) make a Determination of:
- a. 1.03cpm for 1 June 2002 – 4 November 2003;
 - b. 0.99cpm for 5 November 2003 – 4 November 2004; and
 - c. 0.95cpm for 5 November 2004 – 19 July 2005.
147. In respect of this recommendation, TelstraClear notes the following:
- a. setting three different prices, rather than using a weighted average, means that the interconnection rates will be more allocatively efficient. The approach taken here will set a precedent for any subsequent determinations. In addition, we note that the roll-over clauses in Telecom's and TelstraClear's interconnection agreement would apply to the price at the date of the expiry of the Final Determination. 0.95cpm would be a more allocatively efficient rate for 20 July 2005 and beyond than 1cpm since a 1cpm determination would result in a PSTN price in 2005 and beyond significantly above cost⁵⁴;
 - b. this will mean prices are adjusted annually, and hence avoid one-off relatively large (3-yearly) shifts in the TSLRIC rate;
 - c. this is consistent with the regulation of fixed PSTN interconnection rates internationally, which tend to be based on CPI-X arrangements (ie they decline annually);
 - d. a weighted average using months (rather than unbundling the prices or using minutes as the weight) will either favour the access seeker or access provider, providing them with an unwarranted windfall gain/loss depending on whether PSTN minutes are decreasing or increasing. (If the TSLRIC price is decreasing, and PSTN minutes are decreasing (increasing) overtime, a monthly weighting will financially favour the access provider (access seeker)); and
 - e. TelstraClear does not consider that there are any benefits in using a weighted average. Telecom and TelstraClear's billing records provide all the information needed to set prices on an unweighted basis, or to use PSTN minutes as the weight if the Commission considers that this would be more appropriate.

⁵⁴ However, as we argue elsewhere in this submission 0.95cpm would still overstate the true cost and the final price that the Commission determines should be lower than this.

Recommendation

148. TelstraClear recommends that the Commission:

- a. make an unweighted determination of the TSLRIC price for each year of the Determination; but if the Commission rejects this recommendation; and
- b. use a weighted average based on PSTN minutes rather than months.

10. Expiry of the Determination

149. In paragraph 50 of the Draft Determination, the Commission records its preliminary view that the expiry date of the pricing review determination should be the date of public notice of the final pricing review determination. TelstraClear concurs with that decision.

150. In paragraphs 51 and 52, the Commission refers to the roll-over provisions in clause 5.4 of Appendix 2 of TelstraClear's and Telecom's Interconnection Terms. In paragraph 52 the Commission notes:

Clause 5.4 is a term of the initial determination. The Commission expects that as the present determination will expire on the date of public notice of the final pricing review determination, the Parties will enter commercial negotiations to renegotiate the terms of future supply. If necessary, the Parties may seek further regulatory intervention under the Act.

151. As currently drafted, there is some ambiguity in paragraph 52 relating to the Commission's intentions as to the future application of the roll-over provisions. This paragraph could be given one of three possible interpretations:

- a. The roll-over clause will recommence its application from 19 July 2005, when the determination expires, and will operate for a period of up to three years from that date in accordance with clause 5.4 of Schedule 2 (**Interpretation 1**);
- b. The roll-over clause will recommence its application from 19 July 2005, when the determination expires, and will operate for a period of up to three years from 5 November 2003 (being the expiry date out of the Initial Determination) in accordance with clause 5.4 of Appendix 2 (**Interpretation 2**).
- c. The roll-over clause will cease to have any further application once the determination expires on 19 July 2005 (**Interpretation 3**);

152. While clause 5.4 does form part of the Initial Determination, it is a term that was commercially agreed between TelstraClear and Telecom, which was then incorporated into the Initial Determination by the Commission by agreement.⁵⁵ Therefore:

- a. The application of this clause should not be altered by the Commission without the agreement of the parties; and
- b. The clause should be interpreted according to the usual principles of contractual interpretation.

153. The purpose of clause 5.4 is to provide for an orderly transition between this Interconnection Determination and the next interconnection agreement or determination, with the aim of providing for the rollover of the terms of the Interconnection Determination on a provisional basis during any period in which TelstraClear is "out of contract", until new terms have been agreed or

⁵⁵ See paragraph (iii) on page 3 of Initial Determination.

determined. Clause 5.4 reflects the parties' intention that the roll-over period would run for up to three years from the expiry of the Interconnection Determination (ie giving an expiry date of 19 July 2008), or in the alternative, for up to three years from the expiry of the Initial Determination (ie giving an expiry date of 5 November 2006).

