

**ELECTRICITY INDUSTRY PARTICIPATION CODE
METERING EQUIPMENT PROVIDER AUDIT REPORT**

For

DELTA UTILITY SERVICES LTD

Prepared by: Brett Piskulic – Veritek Limited

Date audit commenced: 5 May 2021

Date audit report completed: 2 July 2021

Audit report due date: 02-Jul-21

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EXECUTIVE SUMMARY

Delta Utility Services Ltd (Delta) is a Metering Equipment Provider (MEP) and is required to undergo an audit by 2 July 2021, in accordance with clause 16A.17(b).

The audit identified eight areas of non-compliance. The main areas of non-compliance are as follows:

- certification cancelled and registry not updated for three ICPs where low burden was not addressed,
- monitoring of timekeeping devices has not been conducted for three ICPs,
- some registry information incomplete or incorrect,
- the registry is not always updated as soon as possible, and
- sample not representative of the group of meters certified using the statistical recertification method.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The future risk rating provides some guidance on this matter and recommends an audit frequency of six months. After reviewing Delta's responses, I agree with this recommendation.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Participants to Provide Accurate Information	2.5	Clause 11.2 and Clause 10.6	Registry not always updated as soon as practicable by Delta.	Moderate	Low	2	Identified
Changes to registry records	4.10	3 of Schedule 11.4	223 records not updated to the registry within 10 business days.	Weak	Low	3	Identified
Accuracy of registry records	6.2	7 (1), (2) and (3) of Schedule 11.4	Some registry records incomplete or incorrect.	Moderate	Low	2	Identified
Correction of registry errors	6.3	6 of schedule 11.4	Corrections not made within five business days.	Moderate	Low	2	Identified
Cancellation of certification	6.4	20 of Schedule 10.7	Certification cancelled, and registry not updated within 10 business days for three ICPs with low burden.	Strong	Low	1	Identified

Timekeeping Requirements	7.10	23 of Schedule 10.7	Three metering installations with time keeping errors are not checked every 12 months.	None	Low	5	Identified
Statistical sampling	7.13	16(1) of Schedule 10.7	Sample not representative of the group of meters certified using the statistical recertification method.	Weak	Medium	6	Disputed
Category 1 inspections	8.1	45 of Schedule 10.7	Category 1 inspection report for 2020 not provided to the Authority by 1st April 2021.	Moderate	Low	2	Cleared
Future Risk Rating						23	
Indicative Audit Frequency						6 months	

Future risk rating	1-2	3-6	7-9	10-19	20-24	25+
Indicative audit frequency	36 months	24 months	18 months	12 months	6 months	3 months

RECOMMENDATIONS

Subject	Section	Clause	Description
Burden measurement	7.2	10.38(b)	Re-visit one metering installation to confirm the burden by conducting measurements at the CTs.

ISSUES

Subject	Section	Recommendation	Description
		Nil	

1. ADMINISTRATIVE

1.1. Exemptions from Obligations to Comply with Code (Section 11)

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

Section 11 of the Electricity Industry Act provides for the Electricity Authority to exempt any participant from compliance with all or any of the clauses.

