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Otahuhu Substation Proposal

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This presentation considers two questions

- What problem is the GUP trying to solve?
- Have all the appropriate solutions been considered?

What problem is the GUP trying to solve?

- Auckland's location presents Transpower with significant technical challenges:
 - narrow isthmus
 - exposed site at Otahuhu
 - no diversity of supply from the North
 - forecasts of increasing demand
 - uncertainty regarding location of future generation
 - voltage stability issues
 - changing expectations of performance
- 12 June 2006 incident was not a HILP event it was a high probability event given the maintenance gap regarding the D shackle.
- The cost of lost supply from such events is high.
- Currently Otahuhu does not meet the GRS requirements.

Have all the appropriate solutions been considered?

- The Transpower Proposal involves duplication of the Otahuhu substation at the same location. However, we question whether the Proposal will actually overcome the challenges and meet the objectives.
- The Proposal is a traditional engineering approach that involves a major construction project that locks in long term commitments. This approach does not allow for innovative solutions that may be available to provide solutions for the short to medium term.
- The combination of the IGE \$14M option, the construction of the new Pakuranga 220kV substation, incremental reactive support investment, improved maintenance and comprehensive contingency planning, could have provided the most appropriate and least cost option to meet GRS requirements for several years.

Conclusions

- This is a difficult technical problem that needs innovative solutions.
- We need to be certain that the “problem” has been solved, the proposed solution does not do this.
- The new Pakuranga 220kV substation will provide additional security for Auckland supplies and combined with the \$14 million Otahuhu improvements and incremental reactive support investments, will meet GRS requirements for some time.
- The Proposal can be considered as bridging the gap between 2009 and the Pakuranga substation commissioning in 2011/12. It is a very expensive means of doing this.
- The IGE proposal (\$14m), which is common to all options, provided an opportunity to take time to develop more innovative and lasting solutions.