TelstraClear Limited

Submission on the Telecommunications Services Obligation (TSO) Regulatory Framework

15 October 2007

1. EXECUTIVE SUMMARY

1. TelstraClear supports the provision of basic telecommunications services to all New Zealanders, whether urban or rural. The Local Service TSO has historically ensured that a widespread, affordable basic voice service is available across New Zealand. However, the current structure of the Local Service TSO is outdated, ignores alternative delivery mechanisms, and imposes unnecessary costs on the whole of the industry.

2. TelstraClear supports introducing contestability to the provision of these basic telecommunications services to New Zealanders. In addition to local loop unbundling and wholesale DSL provided over Telecom's copper network, there are an increasing number of alternative infrastructure, including cable, wireless, cellular and satellite, which have the capability to deliver local services at an efficient cost.

3. Rapid changes in the architecture of telecommunications networks are occurring with the migration from a PSTN to an NGN environment. Concurrently, the terms for unbundled local loops, unbundled bitstream and the operational separation of Telecom are being finalised.

4. TelstraClear recommends that the Telecommunications Carriers' Forum (TCF) be provided with the opportunity to develop an industry solution to the issues raised in the TSO Review. The industry as a whole is best placed to understand the technical impact of these changes, and develop a solution that will achieve two objectives - to deliver on the government's policy objectives, and to minimise the cost and market distortions impacting our customers.

5. TelstraClear supports the goals of the Digital Strategy. Ubiquitous broadband has the potential to improve economic outcomes for all New Zealanders. However, we do not support the imposition of a Broadband Universal Service Obligation (USO) to achieve that goal - a policy that has been comprehensively rejected overseas.

6. The government should provide targeted funding to develop broadband infrastructure in rural areas where further broadband investment is uneconomic. This may also include targeted subsidies for rural customers whose broadband access is limited to higher cost broadband services such as Satellite.

2. CONTENTS

3. INTRODUCTION

7. TelstraClear welcomes the opportunity to make a written submission on the Ministry of Economic Development's "Telecommunications Service Obligations Regulatory Framework Discussion Document" issued in August 2007.

8. The rest of our submission is structured as follows:

   a) Section 4 discusses the Local Service TSO, and how its structure could be improved to efficiently deliver the government's policy objectives;

   b) Section 5 discusses why the standards for the Local Service TSO, including access to emergency services, would be most effectively dealt with by the Telecommunications Carriers' Forum;

   c) Section 6 discusses the development of broadband infrastructure in rural New Zealand;

   d) Section 7 addresses TelstraClear's concerns with the methodology to calculate the costs of the Local Service TSO; and

   e) Section 8 provides summarises TelstraClear's recommendations.

   f) Appendix One provides responses to the specific questions raised in the TSO Discussion Document.

9. TelstraClear would be pleased to provide clarification on any of the matters raised in this submission and any further information that the Ministry of Economic Development might find helpful.

10. This submission is public. There is no confidential version.

4. THE LOCAL SERVICE TSO MECHANISM

11. TelstraClear supports the provision of basic telecommunications services to all New Zealanders, whether urban or rural.

12. The Local Service TSO has successfully provided all New Zealanders with access to price-capped residential access with free local calling. However, the structure of the Local Service TSO is now outdated, ignores alternative delivery mechanisms, and imposes unnecessary costs on the whole of the industry.

13. The Local Service TSO requires that Telecom:

- provide a free-local calling option for all residential customers for voice and data;
- not increase the residential rental charge above the rate of inflation;
- charge rural residential customers no more than urban customers;
- ensure local residential services are as widely available as they were in December 2001;
- provide directory assistance; and
- meet a number of service quality measures.

14. Section 70(1) of the Telecommunications Act 2001 sets out the purpose of TSO Instruments as:

> ...to facilitate the supply of certain telecommunications services to groups of end-users within New Zealand to whom these telecommunications services may no otherwise be supplied on a commercial basis or at a price that is considered by the Minister to be affordable to those groups of end-users.

15. Delivering the Local Service TSO entails significant cost to the whole industry. TelstraClear is supportive of the broad policy objective, however considers that there are better ways to deliver the policy objectives.

Creating a contestable Local Service TSO

16. TelstraClear has long endorsed making the TSO contestable. Universal Service Obligations (USOs) are contestable in a number of countries, including Chile, Colombia, Malaysia, Nepal, India, Peru, Russia, Chinese Taipei, Austria and Greece and legislation provides for contestable USOs in Ireland, Denmark and Germany.[1]

17. The Local Service TSO developed at a time when there was no alternative to Telecom's ubiquitous copper network to deliver Local Services, particularly to rural customers. However, since the current TSO Deed was signed in December 2001, alternative technologies including wireless, cellular, cable and satellite have emerged as viable alternatives to deliver services akin to those provided under the current Local Service TSO.

[1] Xavier, P, *Universal Access for Telecommunications in a Competitive Environment*, OECD/World Bank, 3 February 2005.

18. This includes:

- Vodafone's network now covers approximately 70% of so-called commercially non-viable customers,[2]
- IP Star Satellite, via various resellers, offers voice and broadband services (at speeds of 256kbps and above) to all of New Zealand including the Chatham Islands,[3]
- Kordia offers wireless broadband in Northland, Waikato, Bay of Plenty, Taranaki, Manawatu/Wanganui, Horowhenua/Kapiti, Canterbury, Otago and Southland;
- Woosh offers broadband services in Southland; and
- Satellite phone services are available that provide coverage to all of New Zealand.[4]

19. In addition, Telecom's CDMA coverage extends throughout New Zealand and Telecom offers a satellite phone service that covers all of New Zealand, except the Chatham Islands and other outer lying islands.[5]

20. As time passes, technology to deliver those basic services has changed, and increasingly, persons other than Telecom, who maintain the existing TSO agreement with the Crown, can supply those services. While not all of these services are at a price equivalent to or less than the TSO, it does suggest that, at least on a regional basis, several platforms to deliver TSO-type services are available. Wireless technologies in particular are likely to be able to deliver TSO-type services to rural customers at a lower cost.

21. In order to make the TSO contestable, TelstraClear considers that the current regime needs to be reformed to make it technologically neutral so that providers other than Telecom can compete to provide TSO services. This will necessitate moving away from copper-based quality-of-service levels but quality-of-service requirements would nevertheless need to be sufficient to ensure that services are at a level that is acceptable to customers.