Audit observation

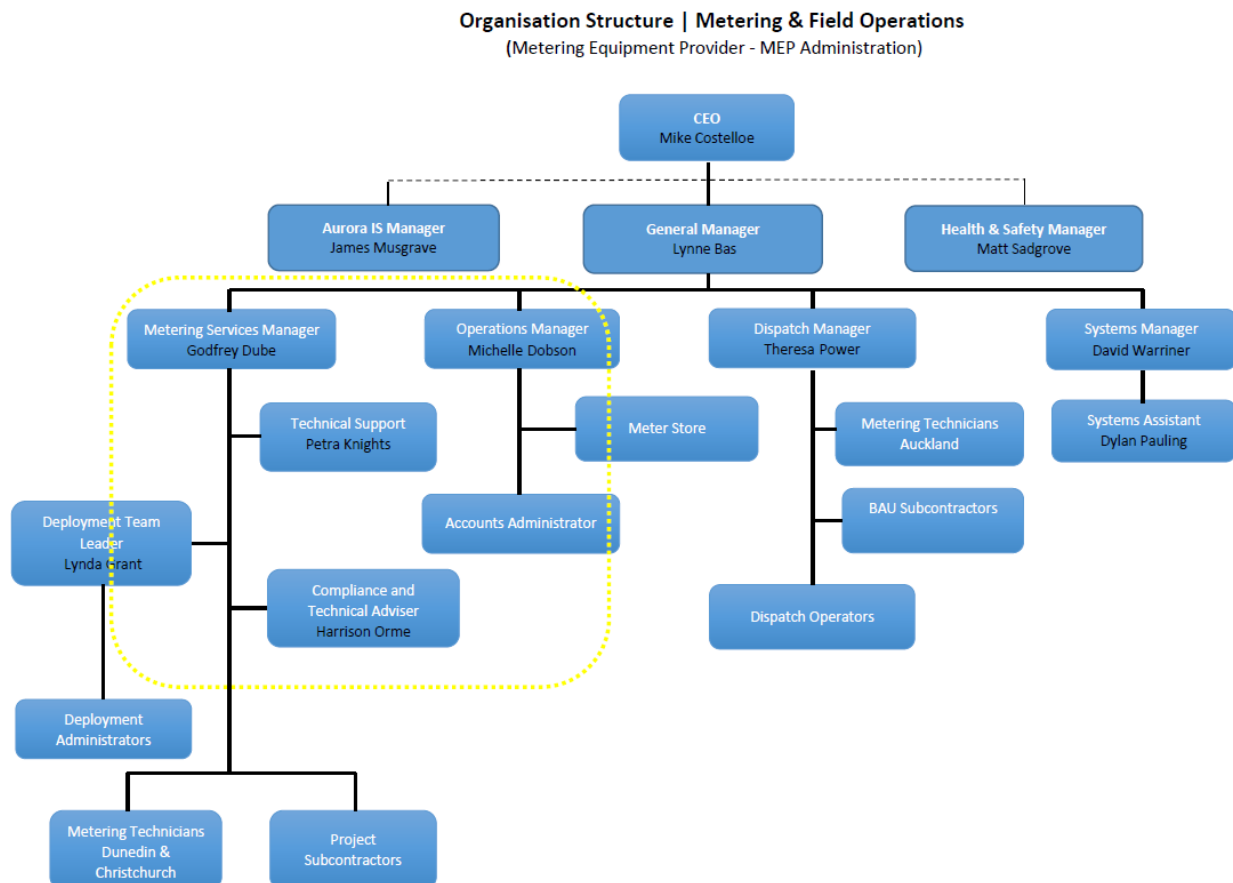
I checked the Electricity Authority website and I confirm there are no exemptions in place.

Audit commentary

I checked the Electricity Authority website and I confirm there are no exemptions in place.

1.2. Structure of Organisation

Delta's organisational structure was provided for the audit:



1.3. Persons involved in this audit

Auditor: Brett Piskulic

Veritek Limited

Electricity Authority Approved Auditor

Delta personnel assisting in this audit were:

Name	Title
Godfrey Dube	Metering Services Manager - Delta
Harrison Orme	Compliance and Technical Support - Delta
Jon Stone	Commercial Manager – Aurora Energy
Simeon Dwyer	Network Billing Analyst – Aurora Energy
Graham Moore	Works Co-ordinator – Aurora Energy

1.4. Use of Agents (Clause 10.3)

Code reference

Clause 10.3

Code related audit information

A participant who uses a contractor

- *remains responsible for the contractor's fulfillment of the participants Code obligations*
- *cannot assert that it is not responsible or liable for the obligation due to the action of a contractor,*
- *must ensure that the contractor has at least the specified level of skill, expertise, experience, or qualification that the participant would be required to have if it were performing the obligation itself.*

Audit observation

I checked if Delta uses agents to conduct any of its MEP activities.

Audit commentary

Delta engages with ATHs to conduct certification activities and they are an ATH themselves. It has been recorded in previous audits that registry functions were conducted by Aurora Energy staff, so Aurora Energy was deemed to be an agent. Since January 2021 Delta has taken responsibility for the registry functions using Delta's staff. There has been no change to the systems used as Delta and Aurora Energy continue to share the GTV system.

1.5. Hardware and Software

MEP data is held in GTV, which has an interface with the registry.

Backup is in accordance with standard industry protocols.

1.6. Breaches or Breach Allegations

Delta confirmed there are no breach allegations relevant to the scope of this audit.

