MINUTES OF CQTG MEETING 13

Held on Monday 20 October 2025, 9:00am – 4:05pm
Electricity Authority office – Wellington

Members present:	Grant Benvenuti (Chair - acting), Graeme Ancell, Matt Copland, Brent Duder-Findlay, Barbara Elliston, Brad Henderson, Stuart Johnston (online), Stuart MacDonald, Mike Moeahu, Rob Orange, Jon Spiller, Philip Wong Too.
Apologies:	Sheila Matthews.
In attendance:	Phillip Beardmore, Otis Boyle, Rob Mitchell, Amelia Tan, Nyuk-Min Vong (Vong), Kevin Wronski (12:04pm - end).

1. Introduction

1.1 The Chair welcomed attendees to the thirteenth meeting of the Common Quality Technical Group (CQTG). A quorum was established, with eleven of the twelve members present.

1.2 The Chair welcomed Philip Wong Too, who recently joined the CQTG. This is Philip's first meeting since joining the CQTG.

1.3 The purpose of this meeting was to seek feedback from the CQTG on the summary of feedback from submitters and proposed next steps for the following consultation papers:

(a) Promoting reliable electricity supply: Frequency-related Code amendment proposals

(b) Promoting reliable electricity supply – a voltage-related Code amendment proposal

(c) Promoting reliable electricity supply – a Code amendment proposal on common quality-related information

(d) Part 8 Code Amendment – Connected Asset Commissioning, Testing and Information Standard (CACTIS)

2. Frequency-related Code amendment proposals

2.1 Rob M presented the section on the frequency-related Code amendment proposals. Key points from the CQTG's discussion included:

(a) Agreement from the CQTG that generating stations 10 megawatts (MW) and above but less than 30MW (10MW-<30 MW) should be required to

complete the same commissioning testing as generating stations that are 30MW and above. This is because the incremental cost of doing so relative to commissioning tests tailored for 10MW-<30MW generating stations is expected to be minimal. The CQTG noted that commissioning testing is lower cost than commissioning modelling and model validation. For routine testing, the CQTG confirmed its earlier view that generating stations between 10MW-<30MW should be able to choose between high-speed monitoring or routine testing to prove compliance with the frequency-related asset owner performance obligations (AOPOs).

(b) Agreement from the CQTG that the system operator should accept a comparison of a generating station's routine test results with previous test data for the generating station (ie, from commissioning tests or from prior routine testing), to prove the performance of the generating station is unchanged. The CQTG recommended this should apply to all generating stations 10MW and above (ie, including generating stations that are 30MW and above).

(c) Agreement from the CQTG that a grandfathered generating station should be permitted to increase its capacity by a maximum of 5MW over the station's capacity at the time of grandfathering, before the generating station loses its grandfathered status. The CQTG agreed this provision should also apply to the voltage and common quality information requirements Code amendments.

(d) Agreement from the CQTG to retain the proposed uniform dead band of ±0.1%, but also to allow asset owners to set a wider dead band with the agreement of the system operator, acting reasonably. This change is in response to submitters that recommended setting technology-specific dead bands, which submitters believed would be lower cost than having to rely on the dispensation process, with many applications expected. The CQTG noted a generating site may use equipment from various original equipment manufacturers (OEMs), which would complicate the Code defining what is meant by 'inherent dead band'. The CQTG also recommended excluding geothermal generating technologies from the dead band requirement since they are unlikely to ever be able to comply.

(e) A recommendation from the CQTG to review and consider common quality requirements for the demand-side. Large demand-side connections (eg, data centres) are realistically 2-3 years away from connecting to New Zealand's power system, so the CQTG recommends the Authority consider this matter as a priority.

Action Item **13.1: Authority to consider incorporating the CQTG's feedback into the frequency-related decision paper.**

3. Voltage-related Code amendment proposal

3.1 Phillip presented the section on the voltage-related Code amendment proposal. Key points from the CQTG's discussion included:

(a) Agreement from the CQTG that the default voltage support obligation should apply:

(i) when voltage at the embedded generating station's point of connection with the local network is within the relevant 11kV-110kV voltage range set out in clause 8.23 of the Code; and

(ii) at all times when the embedded generating station is electrically connected and synchronised, which aligns with clause 8.23 of the Code.