22. The manner in which the Local Service TSO is made contestable will depend on the approach taken to funding TSO services. A range of options are available which include:

- providing commercially non-viable customers with vouchers for purchasing TSO services funded by the Government;
- direct customer subsidies funded by the Government;
- a levy applied to all residential customers;
- Government-funded subsidies to providers of services;
- requiring services to be funded from rental charge revenue; and
- a modified version of the current system of industry funding.

[2] Network Strategies, *The Wireless Cap for TSO 2003-04,* 15 March 2006, page i.
[3] http://www.ipstar.co.nz/en/service_footprint.html
[4] See for example: http://www.iridium.com/corp/iri_corp-understand.asp
[5] http://www.telecom.co.nz/content/0,8748,205273-201928,00.html

23. The TSO Paper does not traverse broader alternatives to deliver on the requirements consistent with section 70(1) of the Telecommunications Act. TelstraClear recommends that the industry, via the Telecommunications Carriers' Forum, be afforded the opportunity to develop an industry-led solution consistent with the government's objectives that would minimise the impact and cost on the industry of meeting that obligation.

5. STANDARDS FOR LOCAL SERVICE TSO INCLUDING EMERGENCY CALL SERVICES

24. The TSO paper raises a number of issues in respect of future requirements of Local Services. This includes the availability of the service, the service performance, service reporting, access to emergency services, and convergence and transitioning to the NGN.

25. Consideration of these issues is necessary as the migration from PSTN to NGN platforms occurs, and alternative infrastructure such as cable, wireless, cellular and satellite has the capability to deliver Local Services. At the same time, the Commerce Commission is finalising its Standard Terms Determinations in respect of local loop unbundling and Unbundled Bitstream Access, and the Government is finalising the details of Telecom's operational separation.

26. In TelstraClear's view, the industry has not been provided with sufficient opportunity to comprehensively submit on each of these issues in detail. Many of these issues will require comprehensive discussion as an industry given the degree of interconnection between each other's networks. Furthermore, the outcomes of other regulatory workstreams, including access to regulated services, and operational separation, maintain uncertain.

27. TelstraClear is concerned that additional technical requirements may be imposed on the industry, without full consideration of the potential impact of these changes on the industry, and prior to the Commission and Operational Separation workstreams, a necessary input, being completed.

28. Sufficient time and analysis must be devoted to these complex technical issues, as the consequences of getting the detail wrong are significant. Further deliberation would adversely impact end-users, who are currently provided with TSO Local Service by Telecom.

29. TelstraClear recommends that the Telecommunications Carriers' Forum be provided with the opportunity to develop the detail that would meet the objectives of the current TSO Review, as well as ensuring that the technical solution is both practicable and workable for the industry.

30. The TCF have demonstrated its ability to deliver industry led solutions, delivering on regulatory and social objectives, including the development of non-price terms for local loop unbundling, co-location and unbundled bitstream access; the development of the Telecommunications Dispute Resolution Service; and the delivery of Local and Cellular Number Portability in April this year.

31. The TCF has commenced a workstream specifically dealing a significant number of issues raised in respect of Emergency Services. The purpose of the TCF emergency workstream is to:[6]

- undertake a stocktake of current expectation and capabilities for calls to emergency services, including consulting with emergency services

[6] See: http://www.tcf.org.nz/content/a21f526e-5f82-41fa-9aa8-4dd8538b6b7d.html

to identify what happens currently and what they would like to see happening

- consider the outline provided by the MED on 23 July 2007 and the TCF's proposed approach to each of the issues in that outline
- recommend what the industry believes is appropriate to deliver for calls to emergency services and how this is best achieved. This could include, for example, the development of an industry code and consumer education
- include a recommendation from the Working Party as to what further work should be undertaken
- if the working party recommends further work be undertaken, propose the timeline to apply.

32. TelstraClear recommends that the Minister of Communications request that the TCF develop standards for Local Service, incorporating the TCF's existing workstream in respect of emergency call services.

6. BROADBAND IN RURAL AREAS

33. Broadband is a key enabler to deliver on the government's digital strategy. TelstraClear supports the goals of that strategy. The TSO Paper discusses the availability of broadband services to rural New Zealand, and whether the Government should put in place a Broadband Universal Service Obligation (USO).

34. TelstraClear does not support a Broadband USO, and considers that there are more appropriate, less distortionary, mechanisms to ensure that all New Zealanders can benefit from broadband services. TelstraClear considers that the central government has a key role in providing economic assistance to address any supply-side or demand-side issues in respect of rural broadband.

35. The costs of delivering broadband to commercially non-viable customers should not be imposed on the industry. To TelstraClear's knowledge, no other jurisdiction has sought to create a Broadband USO, but rather has focussed on subsidizing network builds where it would not be economic, absent that subsidy.

36. To deliver on the Digital Strategy, TelstraClear considers that the Government should investigate the following options to improve broadband outcomes for rural New Zealanders:

    a) Subsidies for infrastructure providers to develop broadband infrastructure in areas where it would not be commercially viable to undertake broadband investment without a subsidy (to address any supply-side issues); and/or

    b) Subsidies for rural customers to access satellite broadband where lower cost broadband access technologies are available in other areas (to address any demand-side issues).

Addressing supply-side issues for Broadband

37. There has been significant commentary and discussion on rural broadband, and the ability for customers to access quality broadband services at reasonable prices. Much of the debate has focussed on the reach of Telecom's DSL network, and to a lesser degree on alternative technologies such as wireless, cellular and satellite to deliver broadband services to rural New Zealanders.

38. To appropriately understand the extent of the supply-side issue, TelstraClear supports a comprehensive network stocktake to identify those areas where customers are unable to access broadband, or where current technology will not achieve the longer-term requirements of the Digital Strategy.

39. A focus on all technologies, the network footprint, any constraints of particular technology, and its ability to deliver quality rural broadband outcomes, will ensure that the Government can make informed, economically efficient, targeted investment to achieve its policy outcomes.

Ubiquitous availability of Broadband via satellite?

40. TelstraClear understands that satellite technology, using the IPStar satellite, provides near-ubiquity of broadband to all New Zealanders.