1.7. ICP Data

Metering Category	Number of ICPs
1	2,068
2	109
3	0
4	0
5	0
9	3

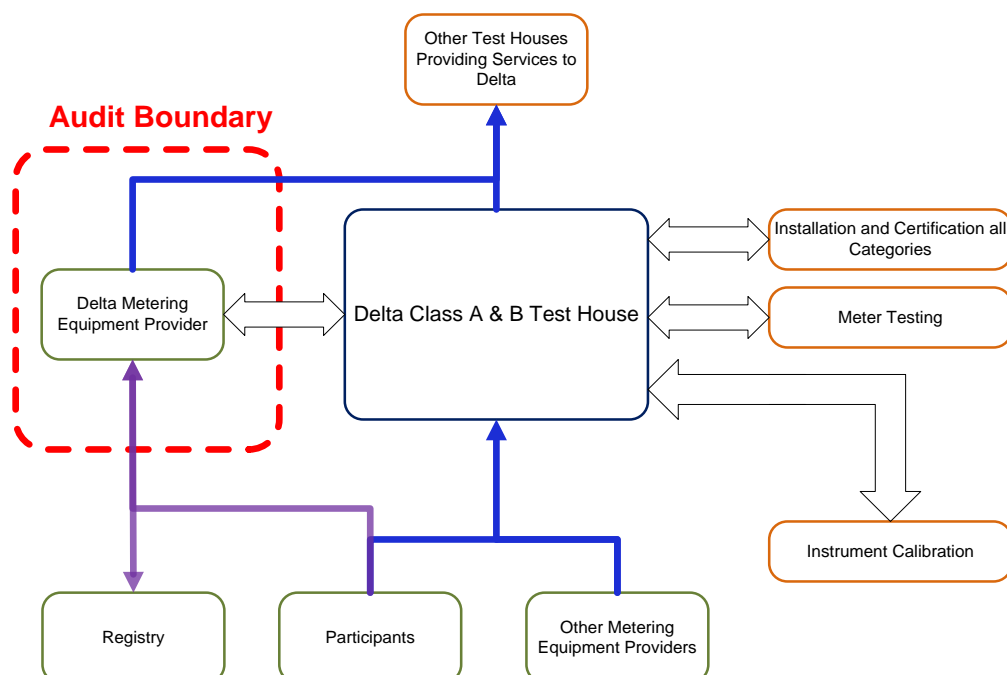
1.8. Authorisation Received

A letter of authorisation was not required or requested.

1.9. Scope of Audit

This audit was conducted in accordance with the Guideline for Metering Equipment Provider Audits V2.2, which was published by the Electricity Authority.

The diagram below shows the audit boundary. Delta does not have any AMI installations or metering infrastructure.



1.10. Summary of previous audit

The previous audit was conducted in July 2020 by Brett Piskulic of Veritek Limited. The table below shows the issues raised and their current status.

Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
Participants to Provide Accurate Information	2.5	Clause 11.2 and Clause 10.6	Registry not always updated as soon as practicable by Delta.	Still existing
Metering Installation Design & Accuracy	4.3	4(1) of Schedule 10.7	One metering installation with CTs which do not meet minimum metering accuracy class requirements.	Cleared
Changes to registry records	4.10	3 of Schedule 11.4	Nine records not updated to the registry within 10 business days.	Still existing
Accuracy of registry records	6.2	7 (1), (2) and (3) of Schedule 11.4	Some registry records incomplete or incorrect.	Still existing
Correction of registry errors	6.3	6 of schedule 11.4	Corrections not made within five business days.	Still existing
Cancellation of certification	6.4	20 of Schedule 10.7	Certification cancelled, and registry not updated within 10 business days for 14 ICPs with low burden.	Still existing for 3 ICPs
Certification and maintenance	7.1	10.38 (a)	Certification expired for 33 ICPs. Certification late for 7 ICPs. Certification cancelled for 14 ICPs.	Cleared
Timekeeping Requirements	7.10	23 of Schedule 10.7	Five metering installations with time keeping error are not checked every 12 months.	Still existing

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Status
Burden measurement	7.2	10.38(b)	Re-visit 15 installations to confirm the burden by conducting measurements at the CTs.	Still existing for 1 installation

2. OPERATIONAL INFRASTRUCTURE

2.1. MEP responsibility for services access interface (Clause 10.9(2))

Code reference

Clause 10.9(2)

Code related audit information

The MEP is responsible for providing and maintaining the services access interface.

Audit observation

The Code places responsibility for maintaining the services access interface on the MEP and places responsibility for determining and recording it with ATHs. I checked the certification records for all relevant ATHs.

Audit commentary

Delta does not have AMI or data collection facilities; therefore, the services access interface is at the meter in all cases.

The location of the services access interface was correctly recorded for all 10 metering installations certified during the audit period.

Audit outcome

Compliant

2.2. Dispute Resolution (Clause 10.50(1) to (3))

Code reference

Clause 10.50(1) to (3)

Code related audit information

Participants must in good faith use its best endeavours to resolve any disputes related to Part 10 of the Code.

Disputes that are unable to be resolved may be referred to the Authority for determination.

Complaints that are not resolved by the parties or the Authority may be referred to the Rulings Panel by the Authority or participant.

Audit observation

I checked whether any disputes had been dealt with during the audit period.

Audit commentary

Delta has not been required to resolve any disputes in accordance with this clause.

Audit outcome

Compliant

2.3. MEP Identifier (Clause 7(1) of Schedule 10.6)

Code reference

Clause 7(1) of Schedule 10.6

Code related audit information

The MEP must ensure it has a unique participant identifier and must use this participant identifier (if required) to correctly identify its information.

Audit observation

I checked the registry data to ensure the correct MEP identifier was used.

