

# 2013 Review

## Ministry of Economic Development, November 2007

### Summary of Submissions

#### Introduction

This paper presents a summary of submissions received on the discussion paper “Review of Section 62 of the Electricity Act 1992 ‘Continuance of Supply’ (2013 review), August 2007” (ISBN 978-0-478-31064-1).

A total of 64 submissions were received. These are listed in Table 1 below.

**Table 1: Submissions Received**

	Submitter	Role
1	Ruapehu District Council	Local government
2	French Pass Residents Incorporated	Interest group
3	French Pass Sea Safaris	Business - tourism
4	Winston Oliver	Private
5	Network Waitaki	Lines company
6	Meridian Energy	Electricity Retailer
7	Top Energy Consumer Trust	Energy Trust

8	Eastern Bay Energy Trust	Energy Trust
9	Waitaki Power Trust	Energy Trust
10	MC and AE Ward	Private
11	Theodora C. Ward	Private
12	Anthea Ward	Private
13	Ruapehu DC, Otorohanga DC, Waitomo DC, and The Lines Company	Local Government / Lines Company
14	Jewell Group	Business
15	Southland District Council	Local government
16	Orion	Lines company
17	Rural Women New Zealand	Interest Group
18	Eastland Network	Lines company
19	Scanpower	Lines company
20	Powerco	Lines company
21	Thames-Coromandel District Council	Local government
22	South Island High Country Federated Farmers	Business lobby: farming
23	Federated Farmers	Business lobby: farming
24	Vodafone	Business - telecommunications
25	JDA & Associates	Business - telecommunications

26	TelstraClear	Business - telecommunications
27	Far North District Council	Local government
28	Counties Power Consumer Trust	Energy Trust
29	King Country Electric Power Trust	Energy Trust
30	Department of Building and Housing	Central Government
31	Electricity Networks Association	Business lobby – electricity lines
32	Counties Power	Lines company
33	Sian Smith	Private
34	Fonterra	Business - dairy
35	Hurunui District Council	Local government
36	Top Energy	Lines company
37	PowerNet	Network management company
38	Marlborough District Council	Local government
39	Marlborough Lines	Lines company
40	Collective Submission of 18 Lines Companies	Lines companies
41	Major Electricity Users Group	Business lobby – electricity
42	Contact Energy	Electricity retailer
43	Unison	Lines company

44	Northland District Health Board	District Health Board
45	Sustainable Electricity Association NZ (SEANZ)	Business lobby - energy
46	Network Tasman	Lines company
47	The Lines Company	Lines company
48	David MacClement	Private
49	National Institute of Water and Atmospheric Research (NIWA)	Crown research institute
50	Richard Leckinger	Private
51	OnTrack – Smartpower	Business – rail infrastructure
52	Vector	Lines company
53	Clutha District Council	Local government
54	Tararua District Council	Local government
55	Te Aroha Kanarahi Trust - Ani Pahuru-Huriwai	Community trust
56	Mighty River Power	Electricity retailer
57	Local Government New Zealand	Local government
58	Genesis Energy	Electricity retailer
59	Environment Bay of Plenty	Local government
60	NZ Police	Government agency
61	Power Systems	Business - energy

62	Environment Waikato	Local government
63	Telecom	Business - telecommunications
64	Watercare Services Limited	Business - water
65	CN & VCW Thornley	Private

**Table 2: Glossary**

<b>Abbreviation</b>	<b>Description</b>
Commerce Act	Commerce Act 1986
CC	Commerce Commission
DC	District Council
DG	Distributed Generation
EC	Electricity Commission
ELB	Electricity Lines Business
Part 4A	Part 4A of the Commerce Act 1986
Electricity Act	Electricity Act 1992
EGR's	Electricity Governance Rules 2003
EIRA	Electricity Industry Reform Act 1998

LFS	Line Function Services
MUoSA	Model Use of System Agreements
Part F	Part F of the Electricity Governance Rules 2003
NZES	New Zealand Energy Strategy
RERC	Rural Electrical Reticulation Council
TSO	Telecommunications Service Obligations
WACC	Weighted Average Cost of Capital

## 1. Introduction

### What is the problem?

**The expiry of section 62 is likely to affect those consumers on lines that are considered uneconomic, such as those to remote rural areas. If section 62 is repealed and the requirement for continuance of supply expires, lines companies would no longer be legally obliged to maintain connection.**

Federated Farmers	The removal of the obligation risks telecommunications infrastructure (cell sites and the police radio network). Recent weather events have highlighted the reliance of such infrastructure on diesel generators owned by farmers but these are not always adequate. Such measures are not sustainable alternatives to supply by lines.
South Island High Country Federated Farmers	Many farmers made significant contributions to the construction of supply lines to their stations or communities and (perhaps reluctantly) accepted the 20 year sunset clause on the obligation to supply. A mitigating factor was the belief that by 2013 cost effective alternative supply options would be widely available, however no significant advances have been made.
Winston Oliver	Since reticulation, alternative energy use (such as coal ranges and kerosene fridges) has been replaced by electrical appliances. The loss of rural reticulation now would have a significant impact on the average farm.
The Lines Company	Acknowledge national benefit in maintaining secure supply to remote areas. Support Federated Farmers

	observations of unproductive time non-grid energy supply can consume, more productive for the nation if time spent on activities that add to GDP.
Counties Power	Issue of continuance of supply cannot be evaluated in isolation from the broader regulatory environment.
Collective submission - 18 lines companies	Should section 62 remain unchanged, it is possible that from 2013 electricity supplies may not be maintained in rural areas, where costs of supply significantly exceed the revenues associated with those assets. Cross-subsidy has the potential to become significant as assets initially built from RERC subsidies reach the end of their useful lives and require replacing.
Collective submission - 18 lines companies	Currently ELBs manage their networks in a manner which meets the needs of the communities they serve. Support solutions which recognise wider community responsibility for local infrastructure.
Electricity Networks Association	Concerns expressed by power boards in submissions on original bill in terms of delaying sensible arrangements, encouraging disputes, continuing maintenance over transition period have shown themselves to have some basis. ENA understands that no prior consents have been issued by the Minister of Energy or Consumers by formal agreement as anticipated in particular situations. Clearly this has not been an effective transitional mechanism.
Electricity Networks Association	<p>In order to properly assess the number of consumers affected by expiry of section 62, there needs to be basic information on</p> <ul style="list-style-type: none"> <li>• Appropriate ways of distinguishing 'uneconomic' lines</li> <li>• Number of currently 'uneconomic' lines which could potentially not be maintained if there were no obligation</li> <li>• Number of lines that may be 'uneconomic' in the future</li> <li>• Number of consumers serviced by those lines</li> <li>• Geographic placement of those consumers</li> <li>• Community and industry needs those lines served.</li> </ul> <p>ENA is prepared to work further with officials and other stakeholders to help obtain this basic information and to consider its implications.</p>
Powerco	<p>A 'future proof' solution will as far as possible rely on the market to deliver affordable energy solutions but where the market is unable to deliver there will be a process to</p> <ul style="list-style-type: none"> <li>• Define the social externality</li> <li>• Quantify its value and subsidise it explicitly</li> <li>• Allocate these subsidies transparently, predictably and in a non-distortionary manner.</li> </ul>

	<ul style="list-style-type: none"> <li>• Have a 'last resort' option for complete market failure.</li> </ul>
Network Waitaki	<p>This section might better ask “Is there a problem?”</p> <p>When a storm event currently occurs line companies have an incentive via performance measures and price/quality thresholds to restore supply as quickly as possible. Having restored supply they will then take the time to analyse what is the optimum level of rebuilding and reinforcement that is warranted. This considers the affects on future performance and costs and is assessed against the network as a whole. The process can take several years and therefore no consumers are simply abandoned at the time of the storm event. RERC subsidies were a matter of central government social policy. Line companies are not social service providers and are not accountable for the outcome of policy changes.</p> <p>Consumers do face higher costs for maintaining their own service line assets now as they don't have a large asset base to average costs over. The assumption that line companies own the lines is not correct. Consumers own between 5 and 15% of the last part of their supply. In NWL's case about 10 % of these lines were subsidised by the RERC.</p> <p>Note that the consumers (not the power company) paid the remainder of the cost of the lines built under RERC scheme. The RERC scheme required a consumption guarantee and was effectively the equivalent of a New Investment Contract with a fixed price and term. The term subsidy is also a bit of a misnomer, as consumers were actually paying the full cost via a mechanism that simply spread cost out over a number of years by applying a higher fixed charge component for those individual consumers.</p>
Marlborough District Council	<p>The spirit of the Civil Defence Emergency Act 2002 is clear for lifeline utilities to be maintained in rural areas “the economic viability of communities and of the nation as a whole depends on the continued operation of lifeline utilities’. Many people completely unaware of the legislation – needs to be publicized to give people 5 years to prepare.</p>
National Institute of Water and Atmosphere (NIWA)	<p>Very few consumers are likely to be isolated from the system until a large capital spend is required – timing of this is uncertain consequently supply duration is uncertain.</p>

## Objective of the review

**The objective of the review is to consider what new arrangements should be put in place to ensure that affected consumers continue to have proper access to an electricity supply that is efficient, fair and reliable and delivered in an environmentally**

**sustainable manner.**

Powerco	<p>Suggest proposed outcomes are:</p> <ul style="list-style-type: none"><li>• All classes of consumer have their energy needs reliably serviced at an affordable price</li><li>• Investors in energy services are able to generate a commercial return on their investments</li><li>• Market solutions where possible and regulatory solutions only where necessary. Market failure (for example, social externalities) to be explicitly addressed using the least distortionary mechanisms available.</li><li>• A sustainable, low emissions energy future.</li></ul> <p>2 key differences between proposed approach and review objective are that Powerco's proposal recognises consumer energy needs can be met through a variety of different means rather than simply through the conventional approach to delivering electricity; and all classes of consumer have their energy needs reliably and affordably serviced.</p>
National Institute of Water and Atmosphere (NIWA)	<p>To ensure that affected consumers continue to have access to <i>energy services</i> after 2013....Whether continuance of supply is interpreted as energy services or electricity will have considerable impact. Optimisation of the unit cost of a lines network is driven by maximising throughput, optimisation of the ultimately desired energy services are at least equally governed by maximising efficiency.</p>

## 2. Assumptions and proposed assessment criteria

### Urban and rural cross-subsidy

**Current government policy is to peg changes in line charges to rural areas to changes in line charges to urban areas.**

National Institute of Water and Atmospheric Research (NIWA)	The choice between lines and alternative supply appears unrelated to the cross-subsiding issue. Intent of subsidy should be the focus.
Sustainable Energy Association NZ	Problem with levelising the lines charges between urban and rural customers is the inhibiting effect it has on the uptake of distributed and standalone generation.
New Zealand Police	Intention of government policy appears to have been to keep rural customers supplied at an affordable cost.
Ontrack	Intention of government policy appears to have been to keep rural customers supplied at an affordable cost.
TelstraClear	Intention of government policy appears to have been to keep rural customers supplied at an affordable cost.
JDA & Associates	Intention of government policy appears to have been to keep rural customers supplied at an affordable cost.
Vodafone	Intention of government policy appears to have been to keep rural customers supplied at an affordable cost.
Genesis Energy	The range of plausible solutions is constrained by this requirement; and that lines companies are the vehicle through which the subsidy is delivered. Hence dynamic efficiency losses are not to be addressed – i.e. incorrect investment decisions will be made due to lack of signal of full cost of supply.
Thames Coromandel DC	Supports continuation of this government policy.
Rural Women of NZ	Supports this policy. Electricity supply at reasonable cost is vital to the rural sector.
Federated Farmers	This policy should continue. Given the importance of primary products to domestic and export markets, affordable electricity is a key issue for the economy.
French Pass Sea Safaris	The rural sector supports the whole of NZ and should not be penalised with rate increases.
French Pass Residents Inc	Generation is often located in the rural environment. Though not officially recognised, impacts of this are compensated by socialising the cost across all electricity users.
Scanpower	Scanpower maintains equality of pricing across network. Acknowledges that prima facie cross subsidy is inherent in this pricing policy, but believes this is offset to some degree by economic benefits provided by rural sector in the network area, and higher quality received by urban consumers. Removing cross subsidy unlikely due to complexity of establishing/administering asset base pricing, and magnitude of increases in rural line

	charges would be socially and politically unacceptable.
Eastland Network	Using supply alternatives has ability to reduce extent of cross-subsidy; benefits could be passed on to consumers. It is likely that regulatory alignment will require cross-subsidisation between urban and rural consumers to be explicitly provided for.
Marlborough Lines	Para 99 of GPS should be reviewed and implications considered in the context of the current review of section 62. Even if costs of alternatives are lower than true costs of lines supply, if line prices are held at artificially low levels as a consequence of GPS requirements, there is little incentive for consumers to consider alternatives.
Network Tasman	Introduction of GPS policy and low use tariff option for residential consumers has forced NTL to abandon price loadings in rural areas with uneconomic segments of the network. To meet new policy requirements NTL no longer carries regional differentiation in line pricing. Rural segments have become more uneconomic and level of cross subsidy has increased. By sheltering users from true cost of supply, incentives for uptake of new technologies and alternative power systems have been muted.  Economic efficiency considerations (allocative, productive, and dynamic) argue reductions of cross-subsidy through cost reflective pricing will produce best economic outcome, efficient allocation of resources.
The Lines Company	Info shows six lines companies with significantly higher proportion of RERC funded lines. Price analysis will probably show these six have relatively higher prices, even without factoring in replacement of uneconomic lines.
The Lines Company	Not equitable for consumers of local lines company to pay for supply to remote areas. Lines company boundaries often arbitrary and bear little relationship to any community of interest. Cost of subsidy should not fall on citizens of low-decile rural towns, who can least afford to bear cost. We submit the nation should bear the cost. This would be in line with telecommunications and other subsidies.  Do not believe there needs to be a special levy, cost is relatively small, could be funded from general tax funds.
Orion	While a degree of cross-subsidy inevitably exists, continuation of the GPS policy will encourage lines companies to discontinue supply to non-economic consumers or not connect them in the first place. It makes alternatives less attractive as the alternative is unlikely to be cost-effective compared to subsidised supply from a network.
Counties Power	Recommends MED consider the need to allow a reasonable degree of flexibility in pricing policies adopted by lines companies.
Collective submission - 18 lines companies	Combination of average pricing and differential quality of supply therefore results in an inherent price quality trade-off for remote rural consumers. Extent of cross-subsidy differs across networks depending on how tariff groups are defined, and relative proportions of urban, rural, remote network and connections. Many ELBs indicate that the impact of cross-subsidy on urban and rural consumers is insignificant due to small proportion of consumers supplied by remote rural assets.
Collective	Existing GPS requirement potentially unsustainable – based on historical position. There is no evidence to

submission - 18 lines companies	suggest this is efficient or fair or will be in the future. This policy requirement is a barrier to meeting objectives of 2013 review.
Waitaki Power Trust	<p>Historically subsidy to construct lines justified in terms of enabling farmers to increase GDP – regarded as promoting national good. Rural area towns benefit when rural area is doing well, so while there is some cross-subsidy, this is paid back in other ways.</p> <p>Extent of cross-subsidy is uncertain, noted that less than 1% of lines companies made economic value adjustments (to their asset values), suggesting that currently the number of consumers served by uneconomic lines could actually be quite small.</p> <p>Suggests cross-subsidy is only an issue for lines companies that are publicly listed, seek a commercial return. Consumer Trust owned lines companies will continue to use normal price averaging across the network.</p>
Electricity Networks Association	If s62 continues, costs borne by urban customers will increase. As assets deteriorate, they will need to be replaced, potentially at considerable cost. Necessary repair and maintenance work will be difficult and expensive because of inconsistencies and ambiguities in current legislation. Issue of whether this re-distribution of costs should occur needs to be considered.
Electricity Networks Association	Another issue that needs consideration is the ability of favoured larger customers to avoid the cross-subsidy by connecting directly to Transpower's grid at one or more of its GXPs. As the costs of maintaining ageing remote lines rises, pressures to do this could well increase, leaving relatively fewer urban consumers to carry the rising costs of the cross-subsidy.
Electricity Networks Association	Burden of uneconomic lines falls unevenly on lines companies in different areas, as not all lines companies have the same proportion of uneconomic lines to asset base.
Electricity Networks Association	Would seek a statutory guarantee that any necessary cross-subsidies from urban to rural consumers will not be disallowed by (or invoke sanctions from) the CC under part 4A or by any regulatory authority.
Vector	<p>Subsidy is consistent with other government social policy objectives. Up to government to determine what appropriate subsidy is, when full cost recovery may cause some consumers hardship. Although costs of supplying uneconomic consumers seem low, has potential to be a more significant issue in future as ageing networks become due for replacement and costs of alternatives reduce.</p> <p>Issue should not be resolved by assumption. Should be an attempt to assess and make transparent the value of the subsidy to ensure overall costs not unacceptable.</p>