154. The Commission has no jurisdiction to overturn or modify commercially agreed terms:
- a. The Commission's role is to determine terms of supply of regulated services if and when the parties to that supply agreement are unable to do so. Parliament and the Commission have recognised that commercially agreed outcomes are to be favoured over outcomes determined by the Commission. Clause 5.4 of Appendix 2 represents a negotiated provision. It is a sensible and desirable arrangement and not one that should be modified or revoked by the Commission
 - b. The Commission has no jurisdiction to modify Clause 5.4 of Appendix 2 as part of the Pricing Review Determination:
 - i. It is not a term that relates to the price to be paid for the service, and therefore falls outside the parameters of section 42(1);
 - ii. It is not "the expiry date of the determination" under section 52(f). Rather it represents a roll-over arrangement that provides for a temporary extension of the Interconnection Determination on a provisional basis once the expiry date has passed, pending the parties agreeing new interconnection terms for the post expiry period or those terms being determined by the Commission in a subsequent application.
 - c. As an agreed term, the Commission is precluded from making any contrary determination in relation to that term by section 20(1), which effectively limits the Commission's jurisdiction to the terms not agreed.
155. Accordingly, TelstraClear requests that the Commission clarify paragraph 52 in the Final Determination to reflect that the effect of clause 5.4 is as set out in Interpretation 1. This is the interpretation that reflects the intentions of the parties.

Interpretation 1

156. This is the interpretation that best reflects the parties intentions because:
- a. As noted above, the parties intended that there be a roll-over period of up to three years from the expiry of the Interconnection Determination. This would give the parties a reasonable opportunity to negotiate a new agreement, and failing that, to apply for and obtain a new determination;
 - b. When the parties agreed the roll-over provision, there was a high probability that one or both of them would seek a pricing review determination, with at least a possibility that the Commission would then exercise its power under section 53(f) to set a new expiry date of the

Interconnection Determination. This is what has occurred. Until that Pricing Review Determination was made, there was little utility in the parties commencing negotiations on a new interconnection agreement, or applying for a new Initial Determination for any subsequent period. Against that background the logical outcome is for the roll-over period to commence from the new expiry date set by the Commission for the Interconnection Determination, being 19 July 2005;

- c. Clause 5.4 refers to a roll-over period that ceases to apply from the date three years after the expiry of the Term. The Term is defined as:

The period on and from the Commencement Date to and including the date of expiry of the Commission's determination relating to these terms under section 30(e) of the Telecommunications Act 2001.

157. This definition refers to the expiry date of the Commission's determination. Although it contains a reference to section 30(e) of the Act, that determination, including its term, has been modified and merged into the Pricing Review Determination. As was noted by Justice Harrison in *Telecom New Zealand Limited v Commerce Commission & TelstraClear Limited* (unreported, CIV 2004-404-005417, AK HC, 8 April 2005) at page 27:

*"However, by implication it suggests that the Commission would provide for both determinations, **which are effectively merged into one when the second is delivered**, to take effect from the same date. That date is set by the s27 determination, which is the foundation judicial instrument. I agree with Messrs Farmer and Simpson that, where the only alteration brought about by the pricing review determination is to replace the initial price with a different final price, the remainder of the s 27 determination remains unchanged including, of course, the operative date.[emphasis added]"*

Interpretation 2

158. This interpretation, while similar to Interpretation 1, does not reflect the intentions of the parties. The difference between Interpretation 1 and Interpretation 2 is that the roll-over period is deemed to start on the expiry date of the Initial Determination and is founded on the interpretation of the word "Term", as being the term of the Initial Determination, not the Pricing Review Determination. Although a possible outcome, it is not a practical outcome compared to Interpretation 1. This is because if either party applies for a Pricing Review Determination, then it is unlikely that the parties will commence negotiations on a subsequent interconnection agreement until that Determination has been issued. It is therefore more logical and consistent with the mutual intentions of the parties that the roll-over period is refreshed and commences from the expiry of the Pricing Review Determination.