Audit commentary

Delta uses the DELT identifier for all MEP functions.

Audit outcome

Compliant

2.4. Communication Equipment Compatibility (Clause 40 Schedule 10.7)

Code reference

Clause 40 Schedule 10.7

Code related audit information

The MEP must ensure that the use of its communication equipment complies with the compatibility and connection requirements of any communication network operator the MEP has equipment connected to.

Audit observation

Delta is not the MEP for any metering installations where communication equipment is present.

Audit commentary

Delta is not the MEP for any metering installations where communication equipment is present.

Audit outcome

Compliant

2.5. Participants to Provide Accurate Information (Clause 11.2 and Clause 10.6)

Code reference

Clause 11.2 and Clause 10.6

Code related audit information

The MEP must take all practicable steps to ensure that information that the MEP is required to provide to any person under Parts 10 and 11 is complete and accurate, not misleading or deceptive and not likely to mislead or deceive.

If the MEP becomes aware that in providing information under Parts 10 and 11, the MEP has not complied with that obligation, the MEP must, as soon as practicable, provide such further information as is necessary to ensure that the MEP does comply.

Audit observation

The content of this audit report was reviewed to determine whether all practicable steps had been taken to provide accurate information.

Audit commentary

As mentioned in **section 6** there are some registry records which are not complete and accurate. Delta is attempting to correct information as soon as practicable. There are some metering installations with cancelled certification and the registry has not been updated as soon as practicable.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.5 With: Clause 11.2 and Clause 10.6 01-Jul-20 To: 05-May-21	Registry not always updated as soon as practicable by Delta. Potential impact: Medium Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate because there is room to improve processes. The impact on other participants is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Aurora have acted as an agent for half of the audited period. Delta have migrated this function in-house. <ul style="list-style-type: none"> • Gentrack & Registry training for Delta staff ongoing • Registry-Gentrack discrepancy report to be run each month and discrepancies resolved. • Audit Compliance report to be used to identify discrepancies and compliance staff to remedy. 		31-10-2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Aurora have acted as an agent for half of the audited period. Delta have migrated this function in-house. <ul style="list-style-type: none"> • Gentrack & Registry training for Delta staff ongoing • Registry-Gentrack discrepancy report to be run each month and discrepancies resolved. 		31-10-2021	

3. PROCESS FOR A CHANGE OF MEP

3.1. Change of metering equipment provider (Clause 10.22)

Code reference

Clause 10.22

Code related audit information

The MEP for a metering installation may change only if the responsible participant enters into an arrangement with another person to become the MEP for the metering installation, and if certain requirements are met in relation to updating the registry and advising the reconciliation manager.

The losing MEP must notify the gaining MEP of the proportion of the costs within 40 business days of the gaining MEP assuming responsibility. The gaining MEP must pay the losing MEP within 20 business days of receiving notification from the losing MEP.

The costs are those directly and solely attributable to the certification and calibration tests of the metering installation or its components from the date of switch until the end of the current certification period.

The gaining MEP is not required to pay costs if the losing MEP has agreed in writing that the gaining MEP is not required to pay costs, or the losing MEP has failed to provide notice within 40 business days.

Audit observation

I checked if Delta had sent or received any invoices.

Audit commentary

Delta has not sent or received any invoices in accordance with this clause.

Audit outcome

Compliant

3.2. Registry Notification of Metering Records (Clause 2 of Schedule 11.4)

Code reference

Clause 2 of Schedule 11.4

Code related audit information

The gaining MEP must advise the registry of the registry metering records for the metering installation within 15 days of becoming the MEP for the metering installation.

Audit observation

I checked the audit compliance report for the period 1 July 2020 to 5 May 2021 for all records where Delta became the MEP to evaluate the timeliness of updates.

Audit commentary

The audit compliance report did not identify any late registry updates and there were no cases of Delta becoming the MEP for any metering installations.

Audit outcome

Compliant

3.3. Provision of Metering Records to Gaining MEP (Clause 5 of Schedule 10.6)

Code reference

Clause 5 of Schedule 10.6

Code related audit information

During an MEP switch, a gaining MEP may request access to the losing MEP's metering records.

On receipt of a request from the gaining MEP, the losing MEP has 10 business days to provide the gaining MEP with the metering records or the facilities to enable the gaining MEP to access the metering records.

The losing MEP must ensure that the metering records are only received by the gaining MEP or its contractor, the security of the metering records is maintained, and only the specific metering records required for the purposes of the gaining MEP exercising its rights and performing its obligations are provided.

Audit observation

I checked with Delta to confirm whether there had been any requests from other MEPs.

Audit commentary

This has not occurred, and no examples are available to examine.