41. IPStar advertises the following features of its satellite service[7]:

> Key Features
>
> - IPSTAR is a satellite system designed for high speed two-way broadband communication over the IP platform and fully supports normal internet connection and any IP applications.
> - The connection via IPSTAR is "always on".
> - An IPSTAR terminal will be able to access the internet at very high speed, subject to the class of service chosen, up to 8 Mbps forward /2.5 Mbps return per IPSTAR terminal.
> - The access speed of the IPSTAR system can be classified per Class of Service (CoS) to match the users' requirements and consume bandwidth efficiently.
>
> IPSTAR Advantages over Terrestrial Broadband:
>
> - IPSTAR will provide nationwide internet coverage with uniform access, quality and price.
> - Integrated voice, data and video communications is possible anywhere with IPSTAR, regardless of the terrestrial line speed or coverage limitation, and congestion can be bypassed.
> - IPSTAR allows Bandwidth On Demand (BOD) and Burstable speed.
> - IPSTAR Internet Access is a fast and low cost service deployment. fast bandwidth upgrade.
> - Application platform on top of baseline broadband access
>
> IPStar Voice Application
>
> - IPSTAR system supports voice applications over IP network as one of the most promising services it has the following advantages:
> - Substantially lower voice circuit cost than the SCPC/DAMA system.
> - Uniform high quality nationwide service anywhere.
> - Supports off-the-shelf Analog Telephone Adapter, IP or LAN Phone & PABX and Enterprise & Carrier VoIP Gateway.
> - Attractive Service
>   - § Add-on Service for Corporate Intranet
>   - § Rural Telephony Service
>
> IPSTAR Voice Applications Solutions for Rural Telephony:
>
> - The design of the IPSTAR modem can be adjusted for use in the rural environment. It has a rugged enclosure to withstand harsh environments, and come with air ventilation, anti-dust features.
> - When compared to the conventional rural telephony using SCPC DAMA (Single Channel per Carrier / Demand Assigned Multiple Access), IPSTAR will be superior due to:
> - Lower terminal equipment costs
> - Ability to support other applications on the IP network
> - Better bandwidth efficiency, hence lower bandwidth costs e.g. with IPSTAR, a 9.6 kbps-voice channel requires only 24 kbps of IP package including IP

[7] See http://www.ipstar.co.nz/en/p_broadband_access.html

headers, which utilize about 30 kHz on Satellite Bandwidth compared to 48 kHz of SCPC DAMA.

42. The IPStar website lists the service being provided by: Wireless Nation, Orcon Internet, Farmside New Zealand, ICONZ, Natcom Broadband Networks, and Snap internet.[8]

43. Orcon Internet provided the following price to supply the service within New Zealand:

Set up cost including installation:	$2,350 + GST
Monthly charge	$59 + GST
1Mbps downstream, 256-512 kbps upstream	
Data Cap – 1Gbps	

44. Although the Commerce Commission does not separately record satellite broadband uptake in its quarterly broadband report, TelstraClear understands that its uptake has been modest. The significant set up cost is likely to be an impediment to end-users, particularly where DSL services are available.

45. What the Satellite case does highlight however is that there may not be a significant broadband supply-side issue, but rather that the higher costs of alternative technologies capable of delivering broadband to rural customers, suppress broadband uptake.

46. In recommending that the Government undertake a stocktake of telecommunications infrastructure, it would be important to assess whether alternative technologies such as satellite and wireless technology have an appropriate upgrade path to deliver broadband connectivity consistent with the longer term goals of the Digital Strategy.

Addressing broadband cost for rural communities

47. To address the Government's concern that a digital divide develops as a result of focussed economic investment in urban areas, the government could look to subsidise higher cost connections in rural areas.

48. TelstraClear considers that the issue of broadband subsidies for the rural community should be considered separately for business and residential customers, where the benefits, and ability to pay, for broadband differ.

49. The TSO Paper identifies the significant benefits to the agricultural sector having access to quality broadband services. The benefits of a Government subsidy could be measured against productivity improvements as a result of technology uptake – economic development.

50. For residential customers in rural areas, broadband can reduce the impacts of isolation, including access to tele-medicine and education for example. The benefits of such a subsidy could be measured against cost savings to provide quality health and education services to remote communities – social development.

[8] See: http://www.ipstar.co.nz/en/where_to_get.html

51. As noted above, for those 50% of Telecom's rural lines[9] that are not capable of supporting broadband, the Government could explore subsidising individual customers who only have access to higher cost satellite services.

Subsidy mechanisms to fund upgrading of rural broadband infrastructure

52. To ensure that all rural customers can advantage from quality broadband services, TelstraClear supports targeted subsidies to accelerate the deployment of broadband infrastructure including:

    1. contestable funding to support local communities;
    2. a regional tendering process;
    3. one-off 'per connection' grants to providers for connecting rural users; and
    4. directly subsidising end-users.

53. A stocktake of telecommunications infrastructure would ensure that such subsidies give effect to the Government's policy to improve broadband outcomes, but do not remove incentives for private sector investment.

54. TelstraClear supports subsidies in areas where private sector investment is not economically viable. However, subsidies in areas where private sector investment is viable, or overlays current investment, risks undermining the incentives for further commercial investment.

[9] Ministry of Economic Development, *Telecommunications Service Obligations Regulatory Framework, Discussion Document,* August 2007

7. COMMISSION'S COST CALCULATION FOR LOCAL SERVICE TSO

55. Prior to 2001, the cost to meet Telecom's obligation under the Local Service TSO was met by Telecom. The Telecommunications Act 2001 then introduced a mechanism to allocate the "net cost" of serving commercially non-viable customers among the industry (including Telecom) on the basis of liable revenue. The Commission is required to model the net cost on an annual basis.

56. The "net cost" is defined as:

> the unavoidable net incremental costs to an efficient service provider of providing the service required by the TSO instrument to commercially non-viable customers

57. The net cost is allocated amongst the industry (including Telecom) on the basis of "liable revenue".

58. "Liable person's TSO-qualified revenue" means

> means the amount of revenue that, during the financial year, each liable person receives for supplying all or any of the following
>
> 1. telecommunications services by means of its PSTN;
> 2. telecommunications services by means that rely primarily on the existence of its PSTN or any other PSTN:
> 3. directory services in respect of PSTN numbers

59. TelstraClear remains concerned with the Commission's approach to the TSO calculation, its application of efficient real-world technologies within the model, the cost to all parties (including the Commission) in conducting this process, and the significant backlog in TSO calculations leading to significant future uncertainty.

60. Despite our concerns with the current modelling, we remain of the view that the Commission is likely to be the most appropriate body to undertake the cost calculation and the allocation of those costs amongst the industry.

61. TelstraClear recommends that:

- the Commission be required to give effect to real-world technologies in the calculation of the Local Service TSO net cost; and
- the industry explore whether a specified amount TSO charge could be agreed, to improve certainty for all liable persons, and to reduce the administrative cost and burden for all parties.

