



T R A N S P O W E R

**Lower South Island
Reliability Project
Summary of Submissions on Long List**

May 2009

1 Introduction

In April 2009, Transpower published its consultation document seeking feedback from interested parties on the preparatory work for potential upgrades of circuits in the Lower South Island region extending from the Roxburgh power station to Invercargill and Dunedin. This consultation, along with the industry workshops held in Invercargill in October and December 2008, represented stage one of the consultation process. Depending on the outcome of consultation and application of the Grid Investment Test, each upgrade proposal could be submitted to the Electricity Commission.

The purpose of this document is to summarise the responses received. The summary is presented in Section 2 of this paper, question by question.

Transpower received submissions from the following interested parties:

1. Aurora Ltd (submitted by Delta Utility Services)
2. Contact Energy Ltd
3. Dongwha Patinna NZ Ltd
4. Fonterra Ltd
5. Meridian Energy Ltd
6. Powernet Ltd
7. Rio Tinto Alcan Ltd

The submissions can be found on Transpower's Grid New Zealand website.¹

2 Submission Summary

2.1 General Comments

2.1.1 Grid Development

All submitters were supportive of Transpower's plans to expand and develop the grid.

2.1.2 Forecasting

Four submitters have made specific comments about the demand at various GXPs. These comments will be considered in detail and, where appropriate, the comments will be followed up by direct contact with those submitters.

2.1.3 Lower South Island Renewables

Two parties identified specific issues with lines to the north of Roxburgh. They submitted that Transpower should consider upgrading the existing Clyde–Roxburgh line or Naseby–Roxburgh lines. Another option to this would be a new line that bypassed Roxburgh and/or provided greater diversity at Roxburgh.

2.1.4 Information from Generators

Meridian also submitted answers to specific questions that were posed to generators.

2.1.5 Transmission alternatives

Three submitters were not in favour of the use of transmission alternatives eg Special Protection Schemes outlined in the long list of options, indicating that they would at

¹ <http://www.gridnewzealand.co.nz/lsi-grid-reliability-consultation>.

best defer further upgrades for a relatively short time in the region. The preferred option was to upgrade the grid.

2.2 Specific Responses

The following table summarises the response to each question asked. In some cases submitters have made multiple responses to one question. These multiple responses have been considered.

Q1. Are there any other development plan issues or considerations that should be incorporated into the analysis of the Lower South Island Reliability project?

- Pre-contingency load management is already a significant issue. This will only get worse.
- Upper and Lower Clutha hydro schemes should be included.
- Changes to the TPM may provide a greater impetus for LSI generation.
- N-1 security is required for maintenance. Current outages for maintenance already constrain the network.
- Transpower should set restoration targets.
- Four submitters gave no specific response.

Q2. Do respondents consider that the demand assumptions are appropriate for this project?

- The demand for Cromwell and Frankton needs to be considered.
- Irrigation demand may occur at Clyde and Cromwell.
- Greater emphasis is required from the generation forecasts.
- Dairy conversions and expansions are an issue.
- Forecasts for the dairy industry should allow for step load increases in or around Edendale in 2015/16.
- Forecasts should be in MVA not MW.
- A step in demand at the smelter post 2019 would be highly speculative.
- One submitter gave no specific response.

Q3. Do respondents consider that the generation assumptions are appropriate for this project?

- The Deep Stream hydro commissioned in 2008 should be added to the embedded generation.
- The Tuapeka Mouth Hydro option should be added to the list of potential generation options.
- Lignite and coal seam gas should be considered as generation options.
- Wind farms should be considered.
- Government policy on medium term renewables should be considered.
- Two submitters gave no specific response.

Q4. Are there any other qualifying options which should be considered as part of Transpower's long list of options for the Lower South Island Reliability project?

- Is it possible to move more load off the 110 kV grid to the 220 kV grid? Sites include Halfway Bush and Balclutha.
- Grid Support Contracts should not be considered.
- A generation run-back scheme is under development at Clyde.
- Demand side management at peak times needs to be reviewed to so that it is consistent with national winter peak load-management.
- The Naseby to Roxburgh line should also be considered as an option for upgrading.
- Is there a visionary option to connect Gore to the Waitaki valley with a new 220 kV line.
- Can the new Gore ICT be a 220/33kV?
- Is the Gore to Berwick line for sale?
- Can the current Tiwai Point Connection Contract be extended?
- Two submitters gave no specific response.

Q5. Do you consider that any of the identified options in Transpower's long list do not come within the definition of "alternative projects" as defined under the Rules; or are inconsistent with good electricity practice? Please explain.

- Fuel switching will increase operating costs.
- A combination of options will be needed to achieve acceptable solutions.

- SPS schemes only provide short term solutions to transmission alternatives.
 - Four submitters gave no specific response.
- Q6. Do respondents consider this commensurate GIT approach to be reasonable for Transpower to apply when considering the lower South Island reliability project?
- There were no specific comments on the GIT approach.
- Q7. Are there other market costs or benefits which should be reflected in the analysis?
- A secure electricity supply is an enabler for wider economic benefits across a region.
 - The value of water spill that results from transmission constraints should be considered.
 - Upgrades should be paid for by the generators.
 - The environmental impact of spilt milk should be considered.
 - A probabilistic analysis of hydro availability should be included.
 - The analysis should include the enabling of renewables.
 - The effect of a secure supply on industry should be included. This should include a multiplier for flow on effects.
 - Two submitters gave no specific response.
- Q8. Do respondents consider this Value of Lost load is appropriate for valuing lost load in the lower South Island region?
- Higher values of lost load are appropriate for industrial areas. The value should be varied for each grid exit point.
 - The value of lost load should be increased. It has not increased at the same rate that consumer tariffs have increased.
 - The value of lost load will vary depending on the timing with respect to the dairy season. The value for a dairy plant is \$50,000 /MWhr.
 - The value should vary depending on the length of the outage.
 - Specific industries should be contacted for the valuation.
 - The value at Tiwai point will be an order of magnitude higher than this.
 - Two gave no specific response.