

21 April 2023

Submissions - FSR

Electricity Authority

PO Box 10041

Wellington 6143

Consultation on Future Security and Resiliency - Review of Common Quality Requirements of Part 8 - Submission

Thank you for the opportunity to submit on these issues and congratulations for the good work done by the FSR group.

No part of this supplementary submission is confidential and I am happy for all of it to be published.

This submission:

- Supports the first principles approach taken by the FSR group in identifying underlying issues;
- Agrees with all the the issues identified both as real issues and as high priority to address;
- Suggests the order they are presented in the paper is a reasonable starting point for prioritisation within the issues identified; and
- Suggests some coordination with the MDAG work on demand-side flexibility resources may be of value.

Prioritisation within the Issues Identified - Frequency Control Issues Higher Priority as Likely to be Higher Cost to Resolve

Although I agree that all issues identified are high priority it may still be necessary to prioritise the work within the identified issues. In which case I suggest the order the issues are presented within the paper, with frequency control issues before voltage control, before harmonics and code ambiguity issues, is a useful starting point.

Frequency control ancillary services have historically been more expensive to procure than voltage control. And typically voltage control or harmonic control

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solutions are usually cheaper to operate than frequency control. So as an overall priority frequency control issues should probably be addressed first.

Coordination with MDAG DSF Work - Providing Financial Incentives for DSF Dispatch May Help Identify Scope of Embedded Inverter Resources

Some of the issues, e.g. issue 6, relate to lack of visibility of embedded inverter based resources. Some of these embedded inverter based resources may also be able to provide valuable demand-side flexibility (DSF) services as identified by the MDAG work on DSF. Part of MDAG's DSF work is looking at the financial incentives for parties to offer these resources into the market. If they are offered this may help get a better understanding of the quantity present in real time. So the MDAG work may help this work. However, the MDAG work doesn't currently differentiate between inverter based and non-inverter based resources. This differentiation matters from a common quality viewpoint, as identified by this paper. Therefore there may be merit in the FSR group coordinating with the MDAG work of these two work streams to identify synergies. Such as having DSF offer information differentiate between inverter and non-inverter DSF resources, and using offer information to understand the quantity of inverter based embedded resource present in real time. This particular approach may not prove to be practical but there may still be merit in coordinating these workstreams.

Response to specific questions raised in consultation document

<p>Q1. Do you agree with the description of the first common quality issue and that addressing it should be a high priority? If you disagree, please provide your reasons.</p> <p>Q2. Do you agree with the description of the second common quality issue (ie, first voltage-related issue) and that addressing it should be a high priority? If you disagree, please provide your reasons.</p> <p>Q3. Do you agree with the description of the third common quality issue (ie, second voltage-related issue) and that addressing it should be a high priority? If you disagree, please provide your reasons.</p> <p>Q4. Do you agree with the description of the fourth common quality issue (ie, third voltage-related issue) and that addressing it should be a high priority? If you disagree, please provide your reasons.</p> <p>Q5. Do you agree with the description of the fifth common quality issue and that addressing it should be a high priority? If you disagree, please provide your reasons.</p> <p>Q6. If you are a distributor, what is your experience of asset owners sharing information with you for network operation purposes?</p> <p>Q7. Do you agree with the description of the sixth common quality issue and that addressing it should be a high priority? If you disagree, please provide your reasons.</p> <p>Q8. Do you agree with the description of the seventh common quality issue and that addressing it should be a high priority? If you disagree, please provide your reasons.</p> <p>Q9. Do you consider there to be other high priority common quality issues not identified in this paper that are occurring or that you expect to occur because of:</p> <ol style="list-style-type: none"> the uptake of inverter-based resources, and/or how the Code enables different technologies? 	<p>I agree with the issue as described. The issue has been around for sometime and increases in inverter based resources will exacerbate the issue.</p> <p>I agree with the description of the issue and that addressing it should be a high priority.</p> <p>I agree with the description of the issue and that addressing it should be a high priority.</p> <p>I agree with the description of the issue and that addressing it should be a high priority.</p> <p>I agree with the description of the issue and that addressing it should be a high priority.</p> <p>Not a distributor.</p> <p>I agree with the description of the issue and that addressing it should be a high priority. I note if such resources are offered into the market, as DSF resources, as proposed by MDAG, this may, in part, help understand the real time scope of this issue.</p> <p>I agree with the description of the issue and that addressing it should be a high priority.</p> <p>No.</p>
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Thank you again for the opportunity to submit and I hope you will consider this submission and that it is helpful.

Regards

Neil Walbran

Managing Director