	<p>Subsidy framework should be developed with 3 key criteria</p> <ul style="list-style-type: none"> <li>• Ensure competitive neutrality between incumbent network owners and competitors</li> <li>• Should promote efficient competition in supply of alternatives to line services</li> <li>• The extent any option impacts on costs of lines businesses should be reflected in part 4A regime. Lines businesses must be able to recover costs of alternatives.</li> </ul>
Network Waitaki	<p>In general line companies make their living by providing line assets for which they are permitted to fully recover costs and charge a reasonable rate of return. Their charges are averaged across a large asset base and a large consumer base. In this regard there are no uneconomic assets and there is no requirement on line companies for their pricing to reflect economic efficiency principles.</p> <p>In these circumstances why would a line company want to reduce quantity of assets and number of consumers it services? Networks were reticulated in an era when there were subsidies, lower consenting and easement costs, etc. This established position is not given away lightly. Any lines that still cannot currently be justified on a marginal cost basis should never have been built and it doesn't make economic sense to protect these supplies.</p>
Network Waitaki	<p>If the MED or the Government has issues over subsidy and fairness of pricing policy then it should prescribe the principles on which pricing methodologies are to be based.</p> <p>NWL completely average prices between rural and urban consumers. It also makes no distinction between domestic and non-domestic consumption. There is no commercial imperative on NWL to introduce differentials and its consumer trust owners would oppose such a change.</p> <p>This is not a fight line companies need to have in the pursuit of someone else's political ideology. Without the RERC very few new uneconomic supplies are being built while the older connection base is subject to natural age related attrition. Extremely uneconomic supplies will slowly disconnect as owners of service lines requiring upgrade will make their own economic choice.</p> <p>The most distorting issue affecting line company pricing is the cap on fixed charges for low consumption supplies.</p> <p>Line company pricing methodology is still based on electricity volume sales which bear no relationship to the cost of supply or the service levels provided. Until this pricing methodology is addressed cross- subsidy, economic efficiency, social equity and commercial fairness issues will remain.</p> <p>When considering the issue of cross-subsidy, pricing equity must be considered against service equity. Remote connections are unlikely to have the same reliability and security services as a CBD for example. Who is subsidising who is matter of opinion. The material gains from being economically pure don't out-weigh the effort in working it out. Whatever pricing signals are created by a line company they are just as quickly destroyed by</p>

	the retailer's tariffs.
Meridian	With GPS requirement, rural consumers may not be receiving economically efficient signals about the true cost of line supply versus other supply alternatives. Queries whether there are things to be learnt from lines companies' approaches to rural connections since 1993 that can be applied to the connections before 1993 that could be shared with the wider group.
Tararua District Council	Assumption of peg is highly significant and may have more of an impact on future choices than the options outlined in the discussion document.
Local Government NZ	Assumption of peg is highly significant and may have more of an impact on future choices than the options outlined in the discussion document. Seek clarification and confirmation from Government on this.
Mighty River Power	The maintenance of the rural-urban price alignment would act to exacerbate the number of commercially non-viable consumers the lines businesses would have incentives to disconnect. If supply obligation was removed, a rural consumer would probably prefer to pay higher prices than face non-supply. It would not make sense to remove the obligation without reviewing the rural-urban price alignment. However, the ability of lines companies to meet the subsidy is sustainable (as the higher prices paid by urban consumers cannot be undercut).

### **The economics of line supply**

**Supplying electricity by lines could be considered uneconomic for two main reasons: i. When the revenue generated from the consumers connected to the line is insufficient to meet the costs of maintaining the line, including asset renewal. ii. When it would be a lower cost to supply the same area by an alternative means (i.e. not by long distribution lines).**

New Zealand Police	Need to adopt one clear definition for uneconomic; once established should cover no more than the customers who would be picked up by the ODV methodology.
Ontrack	Need to adopt one clear definition for uneconomic; once established should cover no more than the customers who would be picked up by the ODV methodology.
TelstraClear	Need to adopt one clear definition for uneconomic; once established should cover no more than the customers who would be picked up by the ODV methodology.
JDA & Associates	Need to adopt one clear definition for uneconomic; once established should cover no more than the customers who would be picked up by the ODV methodology.
Vodafone	Need to adopt one clear definition for uneconomic; once established should cover no more than the customers who would be picked up by the ODV methodology.
South Island High Country Federated Farmers	Acknowledge the high cost of construction and maintenance of lines.

Marlborough Lines	Lines may still be uneconomic where identified cost of alternatives is greater than the cost of supply by way of lines. Value of uneconomic lines in Marlborough lines network is significantly in excess of 1% of total.
Network Tasman	<p>Provides sample analysis of uneconomic network segments. Indicates that revenues are insufficient to even meet operating and maintenance costs, and line charges would have to increase 3-4 times to meet costs, and 5-6 times to cover costs, depreciation plus WACC on the ODRC (35 - 45c/kWh). This suggests alternative systems are reasonably competitive provided lines are fully costed and cost reflective pricing.</p> <p>Given current network assets are sunk costs it is rational to keep them in use for remaining economic life provided income covers cash operating costs. Inappropriate to build new lines or reinforce existing lines in these areas, but continued use of existing sunk assets probably cheaper than alternatives provided capital cost considerations set aside.</p>
Network Tasman	Where spare capacity available on uneconomic lines, NTL will connect new loads, however, a substantial connection fee will continue to be charged, which: reflects the inadequacy of line charge revenues derived in these areas; encourages new loads to minimise their maximum demand requirements; and encourages new loads to consider alternative energy supply solutions. NTL does not want to be put in a position of reinforcing/upgrading lines and needs to retain the right to refuse new connections to these network segments once capacity limits reached. Once at capacity, lines will be as near to economic as likely to get but will not justify new upgrade capital.
Top Energy Consumer Trust	Top Energy continues to construct supply lines and connect new consumers, where the cost means it is uneconomic. The company operates a capital contribution scheme where the new consumer funds the uneconomic proportion of equipment, which is refundable when others connect. There is no undertaking to maintain supply for any period or at any time. It must be presumed that when equipment requires replacing in future, there may be a requirement for the consumer to again fund part of that cost.
Electricity Networks Association	<p>Review has not properly identified costs for lines companies in extending section 62. These costs include:</p> <ul style="list-style-type: none"> <li>• Cost of maintaining uneconomic supply. Review notes no lines companies have reduced value of line under EV test in latest disclosure. However, lines companies have made EV adjustments in the past. Future costs of maintaining lines installed with cross-subsidies will fall on lines companies.</li> <li>• Costs in securing land access to maintain lines</li> <li>• Costs in resolving disputes over ownership of existing works.</li> </ul>
Network Waitaki	No such thing as uneconomic lines. We fully recover the cost of providing services or would go out of business. We are a cost plus rate of return business. The larger our asset, whether economically efficient or not, the larger our business.

	<p>Issue is economic efficiency and monopolies given weak incentives to address this issue. Price controls, low fixed charges, etc. are all threats to supply in uneconomic areas. The obligation to supply cannot address this issue; a change in pricing methodology and price control practice is required.</p> <p>The economic argument needs to consider what a consumer has to pay to establish the connection (which supposedly covers at least some of the asset investment cost) and the line charges that are only intended to cover the cost of sustaining that connection. Upgrades in service levels and/or increased usage can be addressed by user specific levies and capital contributions. If the cost replacement at the end of economic service life is addressed in a similar fashion then there is no economic issue for the line company.</p> <p>Capital investment aside, the differences in cost of providing line function services between consumers is minor over all. Line company cost efficiency is measured by direct cost per km which does not vary significantly between rural and urban consumers and indirect cost per connection which is also not that user/location specific.</p>
Tararua District Council	As electricity is a national network, contributions to it should come from both local and central levels
Marlborough District Council	Need to define what uneconomic is in order to know how many users will be affected and what level of costs and subsidies are involved. Once a firm decision is established, in our opinion it should cover no more than the customers who would be picked up by ODV methodology.
Southland DC	The use of the term 'uneconomic' may be code for 'profitable, but far less so than other areas of the network where we make a fortune'. A large part of the problem (and the solution) is the attitude of the network owner towards its customers and social responsibilities.
Local Government NZ	Costs of line supply / subsidy: national cost is rural production uneconomic because of increased power costs, cost and efficiency of generation, both central and local, safety management of communications, emergency services and lighting of public areas; equity in relation to pricing.

### Lines companies' asset valuations

**A lines company values its network assets using a valuation methodology called Optimised Deprival Valuation (ODV). One part of the method requires that a lines company consider its network as comprising many segments and evaluate whether, for each segment, it is possible to provide the same service, at lower cost to users of the network, by an alternative means. If so, then that portion of the network is deemed uneconomic. This is called the Economic Valuation (EV) test and its result is to reduce the asset value of the network. A company does not have to undertake an EV test if it is thought that the reduction in value would be less than 1% of the total network value.**

Scanpower	Concerned at potential for inconsistencies in regulatory approach between various bodies in the industry. If obligation to supply continues concerned regarding imposed price regulation that may threaten company's ability
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	to meet obligation to supply on a consistent basis.
Eastland Networks	Note that must be possible for lines companies to make an adequate return on investment that is not based on ODV but real expenditure.
Unison	Review of part 4A of Commerce Act need to take account of both current obligation and any intended extension of obligation.
Marlborough Lines	Review must consider other elements of regulatory framework including Part 4A of Commerce Act. Imperative that MED co-ordinate the approach to review of S62 with review of Part 4A and Commerce Commission consideration of threshold regime to apply from the end of current reset period.
Orion	Has advocated ODRC approach to asset valuation rather than ODV as ODRC appropriately reflects the principle of the 'averagely efficient hypothetical new entrant'. The use of an EV adjustment is also inconsistent with an obligation to maintain supply. Recommend no EV adjustments done on uneconomic assets that fall within s62 criteria.
Collective submission - 18 lines companies	Needs to be consistency in legislation which recognises obligations to supply on ELBs and allows them to include the required assets in their regulatory asset base.
Electricity Networks Association	ENA has issues over whether thresholds under part 4A, any investigations by the Commerce Commission into a breach of those thresholds, and any declaration of control take into account the costs to lines companies of meeting the obligation to supply. Lines companies are concerned that the CC will continue to apply a strict approach that does not recognise the costs of this obligation and of the 2006 GPS obligation under which the Government expects rural users to be cross-subsidised from different categories of customers.
Electricity Networks Association	<p>ODV/EV valuation methodology unfair especially while S62 remains because in most cases, identified costs of alternatives will always be greater than cost of supply by way of uneconomic lines. True cost of uneconomic lines may be significantly in excess of 1% of total value yet that portion of the network does not qualify for an EV adjustment.</p> <p>ENA believes a fair formula for evaluating economic lines could be to value them at the deprival value to the consumers they serve. This could be calculated around a simple range of options of alternatives depending on the load of the lines – for example, diesel sets, micro-hydro, wind. This would more accurately reflect the asset value reduction of supplying uneconomic lines and would encourage lines companies and consumers to consider alternative supplies of energy.</p>
Network Waitaki	<p>Line companies do not value their assets by ODV methodology. They are required by the regulator to prepare this valuation for regulatory purposes only. It has no other practical application. Their business economics and pricing is not based on ODV.</p> <p>The EV valuation is not based on actual revenues derived from actual investment. The methodology considers</p>

	<p>what could be charged on the basis of the next least cost supply solution. An accurate assessment of the economics of supply in terms of whether the revenue derived from the users of the investment made in supply is more likely to be in the order of 5-15% uneconomic network depending on the network's load demographics. This is far greater than the 1% suggested by EV write-downs of ODRC.</p> <p>This is the level of cross-subsidy that exists now and there is no reason to believe that this will suddenly become unacceptable in 2013. The low user tariff requirement is having a bigger impact.</p>
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### What is alternative supply?

**Alternative supply (alternatives) can mean two things: i. Any method to generate and supply electricity to an area that is not connected to a line company's network. ii. Any method by which electricity use can be reduced to better enable alternative supply.**

Rural Women of NZ	Supports the development of alternative supply provided the development and maintenance is certain and cost effective for individual consumers.
Fonterra	Options for alternative supply must be evaluated on reliability, security of supply, cost and efficiency. DG not sufficiently proven.
Federated Farmers	Self generation or community level distributed generation solutions are required to ensure security of supply in rural areas if uneconomic lines are not maintained. One option is for consumers to defer load to off peak times (thereby avoiding investment in lines), although the ability for rural energy users to do this can be limited.
Unison	Before a decision on alternative supply taken, further research of new technologies should be undertaken. Investors in energy services need to be encouraged to further innovate and adopt new technologies, which stems from the ability to make commercial returns. By addressing problems of alternative supply solutions, reliance on extension of s62 could be mitigated.
Top Energy	Over past 15 years has investigated alternatives, in every case this has been unsuccessful. Paper seems to assume that alternative energy systems are viable. In almost all cases, systems are very capital intensive. Many consumers in Far North would be incapable of accessing funds required for alternative supply, and if disconnected may have to live without proper heating, lighting and provision of water and sanitation.
Collective submission - 18 lines companies	Understand that alternative supply options incur a higher total cost of supply than equivalent costs for customers already connected to a network. In addition, alternatives tend to provide lower quality of service (availability and reliability). More common for consumers to pay for high cost connections than investigate alternatives, though this may change over time. ELBs should be permitted to consider and possibly promote alternative options but there should be no explicit requirement in legislation/policy for them to do so.
Top Energy	Far North is a district where a significant proportion of population would be totally incapable of accessing funds

