



30 July 2010

Submission Administrator
Electricity Commission
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Dear Sir or Madam

Normal Frequency - Generator Asset Owner Performance Obligations

Thank you for the opportunity to provide comment on the consultation paper on Normal Frequency - Generator Asset Owner Performance Obligations. No part of our submission is confidential. Mighty River Power's response to the consultation questions is outlined in Appendix 1 attached.

Mighty River Power believes the proposed rules are far more "stick" than "carrot". They rely exclusively on penalising non-responsive plant rather than encouraging investment in responsive plant. By discouraging certain investment decisions, a potential outcome is security of supply is jeopardised as a result of pursuing improvements in frequency quality. The focus should instead be on how owners of responsive plant, (currently excluded from the frequency keeping market), could earn revenue from providing responsive generation.

Mighty River Power is concerned that there has been no thorough analysis done on the frequency quality under the current or future rules and believe that this should be undertaken before any rule changes are implemented.

If you have any queries please contact me, Andrew.Anderson@mightyriver.co.nz, 07 857 0112 or 027 207 8304

Yours faithfully

A handwritten signature in black ink, appearing to read 'A. Anderson', followed by a long horizontal flourish.

Andrew Anderson

Trading Operations Manager

Question	Response
1. With respect to normal frequency management, are there features of other grid codes you think the Commission should consider?	No – The NZ system is unique and it is hard to find parallels with any other countries due to our isolation and lack of interconnection with other grids.
2. Do you agree with the proposal to clarify rule 2.1 so that generators must ensure their generating units operate under unrestricted governor control?	Yes the rules should be clarified. However we disagree that plant with deadbands on their governors contribute to frequency deviations.
3. Do you agree with the proposals for speed governor requirements?	No – The requirements to provide response to frequency deviation and stable operation are to a large degree mutually exclusive. Modern electronic devices may have the functionality of dual settings but many older mechanical devices do not have this functionality. There should be scope within the rules to allow for fast acting responsive devices as well as slower more stable devices.
4. Do you agree with the proposal that initial and all subsequent changes to the speed governor settings be agreed by the System Operator?	Yes – While in principle the SO must control frequency quality, limitations of various governor types must be acknowledged and a flexible proactive stance adopted by the SO. Achieving repeatability of settings for mechanical devices sets a number of challenges compared with programming electronic devices where repeatability can be assured. Enforcing the need to test, return to service, obtain permission and then perhaps retest/reset governors will be time consuming and difficult.
5. Do you agree with the Commission’s analysis regarding the “catch-all” rules?	Yes – refer to question 4 above. In addition we do not consider generation with deadbands adversely affects the ability of the System Operator to plan to comply, and to comply, with its principal performance obligations. Proactive management by SO could improve overall control of frequency management such as better or more demand forecasting/control.
6. Do you have any comments on the proposed rules?	The proposed rules appear to discourage investment in non-responsive generation rather than encourage investment in responsive generation. As the Commission notes in its paper, the main cause of frequency fluctuations is from load, with unstable generation adding to variations. Whilst governor dead bands prevent a response to these fluctuations, they do not cause them. By discouraging certain investment decisions rather than encouraging others, a potential outcome is that security of supply is

	jeopardised as a result of pursuing improvements in frequency quality. As there appears to be no thorough analysis of current or future frequency quality under the current rules, this would clearly be an unwanted outcome of the proposed rule changes.
7. Do you think there are other reasonably practicable options the Commission should consider?	<ul style="list-style-type: none"> • Clarify existing rules • Allow generation with deadbands • Rules to encourage investment in responsive generation
8. Do you have any comments on the Commission's assessment of the options?	<p>There appears to be a lack of analysis in regards to:</p> <ul style="list-style-type: none"> • How many participants will be able to comply with the proposed rules around governor settings, and how many will require exemptions. • The current quality of frequency and whether or not it is deteriorating to a point where changes are required.