

Ms Fritha Mackay
Manager
Market Structure Group
Commerce Commission
P O Box 2351
Wellington

**APPLICATION FOR EXEMPTION
SECTION 81
ELECTRICITY INDUSTRY REFORM ACT 1998**

Date of Application:

28 February 2003

The Applicant:

Eastland Network Ltd
P O Box 1048
Gisborne

Applicant's Contact:

Ken Mitchell
Chief Executive
Eastland Network Ltd

phone: 06 869 0700
fax: 06 867 8563

Application:

Pursuant to section 81 of the Electricity Industry Reform Act 1998 (EIR Act), application is hereby made to the Commerce Commission for exemption from the application of the EIR Act, as described in the application below.

Introduction

Eastland Network Ltd (ENL) is an “electricity lines business” which owns generation asset within the provisions of the EIR Act with regard to involvement in an “electricity supply business”. It also owns standby mobile diesel generator sets for security and outage management purposes.

ENL wishes to apply this standby generation and develop new capability in a peaking role to avoid more costly transmission and distribution asset upgrade.

Exemption is sought in regard of the generating capacity permitted to be owned and operated by ENL for this specific purpose. Expressing limitations in terms of GWh instead of “nameplate” capacity is likely to meet ENL’s request.

Details of ENL’s Involvement

Eastland Network Ltd is the electricity lines business (defined under section 4 of the EIR Act 1992) servicing the Gisborne and Wairoa Districts with line function services. It distributes approximately 302 GWh of electricity to approximately 26,000 consumers across two isolated distribution networks.

ENL is a limited liability company formed under the Energy Companies Act 1992.

ENL is 100% owned by the Eastland Energy Community Trust. The Gisborne District Council is the capital beneficiary of the Trust. The income beneficiaries constitute all consumers connected to ENL’s distribution network and all rate payers on the Gisborne District Local Authority Electoral Roll. As a result of the EIR Act ENL sold its interests in electricity supply to Contact Energy Ltd. in November 1998.

ENL purchased both the line business and generation business assets from Wairoa Power in August 1999. ENL therefore has an interest in an “electricity supply business” as defined in section 5 of the EIR Act. These generation assets consist of the Waihi Hydro Scheme which has a “nameplate” capacity of 5MW. However, due to low inflows and reduced storage as a result of Cyclone Bola this generation facility does not generate the volumes that would be expected of a plant its size. ENL currently has its Waihi generation for sale.

ENL currently sells the energy output for its Waihi Scheme to TrustPower, the incumbent electricity retailer in Wairoa. ENL has no direct involvement in the national electricity retail market.

Background

ENL currently owns a 5MW Hydro Electricity Generator at Waihi embedded into its Wairoa distribution network. This station generates electricity for sale to electricity retailers. Due to the dam's storage being reduced to approximately 3 days, as a result of Cyclone Bola, ENL's water management is focussed on the use of the scheme as a peaking plant applied to reduce transmission charges. As a pure generation facility the plant has a low value.

However, in terms of the Wairoa network, in which it is embedded, it makes a significant contribution. The Wairoa network has a maximum demand of approximately 13.5MW and annual consumption of approximately 50GWh. The Waihi Scheme therefore presents 37% of demand and with an annual generation output of approximately 11GWh, 22% of the energy supply in Wairoa.

In addition ENL owns some containerised, mobile diesel generation sets for the purpose of providing security and managing outage on ENL's distribution network. This generation has increased to a total capacity of 6.5MW over recent years as load growth places pressure of security standards. There is an additional 1.5MW of privately owned generation in the district which ENL also deploys as necessary to meet security needs. This combined generation is also applied to deliver acceptable security standards at transmission level where existing Transpower assets are constrained.

ENL's and the community's investment in this standby generation is now sizeable and it is therefore desirable that the investment be utilised as effectively as possible. ENL therefore proposes to deploy this standby generation in a peaking role during winter daily peaks starting in 2003 i.e. the generators will be run, as required, up to a few hours per day to limit the peak demand ENL's aggregate system load profile presents to the national grid.

This not only lets existing network and transmission assets be utilised more efficiently but is a lower cost alternative than ENL would otherwise face to upgrade its network, and Transpower's, in order to meet new capacity demands from local economic development.

