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TSO Review
Information Technology and Telecommunications Policy
Ministry of Economic Development
PO Box 1473
Wellington

Delivered by email to:
tsoreview@med.govt.nz

Dear Sir/Madam

Telecommunications Service Obligations (TSO) Review

Please find attached the response to the MED TSO discussion document made by Environment Bay of Plenty in its capacity of lead agency in BayBroadband – an initiative of the six territorial councils and Environment Bay of Plenty.

BayBroadband also supports the submission of Local Government New Zealand however has placed different emphasis on some aspects. At the bottom of the attached appendix is a table showing those parts of the review where there is alignment and where there is a difference.

Thank you for the opportunity to respond. If there are any questions please contact Miles McConway, Group Manager Technology and Science at Environment Bay of Plenty as follows:

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Yours faithfully



Bill Bayfield
Chief Executive

Encl 1 Appendix 1 - BayBroadband's Response to the MED TSO Discussion Document

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Appendix 1

1 BayBroadband's Response to the MED TSO Discussion Document**1.1 3 The TSO Framework**

- 3a How important is the KSO/TSO framework as a component of the overall regulatory regime of New Zealand for telecommunications services?*
- 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?*
- 3c Would other policy mechanisms be more appropriate than TSO instruments to achieving the government's telecommunications objective going forward?*
- 3d What are the strengths and weaknesses of the TSO framework?*

- 3a. The KSO/TSO have played a very important role in regulating New Zealand's telecommunications services. Without it rural customers would have been further disadvantaged.
- 3b. The TSO framework has partially delivered 'fair and equitable services'. However, its effectiveness is reducing with the introduction of digital services. The gap between available metropolitan and rural broadband services is much larger than the gap between metropolitan and rural voice services.
- 3c. The TSO remains appropriate for achieving the government's telecommunication objectives, but it is not the only relevant policy instrument and will require refreshes to reflect changing trends in technology economics.
- 3d. The key strength in the TSO framework is the service standard requirements for universal service. The secondary strength is the associated funding component. The key weaknesses in the framework are the lack of definition and inclusion of basic broadband services as a component of basic telephone services, and secondly the barriers to entry created for new regional service providers by the TSO subsidy being available only to the incumbent.

1.2 4 Purpose and Market Impact of the Local Service TSO

- 4a How does the Local Service TSO contribute to advancing the interests of telecommunications users?*
- 4b Would the universal availability and affordability of local residential telephone service for households be better achieved another way?*
- 4b What should be the focus of the Local Service TSO going forward?*

- 4a. The Local Service TSO helps ensure minimum standards of local service for most New Zealanders. This is an essential social and economic objective.
- 4b. The TSO is an appropriate policy instrument – while there may be additional mechanisms available, the TSO remains relevant.
- 4c. The focus of the Local Service TSO needs to incorporate basic broadband connectivity and performance.

1.3 5 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?*
- 5e Are there service measures which would better represent the aspects of service performance which are of most importance to users?*
- 5f Should penalty performance rebates apply for non-compliance by the Local Service TSO Provider?*
- 5g Should there be reporting on the quality and capacity of network capabilities for supplying TSO local service?*

- 5d. Regional service performance measurements are more appropriate than a national average although it would be expected that minimum service performance levels (such as time to repair) would be lower than urban service performance.
- 5e. Service performance measures need to include technical performance measures if broadband is considered a “basic telecommunications service”. Key technical performance would include available bandwidth, latency, and jitter.
- 5f. Penalty performance rebates are only appropriate on a systemic basis and not on individual issues. Even on a systemic basis they would need to allow for environment effects such as storms or earthquakes.
- 5g. Reporting is considered a key quality and transparency driver and should be supplied.

5 Service Reporting

5h Should information about TSO local telephone service supplied in commercially nonviable areas be made publicly available by the TSO provider as part of its TSO requirements? If so, why?

