

12 August 2025
Electricity Authority
1 Level 7, ASB Bank Tower
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Wellington

Introduction

Manawa Energy welcomes the opportunity to provide a submission to the Electricity Authority on its proposed changes to the common quality-related information code. Manawa Energy's views and questions are covered below in the body of this submission, with answers to the Authority's specific contained in Appendix A.

Manawa Energy, a wholly owned subsidiary of Contact Energy, owns and operates a diverse portfolio of 41 power stations across 25 hydro-electric power schemes, supplying around 5% of New Zealand's electricity needs. Manawa also jointly owns and operates King Country Energy's six hydro-electric power stations. Approximately 60% of this combined generation portfolio is connected to ten different distribution networks across New Zealand, which makes Manawa New Zealand's largest distributed generation portfolio, with multiple stations operating successfully for more than 100 years.

Manawa Energy has made previous submissions Part 8 code amendments to the Authority. Those submissions have been backed up with examples of various generating plant types (for example, asynchronous and synchronous plant), machine voltage control types (from none to automatic voltage controllers). This submission should be read in conjunction with previous submissions given the overlap in subject matter.

Common quality information clarification

Manawa agree with the need to have the correct information, and the intent of the proposed code amendment has moved somewhat towards this. However, there are several aspects of the Code amendments we do not agree with, some we have concerns with and some we seek further detail and clarification on.

Key Points

1. We disagree with the requirement for High-Speed Data monitoring as this will be a significant cost to Manawa, with little benefit.
Specifically:
 - a. The estimated cost included in the proposal of \$20,000-\$30,000 per station significantly understated.
 - b. No time frames for implementation have been provided, Manawa anticipates this will be a long process and will require considerable coordination between the asset owner, the system operator and Transpower.
 - c. There will be significant cost to the asset owners, to design, install commission and maintain. We estimate the cost likely to be plus \$100,000 per unit in the \$5 – 10 million across the fleet.

- d. Manawa see that this is just adding cost to the asset owner, and it is not clear that this will result in a net benefit for consumers.
 - e. How will stations with asynchronous machines be treated under these requirements?
- 2. The amendment is silent on legacy clauses for existing stations and if these arrangements will be consistent with the previous code amendments that *do* have legacy clauses for existing generation.
- 3. Sharing encrypted models from other asset owners when under-taking fault ride through modelling. We see this as a challenge and if there is an issue identified with another asset owner system how will this be managed?
- 4. Confidentiality protections, discussed and proposed in the amendment and the legal requirement for an OEM to provide their intellectual property. This could result in legal issues for the asset owner if they comply with the requirements contained in the proposal. Has the Authority sought legal advice on this topic? We note the System Operator has been working on NDA's with OEMS and developers, with varying results.
- 5. Manawa has concerns with the requirements for routine testing:
 - a. Do high-speed data requirements replace the need to confirm performance (the 10 yearly testing requirements)?
 - b. The cost for this routine testing will remain at \$70,000 - \$100,000 per generator including model revalidation. At a total cost of \$2-5 million.
 - c. The Event Data in lieu of testing is potentially an opportunity that and could offset the requirement to retest and remodel and therefore reduce the maintenance, cost estimates above
- 6. The CACTIS as presented is a proposed version and still subject to consultation in September 2025. Manawa agree with removing the CACTIS document and details out of the Code, however, it is important that clear input and direction from the asset owners and affected parties is considered in the submission phase as the cost and impacts are potentially significant.
- 7. The code amendment proposal does not specifically cover asynchronous machines; how will these be treated under the proposal?
- 8. As discussed in previous our submissions the definition of station and generators need to be clarified. This is covered in Appendix A of the CACTIS however, it would be useful to confirm this description is sufficient to cover all situations?

Kind regards,

Mike Moeahu
Principal Generation Engineer

Appendix A - Promoting reliable electricity supply: A Code amendment proposal on common quality-related information

Submitter: Manawa Energy Promoting reliable electricity supply: A Code amendment proposal on common quality-related information	
Q1. Do you support the Authority's proposal to clarify the Code's common quality information requirements and describe the technical specifications in a document incorporated by reference in the Code?	<p>We support the need to be clear with requirements and are comfortable with the technical detail being included in a document incorporated by reference, however, we emphasise the need for the System Operator to run robust consultation processes when implementing and changing the CACTIS (with an appropriate level of oversight from the Authority).</p>
Q2. Do you have any comments on the drafting of the proposed amendment?	<p>We do not agree with many assumptions, especially around the cost/benefit analysis that underpin the drafting of the proposed amendment. Specifically:</p> <ol style="list-style-type: none"> 1. The cost to implement high speed monitoring communication to the System Operator will be expensive. Particularly where there are no connections to the SO currently. The cost to install and maintain will be significant and Manawa's case and fleet will be in the millions of dollars. Also, the time to have this installed will not be quick and we suggest that for existing plant a legacy clause put in place. 2. As this is a benefit to the SO will there be any contribution to this proposed data transfer? 3. Confidentiality protections for the OEM's are beyond the Asset owners' control and may put us in conflict with the OEMs. We believe the SO has significant challenges with NDA's and the OEMs IP. Even with the proposed confidentiality protections we may not have any legal avenues to progress this and will this prevent approvals with the SO. We believe there will be a legal precedent required to secure OEMS IP. 4. We do not agree with the cost benefit evaluation assumption. <i>"While some asset owners may incur reasonably material compliance costs, these are proportionate to corresponding but larger operational benefits and are aligned with international practice."</i> 5. The we do not agree with the estimated costs in section 6 Regulatory Statement. We believe these are all understated and will be significantly more in our opinion. <p>For example:</p>