(b) Recommendations for the voltage decision paper to include:

(i) an explanation regarding the basis for the ±33% voltage support range.

(ii) a note that the Authority is going to review the wording of clause 8.23 in the upcoming work on the AOPOs for hybrid plants and on battery energy storage systems (BESS) in 'idle' mode.

(c) Agreement from the CQTG that:

(i) the incremental cost of the default voltage support proposal over the status quo will not be material because participants are already liaising, as appropriate, around voltage support/reactive power support/power factor requirements on new embedded generation connections. However, there would be a benefit in improving the consistency of default obligations across distributors.

(ii) the system operator should accept 10-<30MW generating stations completing a single machine infinite bus test, using the fault ride-through curve in the Code, as sufficient proof of the generating station's compliance with the Code's fault ride-through requirements.

Kevin Wronski joined the meeting at 12:04pm.

(iii) the Code should have a new defined term, 'maximum continuous output', which can be used to determine the 10MW threshold at which voltage, frequency and common quality information requirements apply. The Authority should use as the basis for this new definition the definition of 'maximum continuous output' contained in the asset capability statement.

(d) An action for the Authority to consider removing the definition of 'maximum continuous rating' from the Code, as it is currently used only in Technical Code C, which is proposed to be transferred to the proposed CACTIS. The system operator has used 'maximum net capacity' in the CACTIS instead.

Action Item 13.2: Authority to consider incorporating the CQTG's feedback into the voltage-related decision paper.

4. Information-related Code amendment proposal

4.1 Otis presented the section on the information-related Code amendment proposal. Key points from the CQTG's discussion included:

(a) an update to the CQTG that Authority and system operator staff had met with various OEMs, who advised that they were generally comfortable with the system operator not using non-disclosure agreements and instead relying on confidentiality provisions in the Code. Some would seek legal confirmation before confirming their view.

(b) emphasis on the importance of getting confidentiality arrangements right to avoid OEMs withdrawing from the New Zealand market, given our country's relatively small presence in the global market.

(c) the need to define the accuracy tolerances of a generic model, and to clarify the model's intended use (eg, testing interactions with other plant controllers). The system operator confirmed that generic models are typically used for frequency and voltage studies published on the Authority's Electricity Market Information (EMI) website.

(d) the need for a clear process when asset owners are required to undertake studies beyond frequency and voltage (eg, in complex connection scenarios).

(e) a recommendation from the CQTG to link the fault ride-through study obligations to AOPOs and generating station size.

(f) the system operator's view that the number of study cases could potentially be reduced for frequency and voltage tuning obligations for 10MW-<30MW generating stations.

(g) discussion on the threshold at which asset modifications require updated modelling. The CQTG agreed an asset owner should advise the system operator of any changes to an asset's capability that the asset owner considers material, and the system operator should decide, acting reasonably, whether the asset owner needs to update its modelling for the asset.

(h) regarding Transient Security Assessment Tool (TSAT) modelling, the system operator is aware that there are at least two consultants in New Zealand that are currently capable of performing TSAT model validation. However, the cost of a TSAT licence is estimated between $100,000-$150,000. The CQTG agreed that the system operator should hold a TSAT licence and engage consultants to perform TSAT modelling on behalf of asset owners. This was seen as a more efficient approach and would address OEM concerns about sharing models with parties other than the system operator.

Action Item **13.3: Authority to consider incorporating the CQTG's feedback into the information-related decision paper.**

5. CACTIS

5.1 Kevin and Vong presented the section on the CACTIS. Key points from the CQTG's discussion included:

(a) agreement from the system operator to include the relevant grandfathering clause from Part 8 of the Code in each CACTIS chapter.

(b) agreement from the system operator to clarify that 'asset group 1' referred to in the slides includes direct connect consumers, and to refine the description of 'asset group 3' to plainly state what type of assets it typically includes.

(c) a recommendation from the CQTG to incorporate into the CACTIS that the system operator must 'act reasonably' when requesting information from asset owners.

(d) confirmation that CACTIS maintains existing Code obligations, particularly regarding commissioning plan requirements and the materiality test.