62. The following section addresses these issues in further detail

The Commission's development of the TSO model since 2001

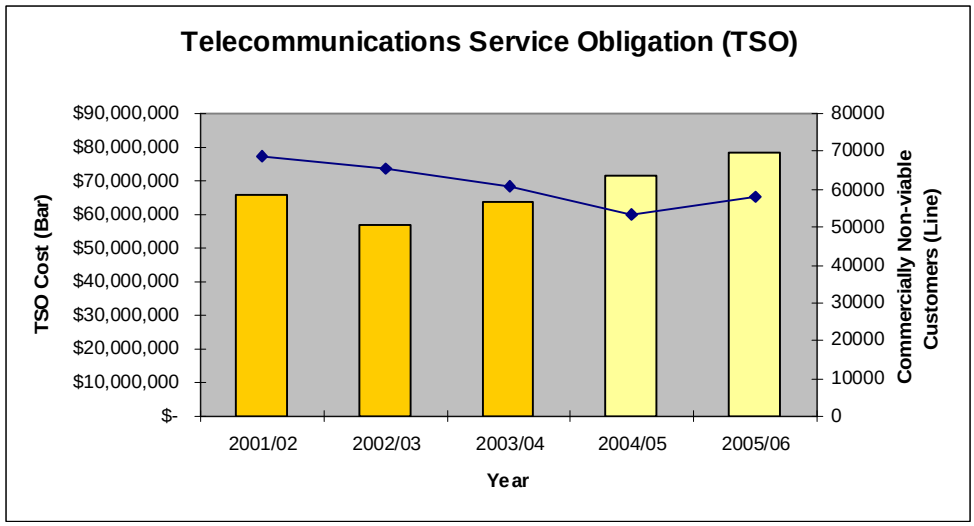
63. Since 2001, the Commission has developed a TSO cost model. The development of the TSO cost model has involved significant resources from the Commission and the parties. The costs for the Commission to develop the

TSO model are funded through the Communications budget; the cost of which is then levied to the industry. The costs to the parties of that process have been significant.

64. The Commission finalised the 2003/04 TSO cost calculation, which is currently subject to High Court Appeal by Vodafone, and has issued draft calculations for the 2004/05 and 2005/06 periods earlier this year.

65. TelstraClear and Vodafone contribute approximately 98% of the TSO net cost (other than Telecom's own share). While many of the modelling issues are now settled, using an optimized scorched node approach; the key tension remaining is the appropriate application of wireless technologies within the model.

66. Table One shows the Commission's modelled TSO cost since 2001.



67. The 2004/05 and 2005/06 TSO draft determinations represent the fourth and fifth calculations by the Commission. TelstraClear has invested significant resource since 2002 to ensure that the TSO model is consistent with the requirements of the Telecommunications Act. While many historic TSO modelling issues are now resolved, TelstraClear remains very concerned with two matters that affect the efficacy of the Commission's model.

68. Firstly, the Commission's application of wireless technology in the TSO model is inconsistent with the efficiency requirement under the Act, and the standard wireless architecture of real world operators. As a direct consequence, the Commission's costs of wireless technologies serving commercially non-viable customers are inappropriately high.

69. Secondly, the model contains material errors that will require correction. TelstraClear has previously raised concerns about inaccuracies in the TSO model that do not appear to have been addressed in the 2004/05 and 2005/06 draft models. Network Strategies demonstrate that correcting these modelling errors alone would reduce the TSO by $8.4m in 2004/05 and $9.6m in 2005/06.

70. The financial consequences of the TSO to the industry are significant. For the 2003/04 period, Network Strategies estimated that revisiting the Commission's approach to wireless caps and correcting the Commission's model would reduce the TSO cost from $63.8m to $24m. If the Commission was to finalise the 2004/05 and 2005/06 determinations in the present form, TelstraClear estimates that the TSO cost for the three years between 1 July 2003 and 30 June 2006 would be overstated by approximately $130m. This would result in liable persons, other than Telecom, paying over $40m extra for that period.

71. The materiality of these errors gives rise to serious concerns about the Commission's model. The financial impact of an incorrect TSO cost determination is significant for all parties.

72. The 2003/04 TSO Determination is subject to an appeal by Vodafone in the High Court. Given the impact of a successful appeal on not only 2003/04, but also future TSO costs, significant uncertainty remains.

73. TelstraClear is required to accrue for its likely TSO exposure. This is difficult to accurately determine given continual changes to the TSO model, and significant differences between draft and final decisions. Furthermore, because the Commission's finalised calculations are currently several years behind, any adjustments to the accrual as a result of draft or final decisions, are amplified because the adjustment must occur for several years. This creates an arbitrary charge that is extremely difficult to estimate.

TelstraClear's recommendations

74. Should the government maintain its approach to allocating the net cost of a Local Service TSO, TelstraClear considers that the following improvements could be made to minimise the impact of the issues identified above.

(1) Industry development of a "Specified amount TSO"

75. The industry faces uncertainty as to its TSO exposure on an annual basis. The TSO Issues paper invites comment as to whether the TSO charge should be a "specified", rather than an "unspecified" amount calculated by the Commission on an annual basis.

76. We consider that the industry should be provided with an opportunity to reach agreement on a specified amount that liable persons must contribute to meet Telecom's "net cost" (as defined under the Telecommunications Act).

77. A "Specified Amount" would:

- remove uncertainty around the liable person's TSO exposure, enabling a liable person to budget its TSO contribution with certainty;
- reduce the cost to the industry of engaging in the Commission's consultation processes; and
- reduce the cost to the Commission (the cost of which is met by the industry) of the annual TSO cost calculation.

78. TelstraClear considers that, once the scope of any future Local Service TSO is clear, it would be possible for the industry to agree on a "specified amount". However, we would not support the imposition of a "specified amount" where the industry was not first afforded the opportunity to engage in constructive negotiations on the quantum.

79. As has been shown with the LLU and naked DSL working parties, the development of the Telecommunications Dispute Resolution service, and the delivary of number portability, the industry has demonstrated its ability, where clear policy direction is set, to deliver robust outcomes.

(2) Commission be required to give effect to real-world technologies

80. TelstraClear supports the Local Service TSO being contestable, on the basis that basic telecommunications services should be provided at least cost. Accordingly, the Commission's calculation of the net cost to deliver services to commercially non-viable customers, should reflect the technologies used to deliver these services today.

8. CONCLUSION

81. TelstraClear supports the provision of basic telecommunications services to all New Zealanders, whether urban or rural. The current structure of the Local Service TSO is outdated, ignores alternative delivery mechanisms, and imposes unnecessary costs on the whole of the industry.