Consumer Trust	required to source alternative energy supplies. Only realistic result that can be anticipated is that many of these people will be disconnected from the power supply and then will have to live without proper heating, lighting and sanitation. House fires in the Far North from use of candles illustrate graphically the likely outcome of allowing S62 to continue to its scheduled termination.
Powernet	Does not wish to see lines businesses constrained to providing a reticulated supply to existing customers but to also include providing assistance to customers with a transition to an alternative supply option if that was the optimum solution in providing a continuing supply to the customer.
Electricity Networks Association	Continuance of section 62 (especially coupled with EIRA) could stifle lines companies' and consumers' incentives to further innovate and adopt new technologies as an alternative to electricity supply by lines. A Parliamentary Commissioner for the Environment study and report demonstrate there is significantly more research and consideration needed of new technologies for alternative supply options for supplying rural consumers currently serviced by 'uneconomic' lines, before a decision on section 62 is made. Risk that a decision on s62 is made without knowing implications of that decision for incentives for investment in new technologies.
Vector	<p>Alternatives becoming more economic. As this happens, proportion of lines that are uneconomic may increase and value of a technology-neutral policy would increase. Supports government commitment to encourage uptake of renewable energy generation and DG.</p> <p>Consumers interested in services provided not in mode of delivery. As long as there is comparability in quality, consumers should be indifferent to lines or alternatives. Policies should be ambivalent to technology choice. Consistent with government policy to permit alternative solutions.</p>
Network Waitaki	<p>The alternative supplies considered include the entire supply system not just LFS. It should not be assumed that local line companies have the expertise to advise on alternative systems or the ability to manage them. While the supply obligation remains and consumers can benefit from cross-subsidy it is unlikely their investment decisions regarding their supply and the appliances they use will change.</p> <p>Rather than stand alone alternative power supplies it is more likely that power systems will develop with mass market distributed micro generation such as Photovoltaic and Combined Heat and Power systems at household scale. This will use networks to interconnect and will have a major impact on investment and economics of supply. There will be less need for capacity, security, and bulk transmission functions. Line asset can be reduced and economic efficiency improved. For these outcomes to occur the method used to charge line function services will need to change away from an energy volume sale basis.</p>
Network Waitaki	Indicative unit costs do not identify the line charge component and are not related to line function service cost structures. Alternatives assume reduced service levels. To make a fair comparison some normalisation is

	<p>required. This would show that services being provided are well beyond the minimum essential services and that charges are not sufficiently high enough to recover costs i.e. service is under valued and alternatives are unlikely to compete effectively.</p> <p>Policy objectives like sustainability are not factored into the cost equation.</p>
Contact Energy	<p>Considers should select and option that does not discourage future investment in alternative energy sources, especially renewable micro-generation. Promoting renewable alternatives will likely be in line with the NZES.</p> <p>Lines companies and energy retailers can work with customers to facilitate these alternative sources.</p>
Tararua District Council	<p>Imperative that there are incentives to develop and use appropriate alternative forms of generation (rather than just being left to the 'Market'), critical that lines companies are allowed to own, maintain and sell generation in areas outside their own network.</p>

### Proposed Assessment Criteria

**The objective of the review is to consider what new arrangements should be put in place to ensure that affected consumers continue to have proper access to an electricity supply that is efficient, fair and reliable and delivered in an environmentally sustainable manner.**

Major Electricity Users Group	<p>Equity consideration: customers that have been supplied from an uneconomic line since 1945 will by 2013 have had 68 years of line service whereas those since 1993 will have had 20 years of supply. Equity consideration stronger for the more recent customer.</p>
New Zealand Police	<p>Efficiency: while it may inefficient to subsidize, other inefficiencies are created if lines are removed (i.e. section 62 stands). Fairness: access to electricity at affordable prices cannot be met with existing technology. Reliable: Technology has not advanced to the stage that other options will provide the same level of security at similar prices. Environmentally sustainable: in general diesel generation will be the replacement with its attendant greenhouse gas emissions. Tankers would be needed to bring in the fuel.</p>
Ontrack	<p>Efficiency: while it may inefficient to subsidize, other inefficiencies are created if lines are removed (i.e. section 62 stands). Fairness: access to electricity at affordable prices cannot be met with existing technology. Reliable: Technology has not advanced to the stage that other options will provide the same level of security at similar prices. Environmentally sustainable: in general diesel generation will be the replacement with its attendant greenhouse gas emissions. Tankers would be needed to bring in the fuel.</p>
TelstraClear	<p>Efficiency: while it may inefficient to subsidize, other inefficiencies are created if lines are removed (i.e. section</p>

	62 stands). Fairness: access to electricity at affordable prices cannot be met with existing technology. Reliable: Technology has not advanced to the stage that other options will provide the same level of security at similar prices. Environmentally sustainable: in general diesel generation will be the replacement with its attendant greenhouse gas emissions. Tankers would be needed to bring in the fuel.
JDA & Associates	Efficiency: while it may inefficient to subsidize, other inefficiencies are created if lines are removed (i.e. section 62 stands). Fairness: access to electricity at affordable prices cannot be met with existing technology. Reliable: Technology has not advanced to the stage that other options will provide the same level of security at similar prices. Environmentally sustainable: in general diesel generation will be the replacement with its attendant greenhouse gas emissions. Tankers would be needed to bring in the fuel.
Vodafone	Efficiency: while it may inefficient to subsidize, other inefficiencies are created if lines are removed (i.e. section 62 stands). Fairness: access to electricity at affordable prices cannot be met with existing technology. Reliable: Technology has not advanced to the stage that other options will provide the same level of security at similar prices. Environmentally sustainable: in general diesel generation will be the replacement with its attendant greenhouse gas emissions. Tankers would be needed to bring in the fuel.
Marlborough Lines	More appropriate fairness criteria would be to remove comparison with other users and adopt a reasonableness test which takes into account e.g. location, consumer density and the cost of alternatives.
Orion	<p>'Efficiency' criteria should explicitly include allocative, productive, and dynamic efficiency</p> <p>'Fair' criteria should be removed. Use of the word 'fair' is highly subjective and can be interpreted in many different ways; there is no agreed definition of the term. If it is to be retained, should be clarified – Fair (e.g. assess whether remote, rural users will continue to have access to electricity at reasonable prices, comparable with prices for alternative forms of supply).</p> <p>Should include 'certainty' as the paper's purpose is to identify options that could address the problem of uncertainty of supply beyond 2013.</p>
Counties Power	Object to narrow definitions of 'fair' that apply only to consumers.
Collective submission - 18 lines companies	<p>Need to consider impacts on the following consumer groups:</p> <ul style="list-style-type: none"> <li>• Farmers/farm and forestry workers located in remote regions and/or areas with difficult terrain</li> <li>• Small remote communities characterised by low income household with basic amenities</li> <li>• Holiday home owners, tourist facilities located in remote regions.</li> </ul> <p>Capacity of each group to contribute toward cost of continued electricity supply likely to vary considerably. For</p>

	this reason we support an approach which provides for a range of solutions.
Waitaki Power Trust	Concept of 'fairness' needs to be widened to include not only 'reasonableness' of line charging to remote rural users, but also to take account of the ownership status of the line company supplying line function services to the potentially affected consumers.
Vector	Should be amended to include: <ul style="list-style-type: none"> <li>• Whether is consistent with or promotes government's objectives for the energy sector, including removing barriers to DG</li> <li>• Whether option is competitively neutral in both supply of subsidised and non-subsidised services</li> <li>• Whether proposed subsidy approach is administratively cost effective given the size of the economic issue</li> <li>• Whether option is consistent with operation of Part 4A regime.</li> </ul>
Vector	Assessment framework would be improved by breaking policy issue into constituent parts and assessing elements separately. <ul style="list-style-type: none"> <li>• Technology choice (assuming obligation or explicit supply subsidy)</li> <li>• Subsidised supply</li> </ul>
Powerco	Following definitions would assist the application of the criteria to consideration of whether a proposed regulatory regime would deliver the desired outcomes: <ul style="list-style-type: none"> <li>• Efficient – promote competition in markets for the long-term benefit of consumers in a way that minimises distortions (i.e. cross-subsidy)</li> <li>• Fair – energy services are affordable for all classes of consumers. The delivered price of energy services to consumers in rural areas is comparable to the delivered price of energy services in urban areas.</li> <li>• Reliable – Consumer energy needs are adequately serviced. Users are able to access the energy services they require, when they require them. For the avoidance of doubt, reliability thus defined does not necessarily refer to the reliability of line function services at a point of connection.</li> <li>• Environmentally sustainable – Net environmental effects are reduced. In particular carbon emissions decrease and there are energy efficiency gains (energy efficiency means a change to energy use that results in an increase in net benefits per unit of energy)</li> </ul>
Powerco	Options are not mutually exclusive, in choosing between them respondents may not be identifying discrete

	<p>differences in policy. Each of the options is made up of four elements:</p> <ul style="list-style-type: none"> <li>• Nature of future obligation (1993 service, information on LFS intentions, assistance in transition)</li> <li>• Means of meeting service obligation (LFS, LFS or alternatives)</li> <li>• Length of obligation (no expiry date, a limited time beyond 2013)</li> <li>• Nature of subsidy (internalise in lines business, all electricity users.)</li> </ul> <p>A useful approach may be to apply the assessment criteria to these elements individually.</p>
Network Waitaki	There is no definition of Government's objects and a consistent policy framework to drive the tools like pricing methodology that will deliver on the objectives. Without this the assessment criteria are meaningless. We appear to be reverse engineering policy to fit the assessment criteria not using the assessment criteria to show that policy is delivering on objectives.
Environment Waikato	Ensure these criteria are assessed in their widest scope and offers the 'four well beings' of the LGA 2002: social, economic, environmental, and cultural. Social equity considerations need to be balanced alongside purely economic equity considerations. Macroeconomic view of retaining productive capacity and community sustainability of remote users.
Marlborough District Council	If s62 takes effect (i.e. obligation is removed) then: inefficiencies created for other parts of rural sector e.g. maintenance of civil defence; not fair; no longer have reliable technology to create electricity; not environmentally sustainable to truck diesel to remote locations.
Hurunui DC	Support the assessment of options under criteria; expand environmental sustainability to cover potential effects on climate change and whether the supply is generated from renewable energy sources.
Local Government NZ	Supports criteria, but found it difficult to apply these in any meaningful way.
Environment Bay of Plenty	Efficient operation of the network should not be seen as a priority over social concerns and issues. Include 'practical' so the options are tested for how realistic uptake will be.
Genesis Energy	'Fairness' relates to relative price levels between classes of consumer; fairness does not equate to the concept of affordability. Affordability is an important public policy outcome; aim of good public policy is to focus on delivery of the lowest cost option as encapsulated in the concept of efficiency first, with affordability next.

<b>3. Indication of line companies' current policies</b>	
<b>Approximately half of the lines companies mention continuance of supply after 2013 in their Asset Management Plans. Several lines companies comment that this issue is under consideration and policy has not yet been developed.</b>	
Federated Farmers	Members have concerns that lines companies will soon reduce maintenance on lines they have identified as uneconomic. Allegations that in some areas maintenance has already been neglected.
Marlborough Lines	Is generally committed to maintaining some form of electricity supply to all connected customers post-2013. However unless final outcome of review provides sufficient flexibility, concerned that could become forced into non-commercial solutions. Need to consider how range of options will be affected by other legislation.
Network Tasman	No formal or public commitment made. Unlikely, given consumer trust owned, that would curtail supply to consumers based on consideration of locality or supply economics. Nevertheless given detrimental impacts of energy policy and regulatory initiatives on distribution business viability, would be commercially irresponsible to give unequivocal commitment to supply.
Counties Power	Intends to continue to offer supply to all customers, irrespective of when connected. They may choose an alternative, however, there should be no mandate for us to supply by alternative means unless this is mutually agreed.  However, there are contradictory drivers between social interests and commercial pricing principles. Government should create or allow pricing flexibility as lines companies vary tremendously in terms of network topography and other characteristics.
Collective submission - 18 lines companies	ELBs supporting submission have indicated a general willingness to continue to supply post 2013. Supports solutions which allow ELBs to work with all consumers unless they wish to disconnect. However, it is important lines businesses are not forced into non-commercial solutions or outcomes which are inconsistent with other legislation. Disappointed that paper does not adequately address this issue.
Powernet	Supports in principle the obligations of lines businesses towards their existing connected customers who wish to continue to receive an electricity supply.
Network Waitaki	It will not be NWL's policy to disconnect any existing supply where it is still wanted and the consumer is prepared to maintain their connection in a compliant state. We give consumers generous notice where we are aware of a maintenance issue. We do not give advice on how to not use our services. New connections are permitted to connect to NWL assets when they are prepared to meet the cost of doing so. This is a self regulating process that does not change regardless of whether the obligation to supply remains or not.

<b>4. Summary of options</b>	
<b>Option A: Continuance of obligation to maintain line function services with no expiry date</b>	
<b>Subsection 6 of section 62 is repealed so that line function services must be supplied in perpetuity.</b>	
Anthea Ward	Option supported
Theodora C. Ward	Option supported
MC and AE Ward	The simplest and easiest to adopt.
Richard Leckinger	Second best choice as the status quo access for remote communities is a relatively low cost affair.
National Institute of Water and Atmospheric Research (NIWA)	Rank 3 of six options; robust, efficient and environmentally-friendly system for urban; rank 2/6 for rural, economically poor.
David MacClement	Not supported
New Zealand Police	Not supported – counterproductive for everyone else if suitable (i.e. effective and affordable) alternatives were to become available.
Ontrack	Not supported – counterproductive for everyone else if suitable (i.e. effective and affordable) alternatives were to become available.
TelstraClear	Not supported – counterproductive for everyone else if suitable (i.e. effective and affordable) alternatives were to become available.
JDA & Associates	Not supported – counterproductive for everyone else if suitable (i.e. effective and affordable) alternatives were to become available.
Vodafone	Not supported – counterproductive for everyone else if suitable (i.e. effective and affordable) alternatives were to become available.
Genesis Energy	Little difference between a and b options.
Environment Bay of Plenty	Least preferred (last of six)
Local Government NZ	Support, but does not provide incentives to make supply more sustainable, only more economic.
Rural Women of NZ	Give qualified support to this option, but note that unlikely to be taken up. Recognise that may hinder development of alternatives.

Federated Farmers	Preferred option.
French Pass Sea Safaris	Support implied.
French Pass Residents Inc	Support implied.
Eastland Network	Not favoured. Hinders opportunity for lines companies to be able to make economic return on their network or provide alternatives. Supply alternatives as a replacement for uneconomic lines might have positive spill-over effects for consumers in terms of cost reduction and quality of service.
Marlborough Lines	Many lines built in 1950s/60s require significant renewal or replacement expenditure over the next decade or two. While current subsidy is sustainable, any significant increase in cross-subsidy arising from need for renewal/replacement risks cross-subsidy becoming unsustainable.
Waitaki Power Trust	Preferred option – counter intuitive, unjust, unfair that legislation could permit a service to be withdrawn should a lines company decide to do so on economic grounds alone, when that consumer has a financial interest in the provisioning Company and requires line function services by the Company to continue.  Recommends repealing sub clause 6 and all reference to time lines.
Eastern Bay Energy Trust	Supports option. Recommends that subsection 6 of S62 of the Act be repealed; meaning that s62 of the Act would no longer expire in 2013.
Electricity Networks Association	Reasons given for inclusion of original sunset provision are equally valid to consideration of a proposal to extend the s62 obligation beyond 2013. <ul style="list-style-type: none"> <li>• Difficulty in valuing an obligation in perpetuity. Unfair to impose an unlimited obligation for continuance of supply where that obligation would mean that lines companies would have severe difficulty meeting the asset valuation requirements under the Commerce Act.</li> <li>• Prospect of new technologies – ENA believes if obligation in perpetuity no incentive to continue research into alternative electricity supply methods.</li> <li>• Obligation to serve distant consumers difficult to maintain in the face of competition – regulatory and policy changes mean obligation is difficult to maintain, but for different reasons. Part 4A, EIRA, ownership of existing works.</li> </ul>
Vector	Obligation should not be extended beyond 2013 in current form. Should be provision for flexible approach which enables new technologies to be substituted for line supply as they come to the end of their lifetimes.
Contact Energy	This option makes it very difficult to economically justify a switch to any alternative supply, both now and in the

	future. It also discourages research and development into alternatives.
Northland District Health Board	Support; electricity is not an optional extra, it is a basic necessity. If lines companies assess that particular rural lines are uneconomical, they have to ensure an alternative is feasible.
Clutha DC	Support
Southland DC	Support
Ruapehu DC	Should be considered if supply is safe, affordable and reliable no matter where one lives; consumers fully informed within adequate timeframes; could be a burden just to maintain one form of supply.