Interpretation 3

159. Interpretation 3 is neither appropriate nor permissible because it does not provide for any orderly transition between this Interconnection Determination and the next interconnection agreement or determination with the aim of covering any period in which TelstraClear is "out of contract". It represents a revocation of a term agreed between Telecom and TelstraClear and included

within the Initial Determination by agreement and it is beyond the jurisdiction of the Commission to modify or revoke it.

Recommendation

160. TelstraClear recommends that the Commission:

- a. set the Determination to expire on the day that the Determination is made and publicly notified; and
- b. clarify that the roll-over clause will recommence its application from 19 July 2005, when the determination expires, and will operate for a period of up to three years from that date in accordance with clause 5.4 of Schedule 2.

11. Mechanism for Recovery of Overpayments

161. TelstraClear concurs with paragraphs 53 to 57 of the Commission's draft determination regarding the refund of overpayments.
162. On the question of interest, TelstraClear submits that where the Commission is asked to make a determination the Commission can and should require interest to be paid on the refund of overpayments at commercial rates to reflect the use of money enjoyed by the party that received the benefit of the overpayments and the loss of use of money by the party that made the overpayments and who is now entitled to a refund. The Commission has power to require the payment of interest on refunds under subsections 52(d) and (e) of the Act.
163. However, in relation to the present Pricing Review for Designated Access Services, the parties have given final undertakings to the High Court of New Zealand in CP177/02 (Auckland Registry) to refund overpayments with interest at an agreed rate.
164. These undertakings are binding on the parties and the Commission's determination regarding refund of any overpayment is, in this particular case, not required. However if it appears, either from Telecom's submissions or from discussions with Telecom, that it has a different view on this issue, TelstraClear reserves the right to make further submissions on this point.

12 Summary of Response to Commission Questions

Question 1: Appropriate weighting and selection of call types

165. TelstraClear has no comment to make in relation to this question at this time.

Question 2: Approach to modelling changes which influence the cost of providing that service over the period of the determination

166. Please refer to sections 7 and 8 of this submission and the accompanying Network Strategies and Marsden Jacobs Associates reports.

Question 3: One minute minimum call duration.

167. TelstraClear has no comment to make in relation to this question at this time. TelstraClear is still investigating this issue and may have more to report on this subsequently.

Question 4: Input values for calculating the price of the interconnection service using TSLRIC

168. Please refer to section 8 of this report and the accompanying Network Strategies and Marsden Jacobs Reports.

13. Full listing of TelstraClear's Recommendations

169. The following recommendations are made in this Submission and are repeated here in full for the convenience of the reader:

13.1 A lower final price best satisfies s.18

170. TelstraClear recommends that in its judgements on the correct parameter values to apply, the Commission should opt for values that result in a lower, rather than higher, TSLRIC price because this best satisfies s.18 of the Telecommunications Act.

13.2 Relationship to TSO – Double recovery and costs common to TSO

171. TelstraClear recommends that the Commission interpret sub-paragraph (b) of the definition of forward-looking common costs as excluding:

- a. net losses from CNVCs (if any); and
- b. any other costs of providing TSO services, whether incremental or common, and whether to CNVCs or commercially viable customers.

13.3 Model methodology

Sharing of common costs with data network

172. TelstraClear recommends that:

- a. the Commission review the mark-ups (which represent housing and land costs) that are applied to switch costs to ensure that they correctly represent the efficient housing and land requirements of the switches being modelled.
- b. the Commission ensure that cost sharing has been implemented for the full set of non-voice services, including:
 - i. DSL (on voice line);
 - ii. DSL (on dedicated line)'
 - iii. ISDN (BRI and PRI);
 - iv. DDS (digital data services) and Megalink leased lines;
 - v. Frame relay;
 - vi. ATM; and
 - vii. Analogue Data Services.

Cost allocation between access and core

173. TelstraClear recommends that the Commission investigate whether the model is appropriately modelling the allocation of costs between the access and core increments.

TSO costs

174. TelstraClear recommends that the Commission provide more information on the costs that are removed and how this is implemented in the model.

13.4 Model inputs

Adjustment of capital costs

175. TelstraClear recommends that adjustment of capital costs for inflation is limited to application of the tilt only.

Date at which the tilt is applied

176. TelstraClear recommends that the Commission follow Network Strategies' recommendation that a trend of either 10.5 months or 13.5 months be applied to the data to bring it up to the interconnect period and to ensure that it is consistent with the TSO.