Audit outcome

Compliant

3.4. Termination of MEP Responsibility (Clause 10.23)

Code reference

Clause 10.23

Code related audit information

Even if the MEP ceases to be responsible for an installation, the MEP must either comply with its continuing obligations; or before its continuing obligations terminate, enter into an arrangement with a participant to assume those obligations.

The MEP is responsible if it:

- *is identified in the registry as the primary metering contact or*
- *is the participant who owns the meter for the POC or to the grid or*
- *has accepted responsibility under clause 1(1)(a)(ii) of schedule 11.4 or*
- *has contracted with a participant responsible for providing the metering installation.*

MEPs obligations come into effect on the date recorded in the registry as being the date on which the metering installation equipment is installed or, for an NSP the effective date set out in the NSP table on the Authority's website.

An MEP's obligations terminate only when,

- *the ICP changes under clause 10.22(1)(a);*
- *the NSP changes under clause 10.22(1)(b), in which case the MEPs obligations terminate from the date on which the gaining MEP assumes responsibility,*
- *the metering installation is no longer required for the purposes of Part 15; or*
- *the load associated with an ICP is converted to be used solely for unmetered load.*

Audit observation

I confirmed that Delta has ceased to be responsible for some metering installations by checking the event detail report.

Audit commentary

Delta has ceased to be responsible for some metering installations and they still continue with their responsibilities, mainly in relation to the storage or records, which are kept indefinitely. I checked examples of records dating back to 2007 to confirm this.

Audit outcome

Compliant

4. INSTALLATION AND MODIFICATION OF METERING INSTALLATIONS

4.1. Design Reports for Metering Installations (Clause 2 of Schedule 10.7)

Code reference

Clause 2 of Schedule 10.7

Code related audit information

The MEP must obtain a design report for each proposed new metering installation or a modification to an existing metering installation, before it installs the new metering installation or before the modification commences.

Clause 2(2) and (3)—The design report must be prepared by a person with the appropriate level of skills, expertise, experience and qualifications and must include a schematic drawing, details of the configuration scheme that programmable metering components are to include, confirmation that the configuration scheme has been approved by an approved test laboratory, maximum interrogation cycle, any compensation factor arrangements, method of certification required, and name and signature of the person who prepared the report and the date it was signed.

Clause 2(4)—The MEP must provide the design report to the certifying ATH before the ATH installs or modifies the metering installation (or a metering component in the metering installation).

Audit observation

I checked the design reports prepared by Delta to confirm compliance.

Audit commentary

Delta has prepared design reports and has provided these to all relevant parties. At the time of the audit, the reports included all of the requirements noted above, including a signature of the person who prepared the reports. No new design reports were prepared during the audit period.

Audit outcome

Compliant

4.2. Contracting with ATH (Clause 9 of Schedule 10.6)

Code reference

Clause 9 of Schedule 10.6

Code related audit information

The MEP must, when contracting with an ATH in relation to the certification of a metering installation, ensure that the ATH has the appropriate scope of approval for the required certification activities.

Audit observation

Delta has used the Delta ATH during the audit period, and the Delta ATH has the appropriate and current scope of approval.

Audit commentary

Delta has used the Delta ATH during the audit period, and the Delta ATH has the appropriate and current scope of approval.

Audit outcome

Compliant

4.3. Metering Installation Design & Accuracy (Clause 4(1) of Schedule 10.7)

Code reference

Clause 4(1) of Schedule 10.7

Code related audit information

The MEP must ensure:

- *that the sum of the measured error and uncertainty does not exceed the maximum permitted error set out in Table 1 of Schedule 10.1 for the category of the metering installation*
- *the design of the metering installation (including data storage device and interrogation system) will ensure the sum of the measured error and the smallest possible increment of the energy value of the raw meter data does not exceed the maximum permitted error set out in Table 1 of Schedule 10.1 for the category of installation,*
- *the metering installation complies with the design report and the requirements of Part 10.*

Audit observation

I checked the processes used by Delta to ensure compliance with the design and with the error thresholds stipulated in Table 1. I also checked the certification records for 10 metering installations.

Audit commentary

The selected component certification processes are compliant, as confirmed by checking certification records for 3 Category 1 metering installations.

My checks included seven Category 2 certifications conducted by the Delta ATH using the comparative recertification method. The Delta ATH procedure records the on-site temperature which is used in the uncertainty calculations.

A design report reference was recorded in the metering installation certification reports for all 10 metering installations which confirms that the installation complies with the design report.

Audit outcome

Compliant

4.4. Net metering and Subtractive Metering (Clause 10.13A and 4(2)(a) of Schedule 10.7)

Code reference

Clause 10.13A and Clause 4(2)(a) of Schedule 10.7

Code related audit information

MEPs must ensure that the metering installation records imported electricity separately from exported electricity. For category 1 and 2 installations the MEP must ensure the metering installation records imported and exported electricity separately for each phase.