Viability requires ENL to recover some of the cost of the generation by offering the energy for sale to retailers. However the majority of the recovery of costs is derived from avoided transmission costs and avoided new investment.

Retailers have requested that they be permitted to contract the use of the gensets during periods of high spot price. While the diesel gensets generate at costs exceeding 20c/kWh the spot price in Gisborne regularly exceeds this level. This is characteristic of the constrained transmission system and the dominance of the Genesis owned generation in the region that is located behind the transmission constraint. The deployment of ENL's generation by retailers is likely to increase competition and reduce power supply costs to the region.

Although the primary purpose of ENL's generation is to solve network issues and not to compete in the energy market, the sale of its output to retailers raises the issue of whether ENL requires an exemption to own and operate its generating capability.

It is ENL's intention to sell its Waihi Hydro Scheme and it has the scheme currently open to offer from the market.

However, it is now evident that the sale will not be as quick as hoped for and that ENL may therefore be using its diesel generation for load peaking during the 2003 winter while it still owns its Waihi Hydro scheme.

Our concern is whether or not we then breach the limitations on line company ownership of generation per the Electricity Industry Reform Act 1998. Consequently we feel it prudent to make this application for an exemption under section 81.

There is also further potential to meet new capacity demands by managing load via the application of more peaking plant. ENL is also seeking approval to be the investor of last resort for these opportunities.

Details of Exemption Sought

ENL has two connections to Transpowers national transmission grid, (Grid Exit Points or GXP's) to which it applies distributed generation embedded in its distribution network. These are Gisborne and Wairoa. The two distribution networks associated with these GXP's are not interconnected and are supplied by 110kV transmission spurs connected at Tuai where the Genesis owned Waikaremoana Hydro Generation Scheme also connects to the grid. Contact Energy Ltd. is the incumbent electricity retailer in the Gisborne District. TrustPower Ltd. is the incumbent electricity retailer in the Wairoa District.

Gisborne

The Transpower 110kV line from Tuai to Gisborne and the Gisborne GXP are capacity constrained to approximately 42MW of firm/secure capacity. ENL's network presents a 46MW demand peak to this GXP. The gap in security provision is covered by four 1MW diesel generators owned by ENL.

In addition the generators are positioned on ENL's distribution network in locations where they can address security issues in localised parts of the network. For example ENL has a 200km 4MW spur line extending up the East Cape that cannot be economically secured via a line solution. They are also deployed as emergency voltage support during holiday season peaks.

As the generators are portable they can be shifted from place to place or even from one GXP to another in order to maintain supply during maintenance or sustained fault conditions. ENL has an additional 0.5MW mobile genset which it uses only in extreme events and can access use of approximately 1.5MW of mobile diesel gensets owned by other parties such as the District Council. These additional generators do not have synchronising equipment and so are used on a lesser priority basis.

Currently ENL does not sell the energy output from these generators. The more this generation is deployed in this fashion the greater the competitive advantage to retailers receiving the income from consumers for energy they haven't had to purchase. This energy reduces the losses calculated at the GXP and therefore favours incumbent retailers over their competitors.

ENL has applied the use of standby generation as part of its network management strategy for a long time. Without them it would be necessary to either compromise service standards or apply costly uneconomic monopoly line solutions. The provision of electricity supply on the East Coast is marginal in terms of commercial viability and generation frequently presents as the least cost engineering solution.

Load growth driven by economic development is increasing demand for capacity on the Gisborne network by approximately 2MW p.a. For the past 4 years ENL has limited the peak demand presented to grid via better load management, enabled through the diversity it has created from development of its sub-transmission network. ENL has developed a strategy to continue to meet growth with better load management by co-ordinating the development of appropriately sized and located distribution generation to match the annual increments in demand.

The alternative is to enter into new investment agreements, in the order of \$30M, with Transpower and invest in ENL network upgrades in the order of \$10M. Given that load growth is only incrementing at 2MW p.a. this investment is not capital efficient, presents high risk and is not commercially viable. Pursuit of traditional line solutions would result in an increase in monopoly owned asset i.e. distributed generation is a competitor to lines whether Transpower's or ENL's.

In contrast a distributed generation solution to these network issues presents lower cost, more efficient competition to line solutions. The economic development of the region would be placed at risk if ENL was not permitted to apply a generation solution and forced to lock in the costs of a lines only solution.