	<ul style="list-style-type: none"> a. 6.13 - synchronous generators additional fixed cost for compliance of \$500 per generating station. b. 6.16 - The vagueness on the long-term benefits on costs to achieve. <p>6. Regarding Schedule 8.3 Technical Codes:</p> <ul style="list-style-type: none"> a. Section 7 appears to not allow for tuning or component replacement / refurbishment without being classed as a new asset (and therefore removing any legacy clauses) b. It would be useful to get clarification on how this, and any legacy clauses get applied. c. 7.2 (c) Installation of high-speed monitoring specified in CACTIS. This will be expensive for existing plant that it is not now installed, and Manawa's case will a considerable time to implement. <p>Note: there is an opportunity if this was agreed that the high-speed data should prove performance and not require future testing for frequency and voltage response in events.</p>
Q3. Do you see any unintended consequences in making such an amendment?	Covered above
Q4. Do you agree with the objective of the proposed amendment? If not, why not?	Yes, we agree with the intent but have concerns about the proposed amendment and the assumptions that support it.
Q5. Do you agree the benefits of the proposed amendment outweigh its costs? Please provide evidence to support your view. This may include incremental benefits and costs associated with the draft CACTIS	No, we don't agree with some of the assumptions on cost benefit due to being vague and understated. Comments and recommendations and outlined above.
Q6. Do you agree the proposed amendment is preferable to the other options? If you disagree, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.	<p>Yes, we agree in principle.</p> <p>The increase in protection equipment is reasonable but the cost of installing faster monitoring exceeds the benefit. That is the asset owner will still pass this on to the consumer as we cannot absorb the costs as it is ongoing.</p>
Q7. Do you agree the Authority's proposed amendment complies with section 32(1) of the Act?	No comment

Q8. Do you have any comments on the drafting of the proposed amendment?	Covered in other responses.
Q9. Do you have any comments on the draft Connected Asset Commissioning, Testing and Information Standard?	<p>Proposed CACTIS:</p> <p>We acknowledge the CACTIS is a proposal at this stage and will not be released until later in the year for review. we make the following comments:</p> <ul style="list-style-type: none"> d. We conceptually agree the CACTIS proposal overall is an improvement and provides clarity for the asset owners. e. There are certain details of the standards that will be expensive and take a long period to implement. f. We cannot agree to a blanket approval for CACTIS at this stage until we have a better understanding of what all the requirements mean in terms of implementation, ongoing management and costs. g. Synchronous generators are only considered in the standards and the new code, but the code is silent on asynchronous (induction) generators. Mentioned frequently in model requirements. h. Sharing encrypted models from other asset owners raises several issues around how this information sharing will be managed appropriately. We are concerned about issues related to our assets or information on these assets which is out of our direct control or influence. i. Synchronous generating Units: 7.15 – 7.18 - Running new models every 10 years assumes that when performance testing, the parameters have changed if there is no change in performance the machine is stable. Why would you rerun the model at a significant cost to undertake these tests per unit. Tests and model will be between \$50,000 - \$100,000 per unit. The cost to Manawa could be in the range \$2 – 5 million across the fleet. g. Event Data in lieu of testing is a good initiative and will offset the need to run models. There is a challenge with the station versus the generator should be by units and not the station. Also not just be inclusive of the 10 MW – 30 MW range. h. For existing generation, including embedded generation will require owners of this generation to supply indications and measurements. In certain, cases this will already be supplied and in others it will not be.

	<p>If not, there will be costs to make this available and maintain.</p> <p>i. Chapter 9: High Speed Data Requirements: On our existing assets we will need to install this equipment and communication to connect to the grid owner. This could be up to or more \$100,000 per generator and / or station. For the number of stations and generators this could be in the range of \$5 – \$10 million or more. We have expressed this in previous submissions. Then there is the time to order equipment, install and commission. This suggests the benefits do not outweigh the costs (noting: If the data was able to prove performance and retesting can be deferred particularly on event reviews this may increase the benefits).</p>
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