82. TelstraClear supports introducing contestability to the provision of these services to New Zealanders. In addition to local loop unbundling and wholesale DSL provided over Telecom's copper network, there are an increasing number of alternative infrastructure mechanisms, including cable, wireless, cellular and satellite, which have the capability to deliver Local Services to at an efficient cost.

83. Ubiquitous broadband has the potential to improve economic outcomes for all New Zealanders. However, we do not support a Broadband Universal Service Obligation (USO) to achieve that goal. The Government should instead consider targeted subsidies for further broadband infrastructure investment where commercial investment is uneconomic.

84. TelstraClear recommends that the Telecommunications Carriers' Forum (TCF) be provided with the opportunity to develop an industry solution to the issues raised in the TSO Review. The industry as a whole is best placed to understand the technical impact of these changes, and develop a solution that will achieve two objectives - to deliver on the government's policy goals, and to minimise the cost and market distortions impacting our customers.

9. APPENDIX ONE – TABULAR RESPONSE TO QUESTIONS

Question	Issues Paper Question	TelstraClear Response
The TSO Framework		
3a	How important is the KSO/TSO framework as a component of the overall regime of New Zealand for telecommunications services?	TelstraClear supports the universal availability of essential telecommunications services to all New Zealanders, whether urban or rural. The Local Service TSO recognises the state's historical involvement in providing telephone services to all New Zealanders. The recognition that basic telecommunications should be available to all at a reasonable price formed a part of the conditions of the privatisation and sale of Telecom in 1990. At that time, there was little development of alternative fixed or mobile networks in New Zealand. As a result of developing alternative networks, the relevance and primacy of Telecom's network to deliver these services is reducing, particularly in urban areas.
3b	How effective has the TSO framework been in achieving the government's telecommunications objective of ensuring the delivery of cost efficient, timely, and innovative telecommunications services on an ongoing, fair and equitable basis to all existing and potential users?	TelstraClear does not consider that the TSO will achieve the stated objective of ensuring cost efficient delivery of telecommunications services in the future. TelstraClear supports contestability of TSO services, to ensure that the basic Local TSO service, is delivered at least-cost by the most efficient network available. This may include contestability on a regional basis.
3c	Would other policy mechanisms be more appropriate than TSO instruments to achieving the government's telecommunications objective going forward?	A requirement for the provision of basic telecommunications services (commonly known as a universal service obligation) is a common mechanism internationally to ensure basic levels of service at reasonable prices – particularly in areas where it is commercially uneconomic to service those customers.

		An alternative would be to allow the market to deliver services at commercial rates, with the government subsidising the cost for customers in rural uncontestable areas where the market price exceeds a particular price threshold.
Purpose and Market Impact of the Local Service TSO		
4a	How does the Local Service TSO contribute to advancing the interests of telecommunications users?	The TSO Local Service enables all New Zealanders, whether urban or rural, access to affordable basic telephone services, providing communications to isolated communities, and access to essential services. TelstraClear supports the ongoing availability of affordable telephone services to all users. Other than providing basic telephone services, TelstraClear does not consider that there is a link between the Local Service TSO itself, and the development of improved value-added telecommunications services in New Zealand.
4b	Would the universal availability and affordability of local residential service for households be better achieved another way?	The geographic spread of New Zealand households means that inevitably, some customers will be uneconomic to serve. Internationally, a TSO/USO mechanism is an appropriate way to ensure basic telecommunications services are provided to uneconomic customers. The more significant question is who should provide that service, and how the TSO Provider should be compensated for providing that service.
4c	What should be the focus of the Local Service TSO going forward?	As discussed in our submission, the focus of the Local TSO service going forward should continue to be the delivery of basic telephone services to residential customers at a reasonable cost. TelstraClear does not consider that the TSO should be extended to include broadband. While broadband services are increasingly important for the welfare of New Zealand, there are other more appropriate mechanisms available to ensure that broadband services are available in both urban and rural areas.
Availability of Service		

5a	Does the Local Service TSO effectively address gaps in the commercial market for the availability of telephone service?	While there are significant scale and efficiency benefits from providing a ubiquitous service, it is unclear whether Telecom (as the current TSO Provider) would continue to service a small number of remote commercially uneconomic customers, and if it did, whether it would price services for those uneconomic residential customers to more closely reflect the cost of providing those services. The reliance on one provider to deliver basic telecommunications services to commercially non-viable customers has changed since the Local Service TSO was first conceived, as alternative delivery mechanisms such as wireless, cellular and satellite have the ability to deliver TSO services in competition to Telecom, as the current TSO Provider. While a Local Service TSO mechanism will ensure that no service gap exists, contestability on either a national or regional basis will ensure that these basic services are delivered in the most efficient and least cost manner possible.
5c	Should geographic coverage requirements for the supply of TSO local service be extended to cover areas currently outside the TSO and why?	The Local Service TSO Deed requires that Telecom make TSO local services as widely available as it was at the commencement date of the TSO Deed commencement in December 2001. Accordingly, the existing TSO obligation does not extend to new connections that occurred after December 2001. However, TelstraClear understands that Telecom does provide services to customers that connected after December 2001 on the same terms and conditions as those customers who are subject to the TSO Deed. TelstraClear does not support the Local Service TSO being extended to include connections that have occurred since December 2001 or into the future. The KSO was originally designed to protect existing customers following the privatisation of Telecom. Competing telecommunications providers should be entitled to

		recover reasonable costs and earn a commercial return to deliver services to new remote, high-cost customers. Furthermore, it is not clear that there is any significant issue that needs to be addressed regarding new customers falling outside Telecom's existing TSO obligation.
Service Performance		
5d	Should the existing service performance measures be expanded, including down to geographic regional level, to better ensure reliability of telephone service? If so, what measures are recommended and why?	Part 2 of the TSO Deed sets out the Service Quality measures. Telecom is required to report on its compliance on a national basis. For example, in respect of Line Connect Speed, the TSO Deed requires that: 11.1(a) 95% of all existing residential lines meet the 14.4 kbps connect speed; and 11.1(b) 99% of all existing residential lines meet the 9.6kbps connect speed. The ability for Telecom to deliver to the above requirements is likely to be more challenging in rural areas, where there are long runs of copper, and where further investment may be required to reduce the average copper length. Disaggregating the reporting to a regional level would ensure that any significant service differential between urban and rural areas could be identified and addressed.
5f	Should penalty performance rebates apply for non-compliance by the Local Service TSO Provider?	The TSO is a legally binding agreement between the Crown and the Local Service TSO Provider. The agreement sets out the obligations that the TSO Provider is required to meet, and the TSO Provider is compensated for the costs of providing those services. Performance rebates are likely to create the right incentives for the TSO Provider to comply with the TSO Deed. Under section 80 of the Telecommunications Act 2001, the Commission is required to assess compliance with TSO instruments. The effectiveness of that reporting, and creating