(e) discussion on the cost imposed on asset owners if the system operator requires a TSAT model. In overseas jurisdictions that don't use real-time tools, they can rely on phasor measurement unit (PMU) data. However, this approach is very expensive. Bringing PowerFactory into the system operator's control room would also be very expensive, and time consuming. Also, using constraint limits derived from offline tools (eg, PowerFactory and Power Systems Computer Aided Design (PSCAD)) will lead to overly conservative values, which may impose unnecessary costs on generators.

(f) discussion on future modelling approaches, including the potential for a unified system model and the limitations of current tools like TSAT and PowerFactory.

(g) the system operator being aware that there will be an oscillatory instability problem on our power system at some point in the future. The system operator is already upskilling and trying to get better information into the control room's real-time tools in order to better manage an oscillatory instability problem.

Action Item	**13.4: System operator to consider incorporating the CQTG's feedback into the CACTIS.**

6. AOB

6.1 Due to time constraints, the CQTG will reconvene within the next few days to consider the remainder of the system operator's CACTIS presentation.

Action Item	**13.5: Authority to set up an online meeting to consider the remainder of the system operator's CACTIS presentation.**

6.2 Minutes and actions from the 12th CQTG meeting will be discussed at a future meeting.

6.3 The next CQTG meeting has been scheduled for Wednesday 3 December 2025. This will be a short, online meeting to discuss the second tranche of Code amendment proposals covering Issues 6 (information) and 7 (Code terminology).

6.4 The meeting closed at 4:05pm.

Summary of outstanding action points

No.	Action	Who	Status
5.15	• Authority to consider the appropriateness of including in the Code a new definition 'generating system'. **Update:** this has been included in the hybrid stations/BESS AOPO work.	Authority	In progress
7.2	• Voltage issue: Authority to consider clarifying the terms "synchronised", and "available for dispatch" in clause 8.23 of the Code.	Authority	In progress
7.4	• Voltage issue: Authority to consult distributors (likely via Electricity Networks Aotearoa (ENA)) on a ±33% net reactive power range for generators connected to distribution networks, explaining the reasons for this range when doing so.	Authority	Closed
7.7	• Voltage issue: Authority to consider submitters' concerns about the potential costs of Option 2 as part of evaluating the option's benefits and costs.	Authority	In progress
7.12	• Harmonic issue: Authority to develop harmonics options 1 and 2, discuss with the harmonics sub-group, and present a draft options consultation paper to the CQTG in Q1 2026.	Authority	In progress
8.11	• Authority to elaborate (under FSR-007 in the first tranche of Code amendment proposals covering Issues 6 (information) and 7 (Code terminology)) that further clarification of how clauses 8.17 and 8.19 would apply to BESS will be provided in the DIBR. **Update:** this has been included in the hybrid stations/BESS AOPO work rather than the DIBR	Authority	In progress
9.6	• Authority to further develop Alternative 1 for the co-ordination of	Authority	Not started

	reactive power flows through GXPs, to establish a bilateral information-sharing framework between the system operator and distributors.		
9.9	• Authority to clarify the definition of "idle" in relation to BESS AOPOs, and to clarify the voltage AOPOs when in standby mode. **Update:** this has been included in the hybrid stations/BESS AOPO work.	Authority	In progress
12.1	• Authority to consider an external peer review on the system strength work.	Authority	Not started
12.2	• Authority to publish the minutes from CQTG meetings 9, 10 and 11.	Authority	Complete
13.1	• Authority to consider incorporating the CQTG's feedback into the frequency-related decision paper.	Authority	
13.2	• Authority to consider incorporating the CQTG's feedback into the voltage-related decision paper.	Authority	
13.3	• Authority to consider incorporating the CQTG's feedback into the information-related decision paper.	Authority	
13.4	• System operator to consider incorporating the CQTG's feedback into the CACTIS.	System operator	
13.5	• Authority to set up an online meeting to consider the remainder of the system operator's CACTIS presentation.	Authority	

Confirming the CQTG has approved these meeting minutes are a true and correct record.

Dated this 29 day of January 2026

Grant Benvenuti

Chair (Acting)