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Jay Jeffries  
Team Secretary  
Gas Industry Co  
Level 9, State Insurance Tower  
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21 May 2008

Dear Jay

### **Vector Contribution to GIC Gas Contingency Simulation**

Please find attached slides that depict some work carried out by Vector in assisting the Industry Sub-Group examining the implications of a gas contingency on gas load requirements. This work is the product of a request from the group for Vector to investigate the requirement for load reduction across the gas sector during a contingency. The group provided the scenario and the data, while Vector brought this together in a number of simulations. The outcomes from the simulations were fed back to the group in numerical and graphical form.

The attached slides are a fair representation of that work and Vector would be happy for these, plus this letter, to be added to the GIC website should the GIC believe it would be of value to a wider audience.

The scenario modeled was that of an outage at Oaonui on three different days (one where the gas supply was highly dependent on Oaonui, the second on a more typical dependency day and the third on a day when the supply from Oaonui was a less significant part of the total). Each of the three days was modeled three times over with different levels of compliance to the initial curtailment. The data supplied by the group members included sample MDL gas flows, response times and minimum flow rates of major plant and the proportion of gas supplied to major plant by the Maui and Vector systems.

The slides supply more detail about the approach taken and assumptions made and show graphically the outcomes.

These simulations provide a useful reference for understanding what may happen in the event of a gas contingency. However, given the limitations of the data,

assumptions and the scenarios modeled, Vector encourages each stakeholder to derive their own conclusions. Vector understands Contact has been doing some detailed modeling of the downstream electricity market implications derived from these scenarios, and Vector would encourage all shippers to carry out similar exercises to more fully understand the implications for their business.

It is important to understand this work is intended to provide a general reference only. The content does not reflect actual behaviour and covers only a small subset of possible events. It is meant to assist discussion only and does not represent Vector's expectations regarding outcomes of any real events.

I hope this work has provided some helpful input to the industry.

Kind regards

A handwritten signature in black ink that reads "Ewan Gebbie". The signature is written in a cursive, flowing style.

**Ewan Gebbie**

Group Manager Regulatory Performance