**Option B: Continuance of obligation to maintain supply, using lines or alternatives, with no expiry date**

**Subsection 6 of section 62 is repealed so that services must be supplied in perpetuity, but lines companies can choose whether this is by lines or through an alternative method such as remote area power system (RAPS).**

Power Systems	Best option from point of view of the consumer
Richard Leckinger	Preferred option, allows lines companies to seek least cost option.
National Institute of Water and Atmospheric Research (NIWA)	Allows new optimal total system provided definition and quantification of energy supply is a shared agreement between provider and consumer.
David MacClement	The expectations around price, quality, reliability and capacity will vary with location – more distant consumers should have financial and legislative incentive to move to supplying a larger fraction of their needs locally.
Sustainable Energy Association NZ	Board prefers option B, but this may not be the preference of members.
Fonterra	(Implied support option B). Continuance of current obligation with emphasis on security and cost of supply. Only when new technologies can compete on the basis of critical reliability and cost criteria should consideration be given to relaxing current obligations.
TelstraClear	This is a good option: does not attempt to pick a particular technology.
JDA & Associates	This is a good option: does not attempt to pick a particular technology.
Vodafone	This is a good option: does not attempt to pick a particular technology.
Mighty River Power	Support allowing ELBs to maintain their obligation to supply thought alternative supply mechanisms where this is lower cost.
Genesis Energy	Option B provide only weak incentives for lines companies to find the least cost means of continued supply to remote consumers. On balance of the options, this should be supported.

Thames Coromandel DC	Supports this option (note submission described this as option D, but uses the above description). May raise the issues of cost to providers. Consumers might have to adapt to an alternative method of supply, if more economic.
Environment Bay of Plenty	Preferred option (first of six)
Local Government NZ	Support; more of a user-pay system
Rural Women of NZ	Preferred option (subject to issues raised in submission). Has potential to remove hindrances to development of alternatives and also removes the element of compulsion to change from the consumer.
Federated Farmers	Second most preferred option. Deserves further consideration. Problems with alternative supply would need to be addressed.
South Island High Country Federated Farmers	Preferred option provided the total cost of supply is on par with lines supply.
Scanpower	Broadly supports option – as locally owned trust, all consumers entitled to supply, urban townships in area dependent on rural, given ongoing developments in alternatives, flexibility to use alternatives is desirable.
Eastland Network	Favours option. Provides certainty for affected parties. Pre 1993 consumers assured continuance of supply and lines companies can choose to supply alternatives where this is more efficient. Alternatives may reduce need for cross-subsidy.
Marlborough Lines	Completely unworkable – individual negotiations with up to 2500 consumers would be time consuming and costly. Majority of consumers would not be happy with alternatives offered, particularly if those alternatives resulted in higher operating costs.
Eastern Bay Energy Trust	Supports as an alternative to option A
Vector	(If ongoing obligation) Decision of who chooses technology depends on type of subsidy arrangement. Ideally end consumer should make trade-off between costs and performance. In the event a subsidy regime is discontinued then consumers would be able to make relevant trade-offs between price and delivery mode. If obligation on some party to provide subsidised service, then customers do not face full costs, and it must be decision of the obligated supplier or agent providing subsidy as to what service delivery modes are most cost-effective, particularly if there is no ability to levy customer contribution. If customer prefers a different mode would need to make a contribution to receive more costly service.
Environment Waikato	Option B as second choice (after F). Weather events linked to climate change increase risk of line damage; need to ensure repair of lines to rural communities.

Southland DC	Support
Hurunui DC	Support – Electricity network is essential national infrastructure – certainty and reliability of supply is essential to maintain economic and community well-being. The use of alternatives to lines will encourage the development of new knowledge and expertise in remote area power generation.
Ruapehu DC	Should be considered if supply is safe, affordable and reliable no matter where one lives; consumers fully informed within adequate timeframes; could be a burden just to maintain one form of supply.

## Option A and B Questions

### a) Should access to electricity supply for pre - 1993 connections be maintained with no expiry date? What issues could this raise?

	Not explicitly stated, but implied YES (in options preferred): Rural Women, Federated Farmers, SI High Country Fed Farmers,
Richard Leckinger	No expiry date. Could raise concern with those who have post-1993 contracts.
National Institute of Water and Atmospheric Research (NIWA)	A blanket continuance of lines supply with cross-subsidy appears unfair to those post-1993 consumers that have paid or are paying the full cost of their connection.
Sustainable Energy Association NZ	Yes maintained but provided in such a way that customers re not disadvantaged by making a choice to change their supply options. Pay a remote energy allowance directly to the consumer but allow lines companies to charge cost-reflective.
Environment Bay of Plenty	Limited expertise in DG. Commission a team to provide technical advice to lines companies on alternative supply
Scanpower	Yes – Scanpower continues to maintain supply to all areas.
Marlborough lines	Yes – subject to the right for a lines company to levy all consumers connected to a section of reticulation when /if significant expenditure is required to renew or replace all or part of the reticulation. Levy would be payable by all consumers who elect to remain connected.
Network Tasman	Unacceptable to extend obligations without changes to the current policy and regulatory environment. Proper recognition of full costs of supply required. Assurances about asset valuations are necessary. Assurance about ongoing sustainability of cross-subsidisation is fundamental.
Top Energy	No economic justification for inclusion of original provision. No justification for continued inclusion. Termination will raise many social issues; these are issues for the government to address and fund, not individual power

	consumers or lines companies.
Orion	See comments under additional options. We note that a requirement for supply in perpetuity would place customers connected before 1993 in a superior position to those connected after 1993, which do not have any certainty their line function services will be maintained.
Counties Power	Legislating an obligation to continue supply, in whatever form, is a poor solution and is subject to the inevitable mechanism of unintended consequences. Risk of perverse outcomes and unworkable solutions outweighs any potential benefits.
Collective submission - 18 lines companies	Yes – for consumers who wish to maintain connection subject to standard conditions of supply (tariffs, quality of supply, contributions toward investment in dedicated assets). This involves balancing the needs of individuals with community as a whole. Potential issues include conflicts with other legislation/policy which may impose requirements on ELBs contrary with obligations to act as successful businesses and to meet needs of community.
Top Energy Consumer Trust	Should be openly acknowledged that it will never be politically acceptable to allow existing consumers to be disconnected. Once this acknowledged, obvious answer is that the obligation must continue.
Electricity Networks Association	<p>Paper has not established a case to extend section 62. Issues raised include:</p> <ul style="list-style-type: none"> <li>• Inequitable to supply consumers connected pre-1993 on more preferable terms than post-1993. However, this is not an argument for ‘updating’ the obligation.</li> <li>• Incongruous with government’s infrastructure policy for other infrastructure sectors.</li> </ul> <p>Environmental impacts</p> <ul style="list-style-type: none"> <li>• Little incentive to consider local micro-generation given section 62 and other regulatory settings e.g. EIRA</li> <li>• Environmental cost of transporting electricity large distances would remain, environmental benefits of local micro-generation would not be utilised.</li> </ul> <p>Economic implications</p> <ul style="list-style-type: none"> <li>• Continued cost of providing electricity on ‘uneconomic’ lines would be cross-subsidised by urban consumers.</li> <li>• CC’s application of part 4A could make it increasingly difficult for lines companies to subsidise cost of providing ‘uneconomic’ lines.</li> </ul>

	<p>Practical implications</p> <ul style="list-style-type: none"> <li>Existing ambiguity on whether lines 'lawfully installed' would make maintenance and repair even more expensive and difficult.</li> <li>Increasingly difficult to determine what was existing at 1 April 1993, and what has been installed since.</li> <li>Obligation would be difficult for lines companies to cost.</li> </ul>
Vector	<p>No basis for locking in any particular method of supply beyond 2013. Retention of existing obligation likely to inhibit uptake of renewable energy generation projects. Likely to promote inefficiency in medium to long term, both in terms of increasing demand-side efficiency and in terms of new investment in alternatives.</p> <p>Extending present obligation will simply 'prolong the inevitable' and lead to extended consumer uncertainty in terms of what will happen once it is removed, whenever that occurs.</p> <p>Supports an option that is neutral to technology used, but does not support approaches which mandate lines company should be the supplier without suitable protection mechanisms against unfair competition from new entrants competing to reticulate new subdivisions in urban areas.</p>
Powerco	<p>No. Obligation to supply LFS in perpetuity would slow development of alternatives market and would be uneconomic. To be affordable would require some form of subsidy in perpetuity. Inequity of obligation only being available to pre-1993 consumers would continue. Obligation to continue to provide energy supply in perpetuity would enable 'integrated energy solutions' but as above would continue inequity between classes of consumers.</p>
Network Waitaki	<p>There needs to be an expiry date for pre 1993 connections as lines were never designed to last indefinitely and have not managed on that basis. NWL would prefer all supplies were treated equally such that no distinction is made for pre 1993 connections.</p>
Marlborough District Council	<p>Lines only with no expiry would dampen the market for alternatives. Better option is for lines or alternatives with no expiry date.</p>
<p><b>b) What expectations should there be from consumers around price, quality, reliability and capacity for continuance of supply (either by lines or by alternatives)?</b></p>	
Power Systems	<p>Reliability is not expected to get any better and expect the price will increase.</p>
Richard Leckinger	<p>As they are now.</p>
National Institute of Water and	<p>Expect supply appropriate to their situation. Needs of remote bach different from remote shearing shed.</p>

Atmospheric Research (NIWA)	
Sustainable Energy Association NZ	Lines costs may be higher for similar quality and capacity, but consumer has choice to offset this cost through reduced capacity and reliability requirements.
New Zealand Police	Expectations would be for a continuance of status quo in all areas. Not much room for the trade-off of price vs. quality as quality, capacity and reliability remain the main drivers.
Ontrack	Expectations would be for a continuance of status quo in all areas. Not much room for the trade-off of price vs. quality as quality, capacity and reliability remain the main drivers.
TelstraClear	Expectations would be for a continuance of status quo in all areas. Not much room for the trade-off of price vs. quality as quality, capacity and reliability remain the main drivers.
JDA & Associates	Expectations would be for a continuance of status quo in all areas. Not much room for the trade-off of price vs. quality as quality, capacity and reliability remain the main drivers.
Vodafone	Expectations would be for a continuance of status quo in all areas. Not much room for the trade-off of price vs. quality as quality, capacity and reliability remain the main drivers.
Environment Bay of Plenty	Consumers might expect they will be asked to have a say on how they wish to manage a (DG) resource.
Rural Women of NZ	Should be able to have control over their supply even if financial assistance or subsidised. Should be provided at reasonable price (compared to the price of supply by lines) – lines company prices for alternative supply should be regulated. Should be adequate quality and where necessary provide three phase supply. Should be paid for any electricity feed back into grid by the consumer.
Federated Farmers	Better communication on issues of reliability would be required if supplied by alternatives.
French Pass Residents Incorporated	Prices to be paid for alternative energy should be similar compared to main grid users.
French Pass Sea Safaris	Power supply should be maintained at same price as other users and the same support services should remain.
Scanpower	On basis of support for option B consumers could expect services will continue on a basis consistent with past practice. In certain cases could expect the possibility of being supplied by alternative methods.
Marlborough Lines	Any suggestion consumers accept lower reliability standards is fundamentally flawed. Rural consumers, particularly primary production, require supply reliability.
Marlborough Lines	If continuance of supply is by lines, consumers should expect no less quality and reliability than they currently experience. However, the GPS requirement should be removed to allow lines companies to recover some of the

	<p>additional costs of supplying remote/rural consumers by way of increases in line prices for connections in those remote areas.</p> <p>Consumers should expect lines companies to provide capacity up to current (or contracted) levels. However consumers should accept capacity upgrades subject to lines company obtaining property rights for upgrades, and if these cannot be obtained at reasonable cost, system may not be able to be upgraded.</p>
Network Tasman	Expectations should be for current service levels only with no expectations of enhancement – supply service from existing sunk cost structures while service potential remains intact.
Top Energy	Consumers always desire best quality of service for minimum price.
Orion	Customers should be prepared to pay a commercial rate, and prepared to make price/quality trade-offs. If supply maintained via alternatives, then this may well be less reliable.
Collective submission - 18 lines companies	Consumers should expect supply to be maintained, but also must anticipate terms and conditions will change over time and there may be differences for those with uneconomic services compared to those with economic services. There is a risk of rural/urban cross-subsidy becoming unsustainable if GPS requirement remains.
Top Energy Consumer Trust	Material increases in price are unsustainable, for the same reason private investment is not practical. Only feasible recognition of uneconomic power connection is service levels. May be that Commerce Commission will need to make allowance for lower quality thresholds where consumers supplied from uneconomic supplies.
Electricity Networks Association	We assume this question is a matter for consumer organisations to respond to.
Vector	<p>Quality, Reliability, Capacity - Rural line supplies inevitably of lower quality than urban, it takes longer to attend to a fault given travelling times, meshed or looped designs that can be used in urban networks cannot be used for rural supplies. In designing a regime that considers whether RAPS are a viable alternative, urban/rural quality distinction needs to be considered in the first instance.</p> <p>In principle alternative supplies can be designed to achieve similar service levels to rural line supplies, but necessary to evaluate what is a reasonable subsidy to be paid to uneconomic consumers with any higher service quality achieved through customer contributions above the level of that subsidy.</p> <p>Price – This is an area of social policy, up to government to determine what is reasonable for rural consumers to pay for energy services. Any subsidy framework should be transparently administered, and lines businesses should not be commercially disadvantaged when they compete for new customers in their urban networks.</p>
Powerco	Dependent on wider regulatory and policy objectives. There are clearly price/quality trade-offs to be made. In the current environment government has identified that all classes of consumers should have access to ‘electricity

	that is delivered in an efficient, fair, reliable and environmentally sustainable manner'. This suggests consumers should have a reasonable expectation to receive affordable and reliable electricity.
Network Waitaki	Consumers should not have any expectations beyond what they are paying for. Benefiting from subsidy is a privilege not an entitlement and those who are paying the subsidy should have some input on how much they are prepared to give.
Marlborough District Council	Expectations would be for the continuance of the status quo.
<b>c) What scope is there for remote rural consumers to be supplied using alternative supply methods or for example, the method outlined in paragraph 47?</b>	
Power Systems	Change from 3-phase to single will cause issues and potentially increase the cost of utilising the power itself. 3-phase needed for farming.
Richard Leckinger	Scope should be broad to allow lines companies to explore many different least cost options, including their own generation should changes to Commerce Act go forward.
National Institute of Water and Atmospheric Research (NIWA)	For remote communities at the end of a line, an islanded network can already be effective.
Sustainable Energy Association NZ	No alternative method can yet provide the benefits of network connection at a comparable cost and convenience to the consumer.
New Zealand Police	Would depend on the customer. Starting point is that existing level of service with the price pegged to urban consumers should be maintained.
Ontrack	Would depend on the customer. Starting point is that existing level of service with the price pegged to urban consumers should be maintained.
TelstraClear	Would depend on the customer. Starting point is that existing level of service with the price pegged to urban consumers should be maintained.
JDA & Associates	Would depend on the customer. Starting point is that existing level of service with the price pegged to urban consumers should be maintained.
Vodafone	Would depend on the customer. Starting point is that existing level of service with the price pegged to urban consumers should be maintained.
Environment Bay of Plenty	Lines companies may be able to identify the most suitable supply method
Rural Women of NZ	Development could be unduly constrained by the Resource Management Act 1992, or in the case of LPG, the

