

**TRANSPOWER**

Transpower House, 96 The Terrace,  
PO Box 1021, Wellington,  
New Zealand  
Telephone +64-4-590 7000  
Facsimile: +64-4-495 7100  
[www.transpower.co.nz](http://www.transpower.co.nz)  
[Jeremy.cain@transpower.co.nz](mailto:Jeremy.cain@transpower.co.nz)  
04 590 7544

22<sup>nd</sup> July 2014

John Rampton  
General Manager  
Level 7, ASB Tower  
2 Hunter Street  
Wellington

By email: [submissions@ea.govt.nz](mailto:submissions@ea.govt.nz)

Dear John

## **Normal frequency asset owner performance obligations**

Thank you for the opportunity to comment on the Electricity Authority's (the Authority) consultation paper *Normal frequency asset owner performance obligations*, published 10 June 2014. Our interest in this matter is as System Operator and as HVDC Owner.

### **Support clarity for asset owner performance obligations**

We support the intention of the Code change proposal which reflects the recommendations of a review of normal frequency keeping made under the Technical Advisor Service Contract (TASC).

In particular, we support the intent to assist all parties to have a consistent interpretation of asset owner performance obligations. Such consistency in interpretation is necessary to support broader Authority initiatives to reduce frequency keeping costs and maintain system security. The contribution that governor action plays in the frequency market is also key to the implementation of the National Frequency Keeping initiative. Clarifying the capabilities of generator governor response to frequency deviations will also assist the System Operator with its procurement and operational management of frequency keeping.

### **Further clarification of HVDC asset owner obligations required**

We consider that further clarification is necessary to reflect the practicality of frequency maintenance expectations of the HVDC owner at clause 8.17. Under the current drafting the HVDC is compliant with the fast FSC (Frequency Stabiliser Control) modulation that acts to reverse an excursion of frequency on either island, and the slow SRS (Spinning Reserve Sharing) modulation that acts to return the frequency of both islands back to within the +/- 0.2 Hz band if possible.

The proposed wording in 8.17 is problematic for compliance because the HVDC does not create any energy to be able to "correct" both frequencies, and any action by the HVDC controls to "correct" one island frequency will adversely affect the other island

frequency. We have suggested drafting (at question 2) that separates HVDC from generator requirements.

### Support watching brief to monitor dispensation process

We think that the 'watching brief' proposed by the Authority to monitor the extent to which generators apply for dispensations is proportionate at this stage. A 'watching brief' will help reveal dispensation trends and help the Authority to assess whether further intervention, for example cost allocation, is appropriate.


One issue that we are mindful of is the possibility that generators who are currently code compliant (but may not be under the newly-clarified compliance obligations) may pursue a dispensation rather than taking steps to ensure continued compliance. A step change in dispensation applications, depending on the extent of the issue, would have implications on frequency keeping costs, system security<sup>1</sup> and implementation of the National Frequency Keeping initiative<sup>2</sup>. It would also have implications for System Operator resourcing.

### SO component of allocated timeframe

The transition period allocated to this work in the proposal is a combined eight month period for both asset owners and the System Operator. The work over this period has to allow for asset owner settings' changes followed by System Operator assessment of compliance. Depending also on the volume of dispensations received, the System Operator estimates that 2-3 months is needed to assess revised settings and process potential dispensation assessments.

We have responded to the questions at Appendix A. Please let me know if you have any questions or would like to discuss any part of this submission.

Yours sincerely

A handwritten signature in black ink, appearing to be 'JC' followed by a long horizontal stroke.

Jeremy Cain  
**Regulatory Affairs Manager**

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<sup>1</sup> An increase in dispensations means that there is less of the faster - responding governor action to support the frequency keeper, which in turn puts more reliance on the frequency keeper to maintain frequency inside the normal band.

<sup>2</sup> The National Frequency Keeping initiative is reliant on the behaviours sought in this technical clarification from generators across both islands. A consequence of generator governor response from a limited number of generators may move those generators and HVDC link off their set points which in turn will create a mismatch between the reserves scheduled to cover the HVDC and its actual set point.

## Appendix A - Response to Consultation Questions

Question No.	Question	Response				
1	Do you agree that the problems identified with the current generator APOOs are creating inefficiencies?	<p>Yes. Generator governor response is required to help manage frequency and without this contribution demands on the frequency keeper are increased.</p> <p>Logically the situation will deteriorate if new generators do not provide governor response to return frequency to 50 Hz and existing generators either seek dispensations from this requirement or do not respond.</p>				
2	<p>Do you have any comments relating to the drafting of the proposed Code amendment?</p> <p>Please provide comments and suggested drafting improvements with reference to specific parts, schedules and clauses of the draft proposed Code amendment set out in Appendix A.</p>	<p>Yes, see below.</p> <div><div>1. Clause 8.17. We suggest that the expectations on the HVDC and generators are differentiated consistent with each asset’s operational practicalities.</div><table><tr><th>8.17 for Generators</th><th>8.17 (a) for HVDC</th></tr><tr><td>Each generator (while synchronised) must at all times ensure that its assets, other than any generating units within an excluded generating station, make the maximum possible injection contribution to <del>correct maintain</del> frequency while the frequency is within the normal band (and, <u>otherwise</u>, to restore frequency to within the normal band). Any such contribution must be assessed against the technical codes.</td><td>The HVDC owner must at <u>all times ensure that its assets make the maximum possible contribution to maintain frequency within the normal band (and, otherwise, to restore frequency to within the normal band). Any such contribution must be assessed against the technical codes.</u></td></tr></table></div> <div>2. The term “equivalent mechanism” in Schedule 8.3, Tech Code A, 5(1)(c) is confusing as it may be misinterpreted as meaning an equivalence arrangement.</div>	8.17 for Generators	8.17 (a) for HVDC	Each generator (while synchronised) must at all times ensure that its assets, other than any generating units within an excluded generating station, make the maximum possible injection contribution to <del>correct maintain</del> frequency while the frequency is within the normal band (and, <u>otherwise</u> , to restore frequency to within the normal band). Any such contribution must be assessed against the technical codes.	The HVDC owner must at <u>all times ensure that its assets make the maximum possible contribution to maintain frequency within the normal band (and, otherwise, to restore frequency to within the normal band). Any such contribution must be assessed against the technical codes.</u>
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3	What comments do you have on the Authority’s proposal for an eight-month transition period?	Depending on the volume of dispensations received, the System Operator estimates that 2-3 months of the proposed eight months is needed to assess revised settings and process potential dispensation assessments.				

Question No.	Question	Response
4	What costs do you anticipate that affected parties, particularly generators, may face in transitioning to the new regime if the proposed Code amendment was to proceed?	No comment (we understand this question is primarily addressed to generators).
5	What on-going costs, relative to the status quo, do you anticipate that that affected parties, particularly generators, might incur if the proposed Code amendment was to proceed?	No comment (we understand this question is primarily addressed to generators).
6	What comment do you have on the Authority's evaluation of the alternatives and the cost-benefit assessment of the preferred Code amendment (the proposal) set out in Sections 5.4 and 5.5?	We appreciate the Authority has recognised it may need to revise its cost benefit assessment following submissions, which may change the decision.
7	What comment do you have on the Authority's assessment of the proposed Code amendment against the requirements of section 32(1) of the Act?	No comment.
8	What comment do you have on the Authority's assessment of the proposed Code amendment against the Code amendment principles?	We agree.