For metering installations for ICPs that are not also NSPs, the MEP must ensure that the metering installation does not use subtraction to determine submission information used for the purposes of Part 15.

Audit observation

I asked Delta to confirm whether subtraction was used for any metering installations where they were the MEP.

Audit commentary

Delta does not have any metering installations where subtractive metering is used.

Audit outcome

Compliant

4.5. HHR Metering (Clause 4(2)(b) of Schedule 10.7)

Code reference

Clause 4(2)(b) of Schedule 10.7

Code related audit information

For metering installations for ICPs that are not also NSPs, the MEP must ensure that all category 3 or higher metering installations must be half-hour metering installations.

Audit observation

I checked Delta's list file to confirm compliance with this requirement.

Audit commentary

There are no installations above Category 2.

Audit outcome

Compliant

4.6. NSP Metering (Clause 4(3) of Schedule 10.7)

Code reference

Clause 4(3) of Schedule 10.7

Code related audit information

The MEP must ensure that the metering installation for each NSP that is not connected to the grid does not use subtraction to determine submission information used for the purposes of Part 15 and is a half-hour metering installation.

Audit observation

I checked if Delta is responsible for any NSP metering.

Audit commentary

Delta is not the MEP for any NSP metering.

Audit outcome

Not applicable

4.7. Responsibility for Metering Installations (Clause 10.26(10))

Code reference

Clause 10.26(10)

Code related audit information

The MEP must ensure that each point of connection to the grid for which there is a metering installation that it is responsible for has a half hour metering installation.

Audit observation

Delta is not responsible for any grid metering.

Audit commentary

Delta is not responsible for any grid metering.

Audit outcome

Not applicable

4.8. Suitability of Metering Installations (Clause 4(4) of Schedule 10.7)

Code reference

Clause 4(4) of Schedule 10.7

Code related audit information

The MEP must, for each metering installation for which it is responsible, ensure that it is appropriate having regard to the physical and electrical characteristics of the POC.

Audit observation

Delta's instructions to ATH's include several clauses in relation to physical and electrical characteristics.

Audit commentary

Delta's instructions to ATH's include several clauses in relation to physical and electrical characteristics. The certification records from the ATH contain a statement in relation to this clause and the technician is required to confirm that installations are compliant and safe.

Audit outcome

Compliant

4.9. Installation & Modification of Metering Installations (Clauses 10.34(2), (2A) 2(D) and (3))

Code reference

Clauses 10.34(2), (2A) and (3)

Code related audit information

If a metering installation is proposed to be installed or modified at a POC, other than a POC to the grid, the MEP must consult with and use its best endeavours, to agree with the distributor and the trader for that POC, before the design is finalised, on the metering installation's:

- *required functionality,*
- *terms of use*
- *required interface format,*
- *integration of the ripple receiver and the meter*
- *functionality for controllable load.*

This includes where the MEP is proposing to replace a metering component or metering installations with the same or similar design and functionality but excludes where the MEP has already consulted on the design with the distributor and trader.

Each participant involved in the consultations must use its best endeavours to reach agreement and act reasonably and in good faith.

Audit observation

I checked previous communication regarding metering designs, and I checked whether there were any new or modified designs during the audit period.

Audit commentary

Delta has communicated with all Distributors and Traders in relation to this requirement. There were no new or modified designs during the audit period.

Audit outcome

Compliant

4.10. Changes to Registry Records (Clause 3 of Schedule 11.4)

Code reference

Clause 3 of Schedule 11.4

Code related audit information

If the MEP has an arrangement with the trader, the MEP must advise the registry manager of the registry metering records, or any change to the registry metering records, for each metering installation for which it is responsible at the ICP, no later than 10 business days following:

- *the electrical connection of the metering installation at the ICP*
- *any subsequent change to the metering installation's metering records.*

If the MEP is updating the registry in accordance with 8(11)(b) of Schedule 10.6, 10 business days after the most recent unsuccessful interrogation.

If update the registry in accordance with clause 8(13) of Schedule 10.6, three business days following the expiry of the time period or date from which the MEP determines it cannot restore communications.

Audit observation

I checked the audit compliance report for the period 1 July 2020 to 5 May 2021 to evaluate the timeliness of registry updates.

Audit commentary

Delta has not dealt with any new connections as an MEP during the audit period. The audit compliance report identified one late update which was due to a correction of information dated back to the original new connection in 2005.

The audit compliance report for the period 1 July 2020 to 5 May 2021 identified 218 late updates following recertification out of a total of 224 updates. Analysis of the late updates found:

- 179 were recertified by a statistical sampling completed in December 2020 which were not updated to the registry until January and February 2021,
- 19 were corrections dated back to the original certification date, and
- 20 were late updates due to processing delays.