5h. Service reporting is certainly required in a non-contestable environment. If Local Service TSO 'subsides' are made contestable then disclosure to a regulator remains appropriate but full public disclosure (in general) may not be appropriate due to commercial sensitivities.

5 Convergence and Transitioning to 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?

5j Should a requirement for battery back-up only apply for residential customers living in areas outside mobile cellular phone coverage?

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?

5l Should dial-up internet access be discontinued for TSO local service if a bitstream equivalent (i.e. NGN version) is supplied as a replacement?

5m Do you have any concerns about aspects of Telecom's planned NGN local service?

5i-k. It is probably not practical to have a network operator responsible for the battery backup of consumer end equipment. The topology of the consumer end of the system is highly variable and determined by the consumer. All elements of the consumer end of the network including DSL modem, switches, and IP phone in a digital environment require power to operate and control of this is impractical for a network provider. Although consumers need to be educated as to the requirement for battery operated power, individual variation in approach to this makes this impractical to pass this responsibility to network providers.

5l. As long as the bitstream service meets a minimum standard then it is not necessary to have the dial-up internet access considered as basic service.

5m. Telecom's planned NGN local service is one of a range of network topographies that can be deployed. It is based on 'pushing' fibre closer to the home and continuing to use copper with DSL technologies to provide the 'last mile'. While this is considered an appropriate and economic approach for many rural customers, regional towns will benefit more from FTTH style topographies, particularly in the business and government sectors.

In most instances the regional nature of these organisations (e.g. schools) still fits firmly in the area of “non-commercial” and so also need to be covered by TSO obligations.

6 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?*
- 6i *Do you agree that contestability can only be expected to bring net benefits in areas which are commercially non-viable?*
- 6j *What form of contestability would best achieve the service objectives*

- 6h.j. There are real merits and risks in introducing contestability into the Local Service TSO, however the existing TSO obligations (on a non-contestable basis) act as a barrier to entry for new regional local service providers. Applying the contestability objective to an entire region in a manner that sees the entire region provided by one or other service providers is also probably not practically implemental. The contestability needs to allow multiple providers within a given region and to allow the new provider to gain some of the subsidy benefit available for that region.
- 6i. Contestability will certainly bring more benefits to areas that are non-viable but may also bring benefits to ‘viable’ regions.

7 Eligibility for Service

- 7a *Should eligibility for TSO local telephone service be confined to purely residential use?*
- 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?*
- 7c *Should the incremental revenue for such a new TSO local service be channelled into investment in rural network infrastructure?*
- 7d *What are the merits of applying such an option to all home business premises as opposed to confining the application to only those home business premises located in a rural area as defined by Statistics New Zealand rural definition?*

- 7a-d. Eligibility for TSO local telephone service should be available to all customers including business and home business customers in commercially non-viable areas. There are regional economic objectives at stake which have potentially significant beneficial effects on social objectives as well as the direct influence of the TSO.

8 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?*
- 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?*

- 8d. Geographical calling information should be required only where practicable. This type of information is a usual part of modern telephony customer-care and asset management systems.
- 8d. Legacy networks will be around for some time yet. Both network types should support geographic calling information
- 8e. Carriers should bear the cost as this is likely to be reasonably minimal.
- 8f. Minimum standards should be applied. This would best be by an industry code of practice.

8 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)?*
- 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?*

- 8g. Quality and reliability of emergency services calls should be prescribed across all service sectors. This will need to apply primarily to the switching and gateway services as with VOIP the customer will determine the quality of the call.
- 8h. A regulatory process is preferred.
- 8i. All service providers should offer emergency calling capability.

8 Lifeline access

- 8j *Should access lines be kept in an active state after service is relinquished to enable lifeline calls to be made?*
- 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?*

8j-l This is a much simpler process in analogue networks than in digital networks. In the later it is also necessary to keep customer premises equipment running which requires power and this may not be practical for a network operator on an inactive line. It is also very difficult (perhaps impossible) for a local NGN network operator to distinguish between traffic types and so it may not be technically possible to allow VOIP emergency calls to proceed and to block non-voice traffic.