The East Coast's electricity consumption is characterised by a very high short duration peak. Even after the application of traditional load control, approximately 12MW peak capacity must be provided to meet demand that exceeds the daytime base load at the Gisborne GXP. Therefore 26% of ENL's capacity provision (or asset investment) is applied to the supply of relatively short duration inefficient consumption. Using distributed generation in a peaking role allows the same network assets to be used more efficiently and avoids the need for network upgrades.

The peaky nature of the East Coasts load underlies the regions relatively high cost of supply and consequently the regions economic competitiveness with other regions.

ENL wishes to apply its diesel generators in a peak limiting role to meet new demand and improve efficiency via a lower cost alternative to network upgrade. Diesel generation can only economically be applied to peaks with short duration and then only to the top of the load peak where duration is short, limiting the running hours. This constraint prevents this generation being applied as generation purely for the purpose of electricity supply.

This application is intended to address a network issue and is not increasing ENL's involvement in generation for energy market purposes. Because the generation cannot be used economically in base load scenarios, it cannot negatively impact competitiveness in the electricity supply sector.

ENL forecasts that the top 4MW of the Gisborne load profile can be clipped by running four 1MW diesel generators for a combined running time of approximately 400 hours per year.

ENL wishes to sell the energy generated during this time, plus that generated during network outages plus that during times of emergency voltage support and that during periods requested by retailers as a result of high energy spot prices, to retailers at the market rates able to be negotiated. ENL forecasts that the energy generated from these four gensets operated in this way will amount to approximately 2.3GWh p.a. or less than 1% of the energy distributed over its network.

ENL believes providing retailers with access to the generation for spot market management will increase competition in the retail sector. This will limit the spot price volatility experienced in the area created by generation market dominance of some industry players, therefore allowing lower retail pricing.

Further ENL is seeking exemption to continue developing peaking generation up to the 12MW potential for load management our Gisborne load profile presents.

While the cost of generation limits the application of diesel gensets, Gisborne has a reticulated gas supply which has excess capacity which can fuel gas engines economically. ENL has identified there is a viable 5.5MW opportunity for a gas engine installation.

This opportunity would target the portion of the peak below that which the diesel gensets will be targeted at. The lower portion of the peak has a longer duration and therefore requires lower marginal operating cost generation. While gas is viable solution at this level and duration of generation, it is still too expensive to use the generation in a base load role as would be required by retailers for them to consider investment.

Gas engines will require a host industrial process to utilise the waste heat and to manage load diversity against. They are also constrained to their gas network connection and are not mobile like the ENL diesel gensets.

A significant economic benefit that this generation will deliver to the region is that not only will ENL's network assets be used more efficiently and transmission upgrade avoided but the utilisation of the regions investment in the gas network will also be improved. The gas network is another high cost monopoly infrastructure asset the region is currently supporting.

ENL has a pricing methodology that supports the installation of distributed generation by passing through the transmission savings that the generation creates to the owners of the generation. The benefit passed through is the same to whoever owns the generation whether ENL, a retailer or an independent owner.

ENL invests in the generation as a matter of last resort i.e. when faced with a transmission/distribution investment need, ENL canvasses the opportunity with all parties it considers have an interest and selects the most attractive proposal from a cost perspective.

Our experience to date is that investors have a tendency to turn down the opportunities relating to security and peaking issues and focus on opportunities for base load, where scale is not limited by network demand and where potential for grid connection is viable.

The hydro, biomass and wind opportunities that exist on the East Coast need the capacity firming ability of diesel and gas generation i.e. without a reasonable level of firm contingency generation in the distributed generation portfolio there is insufficient diversity to guarantee avoidance of transmission charges, therefore pass-through benefits to the generator owners.

While the East Coast has a lot of renewable energy resources the opportunities are not viable as individual standalone schemes. Each scheme needs the benefits delivered from managing a diverse portfolio of generation, load and load control capability in a co-ordinated fashion.

To realise the vision of distributed generation, distribution companies like ENL must change their role from distributing capacity along their lines, to one of managing bi-directional power flow in a network. The task is more difficult than their current mode of operation but more efficient. ENL is requesting through this application to operating capability to achieve these outcomes.

