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To: The Electricity Authority
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Addressing common quality information requirements – Genesis Energy submission

Genesis Energy Limited (**Genesis**) welcomes the opportunity to comment on the Electricity Authority's (**the Authority**) *Addressing common quality information requirements* consultation paper. We support the Authority undertaking this work as part of its Future Security and Resilience programme to ensure common quality requirements remain fit for purpose, consistent with the Authority's statutory function to promote system reliability for the long-term benefit of consumers.

We appreciate the opportunity to comment on the Authority's early draft proposed Connected Asset Commissioning, Testing and Information Standard (CACTIS). See our comments on specific chapters below (noting this is an early draft), as well as our response to the Authority's consultation questions in the table below. One overarching comment we have is that we are concerned there is an insufficiently clear distinction between existing and new asset requirements. This ambiguity could cause confusion regarding the obligations applicable to new assets. To address this, we suggest the Authority,

- ensure there is a clear differentiation between requirements on new vs existing assets, using consistent and unambiguous terminology.
- clarify the process and timeframe for existing assets to transition ('grandfather') to the new requirements, such as requirements relating to high resolution data. To avoid creating an unnecessary compliance burden for industry, we urge the Authority to adopt a phased implementation approach and to give industry sufficient lead time to comply with the new requirements. As with the Code, we suggest the Authority also clarify where exemptions and/or dispensations may be granted from complying with CACTIS.

Feedback on draft Connected Asset Commissioning, Testing and Information Standard (CACTIS)

Chapter 1: Time Frame Requirements

Ambiguity of timing requirements: The chapter does not clearly specify whether the timing requirements apply to new assets or also includes existing assets. As currently written, the chapter appears to assume the requirements are applicable only to new assets, but this is not explicitly stated. It would be helpful to clarify whether the timing requirements apply exclusively to new assets or if they also affect existing assets undergoing upgrades or modifications.

Chapter 3: Asset Capability Statement Requirements

As for Chapter 1, this chapter appears to assume the requirements are applicable only to new assets, but this is not explicitly stated. Please clarify.

Chapter 4: Modelling Requirements

The majority of the specified requirements do not explicitly indicate whether they apply to existing installations and/or new developments. This lack of definition is likely to introduce significant uncertainty for international vendors supplying critical systems such as governors and excitation equipment. Such ambiguity increases the risk of scope misalignment and is likely to drive up costs, particularly for future retrofitting or upgrades of existing assets. These costs will fall on asset owners and likely be ultimately passed through to end users.

The Code amendment should clearly define the requirements for existing assets versus new assets to eliminate any ambiguities.

Chapter 4: Modelling Requirements

Genesis welcomes the inclusion of Section 4.5, which clarifies the modelling software package requirements for synchronous generating units versus inverter-based resources.

Chapter 5: Connection Study Requirements

As noted above, the majority of the specified requirements do not explicitly indicate whether they apply to existing installations or new developments.

Chapter 7: Testing Requirements

Section 7.3(a) requires that the ACS be updated within one month of test completion. This may present a challenge, as the model validation and associated report (M2) will not be available until three months after the test concludes. It will also be necessary to clarify whether the Code will require a draft ACS update to be submitted within 1 month, followed by a final version within 3 months.

Chapter 8: Operational Communication Requirements

Genesis suggests some clarifications to **Section 8.25 Table B** regarding **Frequency Control Operation Mode**. Clarification is required regarding the term "Frequency Control Operation Mode." What exactly is the proposed requirement in the Code? We note a governor typically operates in one of two modes:

1. **Power Control Mode** – This mode maintains system frequency in accordance with the droop setting, allowing the generator to respond automatically to frequency deviations. This is the default mode for all governors.
2. **Gate Control Mode** – A manual operating mode where the gate or valve position is fixed, and no automatic frequency response is provided.

Chapter 9: High Speed Data Requirements

Proposed Chapter 9 requesting additional data poses significant challenges at this stage, as compliance would necessitate considerable redesign efforts. This will require re-work and additional cost to the newly installed High Speed Data Recorders. Genesis only recently invested in the installation of high-resolution recording capability at sites to meet the 2023 procurement plan requirements for ancillary services. The specification required 0.1 second resolution, Genesis installed 0.04 second resolution to comply. However, the proposed draft CACTIS would require 0.02 second resolution. All installations across the Genesis power stations were completed in 2024, and the project has since reached formal closure.

Section 9.4 Table K requires some clarifications.

- **Required measurement of Station Active Power (MW):** Is it Gross or Net MW per phase?

- **Required measurement of Station Transformer HV Voltage (kV):** The majority of generators connected to the Transpower's high-voltage (HV) bus are not equipped with HV voltage transformers (VTs). Installing these would require substantial modifications to the primary plant, resulting in a significant capital investment for existing asset owners.

Yours sincerely,



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Consultation Questions – Genesis Energy's response

Question	Genesis response
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?	Yes, we agree clarity is desirable and it is important for the System Operator to have necessary common quality information, consistent with the Authority's statutory function to promote system reliability for the long-term benefit of consumers.
Q2. Do you have any comments on the drafting of the proposed amendment?	See above – we have provided specific comments on the draft CACTIS document. We are comfortable with the Authority's proposal to utilise the CACTIS as a document to be incorporated by reference in the code, and with the proposal that the System Operator be required to follow the process for amending the document and consulting on those amendments is specified in Part 7 of the Code.
Q4. Do you agree with the objective of the proposed amendment? If not, why not?	Yes.
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.	Provided the CACTIS is revised in line with our feedback, yes. We note the proposal will materially increase compliance costs for participants.
Q9. Do you have any comments on the draft Connected Asset Commissioning, Testing and Information Standard?	See above. One additional question we have is whether the ability to apply for exemptions and dispensations for obligations specified in the code will also extend to the CACTIS? Especially given the proposed migration of code requirements to the CACTIS. We propose that the ability to apply for exemptions and dispensations be migrated to the CACTIS. In our case, Genesis has recently invested in new equipment and improved our systems and processes, and this means we could be disadvantaged if certain of the proposed CACTIS provisions are applied to our existing assets.

