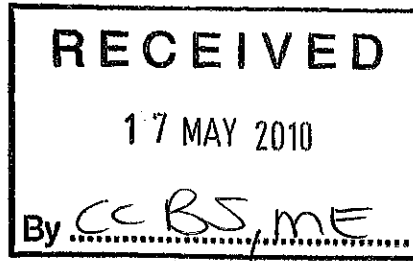


10 May 2010

Mr David Caygill  
Electricity Commission  
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Dear Mr Caygill

**RE: Proposed New 110kV Overhead Line Investment Kaikohe to Kaitaia GXP's**

Top Energy Limited is Transpower's connected customer at the Kaikohe and Kaitaia grid exit points (GXP's). Transpower and Top Energy propose to enter into an Investment Contract to provide a second 110kV overhead line circuit between the Kaikohe and Kaitaia GXP's (Proposed Investment). Commissioning of the proposed investment will increase both the level of Reliability and Security of Supply at the Kaitaia grid exit point above Grid Reliability Standards (GRS) under Top Energy's default Transmission Agreement.

Rule 5.1 of section II of part F of the Electricity Governance Rules 2003 (EGRs) provides that, subject to rule 5.5, if a proposed transmission agreement increases the level of reliability above the GRS for a particular grid exit point, the parties must certify in writing to the Electricity Commission Board that they have consulted with affected end use customers in relation to the proposed increase in reliability and any resulting price implications, and that there are no material unresolved issues affecting the interests of those end use customers.

The purpose of this letter is to comply with the obligations on Top Energy and Transpower under rule 5.1.

Background

Top Energy has over the last eighteen months been in consultation with Transpower over the security of supply of the Kaitaia GXP. These discussions have resulted in the identification of several areas of security of supply and capacity limitations associated with the Kaitaia GXP. Transpower standards revisions have so far enabled the scheduling of replacement of the existing aging single phase transformers on site which will eliminate the likelihood of extended rolling outages due to failure of one of these units while spares are sourced from overseas.

The existing single circuit 110kV overhead transmission line between Kaikohe and Kaitaia supplies power to approximately one third of Top Energy's 30,825 customers in the Far North. The line is rapidly approaching the end of its service life and over recent years has been subject to several faults and routine annual scheduled maintenance. Transpower has indicated to Top Energy that this maintenance is likely to be an annual event for the foreseeable future. A secondary 50kV circuit was removed during the early 1980's at the end of its serviceable life, due to the inability for the line to provide solo capacity for the Kaitaia GXP and the significant ongoing cost that would have arisen from maintenance and upgrade of that line. The reduction in Transpower charges as a result of the removal of the 50kV line have been passed through to the Top Energy connected customers over the intervening period.

The absence of a 110kV supply of N-1 capacity causes annual and periodic disruption to the local community as outages result in a complete loss of supply to the entire northern community. No back-feed is available via the southern Top Energy sub-transmission network and there are also no local generation options available to support the community.

Top Energy has requested a second 110kV overhead line circuit to be installed, in conjunction with the planned maintenance of the existing circuit, to provide no-break N-1 security.

#### Proposed Investment

Upon commissioning, the proposed investment will increase the level of reliability at the Kaitaia Grid Exit Point above GRS in addition to providing N-1 Security of Supply under the default Transmission Agreement between Top Energy and Transpower.

The application of the economic test to the situation demonstrates that, at a value of lost load (VOLL) of \$20,000 per MWh, investment in a second overhead line circuit would be uneconomic. However, according to Transpower's 2008 report, Northland is expected to experience the second highest growth in energy usage in the country at 1.9% per annum, marginally behind Auckland at 2.1% per annum. In addition, Kaitaia and the upper Far North region is expected to experience a population growth of over 7% between 2010 and 2031. Over this period, Top Energy is planning to invest over \$200m in sub-transmission projects intended to improve reliability, quality and provide N-1 security of supply to all Top energy's customer base.

Top Energy has engaged in extensive customer consultation and determined that the intangible benefits that are afforded by the higher level of security at transmission level make the investment inherently cost-effective.

#### Compliance with Rule 5.1

Top Energy Limited, formed in 1993, is part of the Top Energy group of companies and is wholly New Zealand owned and operated. The group includes: Top Energy Ltd, Top Energy (FIJI) Ltd, Top Electrical Ltd, Ngawha Generation Ltd, Ngawha Geothermal Resource Co Ltd and PHONEplus 2000 Ltd. The group is 100% owned by the Top Energy Consumer Trust, an independently elected Board of Trustees. The Trust's purpose is to hold the shares in the Company on behalf of power consumers connected to Top Energy's local electricity network and to distribute the benefits of shared ownership to those consumers as a group,

irrespective of which energy trading company they may purchase their electricity requirements from.

As a trust owned company, the focus of Top Energy is on the electricity requirements of the region and it acts in its consumers' interests in ensuring a reliable electricity supply at a reasonable price. Top Energy's Statement of Corporate Intent outlines its principal objectives, and these reflect the importance of the region's consumers and delivering a high quality electricity distribution network in a cost effective manner to the local community. The Top Energy Consumer Trust therefore directly represents the interests of the affected end users.

The Top Energy Consumer Trust has considered, at some length, the proposed 110kV overhead line investment between Kaikohe and Kaitaia GXP's including the associated increase in security of supply, reliability and the resulting price implications. In full consideration of the cost benefit analysis, the Top Energy Consumer Trust has elected to proceed with the investment in a second overhead line. The rationale for this decision is as follows:

- The community experiences an annual summer maintenance outage of 12-14 hours per year. The feedback they receive on this indicates that the local business, tourism, commercial and domestic community is finding a total loss of supply increasingly unacceptable.
- The existing single 110kV overhead line exposes the Kaitaia and upper Far North regional community to the risk of extended unplanned outages in the event of a system fault or accident, as has been experienced twice over the last three years. The Top Energy Consumer Trust finds this risk unacceptable.
- The higher security of supply gained due to the existence of a second overhead line circuit means an isolated total loss of supply to the Kaitaia and upper Far North network would be unlikely.
- Top Energy has investigated an alternative emergency arrangement involving stand-by generation; however, there are several technical and operational safety factors associated with this option which has resulted in Top Energy favouring a second 110kV overhead transmission line option.
- Top Energy has also investigated the options of utilising the planned 33kV sub-transmission network link between Taipa and Kaikohe to provide a suitable security of supply level. Currently, the line distances involved make this option impractical at anything other than transmission voltages and the costs involved with a 110kV line on this route are considerably more than a direct Kaikohe to Kaitaia line route option.
- Mass market consumer consultation has been carried out with a selection of Top Energy consumers. The results of this survey determine that 80% of Top energy customers wish to see an improvement in their supply reliability.

- Extensive consultation has also been undertaken with regional groups and detailed letters of support for the investment in a second 110kV overhead transmission circuit (attached) have been received from:
  - The Mayor of the Far North District Council
  - The Chairman and Chief Executive Officer of the Northland Regional Council
  - The Chairman of the Top Energy Consumer Trust
  - The President of the Farmers of New Zealand Inc

Certification

On this basis, Transpower and Top Energy certify to the Electricity Commission Board that consultation in accordance with the requirements of rule 5.1.2 of section II of part F of the EGRs has taken place and that there are no material unresolved issues affecting the interests of affected end users.

Yours faithfully



**Russell Shaw**  
Chief Executive Officer  
Top Energy Group



**Paul Fuge**  
Customer Services Manager  
Transpower