



the marketplace company

25 June 2004

John Clarke
Transpower
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Dear John

Requested Actions of the System Operator from the Constraints Issues Group

At the meeting of the Constraints Issues Group on 14 June, the group requested that the System Operator undertake a number of actions to clarify and inform the group. This letter is to formally request that these actions be undertaken. These actions are listed below categorised under the relevant issue.¹

Issue #1 – The Spring Washer Effect and Network Characteristics

The System Operator has two action points. The first is to provide a detailed explanation of how reactance is treated in SPD, with a focus on the treatment of the reactance of transformers. The second is to conduct an analysis of the actual flows on the grid during trading period 36 of 24 April, with the modelled flows in SPD. This is to determine if the line characteristics are modelled accurately.

Issue #2 – Degeneracy of SPD Solutions

The System Operator has been requested to provide a report regarding the degeneracy of solutions in SPD. It is requested that this report address the following questions:

- Does the System Operator have any processes to monitor and deal with degeneracy of solutions in SPD;
- Does the System Operator monitor degeneracy of solutions in SPD; and
- Does degeneracy of solutions in SPD cause material impacts on price?

Issue #4 – Real Time and Provisional Price Variations

The System Operator has been requested to detail which infeasibility solutions are flagged in COMIT, both in Dispatch and Real Time schedules.

Issue #7 – Non-physical penalty factors

The System Operator has two actions under this issue. Firstly, it has been requested to provide explanations for the number of non-physical penalty factors currently used in SPD, and the level at

¹ Note that these actions can also be found in the minutes of the Constraints Issues Group available at <http://www.electricitycommission.govt.nz/develop/wholesale/meetings.html>.



which their value is set. The group also requests that the System Operator provide advice about the possibility of potentially reducing the number of factors used. Secondly, the System Operator is to confirm if the non-physical penalty factors create a cap on the nodal price.

Issue #8 – System Operator using increments of 1MW in alleviating constraints

The group requests the System Operator provide guidance about how it resolves infeasibilities, and the reason for choosing 1MW increments in alleviating constraints.

Issue #10 – Transparency of Transpower's Policies

It was recommended that an appendix to the Issues Paper be created that details the actions Transpower undertakes in setting constraints and alleviating infeasibilities. The group requests that the System Operator provide this information to the Market Administrator, to be included as an appendix to the issues paper.

Additionally, Bruce Smith had undertaken analysis of the real time price and final price datasets, and the group agreed that his analysis would benefit from the provision of information about when there were binding constraints. Accordingly, it would be appreciated if you could liaise with Bruce and provide him with this information.

It is envisaged that these actions be completed in time for the next meeting, or if unable to completed by that date, an indication of when they will be able to completed. The group recognises that some of these actions will not be simple to progress. If you have any questions, or require further clarification, please do not hesitate to contact me.

Yours sincerely

Dean Yarrall
For The Market Administrator