During the audit there were four cases found where the metering installation certification had not been updated following recertification. Details of these are included in the following table:

Certification details not updated following recertification			
ICP	ATH	Category	Comment
0000017097WEC0B	VCOM	2	Identified in previous audit with low burden. Burden added and recertified but registry not updated.
0000046798DE04D	DELT	2	Identified in previous audit with low burden. Burden added and recertified but registry not updated.
0979774282LC664	VCOM	2	Identified in previous audit with low burden. Burden added and recertified but registry not updated.
0000007304DEA80	DELT	1	Meter replaced as part of statistical sample recertification project in October 2020, but registry not updated.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.10 With: Clause 3 of Schedule 11.4 From: 01-Jul-20 To: 23-Jun-21	223 records not updated to the registry within 10 business days. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Low	I have recorded the controls as weak as they had not been sufficient to prevent late updates. The impact on participants, customers or settlement could be minor where a certification update is late; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
The majority of these late registry updates are due to the completion of a DELT stat sampling project and resourcing issues. The volume of stat sampling data was a one-off phenomenon since taking over from Aurora. Better planning will avoid re-occurrence in future. Updates have now been completed.		complete	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

Registry data capture staff will be given prior notice to the upcoming completion of a stat sampling project in future allowing for prioritized updating and resource planning.	complete	
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4.11. Metering Infrastructure (Clause 10.39(1))

Code reference

Clause 10.39(1)

Code related audit information

The MEP must ensure that for each metering installation:

- an appropriately designed metering infrastructure is in place,
- each metering component is compatible with, and will not interfere with any other component in the installation,
- collectively, all metering components integrate to provide a functioning system,
- each metering installation is correctly and accurately integrated within the associated metering infrastructure.

Audit observation

Delta does not manage a data collection system that would be considered “metering infrastructure”.

Audit commentary

Delta does not manage a data collection system that would be considered “metering infrastructure”.

Audit outcome

Compliant

4.12. Decommissioning of an ICP (Clause 10.23A)

Code reference

Clause 10.23A

Code related audit information

If a metering installation at an ICP is to be decommissioned, but the ICP is not being decommissioned, the MEP that is responsible for decommissioning the metering installation must:

- if the MEP is responsible for interrogating the metering installation, arrange for a final interrogation to take place before the metering installation is decommissioned, and provide the raw meter data from the interrogation to the responsible trader,
- if another participant is responsible for interrogating the metering installation, advise the other participant not less than 3 business days before the decommissioning of the time and date of the decommissioning, and that the participant must carry out a final interrogation.

To avoid doubt, if a metering installation at an ICP is to be decommissioned because the ICP is being decommissioned:

- the trader, not the MEP, is responsible for arranging a final interrogation of the metering installation,
- the responsible trader must arrange for a final interrogation of the metering installation.

Audit observation

I checked whether Delta was the MEP at any decommissioned metering installations and whether notification had been provided to relevant traders.

Audit commentary

There were no examples of decommissioned metering installations where the ICP was not also decommissioned.

Audit outcome

Compliant

4.13. Measuring Transformer Burden and Compensation Requirements (Clause 31(4) and (5) of Schedule 10.7)

Code reference

Clause 31(4) and (5) of Schedule 10.7

Code related audit information

The MEP must, before approving the addition of, or change to, the burden or compensation factor of a measuring transformer in a metering installation, consult with the ATH who certified the metering installation.

If the MEP approves the addition of, or change to, the burden or compensation factor, it must ensure the metering installation is recertified by an ATH before the addition or change becomes effective.

Audit observation

I asked Delta whether they had approved any burden changes during the audit period.

Audit commentary

There were no examples of burden changes which did not result in recertification of the metering installation.

Audit outcome

Compliant

4.14. Changes to Software ROM or Firmware (Clause 39(1) and 39(2) of Schedule 10.7)

Code reference

Clause 39(1) and 39(2) of Schedule 10.7

Code related audit information

The MEP must, if it proposes to change the software, ROM or firmware of a data storage device installed in a metering installation, ensure that, before the change is carried out, an approved test laboratory:

- *tests and confirms that the integrity of the measurement and logging of the data storage device would be unaffected,*
- *documents the methodology and conditions necessary to implement the change,*
- *advises the ATH that certified the metering installation of any change that might affect the accuracy of the data storage device.*

The MEP must, when implementing a change to the software, ROM or firmware of a data storage device installed in a metering installation:

- *carry out the change in accordance with the methodology and conditions identified by the approved test laboratory under clause 39(1)(b)*
- *keep a list of the data storage devices that were changed,*
- *update the metering records for each installation affected with the details of the change and the methodology used.*

Audit observation

Delta is not the MEP for any metering installations where these changes would occur.

Audit commentary

Delta is not the MEP for any metering installations where these changes would occur.