	Hazardous Substances and New Organisms Act 1996.
Federated Farmers	While alternatives exist, they are very expensive, are not as reliable as lines supply and require investment in a number of technologies to generate sufficient capacity.
French Pass Residents Incorporated	Professional services for development and maintenance of supply should remain. Do not see local involvement being an integrated part of that reliability.
Scanpower	Doubts feasibility of replacing 3-phase power with single phase due to rural load sizes in region. Considers there is scope for use of alternative methods, most likely distributed or micro-generation equipment. Non-standard supply contracts, providing for alternative price structures/reliability standards are a feasible option.
Marlborough Lines	Minimal cost savings from replacing a 3-wire system with a 2-wire system would not be justified in terms of inconvenience caused to consumers who require 3-phase supply. Replacement with SWER is generally not an option because of capacity constraints imposed by NZ Electrical Code of Practice for SWER systems (NZECP 41:1993), which limits current in a SWER circuit to 8 amps.  Majority of consumers would rather have ability to 'flick the switch' than be bothered with the possible inconvenience associated with alternative supplies.
Network Tasman	High cross subsidies, reliability and simplicity of lines based services remove serious/useful incentives to adopt alternative supply methods for existing consumers.
Top Energy	Not the case that lines over-built in Top Energy's network. 18% SWER, built cheaply with result that many now require replacement.  Cost an inconvenience of alternatives means unlikely to get traction. Until cost reduces this is unlikely to change. Most likely driver for cost reduction will be international market, rather than NZ.
Orion	Very limited scope.
Collective submission - 18 lines companies	Although alternatives exist, these are currently not as economic as existing reticulated electricity for a similar standard of service. Costs of replacing 3-phase power with single phase do not result in material cost savings as only a minimal component of cost is associated with the conductor. For many consumers replacing 3 phase with single phase not acceptable.
Top Energy Consumer Trust	Alternative supply unlikely to get significant traction in the foreseeable future. Cost and operational inconvenience to users means few interested. Until cost reduces, this is unlikely to change. Most likely driver for cost reduction will be international market.
Electricity Networks Association	Not aware of any instances where lines companies have been able to delegate maintenance of remote lines to local co-operatives or where quality of lines to rural communities have been reduced as a way of reducing the

	cost of remote lines.
Electricity Networks Association	S62 obligation creates an artificial price for lines services to uneconomic customers, making it difficult to prove the economics of line supply to remote rural areas. ENA considers that this issue needs to be considered further.
Vector	<p>Potential is already significant, given substantial costs of reticulation to some users. This potential will increase over time as alternatives improve and costs reduce. Investigating a number of technologies including wind.</p> <p>In many cases substitution of single phase for 3-phase not technically possible, would be evaluated on case by case basis.</p> <p>A better approach is to enable lines companies (or whoever else has obligation to supply rural consumers) to adopt a flexible approach which enables 'tailor made' solutions.</p>
Powerco	<p>While there are other supply technologies, s62 creates an artificial price for line services to uneconomic customers, making it difficult to prove economics of line supply to remote rural areas.</p> <p>Each of the different alternative supply methods has its own niche. SWER becomes an economic form of supply in remote areas with low customer density when the length of SWER reticulation becomes greater than around 5km. However with SWER there is limited ability for consumers to have three phase supply and the line is less visible from the air resulting in different risk profile for aircraft. Given that remote supplies are now being debated, it might be timely to review whether the 8 Ampere limit for SWER is still necessary or whether this limit can be increased.</p>
Network Waitaki	<p>NWL's network already comprises 30% single phase line construction in terms of system length. Service levels are already constrained by configuration (lack of interconnection) and low capacity. The cost of supply to remote areas is optimised in terms of least cost traditional line construction methods.</p> <p>To get more optimal supply arrangements will require a shift in the function of network i.e. distributed generation, alternative and diverse energy sources within consumer's installations.</p>
Marlborough District Council	Any drop in service should be accompanied by a drop in price; should be no drop in service for maintenance of emergency services.
Southland DC	Opposes any moves to downgrade 3-phase rural supply.
<b>d) To what extent should there be a subsidy from other network users to those in remote, rural areas? (E.g. domestic urban consumers to domestic rural, remote consumers).</b>	
Power Systems	Discussion raises that directly affected or those who contribute feel this to be a fair option, but someone has to

	pay.
Richard Leckinger	Least cost option that maintains current level of access and reliability.
National Institute of Water and Atmospheric Research (NIWA)	Mature economic players should expect to be exposed to a full market forces, but likely that there are other socio-economic drivers.
Sustainable Energy Association NZ	A state responsibility exists to maintain access to the grid; differential 2:1 would not be unreasonable.
New Zealand Police	For domestic and small business users the subsidy should stay as it is. There is a significant public good in having good communications throughout the country removal of a subsidy to achieve pure economic outcomes would be nonsensical
Ontrack	For domestic and small business users the subsidy should stay as it is. There is a significant public good in having good communications throughout the country removal of a subsidy to achieve pure economic outcomes would be nonsensical
TelstraClear	For domestic and small business users the subsidy should stay as it is. There is a significant public good in having good communications throughout the country removal of a subsidy to achieve pure economic outcomes would be nonsensical.
JDA & Associates	For domestic and small business users the subsidy should stay as it is. There is a significant public good in having good communications throughout the country removal of a subsidy to achieve pure economic outcomes would be nonsensical.
Vodafone	For domestic and small business users the subsidy should stay as it is. There is a significant public good in having good communications throughout the country removal of a subsidy to achieve pure economic outcomes would be nonsensical.
Scanpower	Subsidy from urban to rural is almost inevitable due to complexity of user pays pricing, but also appropriate under current legislation.
Marlborough Lines	Have seldom had consumers express concern at current level of subsidy. Whether this is result of acceptance or ignorance of the situation is difficult to say. However, should lines prices increase significantly to meet future renewal/replacement costs, consumers will become more concerned with the level of cross-subsidy.
Network Tasman	Cross subsidy level will vary depending on network segment and customer mix. Ideally all segments should be priced to a level where they recover cash costs and preferably depreciation. Cannot be done with existing low user and GPS requirements.
Top Energy	Many consumers in Far North are residential consumers, in some cases supported by Government benefits that do not have the means to pay the much higher costs removal of subsidy would result in. Without alternative

	arrangements, cross-subsidies are the only way many consumers at the ends of the supply system can continue to have safe and efficient energy available to them.
Orion	For economic efficiency, no cross-subsidies, however there will inevitably be some. This is limited for new connections by way of a capital contribution if necessary. A similar solution for rural customers when line replacement is required could be effective. This would also enable economically-efficiency comparisons between alternative forms of supply.
Collective submission - 18 lines companies	This is partly a community judgement which already exists in tariff structures. Also endorsed in GPS. Generally, impact of cross subsidy is immaterial. For many ELBs provision of remote rural infrastructure supports farming sector, which in turn supports wider community. Where households in remote areas are characterised by low standards of living supported in part by central government welfare payments, financial contribution to community low, and cross-subsidy high. There appears to be role for central government in maintaining minimum standards, and through welfare system supporting low income households in meeting costs of supply, in order for ELBs to maintain an acceptable level of cross-subsidy.
Top Energy Consumer Trust	Many of those affected by a proposal to remove subsidies will be residential consumers, in some cases supported by Government benefits. These consumers simply do not have the means to pay the much higher costs removal of cross-subsidy would result in.
Electricity Networks Association	Government needs to consider this question in consultation with all stakeholders. From the lines companies' perspective, an issue is whether the cross-subsidy would be permitted under part 4A of the Commerce Act.
Vector	Does not support continuation of cross-subsidy in current form. Ensuring continuity of electricity supply at an affordable level should be delivered in a manner that ensures competition is promoted in alternate supplies for uneconomic customers and the competitive position of incumbents competing for new subdivisions in their urban areas is not artificially hampered by an internal cross-subsidy requirement.
Vector	Subsidy design should be based on some set of 'reasonable' services with customers able to make contributions above a relatively fixed subsidy level to receive a superior type of service, including supply through power lines if that is their preference.
Powerco	Any subsidy should be transparent and explicit. Powerco's preference is for a national levy. Cross subsidisation and regulatory pressures (e.g. CPI-X) result in some instances where the financial costs of supplying consumers are greater than the revenues they generate. This does not mean that these consumers are uneconomic to supply because the economics of supply is based on the alternatives for supply, which is a consumer is economic to supply with line function services as long as the cost of the alternative form of supply is more costly.
Network Waitaki	Average costing is appropriate for domestic consumers so long as this definition is restricted to the consumer's single principle place of residence. There does not appear to be any desire expressed by NWL's consumer base

	<p>to see differential pricing between urban and rural consumers. Oamaru is a rural service town.</p> <p>Line charges for non-domestic supplies should relate to assets and capacity involved and not energy volumes i.e. a 5kVA woolshed connection should generate the same revenue as a 5kVA workshop connection in town with the cost of providing that capacity is average costed.</p> <p>A small portion of the NWL's business consumer load group would prefer to see cross-subsidy between domestic and non-domestic eliminated and average costing reduced to load group level averaging. This comes mainly from businesses competing in non-local markets. These consumers are a minority voice in the Consumer Trust that owns NWL.</p> <p>The current argument for energy volume pricing is that variable consumption based pricing encourages lower consumption. However for an under utilised installation like a woolshed, consumption can be lower than the standing losses on the transformer i.e. the installation is a very inefficient load and the cost of this inefficiency is paid for by other consumers.</p> <p>Pricing principles, objectives and methodology have to be defined before a subsidy and its appropriateness can be assessed.</p>
Marlborough District Council	Subsidy should stay as it is; many urban consumers, few rural.
<b>e) If the continuance of supply is by lines or alternatives, should lines companies be able to cross-subsidise alternative-supply customers from lines-connected customers?</b>	
Power Systems	Yes, subsidy should be available to some extent to all electricity consumers who want to provide their own sustainable and renewable electric energy.
Richard Leckinger	Yes, but only as the least cost option. This should not be about subsidizing alternatives just for the sake of it.
National Institute of Water and Atmospheric Research (NIWA)	If cross-subsidy does not apply to alternative-supply then this negates assumed objective of this policy.
Sustainable Energy Association NZ	Yes, but not in favour of this option unless the customer can freely disconnect from the network or not.
New Zealand Police	Yes, would enable lines companies to prompt the market for alternative. Lines companies could negotiate a one-off payment to users for using alternatives to continue without lines company involvement.
Ontrack	Yes, would enable lines companies to prompt the market for alternative. Lines companies could negotiate a one-off payment to users for using alternatives to continue without lines company involvement.
New Zealand Police	Yes, would enable lines companies to prompt the market for alternative. Lines companies could negotiate a one-

	off payment to users for using alternatives to continue without lines company involvement.
Ontrack	Yes, would enable lines companies to prompt the market for alternative. Lines companies could negotiate a one-off payment to users for using alternatives to continue without lines company involvement.
TelstraClear	Yes, would enable lines companies to prompt the market for alternative. Lines companies could negotiate a one-off payment to users for using alternatives to continue without lines company involvement.
JDA & Associates	Yes, would enable lines companies to prompt the market for alternative. Lines companies could negotiate a one-off payment to users for using alternatives to continue without lines company involvement.
Vodafone	Yes, would enable lines companies to prompt the market for alternative. Lines companies could negotiate a one-off payment to users for using alternatives to continue without lines company involvement.
Environment Bay of Plenty	In the renewable/alternative supply context, capital subsidy from rural to urban in terms of land use and resource harvesting. Alternative resource likely to free up supply. Public good in supporting energy supply to uneconomic areas. Cross-subsidising alternative supply seems reasonable.
Rural Women of NZ	An appropriate subsidy should be provided for alternative supply to recognise the contribution of the rural sector to present and future urban demands.  Lines companies should be regulated to provide financial contributions and advice for the development of alternative supply in recognition of the benefit it provides them.
Scanpower	If customers or small communities are supplied by alternative methods in the future, Scanpower acknowledges it may be possible to calculate more accurate customer charges, and for reasons of flexibility would prefer such an option remain open.
Marlborough Lines	Costs should be responsibility of consumer, with no contribution from lines company.
Network Tasman	Will create additional anomalies and misallocation of resources. Better to adopt cost reflective pricing in the first instance.
Top Energy	For the same reasons, this would have to be the case. Introduction of ability to allow lines businesses to determine how energy requirements should be met is a sensible position. There should be no restriction on how lines company achieves this outcome; minimisation of cost should always be part of any solution.
Orion	Any alternative should be able to be supplied via a competitive market. Any customer can choose to have some/all supply from alternatives and would not expect a contribution from the lines company. If a lines company was obliged to maintain supply and not able to achieve a commercial rate of return, then some form of subsidy would be required.
Collective submission - 18 lines companies	Should be no requirement for ELBs to supply by alternatives unless they choose to do so. Expected would do so for commercial reasons, and therefore should be no incentive to cross subsidise alternative supplies to a greater extent than existing cross-subsidies, or supply on a basis different to the existing standard terms and

	conditions.
Top Energy Consumer Trust	This would have to be the case for reasons outlined in c above.
Electricity Networks Association	It is not possible to meet the section 62 obligation of supply without seeking cross-subsidies form urban consumers.
Vector	Does not support subsidisation by other customers without suitable mechanisms being employed to protect from unfair competition in incumbent urban networks.
Powerco	Yes – central levy.
Network Waitaki	Lines only provide part of the supply. If consumers paying for line function services are expected to subsidise alternative supplies what contribution will also come from retailers and will the consumers who have alternative supplies be expected to contribute to other average costed parts of the supply like transmission. One of the principles of the industry reforms has been to minimise the monopoly elements and eliminate transfer payments between sectors. Average costing and non-commercial provision of social services does not fit the reforms.
<b>f) What terms and conditions for continuance of supply do consumers that were connected after 1993 have in their contracts?</b>	
Sustainable Energy Association NZ	No comment.
New Zealand Police	Unclear for consumers, retail contracts are vague. Only area about continuance of supply is the force majeure section.
Ontrack	Unclear for consumers, retail contracts are vague. Only area about continuance of supply is the force majeure section.
TelstraClear	Unclear for consumers, retail contracts are vague. Only area about continuance of supply is the force majeure section.
JDA & Associates	Unclear for consumers, retail contracts are vague. Only area about continuance of supply is the force majeure section.
Vodafone	Unclear for consumers, retail contracts are vague. Only area about continuance of supply is the force majeure section.
Scanpower	Scanpower's terms and conditions are silent on this matter.
Marlborough Lines	Use of system agreement is silent on question of continuance of supply to consumers. Understands most retailer contracts are silent in this regard and notes MUoSA promulgated by EC also appears silent in this regard.
Network Tasman	Additional customers connected in uneconomic areas since 1993 are entitled to be treated ostensibly on same

	terms as those connected pre-1993. At no stage have these new consumers entered supply contracts with specific termination dates, so they hold reasonable expectations their supply will remain intact beyond 2013.
Top Energy	No special provisions for customers connected after 1993.
Orion	<p>Removing S62 obligation just puts customers connected before 1993 in equivalent position to those connected after. While the paper expects terms and conditions for continued supply to customers would be part of a contract, we doubt this is provided for explicitly.</p> <p>Our Delivery Service Agreement is silent on the question of continuance to supply to consumers. We understand most retailer contracts with consumers are silent in this regard. Note MUoSA agreement promulgated by EC is also appears to be silent.</p>
Collective submission - 18 lines companies	As far as we are aware there are no specific provisions in standard terms and conditions for continuance of supply.
Top Energy Consumer Trust	Understand there are no special provisions for customers connected after 1993.
Waitaki Power Trust	Not true to say that all connections after 1993 would have been made under a contractual arrangement between lines company and consumers. Recommends that section 62 of the Act be amended to state the purpose of that section to cover all consumers prior and post 1992 to avoid the potential for misinterpretation of sub-clause 2.
Electricity Networks Association	Most lines companies have not entered into specific agreements with new consumers post 1 April 1993. In the absence of such agreements, ENA believes there is no guarantee of continuance of supply or that any lines built after 1 April 1993 are required to be repaired or maintained.
Powerco	Powerco does not specifically provide a guarantee of continuance of supply or that any lines built after 1 April 1993 will be repaired or maintained in perpetuity. Currently Powerco, in an operational sense, does not treat the pre 1993 connections any differently from the post 1993 connections.
Network Waitaki	Consumers do not have a direct contracted position with line companies. Once connected only a retailer can terminate supply. Line companies operate via connection standards procured via retailers. A line company can issue the retailer with a non-compliance notice and if the retailer does not wish to pursue the issue with the consumer they can terminate their contract. The obligation to supply does not apply to retailers yet they are the ones with the contract to supply. Access and tree control are biggest issues. If line companies are to have responsibility for maintaining supply then the consumer should not be permitted to impede them in their duties.
Marlborough District Council	In practice it is likely that consumers do not know that there is no statutory commitment. Retail contracts are vague. Model interposed agreement doesn't talk about possibility of disconnection it just states that all installations that comply to remain connected.