Price trends

177. TelstraClear recommends that the Commission review the price trends in the Commission's model to ensure that it is consistent with that used recently in regulatory proceedings in other jurisdictions.

Asset lives

178. TelstraClear recommends that the Commission review the asset lives used in the model to ensure that the categorisation and use of asset lives categories are consistent i.e. similar cost items within different categories have the same or similar asset lives.

International comparison suggest that the Commission's mark-ups for building and land costs appear high

179. TelstraClear recommends that the Commission revisit the figures received from Telecom. In particular, we suggest that the footprint of each site building be measured (or at least a selection) and the size of each major unit (in square metres) be determined. This should allow the Commission to determine the space allocated to different equipment types and also if there is any inefficient space that should be excluded. Further, the market value of each site (or again a selection) should be requested including the cost of additional site components such as power supply, air conditioning etc.

Time to build

180. TelstraClear recommends that the Commission review whether the inclusion of the term within the tilted annuity formula for adjusting the investment cost for the period from payment to commencement of productive service is consistent with an efficient forward-looking operator and, if it is not, this term should be removed.

Switching costs do not reflect a forward-looking approach

181. TelstraClear recommends that the Commission should:

- a. implement NGN in the model as soon as possible;
- b. obtain NGN costs from operators through a new data request;
- c. ensure that its judgement on the parameter values to apply for the TSLRIC Determination reflect the substantial efficiencies that implementation of an NGN would allow;
- d. make an unweighted determination of the TSLRIC price for each year of the Determination, as discussed in section 9 above.

Operating Costs

182. TelstraClear recommends that:

- a. the Commission incorporate the Telstra PIE II data into its model; and
- b. use individual operating cost mark-ups for the asset categories.

Actual traffic data should be used in preference to estimated

183. TelstraClear recommends that the Commission use actual call traffic data for the 2004 calendar year, with data at the ESA level, and that this must include:

- a. growth rates in MOU per line;
- b. calls per line; and
- c. line counts.

Discrepancy in base year data

184. TelstraClear recommends that the Commission seek an explanation from Telecom for the reason for this variation in order to confirm whether that the data used in the Commission model is appropriate.

Assumptions for traffic data

185. TelstraClear recommends that the Commission adopts Network Strategies recommendations to supplement the base year data for the calendar year 2003 with the equivalent for 2004 and this must include MOU per line, calls per line and line counts, and the data should be at the ESA level.

International comparisons suggest amount of non-PSTN traffic may be underestimated

186. TelstraClear recommends that the Commission:

- a. review whether the information provided by Telecom is an accurate measure of PSTN and non-PSTN traffic; and

- b. request from Telecom a list of non-PSTN circuits, segmented by type of circuit (retail leased line, interconnection circuit, broadband circuit and so on) showing in each case: the capacity of the circuit, the end points of the circuit in the transmission network and showing where the circuit is used for resilience purposes.

Network Sharing

187. TelstraClear recommends that the Commission implement cable sheath sharing in the model.

WACC issues

188. TelstraClear recommends that the Commission select the WACC and WACC input values for the TSLRIC calculation recommended by MJA:
- a. Post-tax MRP = 6% (range 5 – 7%)
 - b. Equity beta = 0.857 (range 0.571 – 1.143)
 - c. Asset beta = 0.6 (range 0.4 – 0.8)
 - d. Cost of equity = 9.08% (range 6.79 – 11.93%)
 - e. Debt premium = 1.10% (range 0.90 – 1.30%)
 - f. Cost of debt (pre-tax) = 6.97% (range 6.77 – 7.17%)
 - g. WACC = 7.57% (range 6.11 – 9.79%)

13.5 Calculating the TSLRIC Price

189. TelstraClear recommends that the Commission:
- a. Make an unweighted determination of the TSLRIC price for each year of the Determination; but if the Commission rejects this recommendation
 - b. Use a weighted average based on PSTN minutes rather than months.

13.6 Expiry of the Determination

190. TelstraClear recommends that the Commission:
- a. set the Determination to expire on the day that the Determination is made and publicly notified; and
 - b. clarify that the roll-over clause will recommence its application from 19 July 2005, when the determination expires, and will operate for a period of up to three years from that date in accordance with clause 5.4 of Schedule 2.

TelstraClear