9 Availability and Adoption of Rural Broadband

- 9a *Taking into account likely broadband user requirements in 3-5 years time, what do you consider will be the key broadband applications (e.g. email, web browsing etc) for businesses and households?*
- 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?*
- 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?*

9a. The choice of application is the key determinant of required bandwidth and as such sets the underlying required broadband standard. Voice is one such application that is deemed a necessary part of the 'basic telecommunications service' supported by the TSO obligations but so should the minimum of email and web browsing including active web content. The rationale for the later is simply that many important rural services such as banking and supply ordering are now provided at discounted prices so long as the access to these services is via the internet but these require adequate bandwidth for effective use.

9b. The gap between the requirements of rural broadband users and available market services will continue to widen over the next 3-5 years unless active broadband deployment programs continue to be developed.

- 9c. There is most definitely a case for active subsidy for upgrading rural broadband infrastructure, however it is important to focus on the key economic drivers of cost deployment rather than only a subsidy mechanism.

9 TSO Role in Improving Broadband Connectivity

9d	<i>What role do you think the TSO framework should have in accelerating the uptake of broadband access for New Zealand homes?</i>
9e	<i>How are these rules above for considering a broadband USO relevant to New Zealand?</i>
9f	<i>Are there other factors that need to be considered for a Broadband TSO?</i>
9g	<i>Should for the TSO Provider for any broadband TSO be selected on a contestable basis?</i>

- 9d. The TSO Framework should include a minimum definition of broadband (in terms of bandwidth, latency, and jitter) as a component of minimum service. Broadband deployment is a key economic driver of communities and is similar in nature to road and rail services in its ability to stimulate or retard community growth. As such it has a significant role to play in the social fabric of New Zealand communities and should absolutely fall under the scope of revised TSO obligations.
- 9e. The example rules are relevant to NZ
- 9f. It is likely that a single definition of minimal standards for broadband with a TSO environment will not work. The minimum standards will need to be set on the basis of 'remoteness' as it is not practical to expect the same performance from, for example, remote wireless, or satellite when compared with DSL.
- 9g. It is important to make broadband TSO contestable to provide new operators with incentive to provide remote broadband services.

2 4 Comparison between BayBroadband and LGNZ Responses

MED TSO Section	Alignment with LGNZ	Comments
Section 3 - Effectiveness of The TSO Framework	Aligned	Agreement that overall the TSO has been effective but going forward it must be transparent and encompass broadband.
Section 4 - Purpose and Market Impact of the Local Service	Aligned	Agreement that forward looking focus should be on broadband and contestability. EBOP response places greater emphasis on

TSO		economic development as a mechanism for achieving social obligations.
Section 5 - Standards for TSO Local Service	Aligned	Agreement that transparency and regional service standards are desirable. EBOP response recognises that with NGN topologies the network provider cannot be responsible for powering customer equipment.
Section 6 - Compensation for the Local Service TSO Provider	Aligned	Agreement that compensation of local service providers should be a contestable process.
Section 7 - Eligibility and Charging for TSO Local Service	Aligned	Agreement that de-averaging costs is potentially desirable but also difficult to do fairly.
Section 8 - TSO Local Service and Emergency Call Service	Aligned	Agreement that where possible emergency support should be provided by TSO providers. EBOP response recognises that this may be more difficult to do with VOIP providers.
Section 9 - TSO Requirements for Subscriber Access Connectivity	Disagreement	LGNZ assert that application requirements are not relevant to rural broadband deployment. EBOP response includes minimum broadband standards as part of 'standard telephone service'.
Section 10 - Rules and Processes of the TSO Framework	Not applicable	Neither LGNZ nor EBOP have made implementation recommendations.