

2 October 2015

Submissions  
Electricity Authority  
PO Box 10041  
**WELLINGTON**

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

Dear Authority

### **Generation Fault Ride Through Consultation Paper**

Thank you for the opportunity to provide comment.

Contact supports the Electricity Authority's objectives as set out in this paper.

We agree the System Operator needs to guard against the risk of cascade failure of the grid, particularly as wind farm penetration increases. We are also supportive of an exacerbator pays approach where it is applied to new generation.

Where we differ from the Authority is that we do not believe the Code proposal should be applied retrospectively i.e. to existing generation. This is because the voltage fault ride through criteria was not available at the time of the design and commissioning of existing stations, and therefore no provision was made to meet this criteria. For the purpose of allowing the System Operator to manage its Principle Performance Obligations, existing stations can be assessed against the proposed criteria and modelled accordingly in their security tools.

With respect to the cost/benefit analysis, it is unclear from the consultation paper whether the cost to upgrade existing plant and the security assessments for existing plant or compliance assessments for new plant have been considered in the analysis, and where the responsibility to do this assessment would lie. Accurate modelling of generating units to determine performance during under and overvoltage events is a costly, complex and specialised activity.

This security or compliance assessment may be in the form of reviewing existing system events and observing plant or station behaviour when the system has experienced under frequency events (as per current compliance assessments). The most recent transient over voltage event being the bipole trip during pole three's commissioning. A recommendation may be that the Electricity Authority and the System Operator work with generators to model a representative sample of units to determine the costs, effectiveness, standards and guidance for modelling generator voltage fault ride through performance prior to implementing the proposed code amendments. No mention has been made of ongoing costs for monitoring compliance as additional monitoring equipment will be required.

#### **Contact Energy Limited**

PO Box 10742  
Wellington 6143

Level 2 Harbour City Tower  
29 Brandon St, Wellington 6011

P: +64 4 499 4001  
F: +64 4 499 4003

[www.contactenergy.co.nz](http://www.contactenergy.co.nz)

A suggestion may be that the Electricity Authority convene an industry technical workshop for this consultation similar to that of the Normal Frequency Response workshop to facilitate responses from industry experts on the proposed criteria.

Please see appendix A for comments to the specific questions in the consultation paper.

If you require further clarification or would like to discuss our response to this consultation please do not hesitate to contact me.

Yours sincerely

A handwritten signature in blue ink, appearing to read "Gerard Demler".

Gerard Demler  
**Transmission Manager, Market Services**

## Appendix A

Question		Comment
Question 1	Do you agree the issues the Authority has identified are worthy of attention?	Yes. We would like to see some analysis on actual events to determine what level of risk the system is currently facing. Given the flattening of growth predicted over the next 10 years and the risk around a shutdown at Tiwai we would expect the number of new wind farms being built and connected to be much lower than what has been consented.
Question 2	Do you agree with the objectives of the proposed amendment? If not, why not?	Yes. We do not however support the inclusion of existing stations in the proposed Code amendment. As noted above we would like to know what the level of risk is at present, based on past system events.
Question 3	Do you agree the benefits of the proposed amendment outweigh its costs?	Somewhat agree. Our view is that the most likely scenario is B with the recent changes to the HAMI charges and the proposals in the new TPM relating to HVDC charges. It is questionable (please see our response to question one above) as to whether the probability of exceeding the threshold in scenario B will occur in the next 10 years. We feel that the benefit would be minimal and it is unclear whether the cost to upgrade existing plant and compliance assessment costs have been considered as these are largely unknown at this stage. No mention has been made of ongoing costs for monitoring compliance as additional monitoring equipment will be required.
Question 4	Do you have any suggested market-based options that would be easier to implement than option A?	No.

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Question		Comment
Question 5	Do you agree that the proposal does not preclude a move to market-based arrangements in the future?	Yes.
Question 6	Do you agree the Authority's proposed amendment complies with section 32(1) of the Act?	Yes
Question 7	Do you have any comments on the drafting of the proposed amendment?	Yes. Add additional subclause: 8.25A Fault ride through (7) A generating unit need not comply with subclause (1) if commissioned prior to xxxx date.

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