

Facilitating Investment in Generation by Lines Companies

Discussion note

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Resources and Networks Branch,
Ministry of Economic Development
33 Bowen Street,
PO Box 1473
Wellington
New Zealand

1. Purpose of the paper

The purpose of this paper is to open up a discussion on how lines companies' investment in generation can be further facilitated (short of completely removing current ownership restrictions).

In particular, industry views are invited on a proposal to further relax the line-energy separation requirements to allow trading in electricity hedges in order to assist lines companies to sell the output of the generation they are currently permitted to build.

2. Regulatory framework

The Electricity Industry Reform Act 1998 required full ownership separation between lines (distribution and transmission) and supply (generation and retail) businesses.

The main reasons for the separation were to encourage competition in generation and retailing and to help prevent cross-subsidisation of generation and retailing from lines customers.

These cross-ownership restrictions have been relaxed twice since 1999 to allow lines businesses to own some generation and to sell the output from those stations. In particular:

- Under the Electricity Industry Reform Amendment Act 2001 lines companies are allowed to:
 - Own and sell the output of new renewables generation (such as wind) without restriction. This generation must be held in a legal entity separate from the lines business and be operated at arms-length to it (corporate separation and arms-length trading rules); and
 - Own generation up to the higher of 5MW or 2 percent of their peak load.
- The Electricity Industry Reform Amendment 2004 further relaxed the limits by allowing the lines companies to own:
 - Generation commissioned after 20 May 2003 up to the higher of 50MW or 20 percent of their peak load (with all capacity above 5MW or 2 percent of load subject to corporate separation and the arms-length rules); and
 - Reserve generation contracted to the Electricity Commission without limit.

Thus, lines companies are permitted to build new generation within the specified limits. This includes, since 2001, investment in new renewables without quantity restrictions. Lines companies are also allowed to sell the output of their generation without any legal constraints.

The majority of lines companies have yet to take advantage of these opportunities.

3. Potential barriers to investment

Officials have previously engaged in several informal discussions with various lines companies on their assessment of the barriers to investment in generation. The following issues have been cited by the lines companies:

- Time required to get into the generation business;
- Difficulties identifying viable projects (in terms of project economics);
- Difficulties obtaining resource consents under the Resource Management Act;
- Uncertainty concerning a number of electricity market issues, such as transmission pricing and financial transmission rights;
- Uncertainty around gas availability;
- Limited ability to sell the output of the generation lines companies are currently permitted to build.

The majority of these issues are already in the process of being addressed.

In particular, the Government has recently announced:

- A comprehensive package of measures designed to improve the working of the Resource Management Act¹;
- A package of measures to boost gas exploration in New Zealand².

The Electricity Commission is also working on other issues raised by the lines companies, such as those relating to transmission. These potential barriers are expected to gradually reduce over time as the Electricity Commission progresses its work programme.

The outstanding issue appears to be difficulties experienced in selling the output of lines companies' current generation and managing associated risks. The rest of this note, therefore, focuses on this issue.

4. Limitations on ability of lines companies to sell generated output

It has been argued that lines companies are constrained by the current legislative provisions from investing in generation because there are limitations on their ability to retail the output of their generation.

While there are no legal restrictions on lines companies retailing the output of their generation to anyone, by whatever contractual arrangements they wish (subject to only selling their own output), lines companies are not permitted to trade in electricity generally or to buy and sell hedges.

¹ <http://www.beehive.govt.nz/ViewDocument.cfm?DocumentID=20924>

² <http://www.beehive.govt.nz/ViewDocument.cfm?DocumentID=20760>

The practical effect of this is that lines businesses are limited to selling their output either on the spot market, or to other parties able to manage variations in output from lines companies' generation plant. In practice, such parties are likely to be restricted to retailers (who are also generators) and major users.

This presents lines companies with several difficulties:

- Selling on the spot market results in volatile and unpredictable revenue streams, making a project difficult to finance;
- Selling to other retailers may not be an attractive business proposition because these retailers are also likely to be major generators, and are therefore lines companies' competitors in generation;
- Selling to major users is only feasible where there is a direct physical connection.

Retailing to other types of consumers, although permitted by the legislation, may not be feasible due to lines companies' inability to meet standard customer requirements.

In general, customers require:

- Fixed prices; and
- Ability to draw variable quantities of electricity.

However, because lines companies are not permitted to trade in electricity and may only sell their own output (which is lumpy, especially from renewables plant), lines companies/generators are not in the position to guarantee customers either fixed price or variable quantities on demand.

5. A possible option

Officials have considered whether any further legislative amendment (short of full removal of ownership separation requirements) would assist lines companies in selling their generated output.

It seems possible that an ability to buy *some* electricity on the spot market to cover periods when their own generation is unavailable, and an ability to trade in hedges *within specified limits*, would improve the lines companies' ability to sell to retail customers (while still being within the parameters of the current regulatory framework).

We would like to invite industry comments on a proposal to:

Allow lines companies to trade in financial instruments (e.g. hedges) up to the nominal output of their generating plant, assuming that it is available on a continuous basis.

For example, a line company owning a generation plant of an overall 50 MW capacity would be allowed to buy and sell financial instruments up to 25 MWh in each half hour period, i.e. 438 GWh per annum.

The key issue is whether an amendment such as this would help lines companies sell the output from their plants. As noted, the key difficulty for lines companies appears to be a combination of the variability of output from their generation, inability to buy from the wholesale market and inability to hedge related risks. This results in an inability to offer continuous supply contracts to customers and to manage the risks of doing so.

The suggested amendment would allow lines businesses to buy electricity and hedges (up to the capped quantity) on the wholesale market and hence offer continuous supply contracts to customers.

However, the ability to buy conventional *two-way and one way hedges* seems unlikely to be of much assistance to lines companies. Lines businesses may not be able to buy hedges tailored exactly to when their plant was unable to generate to the quantities contracted to customers because in many cases (especially with wind generation) it is difficult to know in advance the exact output of that plant.

The suggested amendment would, however, allow lines businesses to buy *call options*, whereby the lines company, in return for a fee, can choose whether or not to exercise a hedge or more sophisticated “firming” contracts. While this would require the development of instruments which are generally unavailable on the market currently, there seems no reason in principle why this should not occur.

Another implication of the suggested amendment is that a monitoring regime may need to be established to ensure lines companies comply with the imposed limits. Officials recognise that this is likely to increase lines companies’ compliance costs and would welcome suggestions on to how these could be minimised.

6. Expressing your views

The Ministry of Economic Development would welcome comments on this paper by 18 April 2005.

Your comments are sought with respect to the following:

- Whether the ability to trade in financial instruments and spot energy up to the specified limits will assist lines companies’ investment in generation up to the permitted levels;
- Whether the proposed limit (i.e. trade is allowed up to the nominal output of the generating plant assuming that it is available on a continuous basis) is sufficient;
- Whether there are any issues likely to arise with the calculation of the proposed limit for different types of generation; and
- What types of reporting would minimise compliance costs for the businesses.

Officials are also keen to explore other options that could facilitate investment in generation by lines companies up to the currently permitted levels, but short of full removal of ownership restrictions.

Please send your comments and suggestions to:

Inna Koning
Resources and Networks Branch
Ministry of Economic Development
33 Bowen Street
PO Box 1473
Wellington
New Zealand
Ph: +64-4-472 0030
Fax: +64-4-499 0969
Email: inna.koning@med.govt.nz

Please note that your submission will become public information.

Please indicate clearly if your comments are commercially sensitive, or if, for some other reason, you consider they should not be disclosed. Any request for non-disclosure will be considered in terms of the Official Information Act 1982.