Hurunui DC	Support: essential infrastructure, access to and cost of supply for rural users should be comparable to other users
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**Option C: Continuance of obligation to maintain line function services expires but lines companies provide information on intentions in advance**

**Requirement for lines companies to provide information on intentions and notification if they intend a change in, or removal of, supply to consumers.**

Richard Leckinger	Unacceptable as it marginalizes customers who are ill equipped either financially or technically to deal with organising their own independent supply.
National Institute of Water and Atmospheric Research (NIWA)	Effectively a cut-off with notice
David MacClement	Not good enough.
Genesis Energy	No need for consideration because it makes the GPS statement meaningless
Environment Bay of Plenty	Information to include local demand patterns, time required for a process to take its course, information to allow a remote rural community to develop a local energy outlook. Second preferred option
Far North District Council	No comment, implicitly not supported
Local Government NZ	Not generally supported
Rural Women of NZ	Oppose this option as inadequate and unfair.
Federated Farmers	Oppose this option. Does not address uncertainty.
Eastland Network	Practicability of option is questionable. Economic deliberations will likely cause distributors not to replace lines as soon as repair and maintenance costs are getting too high. Additionally, damage to lines by extreme events cannot be foreseen and in this case it is impossible to provide the necessary information for affected consumers. Although favourable for lines businesses, will create uncertainty for consumers.
Counties Power Consumer Trust	Supports option – only one option which is positive, non-interfering and will have most balanced financial impact on all concerned. A reasonable notice period would enable all concerned to make informed choices, and plan for/negotiate alternative arrangements.
Marlborough Lines	Essential for law to be drafted in such a way that consumers were unable to challenge lines company's decision

	to remove supply at some stage in future. Otherwise costly and time-consuming litigation would result as consumers attempted to force a reversal of the lines company's decision.
Top Energy	Proposal not acceptable. Concerned Ministry assumes informed debate exists; many consumers are individuals in many cases living on government benefits with lower levels of education. This makes suggestions such as forming co-operatives for ownership and maintenance unworkable.
Counties Power	Most sensible solution. Believes option would provide adequate customer (and Government) peace of mind, particularly if lines company required to give five year advance notice period prior to ceasing provision of line services, including post-1993 connections.
Top Energy Consumer Trust	Proposal not acceptable. Majority of those likely to be affected by termination of the obligation will not be in a position to finance alternative energy arrangements. Must be assumed that vast majority of consumers have no understanding of the issue. Suggestions in paragraph 69 impractical and unworkable.
Waitaki Power Trust	Opposes option
Eastern Bay Energy Trust	Does not support
Network Waitaki	Prefers option. Considers 2-5 years notice fair and suggest this be linked with an assessment of the current condition of network assets involved and the opportunity for consumers to assume responsibility for them.
Southland DC	Opposes – rural consumers require more certainty than can be guaranteed under this alternative
Ruapehu District Council	Does not support

### **Option D: Continuance of obligation to maintain line function services expires but lines companies assist transition from lines supply to alternative**

**Requirement for lines companies to assist in management of a transition to alternative provision where they wish to no longer maintain 'uneconomic' lines.**

Te Aroha Kanarahi Trust	Support. Reasons are 1. Remoteness and sparse population means community cannot pay to maintain lines 2. Ownership of the alternative generation – acknowledges that this requires maintenance 3. As NZ becomes more inclined to alternative energy one would see greater capacity in this area.
Richard Leckinger	Unacceptable as it marginalizes customers who are ill-equipped either financially or technically to deal with maintaining their own independent supply. Barriers to understanding system are huge. Fails efficiency test as decisions around where a transition obligation end are left unmade. Fails fairness test as rural users potentially lose their access at reasonable prices. Fail reliability test as consumers not equipped to deal with alternative

	system. Could argue it passes environmental sustainability text but more like to be using small gas fired generation rather than a boom in renewable.
National Institute of Water and Atmospheric Research (NIWA)	Lies between B and C in rank (B being preferred)
David MacClement	Transition will vary with region and company. More work needed. Long enough period so consumers can be convinced of the need to get personally involved in their energy supply.
Genesis Energy	No need for consideration because it makes the GPS statement meaningless
Environment Bay of Plenty	Pilot studies on such arrangement needed. Is \$150,000 case provided by Powerco an extreme case or a representative example? Rank third of the six options.
Far North District Council	No specific comment, implicitly not supported
Local Government NZ	Not generally supported
Rural Women of NZ	Give limited support to this option (subject to issues raised in submission). Lines companies should be required to provide information and assistance (including financial) in advance of any change.
Federated Farmers	If obligation to supply ends, then this is preferred option (subject to further work on transition issues).
Eastland Network	Do not support. Potentially imposes increased costs on lines companies as obliged to manage transition to alternative supplies. As it is not clarified who is responsible after transition period, creates uncertainty for consumers and lines businesses.
Marlborough Lines	See comments on option C
Top Energy	See comment on option C
Top Energy Consumer Trust	See comment on option C
Waitaki Power Trust	Opposes option
Eastern Bay Energy Trust	Does not support
Southland DC	Cautious – support in principle, but prospect of rural consumers being even more disadvantaged by high electricity costs
Ruaphehu DC	Should be considered if supply is safe, affordable and reliable no matter where one lives; consumers fully informed within adequate timeframes; could be a burden just to maintain one form of supply.

## Option C and D Questions

### a) If an advance notice period is used, what length of time should it be?

Power Systems	Notice period 3-5 years, long enough for consumers to facilitate the necessary funds and arm themselves with the required ability and knowledge to utilities and maximise (alternative) solutions to the fullest.
National Institute of Water and Atmospheric Research (NIWA)	Period should be linked to consumer consent, rather than a time-frame. A time –frame gives no incentive on lines companies to ensure that the consumer is fully aware of and familiar with the pros and cons of the alternatives.
New Zealand Police	Long enough for practical and cost-effective options to be developed. Risk is that development of a site could become marginal and lines removed before reaching replacement age.
Ontrack	Long enough for practical and cost-effective options to be developed. Risk is that development of a site could become marginal and lines removed before reaching replacement age.
TelstraClear	Long enough for practical and cost-effective options to be developed. Risk is that development of a site could become marginal and lines removed before reaching replacement age.
JDA & Associates	Long enough for practical and cost-effective options to be developed. Risk is that development of a site could become marginal and lines removed before reaching replacement age.
Vodafone	Long enough for practical and cost-effective options to be developed. Risk is that development of a site could become marginal and lines removed before reaching replacement age.
Environment Bay of Plenty	Time for notification should match lead time for alternative supply investment
Rural Women of NZ	15 years for Option C, 10 years for Option D
Winston Oliver	5 years
Counties Power Consumer Trust	5 years
Marlborough Lines	If option were adopted, between 2 and 4 years.
Network Tasman	Advance notice must be given, should be at least 3 years.
Orion	3 year notice period appropriate
Collective submission - 18 lines companies	Do not support advance notice option, but two years notice is sufficient. Should either of these options be considered they should provide for negotiated outcomes between the ELB and remote consumers as these may be in the best economic interest of both the ELB and consumer.
Electricity Networks Association	Lines companies would not immediately discontinue supply to 'uneconomic lines' when section 62 expired in 2013. However, if substantial repair/maintenance was needed, particularly after damage as a result of natural

	disaster, supply could be discontinued once the costs of repair and maintenance of the lines had been established as 'uneconomic'. Accordingly, it would be difficult to establish an advance notice for discontinuance of supply.
Vector	<p>Notice requirements should relate to reason for decommissioning the lines. Timeframe should be established through a stakeholder working group so perspective of all stakeholders can be reasonable accommodated in a clear transition process. Clear transition plan made available to uneconomic consumers setting out dates at which services will be discontinued and providing sufficient notice to enable alternatives to be established.</p> <p>Where permanent decommissioning is accelerated due to a storm event or other force majeure, notice should not be required. Rather, steps should be taken to ensure that consumers are provided with temporary alternative energy supplies, if and when this occurs, pending installation of a permanent solution.</p>
Powerco	Two years subject to particular circumstances such as if a significant event necessitates substantial repairs.
Network Waitaki	A 5 year notice period would align with network inspection cycles. This would reduce deferral of rebuilds required after storms as at least a 5 year service life will be needed.
Marlborough DC	Don't consider that a sensible timeframe can be put on it
<b>b) What other requirements could or should be placed on lines companies if continuance of supply expires?</b>	
Power Systems	Responsible for assistance either financially or otherwise for the distribution of literature to assist consumers
National Institute of Water and Atmospheric Research (NIWA)	Storms etc should not be a reason for discontinuing supply.
New Zealand Police	Up to date register of how much each ICP is being subsidised. Clear policy on what uneconomic is so a customer can ascertain it and what plans were for such sites.
Ontrack	Up to date register of how much each ICP is being subsidised. Clear policy on what uneconomic is so a customer can ascertain it and what plans were for such sites.
TelstraClear	Up to date register of how much each ICP is being subsidised. Clear policy on what uneconomic is so a customer can ascertain it and what plans were for such sites.
JDA & Associates	Up to date register of how much each ICP is being subsidised. Clear policy on what uneconomic is so a customer can ascertain it and what plans were for such sites.
Vodafone	Up to date register of how much each ICP is being subsidised. Clear policy on what uneconomic is so a customer can ascertain it and what plans were for such sites.
Environment Bay of	Case by case basis, with agreement.

Plenty	
Winston Oliver	Lines companies should have to consult with consumers on uneconomic lines.
Counties Power Consumer Trust	Counties Power will be requested to include in its statement of corporate intent that it will advise affected consumers of the rationale behind any intention to cease supply.
Marlborough Lines	Lines company should not be required to assist in transition to alternatives. The consumer will have had at least two years to make alternative arrangements.
Network Tasman	Only reasonable role for distributors would be providing some form of pre-installation fitness for purpose review of proposed alternative systems.
Orion	<p>No case for requirements other than notice period. However consider it necessary to:</p> <ul style="list-style-type: none"> <li>• Encourage Commerce Commission to allow commercial return on assets employed without expiry. Could be achieved by the Commerce Commission adopting an ODRC system.</li> <li>• Remove s99 of GPS</li> </ul>
Electricity Networks Association	<p>Not sure there would be a need for other obligations to be placed on lines companies. Up to Government and other stakeholder to address alternative supply options, including local generation potential for remote consumers.</p> <p>It is clear greater benefits in energy efficiency can be obtained through passive solar design and energy efficiency than from local supply generation itself. Options in the discussion paper that propose lines companies assist customers in transferring to micro-generation will be difficult to meet as lines companies would not be able to assist customers transfer from existing lines supply services by passive solar design and assisting energy efficiency.</p>
Vector	<p>Given lines business would have information on decommissioning date, would at least have to work closely with alternative supplier to ensure an orderly transition. Beyond that obligation, so long as there is a competitive market for alternatives and appropriate lead times for alternatives to be installed, there need be no other obligations on the lines business.</p> <p>Potentially there could be a role for the distributor as a 'supplier of last resort' which could be used in the event that an alternative supplier was not available or was unwilling to provide service. Distributors would presumably be willing to provide that service so long as they received appropriate financial compensation.</p>
Powerco	These are issues best addressed by consumers and retailers. Powerco would expect that the imposition of additional responsibilities on any organisation (retailers or lines companies) would be compensated for.

Network Waitaki	Provision of condition assessments and maintenance recommendations to ensure the remaining service life is reached. Offering to transfer ownership and/or cost responsibility to a consumer and/or collective of consumers is preferential to physically pulling out assets.
Marlborough DC	Provide an up-to-date register of how much any ICP is being cross-subsidised. Policy to determine is consumer is uneconomic.
<b>c) What role would you expect the retailer to take as the continuance of supply expires and a change in supply is signalled?</b>	
Power Systems	Assist in education process.
New Zealand Police	Would oppose lines companies using retailers to advise their customers. Experience of dealing with line issues through a retailer is not good.
Ontrack	Would oppose lines companies using retailers to advise their customers. Experience of dealing with line issues through a retailer is not good.
TelstraClear	Would oppose lines companies using retailers to advise their customers. Experience of dealing with line issues through a retailer is not good.
JDA & Associates	Would oppose lines companies using retailers to advise their customers. Experience of dealing with line issues through a retailer is not good.
Vodafone	Would oppose lines companies using retailers to advise their customers. Experience of dealing with line issues through a retailer is not good.
Network Tasman	Retailers unlikely to want to become involved unless promoting alternatives. May be able to provide historic load/meter data to help with design of alternative systems.
Orion	Some retailers and distributors would develop to be energy retailers. That is, supplying energy in a non-regulated competitive environment.
Electricity Networks Association	See response to question (b)
Vector	If market for supply of alternatives is made competitive then this would potentially be a new business opportunity for retailers, at their discretion. Their involvement is not necessary beyond their existing responsibilities regarding customer disconnections.
Powerco	See response to question (b)
Network Waitaki	Retailers should have the lead the role in managing a transition from a lines connected supply to an alternative. The alternative is more directly related to their core business, they are resourced to manage a large customer base, and have more capability with respect to giving/access technical advice. Line companies not structured and sized for and have nothing to offer other than line function services.
Marlborough DC	Lines company responsibility. Experience of trying to deal with lines issues via a retailer is not good. Don't

	believe retailers would want any role.
<b>d) At what point after a lines company has assisted a transition should its responsibility cease?</b>	
Power Systems	Once the educational and handshake stage has ceased their responsibilities would cease.
National Institute of Water and Atmospheric Research (NIWA)	Ceases when consumer is satisfied with the performance of the alternative system.
New Zealand Police	Lines companies should have an obligation to supply by lines or alternatives for an extended period of time.
Ontrack	Lines companies should have an obligation to supply by lines or alternatives for an extended period of time.
TelstraClear	Lines companies should have an obligation to supply by lines or alternatives for an extended period of time.
JDA & Associates	Lines companies should have an obligation to supply by lines or alternatives for an extended period of time.
Vodafone	Lines companies should have an obligation to supply by lines or alternatives for an extended period of time.
Marlborough Lines	Rejects suggestion lines company should be responsible for cost of transition. However, if this is imposed, line company responsibility should cease when alternative supply installed and proven to meet agreed capacity requirements.
Network Tasman	Lines companies have specialised expertise in line systems not alternatives. Potential conflicts of interest having lines companies promote alternatives. Private markets best placed to provide alternatives. Lines companies' involvement will potentially crowd out other businesses and allegations of cross-subsidisation are probable.  Lines companies should have a very limited role in transitions and responsibility should cease at end of notice period.
Orion	Do not consider distributor best entity to provide assistance for transitions. However, if necessary, responsibility of lines company should cease when alternative supply has been installed and proven to meet agreed performance requirements.
Collective submission - 18 lines companies	If customer chooses alternative supplied by a party other than ELB, ELB should assist in transitioning to new arrangement, and from the point in time new supply is commission, obligations should cease, unless some form of connection retained.  If ELB maintains responsibility for alternative supply, should be subject to standard commercial terms and conditions, which may differ from conditions for reticulated supply, but should be negotiated with the customer.
Electricity Networks Association	See response to (b) above.