This is consistent with the Government Policy objectives regarding the meeting of increased energy demand and regional economic development in a sustainable, economic and efficient manner.

Wairoa

The Wairoa GXP has a net peak demand of 8.5MW after the application of 5MW of generation from ENL's Waihi Hydro Scheme i.e. 13.5MW gross peak demand. The maximum firm capacity ENL's network can support without this generation is 8MW. At times system load can drop below 5MW and the Waihi Scheme then exports surplus generation to grid.

However, due to the very limited storage and poor inflows, Waihi cannot be applied as base load generation. Despite being rated at 5MW it only achieves a 3MW avoided transmission capacity contribution and averages about 11GWh of generation output p.a. (approximately 3.6% of ENL's distributed energy).

ENL's Wairoa network has high dependency on this generation and therefore the management of water is very conservative. Application of the water resource for the primary purpose of energy generation as opposed to peak management would increase transmission costs and require distribution network upgrade.

ENL believes the scheme can be developed to improve storage and increase generation output. However this will increase capacity and exceed the regulatory limits. ENL has therefore opted to sell this generation so that its permitted non-renewable generation quota can be applied to better opportunities in the Gisborne region.

New owners, while still likely to seek some form of contribution for avoided transmission cost benefit, are likely to be less focussed on generation purely to address network needs. Consequently ENL intends to apply two 1MW diesel gensets in a peak role to cover the shortfall in network capacity, a less risk adverse water management strategy, and to cope with the 0.5MW annual load growth being experienced on the Wairoa network.

Generators are currently applied to address security and outage issues on remote parts of the Wairoa network, as well as providing voltage support during peak loading associated with holiday season load. These generators are portable and can be combined with the other generators in Gisborne to address major GXP outages in either region.

Load at the Wairoa GXP is dominated by the 4MW (approximately 12GWh) demand of the Affco Freezing Works. This is seasonal load and therefore Wairoa also has a high peak demand component. There is an additional potential to apply another 2MW of peaking generation to Wairoa GXP. In the absence of resources like a gas supply ENL has no current development plans to exploit this opportunity.

Response to the Commission's three primary questions

1. *Would the Commission, by granting an exemption in respect of a business or involvement or interest, create incentives or opportunities to inhibit competition in the electricity industry?*

From the Commission's Decision 332 (Alpine Energy Limited, 8 February 1999) and Decision 333 (Contact and Enerco New Zealand Limited, 10 December 1998) the relevant markets are:

- I. the national electricity generation market;
- II. the local electricity distribution market in the area covered approximately by the Gisborne and Wairoa District Councils;
- III. the national electricity retail market.

National Electricity Retail Market

ENL no longer has any direct involvement in the national electricity retail market. It is therefore unable to effect competition in this market. Nor would it receive any benefit from inhibiting competition (if it was able to do so). As stated in the Commission's Decision 332, competition in this market is increasing. This is a result of the Government's reforms of the electricity industry and the involvement of new players. ENL's ownership and use of peaking generation has no effect on this. Retailers are able to compete with each other throughout New Zealand (including the East Coast) unhindered by ENL's interest in peaking generation

ENL's interest therefore will not create material incentives or opportunities for ENL to inhibit competition in the national electricity retail market. The purposes of the EIR Act will not be defeated in this market.

National Electricity Generation Market

The potential output from peaking generation will be negligible in terms of the national electricity market. Producing approximately 30GWh annually, it represents 0.1% ⁽¹⁾ of the national electricity generation market. All of its output will be sold to electricity retailers and not via the electricity wholesale market directly.

As stated in Decision 332, competition in the national generation market is likely to increase.

ENL's ownership of peaking generation does not create material incentives or opportunities for ENL to inhibit competition in the national electricity generation market. Competition in the national generation market will be unaffected by anything ENL might do in relation to its generation assets. Therefore, the purposes of the EIR Act will not be defeated in this market.

Local Distribution Market

As stated in Decision 332, the local distribution market is a natural monopoly where, by definition, competition is likely to be limited. Any new incentives or opportunities to inhibit competition are, therefore, likely to be related to those already present. The purposes of the EIR Act will not be defeated in this market.

⁽¹⁾ This is based on a national market of 33,000-34,000 GWh per annum.

