

27 March 2013



**Vector Limited**  
101 Carlton Gore Road  
PO Box 99882, Newmarket  
Auckland 1149,  
New Zealand  
[www.vector.co.nz](http://www.vector.co.nz)  
Corporate Telephone  
+64-9-978 7788  
Corporate Facsimile  
+64-9-978 7799

Electricity Authority  
PO Box 10041  
Wellington

Sent by email to: [submissions@ea.govt.nz](mailto:submissions@ea.govt.nz)

### **Under-Frequency Management: initiatives and changes to procurement plan**

1. Vector welcomes the opportunity to respond to the Electricity Authority's (Authority) consultation *paper Under-Frequency Management: initiatives and changes to procurement plan* dated 29 January 2013. Please see Appendix A for Vector's answers to the Authority's questions. No part of this submission is confidential and we are happy for it to be publicly released.
2. Vector supports the overall proposal to improve reliability of RMT modelling and the security of supply through higher resolution metering data. However, Vector **recommends** the Authority:
  - a) assess the risk that existing IR providers will exit the IR market and future IR providers will not enter the IR market due to the increased costs of providing higher resolution data;
  - b) provide that the costs of providing post-event meter data to 100ms resolution be borne by parties who pay for IR, as the proposal addresses a modelling issue that is intended to reduce the cost of IR, rather than compliance with IR dispatch requirements; and
  - c) ensure there is a means of distinguishing between load dropped by distributors and load dropped by load aggregators when assessing compliance.
3. Vector's contact person for this submission is:

Sally Ma  
Regulatory Analyst  
09 978 8284  
[Sally.Ma@vector.co.nz](mailto:Sally.Ma@vector.co.nz)

Yours sincerely,

A handwritten signature in blue ink that reads "B Girdwood".

Bruce Girdwood  
**Manager Regulatory Affairs**

## Format for submissions on the proposed operational changes

Question No.	Question	Response
Q1	What comments do you have on the proposal to shorten RMT simulation times using higher resolution post-event data from IR providers?	<p>Vector supports the overall aim to use better quality data to improve reliability of RMT modeling and the security of supply through higher resolution metering data.</p> <p>However, Vector considers that it cannot then be reasonably inferred that IR providers are best placed to provide such high resolution data, and should therefore bear its implementation costs.</p> <p>Ultimately, the higher resolution data is being sought to enable better modeling through its RMT tool, and therefore more efficient procurement of reserves. The higher-resolution data is not required for compliance purposes so it is inappropriate for the costs to fall on IR providers. Vector <b>recommends</b> that the costs for upgrading meters to provide 100ms data are allocated to those who pay for IR. This is reasonable as they are the parties who will benefit from any reduction in reserve costs to the System Operator.</p> <p>If the Authority concludes that the costs must be borne by IR providers, the Authority should be wary of the potential effects this might have on both current IR providers and potential IR providers. For instance, the costs of providing higher resolution data may cause some IR providers to rethink their participation in the market. At the same time, it may also hinder potential IR providers from entering the market. This risk has not been assessed as part of the CBA accompanying this consultation.</p> <p>Vector <b>recommends</b> that the EA consider these potential effects on the market as it progresses its proposal.</p>
Q2	What comments do you have on the proposal to model actual IL trip times, facilitated by higher resolution post-event data from providers?	As above Q1.
Q3	What comments do you have regarding the differing requirements for smaller scale FIR IL providers?	Vector <b>recommends</b> that all FIR providers should be subject to the same requirements as all operators should be

		operating to the same standard – i.e. 100ms. All parties get paid at the same rate for IL so it is not clear why different requirements should apply to different providers.
Q4	What are your views on the different costs of different resolution meters?	As above Q1.
Q5	What are your views on the expected costs of the proposed 100 ms testing arrangements?	Increased volumes of post-event data will require more storage capability. This will come at a cost.
Q6	What comments do you have on retaining the current approach on hot water load metering?	A key issue to be considered as part of this workstream is the potential impact of load aggregators on compliance monitoring. If distributors measure load dropped at the GXP or substation level, it will be challenging to distinguish between load dropped by the distributor and by any aggregator operating below the GXP or substation. Some form of reconciliation will be required. Vector <b>recommends</b> the Authority ensure a mechanism is in place to address this issue.
Q7	What comments do you have on the suggested transition periods?	Vector considers that the transition period should align with the new RMT model. However, we do not think that the proposed 1 year for implementation is a reasonable amount of time to allow parties to comply, because it will take considerable time and effort for distributors to make the necessary system changes within this timeframe. Vector <b>recommends</b> the Authority consider a more reasonable timeframe of 2-years, to allow for implementation.
Q8	Do you have any comments on the changes that are shown in the draft procurement plan in Appendix D?	Clause B47.2. should only apply to FIR only, not SIR. Vector <b>recommends</b> that the Authority amend accordingly.
Q9	Do you have any comments on the Authority's evaluation of the proposed changes? If not, what alternative would you propose and why?	No comment.
Q10	What comments do you have on the medium-term proposal to enable wind generators to provide FIR, if they have the capability to do so?	The paper does not provide much detail on the specifics of this proposal; more information is needed before Vector is able to make a judgment call on its value. However, Vector does support the Authority in undertaking work to scope out this initiative.
Q11	For those with wind generating	N/A

	capacity, would you envisage entering the FIR market, and if so, under what circumstances?	
Q12	What comments do you have on the initiative to increase the compliance of IL providers with dispatch quantity?	<p>Creating a maximum as well as a minimum compliance threshold for IL will indisputably increase the risk of non-compliance for an IL provider. IL providers will reasonably take steps to mitigate their risk of non-compliance.</p> <p>This could involve withdrawal from the market. Alternatively it could involve expensive system changes to make it more likely that load will only be dropped within a range.</p> <p>Perhaps most significantly, distributors would need to greatly increase the frequency of load drop tests to estimate how much load will be available to drop at any one time. We understand that previous load drop tests have created problems for the System Operator so an increase in testing may have undesirable implications.</p> <p>Overall, this is an issue with significant ramifications and Vector <b>recommends</b> that it is not taken any further forward without full engagement with stakeholders to identify the issues.</p>
Q13	Do you think that the Authority and System Operator should fast-track consideration of SIR metering requirements, or wait until the initiatives considering alternative reserve products have been completed?	Vector considers that any changes to SIR metering should be looked at in conjunction with FIR metering changes. This should include an assessment of the risk that parties may exit the IL market if the cost of compliance becomes too large.
Q14	What are your views on the longer-term UFM initiatives?	As above Q12.

Q15	What comments do you have on the CBA, the assumptions made, the methodology used or any comments on any parts of the CBA that could be potentially improved upon?	<p>The CBA does not include an assessment of the cost of a potential exit of participants from the IR market due to the increased costs.</p> <p>Further, some of the assumptions in the CBA are explained (e.g. the 50MW assumption in para E.1.18 and the 145/kW/year assumption in para E.1.22) but others are not. It is difficult to value the results where the input assumptions are not justified. For example, paragraph E.1.59 assumes that it takes 1.5 hours to restore the system after the AUFLS load, that the VOLL is \$10,000/MWh and that the system load is 3,200MW. No justification is set out for the use of these assumptions.</p>
Q16	Do you have any views on the relative priorities, and any information that might assist us to undertake an initial assessment of costs and benefits (to assist us with our prioritisation of these projects in the work plan).	As above Q1.
Q17	Do you have any other comments in relation to this part of the proposal?	No comment.