Vector	Does not consider lines company should be responsible for assisting a transition beyond notifying the customer that the relevant lines are to be decommissioned. Given relaxation of restrictions on generation by lines companies, there is a possibility that they may supply (and perhaps lease) equipment used for alternatives, in which case they will obviously continue to have a role in that new capacity.
Powerco	See response to (b) above.
Network Waitaki	Line company involvement automatically ceases as soon as the consumer terminates their contract with their energy retailer.
Marlborough DC	Lines companies should have an obligation to supply for an extended period of time.

### **Option E: Continuance of obligation to maintain supply, using lines or alternatives, for a limited time beyond 2013**

**2013 date in subsection 6 is changed, and section 62 continues until a new expiry date. Lines companies could maintain supply via alternatives or lines.**

Power Systems	Only prolong the final result – make a decision either way.
Richard Leckinger	Postponing the decision is a cop-out. No technological shift is going to appear in the medium to long term that alters the fundamental principles involved.
National Institute of Water and Atmospheric Research (NIWA)	Same as B if not reviewed and acted on in time (context suggests submitter means C)
David MacClement	Best option.
Genesis Energy	No need for consideration because it makes the GPS statement meaningless
Environment Bay of Plenty	Rank fifth of the six options
Far North District Council	No comment, assume not supported
Local Government NZ	Not generally supported
Rural Women of NZ	Oppose this option. Hinders the development of alternatives and contains no requirement for notice or assistance.
Federated Farmers	Oppose this option. Only pushes the problem out and will not address uncertainty.

Eastland Network	Does not favour option – would create further uncertainty if left undecided what happened after transition period, does not create incentives for further investments into network assets and involves incremental costs for distribution companies.
Marlborough Lines	Extending 2013 date does not provide certainty that rural consumers are looking for. While impossible to predict the future, history does not give any comfort that development of alternatives over the next five to ten years will be at a sufficient stage to offer viable alternatives at reasonable cost.
Top Energy	Having concluded it is unacceptable to terminate obligation to maintain supply, any option that defers final determination is unnecessary and inappropriate. Those affected have to live with uncertainty for an extended period.
Top Energy Consumer Trust	Proposal not acceptable. Majority of those likely to be affected by termination of the obligation will not be in a position to finance alternative energy arrangements. A deferral of the final date will change nothing other than to pass the problem to someone else in the future. Those affected will have to live with the uncertainty for an extended period.
Waitaki Power Trust	Recommends option eliminated from serious consideration – would simply delay decisions on extremely important matters which need to be made as soon as possible. Not in best interest to create a situation where lines companies cease to plan ahead for maintenance work that needed to be done if a particular line was tagged for decommissioning beyond a certain date.
Eastern Bay Energy Trust	Does not support
Southland DC	Opposes
Ruapehu DC	Does not support

## Option E Questions

### a) Should the transition period be extended?

Power Systems	Extension not justifiable.
National Institute of Water and Atmospheric Research (NIWA)	Without clear direction and direct action, extending period only pushes the issue forward.
New Zealand Police	Yes until there are suitable alternatives to lines. Would need another scheme to encourage alternatives.
Ontrack	Yes until there are suitable alternatives to lines. Would need another scheme to encourage alternatives.

TelstraClear	Yes until there are suitable alternatives to lines. Would need another scheme to encourage alternatives.
JDA & Associates	Yes until there are suitable alternatives to lines. Would need another scheme to encourage alternatives.
Vodafone	Yes until there are suitable alternatives to lines. Would need another scheme to encourage alternatives.
Environment Bay of Plenty	Changing expiry date might not have any significant meaning in terms of reducing the negative impact of discontinuing electricity supply.
Marlborough Lines	Do not believe anything gained by extension of transition
Network Tasman	Extending transition raises same issues as outlined in options A and B but potentially obviates need for periodic review if extension is reasonably short.
Orion	Do not believe anything is gained from extension.
Collective submission - 18 lines companies	Not supported – simply delays decision.
Electricity Networks Association	ENA considers the discussion paper has not established a case to extend section 62. Instead, ENA considers that the review needs to be continued and consider all the matters set out in the ToR and the other relevant issues raised in our submission.
Vector	2013 date should not be extended. Technologies already exist which can be cost-effectively used to substitute for line supplies.
Powerco	No - an extension is simply deferring the decision. Alternative technologies are already available and economic when considering the full costs of replacing lines. There is sufficient time between now and 2013 to address any transitional issues that may exist.
Network Waitaki	No extension to the transition period is needed. There has already been a 20 year period to prepare. Line assets have a half life of 22 years so the industry should already be in a steady state of replacing supplies installed by RERC subsidy. There is no reason to believe the status quo will change in 2013.
Marlborough DC	Extend until there are suitable alternatives to lines
<b>b) If so, how long should it be extended for and what should happen at the end of the period?</b>	
Vodafone	20 years, if no change in time then extend period again.
Environment Bay of Plenty	Extension required in absence of co-ordinated progressive approach. Australia has a scheme 'Renewable remote Power Generation Programme'
Network Tasman	Maximum of 7 years to 2020. Either obligation would cease at terminal date or further review would be required to determine the way forward given environment at the time.
Electricity Networks Association	If ENA's submission is not accepted and the outcome of the review is that the section 62 obligation should be extended, then it should be extended only on the basis of another limited time period and on the following

	<p>conditions:</p> <ul style="list-style-type: none"> <li>• A statutory guarantee that any necessary cross-subsidies from urban to rural will not be disallowed (or invoke sanctions from) the Commerce Commission or any regulatory authority</li> <li>• A fairer formula is used for determining the asset value of uneconomic lines</li> <li>• A tidying up of access rights for servicing lines</li> <li>• Grandfathering of lines existing at 1 April 1993 to avoid a proliferation of challenges as to whether these lines were lawfully installed.</li> </ul>
Network Waitaki	Extension could be made until the guarantee period of any RERC subsidy had expired. This would ensure that full payback has been achieved and the subsidised supply has the same economic status as any other supply.
Marlborough DC	20 years provided that systems are in place to allow lines companies to assist customers into alternatives

### **Option F: Continuance of supply, using lines or alternatives, with no expiry date but subsidy is from all electricity users**

**The subsidy required to maintain connections on uneconomic lines is recovered from all electricity users.**

Power Systems	Subsidising the cost across all taxpayers may offer a smaller over-all increase.
CN and VCW Thornley	Support this option. Price of alternatives similar to that of grid connected consumers.
National Institute of Water and Atmospheric Research (NIWA)	Spreading of subsidy burden over all grid-connected consumers instead of those in line area appears 'fair'. Most favourable option.
David MacClement	Remote consumers should not be left without any pressure to change their energy supply should take responsibility for own choices and the unfairness of being little benefit to public supplying large subsidies.
Sustainable Energy Association NZ	Supports, with extension that a line charge subsidy or remote energy supply payment directly to the consumer who could decide how to use it.
Major Electricity Users Group	This should not be further considered. Subsidies are appropriate where an identifiable market failure needs fixing and there are no other lower cost options available. The policy issue with s62 is not about market failure, it's about equity.
Mighty River Power	Oppose. Substantial costs in administering the scheme. At present, subsidies are internalised in each electricity

	lines business area.
Genesis Energy	Option F provides only weak incentives for lines companies to find the least cost means of continued supply to remote consumers. The worst of all solutions, of most consequence to networks with little or no rural customers. Would remove accountability for the costs of maintaining the pre-1993 rural connections, and add administration costs to each company.
Far North District Council	Supported
Local Government NZ	Supported
Rural Women of NZ	Oppose this option. Hinders the development of alternatives, contains no requirement for notice or assistance and opposed to unnecessary government spending.
Federated Farmers	This option should be further considered. Would mean the cost are spread over a larger base of consumers and would be a useful way to implement option A or B.
Winston Oliver	Support this option. Socialised costs are a fact of life in NZ.
Eastland Network	Option would entail significant costs for Government in setting up, consumers who may be exposed to increased charges, lines companies with extra administrative requirements while maintaining supply responsibility. Introduction of another regulatory scheme would likely imply an extra burden which especially smaller lines businesses might find hard to carry.
Marlborough Lines	Option would entail establishment of a further quasi-government organisation such as the previous RERC. Costs of that organisation would inevitably be passed on to electricity consumers. Also concerns regarding methodology that would need to be devised to establish need for and quantum of subsidies. Concerned that administrative costs involved would make this option unattractive.
Top Energy	Social disruption from allowing the section to end is clearly untenable. This being the case the cost of continuing to supply uneconomic connections must fall on the whole community either via government support or an industry levy.
Counties Power	Do not support.
Top Energy Consumer Trust	Connection between original requirement to build uneconomic lines (funded by RERC) to the continued existence of those lines which require ongoing maintenance and will, in due course, require rebuilding. Therefore operation and rebuilding of these assets should be funded in the same way that the original assets were funded.
Waitaki Power Trust	Recommends option eliminated from serious consideration. RERC scheme provided subsidy toward capital costs of providing reticulation asset. It would be an extremely different subsidy to provide ongoing subsidies, and that must be avoided at all costs. Additional administrative time and expense high.
Eastern Bay Energy	Does not support

Trust	
Contact Energy	Strongly disagrees, as bureaucratic and compliance costs associated with a levy likely to far outweigh any benefit. Parallel with TSO levy on telecommunications companies. Commerce Commission has expended a significant amount of resources and taken considerable time to administer the TSO. Contact is of the view this should not take place in the electricity industry.
Environment Waikato	Option F given the highest ranking – achieve subsidy by extension of levy administered by EC.
Marlborough DC	A central bureaucracy to administer the cost per ICP would be unwieldy and expensive; the extent of the problem needs to be discovered first.
Southland DC	Support
Ruapehu DC	Preferred option

### Option F Questions

#### a) What issues are there with creating and employing a different subsidy mechanism in order to socialise the costs across all electricity users?

New Zealand Police	Need to know what uneconomic means and exactly how much each site is being subsidised by.
Ontrack	Need to know what uneconomic means and exactly how much each site is being subsidised by.
TelstraClear	Need to know what uneconomic means and exactly how much each site is being subsidised by.
JDA & Associates	Need to know what uneconomic means and exactly how much each site is being subsidised by.
Vodafone	Need to know what uneconomic means and exactly how much each site is being subsidised by.
Rural Women of NZ	Likely that consumers receiving heavily subsidised electricity would lose control over the type and quality of their service.
Marlborough Lines	Costs and complexities would be an economically inefficient way of dealing with the current problem. Costs and potential problems would outweigh benefits.
Top Energy	<p>3 possible approaches to this solution:</p> <ul style="list-style-type: none"> <li>• Allowing introduction of geographically based tariffs, so all consumers pay an amount that provides an economic return to the lines business. Practical implementation is fraught with equity difficulties. A regime would require a transfer payment to consumer to allow them to pay higher prices. Most likely mechanism would be through social welfare system.</li> <li>• Maintenance of single tariffs to consumer with an uneconomic ‘top up’ paid to the lines business. This could</li> </ul>

	<p>be made by government via cash payments, tax concessions or other payment systems.</p> <ul style="list-style-type: none"> <li>• Maintenance of single tariffs to consumers with an uneconomic 'top up' paid to the lines business. This payment could be from an industry operated pool of funds, similar to the RERC programme.</li> </ul> <p>In options 2 and 3, method of supply should be the option of the lines company. This would then start developing the market for alternative supplies.</p>
Orion	<p>Costs and complexities mean this would be an economically inefficient way of dealing with the current problem. Cost and potential problems would far outweigh benefits.</p>
Collective submission - 18 lines companies	<p>Different scenarios across the country complicate reaching one size fits all solution. There appears to be a role for central government in maintaining minimum living standards in remote rural areas, and through the welfare system, supporting low income households in meeting the costs of their supply. This will enable ELBs to maintain a level of cross-subsidy which is acceptable to the local community and avoids the need for an industry-wide subsidy, which in our view could become administratively complex and contradict solutions already implemented and supported by local communities.</p>
Top Energy Consumer Trust	<p>Acknowledged that there will be increased costs to lines businesses and the industry as a regime is developed to manage this scenario. However, the ODV valuation methodology and other information gathering and disclosure requirements imposed by the Commerce Commission under their various programmes mean that much of the data will already be available.</p>
Electricity Networks Association	<p>ENA notes any benefits of section 62 are shared by energy suppliers but the lines companies bear the financial risk and the direct costs since the separation of lines and retail businesses under EIRA.</p> <p>Proposed option is somewhat like the re-creation of the old RERC. Arguably the RERC regime contributed significantly to the problem by providing a larger pool for bigger subsidies to remote consumers – which excluded associated costs to maintain.</p> <p>ENA considers a similar levy concept will distort the economics of line supply and remove incentives to include alternatives even though it might help to provide better returns for rural lines companies. However, if the threshold regulatory regime remains in place, a mix of alternatives should be further considered to deal with the effects of any continuation of section 62.</p>
Vector	<p>A more centralised subsidy funding mechanism (using either a levy or tax funded subsidies) would better meet the objectives for ensuring competition in both alternatives and new subdivisions without creating other distortions or administrative costs (e.g. Universal Service obligations, or exclusive franchise areas) It would also minimise complexity of the part 4A regime in dealing with how alternatives should be treated, when they are</p>

	effectively performing the role of distribution assets.  Would involve new administration costs, so important to establish the order magnitude of the likely overall subsidies to be paid, in determining the cost effectiveness of this option.
Powerco	<ul style="list-style-type: none"> <li>• Transaction costs in designing, collecting and distributing a levy.</li> <li>• Potential increase in average electricity/energy costs.</li> </ul>
Network Waitaki	The issues with subsidised supply are that the users of Line Function Services are subsidising the entire alternative supply. Subsidies are artificially based on energy volumes not the cost of the services being provided. There is not a prescribed and consistent pricing methodology that is based on policies and objectives.
Meridian	Insufficient information about the potential level of the existing subsidy to rural electricity consumers on which to comment on the proposed levy. If a levy was introduced we submit that the treatment of these lines in the threshold regime would have to be amended. A levy regime would also be a markedly different and transparent treatment of pre-1993 lines compared with lines installed since 1993.