2. *Would the Commission, by granting an exemption in respect of a business or involvement or interest, create incentives or opportunities to cross-subsidise generation activities from electricity lines businesses?*

In Decision 332 the Commission identified the following incentives or opportunities to cross-subsidise generation and line activities:

- I. the incentive or opportunity to offer favourable connection terms;
- II. the incentive or opportunity to influence the sale of electricity at a non-market price;
- III. the incentive or opportunity to provide management or other services at below market price; and
- IV. the incentive or opportunity to protect the capital invested should the generation business face “hard times”, by further capital injection on favourable terms.

There is at present no formal connection agreement between ENL and the owners of distributed generation. An agreement is being prepared which will cover quality standards and payment for the avoided Transpower charges (through decreased demand on the national grid) as a result of operating generation. The same terms and conditions will be offered to all owners of embedded generation.

The Electricity Sale and Purchase Agreement is to be on normal commercial terms. The price for the electricity generated will be arrived at by negotiation based on the expected price path for the national electricity market and following for avoided transmission losses at the relevant GXP. It is to be set for 2 to 3 years. There is therefore no material opportunity for ENL to influence the sale of electricity at a non-market price.

The dispatch of peaking generation requires co-ordination with ENL’s other load management activity such as load control. The benefits of this management activity serve line business interests as the priority. The most effective management of peaking generation is to minimise its operating hours as much as demand will allow. There is no incentive to offer management and other services at below market price.

ENL’s generation is justified on providing solutions to network issues. It does not stand alone as a business primarily intended to generate electricity. Its viability is not sensitive to energy market conditions. The risks are changes in Transpower’s Pricing Methodology and/or major change in ENL’s system load profile. The portable nature of plant inherently means investment costs are not sunk. If for any reason the generation fails to deliver on its purpose or faces “hard times” it is more likely to be sold than supported with further capital injection.

In these circumstances there will not be any material incentives or opportunities for ENL to cross-subsidise generation for generation sale with the lines business. The purpose of the EIR Act will not be defeated.

3. *Would the Commission permit, by granting an exemption in respect of a business or involvement or interest, a relationship between an electricity lines business and an electricity supply business which is not at arms length?*

The relationship between ENL's lines business and its generation interests is and would not be at arms length. However, and because of the Electricity Sale and Purchase Agreement there is no scope for day to day negotiation with Retailers on price and volume.

The sale of energy is secondary to the primary purpose of the generation capability which is to avoid demand peaks. In these circumstances the breach of the arms length rules does not defeat the purposes of the EIR Act.

Summary of Exemption Application

1. ENL be permitted to apply its 6.5MW of standby diesel generation in a peak limiting role and sell the energy generated as a consequence to electricity retailers.
2. ENL be permitted to offer electricity retailers its generation capability for their application to management of the wholesale electricity market costs.
3. ENL be permitted to operate its 5MW Waihi Hydro Scheme in addition to the above while it concludes a successful sale process.
4. ENL be permitted to develop peak limiting generation capability at its Gisborne GXP up to a maximum capacity of 12MW, removing the constraint on renewable energy.
5. ENL be permitted to develop peak limiting generation capability at its Wairoa GXP up to a maximum capacity of 4MW in addition to the Waihi Hydro Scheme.
6. Given that the intent of regulation is to limit line company involvement in electricity supply to a 10% level and that the above capacities are related to peak demand and not base load generating capability, it is suggested that expressing limitations in GWh terms may be more appropriate for the way ENL is intending to apply its generation. A 10% limit would therefore equate to 30GWh's in ENL's case.
7. ENL be exempt from the public notification process that ENL must comply with to increase generation capability for the above purpose as the generation largely already exists and ENL is just attempting to apply it in an additional role.

DECLARATION

THIS APPLICATION is made by Eastland Network Ltd.

The company hereby confirms that:

- all information requested by the Commerce Commission has been supplied;
- all information known to the applicant which is relevant to the consideration of this application has been supplied to the Commerce Commission; and
- all information supplied by the applicant to the Commerce Commission is correct as at the date of this application.

The company undertakes to advise the Commerce Commission immediately of any material change in circumstances relating to the application.

Date: _____

Signed by: **EASTLAND NETWORK LTD.**

Ken Mitchell
Chief Executive

I am an officer of the company and am duly authorised to make this application.