



**Transpower Upper North Island (UNI)
Reactive Support Investigation Project**

**Assumptions, Approach and Options
Consultation Document**

Response from

Contact Energy Limited

3 July 2009

Introduction

Contact Energy Limited (“Contact”) welcomes the opportunity to provide feedback to Transpower’s Upper North Island Reactive Support Investigation Project Consultation Document dated June 2009. We appreciate that the deadline for submissions has been extended to 7 July 2009.

Contact’s comments on the consultation document follow below:

For any questions related to this submission, please contact:

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Request for Information:

Contact wishes to advise that its Otahuhu A Station (Units 1, 2, 4, 5 & 6) should be considered as part of Transpowers initial “long-list” of options. As noted in the consultation document, this dynamic reactive support is currently contracted on a short-term basis under an Ancillary Services Agreement. Contact is currently reviewing the asset capability as it would be desirable to secure a longer term contract.

General Comments:

Contact understands that Transpower has identified a need to invest in additional dynamic voltage support plant in the Upper North Island.

Contact supports Transpowers objective of ensuring this is addressed to meet the future needs of consumers and participants in this region, and encourages Transpower to develop a long-term robust technical solution.

Contact supports the process that Transpower is undertaking and its proposed timetable.

Contact supports Transpower (as Grid Owner) in seeking to contract long-term for dynamic reactive support under Part F of the EGR’s which will provide for greater certainty of investment for the scale of dynamic reactive support that Transpower is requiring.

Comments on the document :

1. As the basis of the investigation relies heavily on the load forecasts used and the applied diversity factors for each GXP, we ask that this information is reviewed carefully in consultation with the regional off-take customers. This was discussed at the forum in Auckland and it appears there were some inconsistencies in the load forecast tables and in particular the projection of summer peak load growth. It was suggested that Transpower should utilise the GXP RCPD figures from the transmission pricing reports (Question 2).
2. Similarly, as the basis of the investigation relies heavily on the survey data used for the ratio of the various motor load categories, we ask that this information is reviewed carefully in consultation with the regional off-take customers.
3. Note that the Otahuhu B Generator has been upgraded recently to a nominal rating of 389 MW (nett). (380MW is used in table 3-2, and 373MW is used in table 2 of Attachment A)
4. The investigation suggests the balance between static voltage support and dynamic voltage support is important and hence the approach taken for static voltage support is of interest. Contact would like to see the TPM pricing signal for peak charges move to a kVA rate rather than the existing kW – to provide a stronger signal for power factor correction. Contact will encourage this through the TPM review process.

5. Contact has concerns over the amount of harmonics generated for SVC devices and asks that further studies are done to ensure power quality standards are maintained to a high standard (Question 1).
6. Question 4 asks if the generation assumptions are appropriate. Please note that the Otahuhu A generation plant is subject to availability due to maintenance outages. Hence the capacity of Units 1 & 2 and 4, 5 & 6 will be limited at times subject to the terms of the Ancillary Services Agreements currently in place with the System Operator. It is expected that a greater level of reliability can be achieved through the securing of a longer term contract.
7. There is a comment in Attachment A – Appendix D – D.1.5 regarding the TCC (Stratford Power) AVR. This states the P/Q limiter acts erroneously due to incorrect settings and that the AVR is disabled. This is not correct. This has been addressed and the AVR is enabled.