

Ensuring an Orderly Thermal Transition

Submission of behalf of Taranaki Energy Watch

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Introduction

Orderly transition seems unlikely with the current set up of the electricity market. New Zealand is too small to allow proper functioning competition. The market is dominated by a small number of gentailers which are free to engage in predatory behaviour. Spot prices are set by generation from the Rankin units which provide a strong incentive for their continued operation.

Questions and Answers

Are there any aspects in current spot market arrangements that are likely to undermine incentives to make efficient decisions in relation to back-up resources? If so, what are they?

Yes, if companies decide it is more profitable to retire thermal plant to allow prices to rise, especially if major refurbishment is near. The assertion that companies may take other factors into account rather than financial return is unlikely. The actions of both Contact and Genesis in the past have made it clear that profitability of their operations is top priority. Unless they receive some sort of financial return from retention of units beyond economic operation, those units will be closed. This particularly applies to the TCC and Rankin units

Do current arrangements ensure reasonable availability of forward contracts related to back-up services – such as dry year cover? Please explain your reasoning.

This is unknown. Better transparency is required

Do you agree with the Authority's view above that lumpiness does not (at present) threaten to disrupt an orderly thermal transition? If so, or if not, please explain your reasoning

No. See above

Conclusions

The current electricity market serves only the interests of the gentailers at the expense of consumers. Dr Geoff Bertram of Victoria University and others have demonstrated the problems of the current setup which include market manipulation, profiteering, anticompetitive behaviour and waste of valuable resources. A recent report outlines how the major gentailers have distributed excess dividends to shareholders on the back of increased asset valuation associated with an increasingly tight market over time. This explains why gentailers have failed to invest in new generation despite holding resource consents to do so. There is thus an associated risk that thermal retirement will lead to intermittent supply shortages.

It is noted here that the developers of the proposed offshore windfarm in the South Taranaki Bight (Copenhagen Investment Partners) have stated that fixed price contracts for the entire output of the farm are essential for its financial viability. This is standard procedure overseas and such a move is not surprising as it would insulate the project from the vagaries of our poorly regulated market.

It is surprising that gas availability is not included in this consultation. Despite extensive exploration, both on and offshore, there have been no major gas discoveries since Pohokura over 20 years ago. Methanex consumes some 50% of New Zealand's total gas production alone with supply contracts expiring in 2027. Despite the contracts, Methanex has been forced to shut its Waitara Valley plant due to declining production from Pohokura. Gas availability for any significant thermal generation beyond 2035 is somewhat questionable.

Recommendations

The current electricity market is not fit for purpose. An orderly transition to a largely renewable and affordable electricity supply is unlikely to be achievable with current market arrangements. The EA needs to present to government a case for urgent reform.

This consultation is too narrow in its focus. Issues of pricing transparency, possible changes to the generation mix (such as thermal biofuel), gas supply and the possible exit of Rio Tinto need to be included in a proper analysis of thermal transition risks.

An additional risk that needs to be addressed is changes to the profile of the daily demand curve. The popularity of heat pumps for both heating and air conditioning is likely to produce extra summer daytime demand and especially an early evening peak in winter. In the face of sudden cold weather there may be insufficient fast start generation to cope.

This consultation does little to address reliability in the face of climate change, in particular, dry years. We note at this stage that the Lake Onslow proposal appears dead in the water. The issue of backup can be addressed by:

- Converting the Rankin units to run on biofuel. This will ensure their continued availability. Torried wood chips can be stockpiled for use during times of shortage. Two units should be sufficient to ensure continuity of supply in a dry year, the third used for support when required. Note Genesis will only consider this option if wood is price competitive with Indonesian coal. Since this is unlikely without a significant rise in the cost of carbon emissions, another strategy will be required to effect conversion.
- Installing pumped hydro between Lakes Pukaki and Tekapo. The canal linking the two lakes was constructed with this in mind; it merely requires installation of pumps. Estimated cost: approximately \$200 million. The major barrier to the efficient operation of this scheme would be the necessity for Genesis and Meridian to co-operate.
- Removal of barriers to the uptake of small scale (rooftop) solar. This would be particularly useful in Auckland where summertime use of air conditioning is expanding.
- Removal of price barriers to small scale remote generation, predominantly hydro and wind.

Together these measures would substantially reduce the risk of supply shortages as gas-fired thermal is either retired or is restricted due to gas shortages.