## Other Options

### Any additional options suggested.

National Institute of Water and Atmosphere (NIWA)	Continuation of energy services with a subsidy, where consumer consent is required prior to lines alternatives being developed and introduced. Propose that the subsidy be operated under an open tender system by the EC.
Marlborough Lines	<p>Option B, but with addition of the right for lines companies to require contributions from consumers connected to a line to meet the cost of any significant renewal or replacement of the assets as they reach the end of their useful life.</p> <p>If consumers elect to take supply by alternative means rather than meeting contribution required by lines company, they would accept responsibility for provision and ongoing maintenance of alternatives.</p> <p>Safeguards should be built in e.g. consumers not asked to contribute more than once in any e.g. 20 year period, rules developed for type of work that lines companies could seek contribution for.</p>

	To protect lines company interests, lines companies would have the right to disconnect consumers who failed to respond, or who, after agreeing to meet the levy, then failed to make payment in a timely manner. Also, in the event a material number of consumers on a line elect to install alternatives, such that renewal/replacement was not viable, the lines company could on giving reasonable notice, advise all consumers that line function services would no longer be available.
The Lines Company	<p>Policy is established for the nation to fund supply to remote areas, where in the national interest.</p> <p>Working party be established to work through details of policy and review legislation and regulation concerning remote supply to ensure is consistent with policy.</p>
Orion	<p>Doesn't advocate particular option - If Government proceeds with an option that requires lines companies to maintain supply should:</p> <ul style="list-style-type: none"> <li>• Provide for this to be maintained by line or alternatives.</li> <li>• If via a line, make provision for lines companies to require capital contribution where renew/rebuild needed.</li> <li>• Encourage Commerce Commission to allow commercial return on assets employed without expiry.</li> <li>• Remove S99 of GPS.</li> </ul> <p>If proceeding with an option that removes obligation to supply:</p> <ul style="list-style-type: none"> <li>• Provide certainty with reasonable notice period (e.g. 3 years).</li> <li>• See bullets 2-4 above.</li> </ul>
Collective submission - 18 lines companies	<p>Preferred option similar, but not same as option B:</p> <ul style="list-style-type: none"> <li>• Should consumer wish to change to alternative, ELB must assist with transition but under no obligation to provide alternative supply option.</li> <li>• ELBs must have fair and reasonable access to lines located on private property.</li> <li>• ELBs able to recover costs of supply from all consumers in a manner consistent with published pricing methodologies which must be compliant with relevant legislation. (E.g. could seek capital contributions, or differentiate prices to different consumer groups).</li> </ul>
Electricity Networks Association	Of concern to ENA is that the review does not appear to have considered whether or not the obligation under section 62 should be allowed to expire in 2013 in accordance with the current intent and wording of the Act,

	without imposing other statutory obligations.
Electricity Networks Association	<p>If outcome of working group review is that S62 obligation should be extended, ENA believes it is crucial it is only extended for a limited time period, and that problems with implementation are addressed. In particular:</p> <ul style="list-style-type: none"> <li>• A statutory guarantee that any necessary cross-subsidies from urban to rural will not be disallowed (or invoke sanctions from) the Commerce Commission or any regulatory authority.</li> <li>• A fairer formula is used for determining the asset value of uneconomic lines.</li> <li>• A tidying up of access rights for servicing lines.</li> <li>• Grandfathering of lines existing at 1 April 1993 to avoid a proliferation of challenges as to whether these lines were lawfully installed.</li> </ul>
Powerco	<p>The introduction of new technologies requires at least a level playing field for all forms of investment. If one accepts there are social equity issues in ensuring the electricity needs of remote communities are met, a solution needs to be found which supports the delivery of a sustainable low emissions energy future through integrated Energy solutions using new technology and meets energy needs in an affordable manner.</p> <p>In Powerco's view this is most likely to be achieved through a managed transition to a market environment and would ideally involve:</p> <ul style="list-style-type: none"> <li>• Redefining the service obligation to refer to the delivery of energy services for all consumers with no reference to the means of delivery or a legacy class of consumers.</li> <li>• Applying a regulated national subsidy reflecting the social benefits of affordable energy solutions for all. Such a subsidy would be administered by a neutral body (not the lines business to avoid potential conflict of interest if the lines business was a merchant investor in such energy solutions).</li> <li>• Establishing the incumbent lines business as the monopoly investor of last resort where the available subsidy is insufficient to discover market solutions. This role would be subject to different regulation from the Commerce Act given that it would not necessarily be met through lines.</li> </ul>
Meridian	<p>Whatever changes are made, submits rural consumers must be engaged in discussions regarding the level of service or reliability they would receive or be prepared to pay for.</p> <p>In addition, decisions from the review must be notified to rural consumers and Meridian suggests at least 3 years notice be provided of any change to arrangements for LFS supply. We submit that this notification should be annual from 2009 to minimise the risk of consumers not being informed of changes.</p>
Tararua District	Supply continues beyond 2013, lines or alternatives, no expiry data; cross subsidisation has central element;

Council	incentives provided to encourage a change to alternatives; local solutions for local problems.
Genesis Energy	Better solution lies in-between options c, d and e (removing the obligation to supply that is economically sound) and encouraging the consideration of a, b and f (which deliver on the policy outcome). Option features 1. let full cost flow through to rural consumers 2. transition period for this to occur 3. Development of a targeted affordability safety-net once the full price of access is transparent. Extend obligation but allow for lines companies to adjust up the price; this would facilitate the entry of alternative suppliers. The choice for Government is whether or not it considers the benefits to be gained from the encouragement of investment and the better utilisation of resources outweighs the possible detriments associated with affordability. Other policies recognise that cost impacts can be mitigated e.g. emissions trading.

<b>Other Comments</b>	
<b>Other comments on the 2013 review</b>	
National Institute of Water and Atmospheric Research (NIWA)	Points out that there is a section of economically robust receivers of the cross-subsidy, and groups not connected. Paper fails to consider DG growth.
David MacClement	Focus on a small minority of users but steps taken should fit in with a much longer plan to enable the electricity and heat supply to be much more resilient, into a future with more natural disasters and other supply interruptions than we have experienced to date.
Major Electricity Users Group	The obvious option that s62 should stand needs to be considered and is a requirement for the Regulatory Impact Assessment. All options other than F should be further considered.
Department of Building and Housing	Department of Building and Housing has set quality targets for housing “quality targets for heating, hot water, cooking and artificial lighting...must have a safe and functional energy source to operate properly”. Target suggests line supply will be main delivery, but it is clear that any source is acceptable.
Sian Smith	What will happen to those on low-use tariff in an urban street if obligation expires?
Fonterra	Whatever options are progressed from this review, there must not be any compromise to security and reliability of supply. Any reduction of supply for remote rural users will have flow-on impacts for the economy. Information gaps re specific locations and consumers affected is a barrier to more detailed comment an engagement on

	issues. Encourages the Government to consider establishing pilot projects.
New Zealand Police	NZ Police are concerned that the removal of uneconomic lines will affect their ability to deliver the same standard of policing they do at present. Communications services could be degraded.
Ontrack	Ontrack concerned that a removal of uneconomic lines involving the removal of reliable power supplies in remote areas will affect ability to provide safe and economic operation on sections of the national rail network. Needed for railway signalling, level crossing alarm systems and train control repeater sites. Alternative technologies are currently not practicably capable of providing an equivalent reliable supply.
TelstraClear	Civil Defence Emergency Act states ‘the economic vitality of communities and of the nation as a whole depends upon the continued operation of lifeline utilities’. Primary amongst those are telecommunications facilities.
JDA & Associates	Civil Defence Emergency Act states ‘the economic vitality of communities and of the nation as a whole depends upon the continued operation of lifeline utilities’. Primary amongst those are telecommunications facilities.
Vodafone	Civil Defence Emergency Act states ‘the economic vitality of communities and of the nation as a whole depends upon the continued operation of lifeline utilities’. Primary amongst those are telecommunications facilities.
Unison	Review of EIRA needs to take account of both current obligation and any intended extension of obligation.
Unison	Further review and consideration of resulting implications needs to be undertaken before a decision can be made. The formation of a working group by MED for this purpose would provide an appropriate forum.
Marlborough Lines	In event line becomes redundant, consideration should be given to need for removal of that line, and if not removed, any liabilities arising from an incident caused by that line. Cost of removal of a line is significantly higher than the value of any re-usable materials recovered. Discontinuation will result in a need for the lines company to maintain a redundant line to a ‘safe’ standard or meet significant costs to remove that line. This aspect should be taken into account in the review.
Marlborough Lines	If the outcome is that cross-subsidies are to continue or increase over time, there is a case for re-introduction of franchise areas. Otherwise the ‘incumbent’ network will be placed in an impossible position vis-à-vis other potential network owners who are not required to subsidise remote lines in that region.
Marlborough Lines	Following analysis of submissions, the Ministry should seek further input from consumer groups and lines companies prior to finalising any recommendations to the Minister. It may be appropriate for the Ministry to form a working group to further discuss options and alternatives available. We believe there is adequate time to allow such steps given the more than 5 years before the relevant section of the Act comes into force.
Network Tasman	Under ongoing obligation for continuance, it is imperative that periodic reviews are scheduled to ensure this remains good policy in light of changing technologies, changing relative costs and condition of ageing infrastructure.
Top Energy	Continues to construct supply lines and connect new consumers where cost of new connection means is uneconomic. Operates a capital contribution scheme where consumer funds uneconomic proportion of

	equipment, refundable when additional consumers connect. No undertaking to maintain supply for a period of time – presumed when required to be replaced consumer will again part-fund.
The Lines Company	Distributed Generation Regulations oblige us to provide line services to DG at marginal cost, which will exacerbate uneconomic lines issue. The company will receive little extra income from DG and to the extent consumers save on line charges, income is likely to decrease from these lines rather than increase.
Counties Power	Ownership and access rights often unclear, there will be consumers who lose supply, or whose supply is threatened, not because of a decision by a lines company to disinvest, but because of unclear ownership and access issues.
Collective submission - 18 lines companies	Review should be completed taking into account other policies and legislation including <ul style="list-style-type: none"> <li>• Low fixed charge tariff option</li> <li>• Arrangements for low income domestic consumers</li> <li>• Relativities between rural and urban line charges</li> <li>• Model approaches to distribution pricing</li> <li>• Arrangements for connecting distributed generation to distribution networks</li> <li>• Model Use-of-System Agreements between retailers and distributors</li> <li>• Part 4A pricing methodologies and allowable cross-subsidies.</li> </ul>
Electricity Networks Association	Review needs to be continued and consider full issues identified in ToR and other important concerns identified. Work needs to be done to address the problems of electricity supply to remote consumers positively, rather than simply relying on the extension of section 62. ENA would like MED to form a working group for this purpose, which would include ENA and other public and private stakeholders, including Federated Farmers to ensure that remote consumers have the most efficient, reliable and environmentally sustainable electricity supply.
Electricity Networks Association	Important for MED to provide analysis as to the extent of other statutory obligations to service 'remote communities' or to provide uneconomic services, as well as different government solutions to each of these situations. Appropriate for electricity lines sector to be treated neutrally, even if in a different way, in relation to other infrastructure sectors.
Vector	Endorses ENA's submission for a stakeholder group to be convened to further develop an appropriate policy.
Vector	If continuance of supply by lines or alternatives imposed on lines companies, necessary to reconsider limitations placed by EIRA. In transition period between lines and alternatives, lines businesses may supply by a combination of old lines and new supplies until the old lines fail and are permanently retired.
Powerco	Impacts of wider context need to be explicitly acknowledged and where appropriate built into decision-making process. Discussion paper states it takes into account NZES and EIRA but it is not immediately evident where

	and how these matters have been considered.
Network Waitaki	<p>Under existing legislation line companies only have an obligation to provide Line Function Services up to the consumers Point of Supply (POS). The consumer is responsible for the service line they own between the POS and their installation. This can represent a substantial amount of asset. If there is an issue of economics then it is the service line that will be biggest driver of any decision by the consumer to continue taking supply.</p> <p>NWL maintains that for practical purposes “Continuance of Supply” means so long as the consumer wants the supply and is prepared to pay the economic cost. The requirement is a “smoke and mirror” political ruse.</p> <p>By 2013 this situation will have been the case for 20 years and there has not been widespread disconnection of uneconomic supply. When a line is in need of major replacement (and the service lines will always come up first) consumers are given appropriate advice and they decide whether or not they will continue with supply. Because the line company knows what condition a line is in, it will give a consumer plenty of notice to minimise upset and will try to give advice when the issue can be managed at least cost. There is no upside for line companies in aggravating consumers in the way it manages assets.</p>
Meridian	One of the implications of lines companies assisting transition from LFS, if this option involves lines companies purchasing generation equipment for rural consumers, and retailing electricity, will be the need for officials to monitor the level of retailing by lines companies to ensure this activity is compliant with EIRA.
Environment Waikato	Paper makes no mention of appeal or arbitration for lines companies unhappy with the ‘deal’ offered by lines companies. Suggests Ombudsman function. Also suggests using the term ‘energy services’.
Marlborough District Council	Need to know the extent of cross-subsidy as can’t have a meaningful discussion of section 62 except in very broad principle based terms.
Northland District Health Board	Concerned that it was not contacted to make a submission on the issue as it might have adverse public health impacts. Northland is one of the most deprived areas in the country 49% in lowest deciles (NZ 30%) of which 78% Maori. 6% of population live in remote rural compared with 2% nationally. Should do a health impact assessment
Southland DC	User pays notion should not be pursued at all. Efficiency does not always promote a better allocation of resources... real risk of compromising the economic, social and cultural well-being of rural communities.
Ruapehu DC	Contribution of agriculture to NZ’s economy has been rising. If other method of supping energy are more cost-efficient and fair (i.e. does not penalise consumer by way of affordability or quality of life) then should be considered.
Local Government	Time to consider document relatively short – insufficient time to get sign-off from elected members in Local

NZ	Government, and the National Council. Options weren't assessed against proposed criteria – only impacts were considered. Electricity is a public as well as private good. Incentives to develop alternatives required; consumer choice in delivery. Options a,b and f to given further consideration.
Far North District Council	Far North District Council had 5 customers per kilometre; not many other Districts in NZ with such constraints from terrain and population dispersal. Wants a new funding pool to assist in new lines build so that consumers are not taking risks with candles (five years, seven deaths from house fires attributed to candle use).
Environment Bay of Plenty	Support a consultative and co-ordinated process for any changes to supply for affected electricity consumers; changes based on alternative supply agreed before change occurs; encourage renewable energy generation wherever possible. Guidelines for consulting on intended changes to line supply. Connections to NZ strategy need to be made.
Ruapehu DC, Otorohanga DC, Waitomo DC and The Lines Company	For predominately rural communities with no major metropolitan network the major replacement of lines will create a considerable burden on the region. Government funds roads nationally, should fund electricity. Boundaries of the network companies are artificial for the purpose of establishing catchments for funding remote lines.
Te Aroha Kanarahi Trust	Lines companies have an obligation to assist communities with education to reduce energy consumption through transition; provide financial support to offset capital costs; tailored research to families; provide lists of reputable suppliers; ensure rights of current customers are protected.
Mighty River Power	The combination of an obligation to supply and the ODV requirement means that the costs of doing so are borne by line company shareholders. Recovery of the cost of uneconomic assets will show up as excessive profits under Electricity Information Disclosure. MED need to analyse policy with Commerce Act. True cost of uneconomic supply should be identified in Electricity Disclosure regime.
Watercare Services	Revision to s62 to include definition of uneconomic. Transitional arrangements 'in sufficient time'. Change does not reduce level of service.
Telecom	Clear definition of uneconomic is needed to be able to determine extent of those affected. Urban consumers benefit from remote telecommunications site on sparsely populated hill tops. Conflict between removal of section 62 and Civil Defence Emergency Act. Principles for review are clarity, technological neutrality, competitive neutrality, minimise uncertainty.
MC and AE Ward	Power lines have always crossed rural areas in order to supply urban areas. Perceived subsidy of urban to rural is more than offset by the use of rural land to supply access for power lines serving urban areas.
Theodora C Ward	Contribute to provision of electricity by having pylons on land. Demand for power to rural increases.
Anthea Ward	A good electricity supply is a great factor in keeping rural workers in remote places; without electricity for modern conveniences there would be a rapid drift to urban areas.