		the appropriate incentives to deliver service consistent with the TSO Deed, requires that the metrics appropriately cover all aspects of service delivery.
5g	Should there be reporting on the quality and capacity of network capabilities for supplying TSO local service?	The provision of TSO services should limited to service providers who are able to deliver the minimum requirements of the Local Service TSO requirements for the period of the agreed obligation.
Service Reporting		
5h	Should information about TSO local telephone service supplied in commercially non-viable areas be made publicly available by the TSO provider as part of its TSO requirements? If so, why?	TelstraClear supports the identification of commercially non-viable customers. This will be necessary in the contestable model that TelstraClear is proposing. It is unclear whether the CNVCs would be those identified in the Commission's modelling (currently approximately 60,000), or those customers that Telecom deems to be commercially uneconomic to serve. The commercially non-viable customers are based on the Commission's theoretical modelling. As discussed, TelstraClear has significant concerns with the Commission's current modelling of CNVCs. We consider that there is a significant risk that the CNVCs identified in the Commission's model may not accurately reflect the customers that are uneconomic to serve.
Convergence and Transitioning of NGN		
5i	Should the gateway devices installed in customer's homes to support the supply of telephone service be required to have battery back-up? If so, why, and should there be a requirement that battery back-up last for a specified period?	TelstraClear does not support a mandated requirement that battery backup be provided to residential customers. We consider that this is a consumer education issue. As the PSTN is retired, it will be necessary to have a local power supply at the premises to operate telephone services over the NGN network. Many residential dwellings currently use DECT cordless phones to access the PSTN. These phones rely on a local power source to operate, and do not generally have battery backup. As a consequence, current PSTN telephone services are

		today unavailable for the duration of a power outage. Mandating battery backup would unnecessarily drive up costs to customers, particularly where many customers currently have alternative options to contact emergency services, particularly mobile telephones. Telecom and Vodafone advertise their mobile coverage as covering "97% of the places Kiwis work, live and play"[10], with Vodafone advertising that "97% of New Zealanders live, work and play within Vodafone coverage".[11] Furthermore, mobile penetration in New Zealand is estimated to be 101%, with 4.25 million mobile subscribers in New Zealand at the end of June 2007.[12] TelstraClear considers that this is a consumer education issue, and the industry itself has the responsibility to ensure that customers understand when their telephone service becomes unavailable. For the small number of customers who don't have access to, or coverage by, a mobile network at their residential premises, informed consumers should have the option to purchase battery backup at their discretion.
5j	Should a requirement for battery back-up only apply for residential customers living in areas outside mobile cellular phone coverage?	As discussed above, for those small number of customers outside mobile cellular phone coverage, the customer should have the option to purchase battery backup. However, mandating such a requirement within the TSO is likely to be administratively complex, with the cost to administer such a requirement likely to outweigh the benefit.
5k	Should battery back-up requirements be equally applicable across all providers (TSO and non-TSO) of telephone access services and if so, should any requirements be prescribed by regulation?	TelstraClear understands that the purpose of mandating an independent power supply would be to ensure access to emergency services including Fire, Police and Ambulance in the event that power to the property is unavailable. While

[10] Telecom Mobile Coverage – see http://www.telecom.co.nz/content/0,8748,200499-201927,00.html?nv=sd
[11] Vodafone Mobile Coverage – see http://www.vodafone.co.nz/personal/coverage-and-roaming/nz-coverage-maps/index.jsp
[12] IDC Media Release, 3 August 2007 – see http://www.idc.com/getdoc.jsp?containerId=prNZ20810307

		TelstraClear does not support a requirement to provide battery back up, any such requirement should apply to all fixed providers of the primary voice access line to customers who are not within the coverage area of alternative mobile providers.
5m	Do you have any concerns about aspects of Telecom's planned NGN local service?	Internationally, telecommunications providers are migrating from historic PSTN network to NGN networks. This will deliver improved efficiencies, and allow for further development of services for consumers. This is a necessary step in the evolution of telecommunications. Ensuring competitors have appropriate access is important. Telecom has provided briefings on its planned NGN service. TelstraClear considers that the industry itself is best placed to ensure that Telecom does not raise inappropriate or exclusionary barriers to entry, with appropriate regulatory oversight. The discussions with Telecom are at an early stage. TelstraClear's preliminary view is that the industry, via the Telecommunications Carriers' Forum should be provided with an opportunity to consider this matter further.
Uncontested TSO Charge of Specific Amount		
6c	Should a specified amount TSO charge be applied for the Local Service TSO?	TelstraClear supports a specified TSO charge, agreed by the industry, for any future Local Service TSO. A specified amount would create certainty around our financial obligation on a go-forward basis. The uncertainty of the TSO cost has a significant impact on the industry. TelstraClear must make financial provision for the TSO cost – that accrual is significant because the TSO calculation is currently three years behind. Due to the model's inherent instability, where small changes in input variables lead to large changes in the modelled TSO cost, and sizeable changes between draft and final TSO determinations, it is difficult to accurately forecast our financial

		exposure. A specified amount would largely remove this uncertainty. However there would need to be close consultation with the industry to determine the appropriate quantum. TelstraClear would support a commercial outcome to agree on the appropriate specified amount.
6d	How should any such "specified amount" TSO charge be structured? Should there be fixed charge and variable charge components?	As discussed above, TelstraClear supports further exploration of a specified TSO amount on an industry basis. The structure of such a charge, and whether there should be fixed and variable components of the charge, would need to be explored in further detail.
6e	Should a TSO Charge of specified amount be linked to the Communications Producer Price Index (PPI) as a proxy cost standard for the telecommunications industry?	To provide certainty, an agreement between the Crown and a TSO Provider would need to span a reasonable time period, to allow for an economic return on its investment. In considering how to structure a specified amount, it would be necessary to ensure that changes in underlying costs over the longer term, are reflected in the TSO charge. This is consistent with the net cost principle currently set out in the Telecommunications Act.
Contested TSO Charge of Specified Amount		
6h	What importance do you place on the merits and risks outlined above for contestability in compensating the Local Service TSO Provider?	The Local Service TSO provides for the delivery of basic telecommunications services – that could be delivered over multiple platforms over than Telecom's copper PSTN network. Contestability of services would introduce competition to be 'the provider of last resort' for basic telecommunications services at least cost. This would minimise any distortionary effect from allocating the cost of servicing commercially non-viable customers, thereby allowing investment in enhanced telecommunications services that would improve outcomes for New Zealanders.
6j	What form of contestability would best achieve the service	TelstraClear considers that the TSO should be contestable on a

	objectives	regional rather than a national basis – similar to the Project Probe tenders that were undertaken on a regional basis. This would increase the ability of regional operators, or operators with a sub-national operation, to compete to supply TSO services.
Linking Compensation and Investment		
6k	How should investment be linked to compensation of the TSO Provider for local telephone service?	TelstraClear does not support a requirement that the TSO be linked to the compensation that a TSO provider receives from supply of the service to uneconomic customers. Contestability will increase incentives to deliver the TSO services, consistent with the requirements of the Deed, in the most efficient manner possible. Provided that the TSO Provider meets the terms of the TSO obligation, it should be immaterial what further investment is made in its network. For example, the Commission has found that Telecom has complied with its TSO Obligations since 2001. The TSO requirements have been supplied using Telecom's legacy network. The extent of further investment in its network does not appear to have impacted on its ability to deliver TSO services.
6m	Should a special fund be established for capability renewal of the networks supplying TSO local service?	TelstraClear considers that this is unnecessary, provided that the TSO Provider can deliver the required services to the required standard over the duration of the TSO. Appropriate penalties will ensure that the TSO Provider has the appropriate incentives to deliver TSO services to the required standard.
Eligibility for Service		
7a	Should eligibility for TSO local telephone service be confined to purely residential use?	The key purpose of the TSO local telephone service is to deliver basic telephone services to residential customers. The TSO obligation should not be extended to business users. However, this distinction becomes unclear where the TSO local telephone service is used for both residential and business purposes, particularly home-based businesses. For example, a

		residential connection on a farm that is also used for farm business purposes would currently be captured under the TSO local telephone service. While in principle, mixed use services should be subject to business rates, inevitably this is a difficult matter for a TSO Provider to police. TelstraClear recommends that the Commerce Commission be required to expressly give effect to the mixed use of the TSO service by commercially non-viable customers in its cost calculation. For example, the Commission could, in assessing a commercially non-viable customer, consider the revenue for a mixed-use customer if that customers had been placed on a business rather than residential plan. This would create appropriate incentives for the TSO Provider to charge customers the appropriate tariff for business-use, thereby minimising the TSO cost to both the TSO Providers and other liable persons.
7b	What are the merits of establishing a 'hybrid telephone service option' for home business use where a business is co-sited with a household in residential premises?	It is difficult to police whether a phone service is used for residential only, mixed-use, or business only use. Rather than a separate 'hybrid telephone service option', we consider that the TSO cost calculation should create appropriate incentives for the TSO Provider to place mixed-use customers on the appropriate plan.
Free Local Calling		
7l	Does the option of free local calling for residential customers present difficulties for development and growth of the broadband market?	The availability of free local calling means that customers don't face a metered charge for the time used for a dial-up connection. This has resulted in low cost, unlimited usage dial-up plans. This is likely to have resulted in significant early dial-up penetration. The price differential between low-quality dial-up and higher quality broadband may have been more significant than in other jurisdictions with metered local calling. Any impact that free local calling has had in suppressing broadband uptake is likely to reduce over time, as understanding

		of the improved experience and capability available via broadband improves.
Price Rebalancing, Deaveraging and Wholesale Services		
7m	Should retail line rentals for local telephone service be aligned with the degree of geographic de-averaging applied for pricing regulated wholesale services?	The Commission has provisionally decided to deaverage local loop prices between rural ($32.20 per month) and urban ($16.49 per month) exchanges. If Telecom Retail delivers the Local Service TSO under Operational Separation, they will be required to purchase the local loops from Access Network Services at a geographically deaveraged wholesale price. To be consistent, that differential should flow through to the retail prices charged to rural customers.
7o	How should any detrimental impact on the consumer affordability of local service due to price deaveraging be addressed?	The central government, by way of a subsidy, is best placed to address any impact on consumer affordability of local services due to price deaveraging
Upfront Subscription Charges		
7p	Should the upfront charges for establishing telephone access connections be covered by the TSO requirements?	The existing Local Service TSO requires that Telecom provide services on a widely available basis as it did in December 2001. TelstraClear does not support the extension of the existing Local Service TSO to include new connections. New connections should reflect the cost to the service provider of installation, rather than a predefined maximum cost. The individual installation charge should reflect the cost, creating appropriate incentives for a new customer to seek the most efficient technology solution for supply of telecommunications services (for example wireless rather than a copper-based service).
TSO Provider Gatekeeper Role		
8a	Should the gatekeeper role be performed by a government or	Telecom, as the Local Service TSO Provider, is currently the

	non-government organisation and why?	"gatekeeper" for emergency calls. This includes the conveyance and interrogation of Telecom and non-Telecom subscribers, with direction to the communications centres of emergency service providers (Police, Fire and Ambulance). The conveyance and interrogation is a key function to ensure that New Zealanders have access to emergency services. TelstraClear considers that this function could be provided effectively by any suitably skilled organisation that can deliver the service effectively and cost efficiently.
Emergency Call Information		
8c	Should all providers of telephone service in New Zealand be required to establish and maintain capability to identify caller location for emergency calls sourced by their subscribers?	TelstraClear recommends that the Telecommunications Carriers' Forum (TCF) be provided with the opportunity to develop an industry solution to the issues raised in the TSO Review. *R*apid changes in the architecture of telecommunications networks are occurring with the migration from a PSTN to an NGN environment. Concurrently, the terms for unbundled local loops, unbundled bitstream and the operational separation of Telecom are being finalised. The industry as a whole is best placed to understand the technical impact of these changes, and develop a solution that will achieve two objectives - to deliver on the government's policy goals, and to minimise the cost and market distortions impacting our customers.
8d	How should requirements for call information be phased in? Should they apply equally to both legacy telephone networks and next generation telephone networks?	
8e	Should the cost for establishing and maintaining call information capability for public telephone networks in New Zealand be borne by the carriers operating those networks?	
8f	How should minimum standards be set for the supply of call information? By invoking reserve regulation making powers and/or by an industry code of practice?	
Availability of Emergency Call Service		
8g	Should requirements for the quality and reliability of emergency call services be prescribed to apply uniformly across the telecommunications industry (TSO service and non-TSO service?	TelstraClear recommends that the Telecommunications Carriers' Forum (TCF) be provided with the opportunity to develop an industry solution to the issues raised in the TSO Review.

8h	Should the requirements for conveyance of emergency calls be prescribed through regulations under the Telecommunications Act, through an enforceable industry code of practice, or a combination of both?	
8i	Should all telephone service providers in New Zealand (including those facilitating telephone calling through Internet access) be required to offer their subscribers the ability to make emergency calls?	
Lifeline Access		
8j	Should access lines be kept in an active state after service is relinquished to enable lifeline calls to be made?	TelstraClear recommends that the Telecommunications Carriers' Forum (TCF) be provided with the opportunity to develop an industry solution to the issues raised in the TSO Review.
8k	Should the supply of such lifeline connection be compulsory for all operators of public fixed telephone networks, irrespective of whether telephone access is by an analogue line or a VoIP bitstream on a digital line?	
8l	Should this requirement be applicable to only cable (wire or fibre) fixed lines that reticulate dwellings and premises?	
Availability and Adoption of Rural Broadband		
9b	To what extent do you consider that the market will meet the broadband needs of rural users (including availability and affordability) in the next five years?	TelstraClear notes the increasing emergence of alternative technologies to deliver broadband services to rural customers, including wireless technologies such as WiFi and WiMax, cellular and satellite services. Satellite services supplied via the IPStar satellite provide a near ubiquitous broadband service. A constraint to greater uptake of satellite service appears to be the set-up cost including installation of approximately $2,300 + GST. However, the monthly charges and data caps compare favourably against DSL services.

9c	Do you consider there is a case for subsidy mechanisms to fund upgrading of rural broadband infrastructure, and if so, what mechanisms should or should not be considered, and why?	TelstraClear supports a subsidy mechanism to fund upgrading of rural broadband infrastructure where it is not commercially viable to provide broadband infrastructure. Alternatively, the government could subsidise the cost to rural customers for satellite services, where alternative broadband services are unavailable.
TSO Role in Improving Broadband Connectivity		
9d	What role do you think the TSO framework should have in accelerating the uptake of broadband access for New Zealand homes?	TelstraClear does not supports a Broadband Universal Service Obligation. Extending the existing TSO would limit the delivery mechanism to DSL based technology, which may not be the most efficient delivery method, particularly for rural customers. In the future, broadband services are likely to be delivered over a number of alternative technologies. TelstraClear considers that the most effective policy mechanism to ensure that all New Zealanders can benefit from broadband is either: • government subsidies to develop rural broadband infrastructure where private sector investment isn't, on its own, commercially viable; or • providing direct subsidies to rural customers who are limited to higher cost services, such as Satellite, for broadband services.
Responsibility for TSO Change Determination		
10a	Should the Commerce Commission retain responsibility for calculating the TSO charges for TSO instruments containing charging rates of specified amount?	While TelstraClear has significant concerns with the Commission's approach to the cost calculation, we consider that the Commission is the appropriate independent body to determine the TSO cost, consistent with the Telecommunications Act 2001.
10c	Should responsibility for making TSO determinations which calculate TSO charges of specified amount be separated from the	The Commission has the requisite experience and statutory powers to allocate the cost, on a specified basis, among the

	Commerce Commission?	industry. TelstraClear sees significant benefit in the industry determining a specified amount, to minimise the uncertainty that currently exists for all parties, given that the TSO cost calculations are three years behind.
10d	Should responsibility for allocating TSO charges over the industry be separated from the Commerce Commission?	TelstraClear's key concern around the TSO cost model is the inputs that the Commission uses to determine the TSO cost. The allocation of those costs to liable persons, on the basis of liable revenue, is not controversial.
Payment of TSO Levies by Liable Persons		
10f	Should an interim TSO levy be applied for compensating TSO Providers in advance of reconciliation and final payments?	The TSO calculation undertaken by the Commission currently includes an allowance for the loss of use of money. For that reason, the access provider is not financially disadvantaged if the payment from liable persons is not made until the TSO determination for that period is finalised. The key issue is the timeliness of the TSO decisions themselves. The Commission's last finalised TSO determination was issued for the 2003/04 period. Accordingly, three years of payment remain outstanding but the liability is being accrued. A difficulty with an interim TSO levy, if based on a draft decision for example, is highlighted with the 2003/04 draft TSO cost where the costs between the draft, the revised draft and the final determination differed considerably. A specified TSO charge, agreed by the industry, would alleviate this issue.
10g	Should such an interim payment arrangement for TSO levies be on a similar basis to the industry levy for recovering the Commerce Commission telecommunications regulatory cost?	The Ministry of Economic Development currently invoices the parties on a quarterly basis for the provisional share of the costs to fund the Commission's telecommunications branch, on the basis of liable revenues set out in the Commission's last TSO determination. A wash-up then occurs once the Commission's

		financial year is concluded. While such an approach would be a pragmatic way of distributing the costs on an interim basis, it does not resolve what the interim cost would be. TelstraClear's preference remains for a specified TSO charge, agreed by the industry.
Extension, Expiry and Review of TSO Instruments		
10i	Should TSO instruments automatically expire after a specific period?	Under the terms of the existing TSO Deed, there is no expiry date for the obligation. Clause 23 of the TSO Deed provides that either party can seek to renegotiate any or all terms of the Deed.[13] However, under clause 26, only the Crown may terminate the deed. The TSO instrument must be sufficiently flexible to reflect changes in the telecommunications environment, and allow for periodic review to ensure that the TSO instrument still meets the objectives, and that the TSO Provider is the most efficient deliverer of those services. Any expiry date for the TSO obligation must allow the TSO Provider to recover the economic costs of its investment necessary to delivering the TSO services.
10j	How frequently should TSO instruments be reviewed?	TelstraClear suggests that a formal review of the Local Service TSO should occur every five years. This is consistent with the requirement under the Telecommunications Amendment Act 2006 that the Commission review the ongoing relevance of regulated services at least every five years. Consistent with the existing TSO Deed, either the Crown or the TSO Provider can seek to renegotiate terms within the deed at any time. Any such negotiation should involve consultation with

[13] Clause 23 of the TSO Deed for Local Residential Telephone Service, December 2001

		affected parties – including liable persons such as TelstraClear.
Accountability for Local Service TSO Compliance		
10k	Should a single organisational unit of Telecom have accountability for all TSO functions? What Telecom business unit should this be?	Under the draft Operational Separation requirements, retail services such as the TSO Local Services would be provided by Telecom's retail division. However, under operational separation, Telecom Retail will be reliant on Access Network Services to provide the local loops to deliver the service. Accordingly, several divisions of an operationally separated Telecom would deliver the TSO services. Because the terms of Operational Separation are yet to be finalised, TelstraClear recommends referring this matter to the Telecommunications Carriers' Forum to address.