Audit outcome

Compliant

4.15. Temporary Electrical Connection (Clause 10.29A)

Code reference

Clause 10.29A

Code related audit information

An MEP must not request that a grid owner temporarily electrically connect a POC to the grid unless the MEP is authorised to do so by the grid owner responsible for that POC and the MEP has an arrangement with that grid owner to provide metering services.

Audit observation

Delta is not responsible for any grid metering.

Audit commentary

Delta is not responsible for any grid metering.

Audit outcome

Compliant

4.16. Temporary Electrical Connection (Clause 10.30A)

Code reference

Clause 10.30A

Code related audit information

An MEP must not request that a distributor temporarily electrically connect an NSP that is not a POC to the grid unless the MEP is authorised to do so by the reconciliation participant responsible for that NSP and the MEP has an arrangement with that reconciliation participant to provide metering services.

Audit observation

Delta is not responsible for any NSP metering.

Audit commentary

Delta is not responsible for any NSP metering.

Audit outcome

Compliant

4.17. Temporary Electrical Connection (Clause 10.31A)

Code reference

Clause 10.31A

Code related audit information

Only a distributor may, on its network, temporarily electrically connect an ICP that is not an NSP. A MEP may only request the temporary electrical connection of the ICP if it is for the purpose of certifying a metering installation, or for maintaining, repairing, testing, or commissioning a metering installation at the ICP.

Audit observation

Delta has not dealt with any new connections as an MEP during the audit period, therefore there were no temporary electrical connections conducted.

Audit commentary

Delta has not dealt with any new connections as an MEP during the audit period, therefore there were no temporary electrical connections conducted.

Audit outcome

Compliant

5. METERING RECORDS

5.1. Accurate and Complete Records (Clause 4(1)(a) and (b) of Schedule 10.6, and Table 1, Schedule 11.4)

Code reference

Clause 4(1)(a) and (b) of Schedule 10.6, and Table 1, Schedule 11.4

Code related audit information

The MEP must, for each metering installation for which it is responsible, keep accurate and complete records of the attributes set out in Table 1 of Schedule 11.4. These include:

- a) the certification expiry date of each metering component in the metering installation*
- b) all equipment used in relation to the metering installation, including serial numbers and details of the equipment's manufacturer,*
- c) the manufacturer's or (if different) most recent test certificate for each metering component in the metering installation*
- d) the metering installation category and any metering installations certified at a lower category,*
- e) all certification reports and calibration reports showing dates tested, tests carried out, and test results for all metering components in the metering installation,*
- f) the contractor who installed each metering component in the metering installation*
- g) the certification sticker, or equivalent details, for each metering component that is certified under Schedule 10.8 in the metering installation:*
- h) any variations or use of the 'alternate certification' process,*
- i) seal identification information*
- j) any applicable compensation factors,*
- k) the owner of each metering component within the metering installation*
- l) any applications installed within each metering component,*
- m) the signed inspection report confirming that the metering installation complies with the requirements of Part 10.*

Audit observation

I checked certification records for 10 metering installations to evaluate compliance with this clause.

Audit commentary

The information relevant to this clause was available and included in the certification records.

Audit outcome

Compliant

5.2. Inspection Reports (Clause 4(2) of Schedule 10.6)

Code reference

Clause 4(2) of Schedule 10.6

Code related audit information

The MEP must, within 10 business days of receiving a request from a participant for a signed inspection report prepared under clause 44 of Schedule 10.7, make a copy of the report available to the participant.

Audit observation

I asked Delta whether any requests had been made for copies of inspection reports.

Audit commentary

Delta has not been requested to supply any inspection reports.

Audit outcome

Compliant

5.3. Retention of Metering Records (Clause 4(3) of Schedule 10.6)

Code reference

Clause 4(3) of Schedule 10.6

Code related audit information

The MEP must keep metering installation records for 48 months after any metering component is removed, or any metering installation is decommissioned.

Audit observation

I checked historic metering records from 2007 to confirm compliance.

Audit commentary

Delta intends to keep records indefinitely and my checks confirmed old records were available.

Audit outcome

Compliant

5.4. Provision of Records to ATH (Clause 6 Schedule 10.6)

Code reference

Clause 6 Schedule 10.6

Code related audit information

If the MEP contracts with an ATH to recertify a metering installation and the ATH did not previously certify the metering installation, the MEP must provide the ATH with a copy of all relevant metering records not later than 10 business days after the contract comes into effect.

Audit observation

Delta will comply with this requirement as it arises. There are no current examples where this has occurred.

Audit commentary

Delta will comply with this requirement as it arises. There are no current examples where this has occurred.

Audit outcome

Compliant

6. MAINTENANCE OF REGISTRY INFORMATION

6.1. MEP Response to Switch Notification (Clause 1(1) of Schedule 11.4)

Code reference

Clause 1(1) of Schedule 11.4

Code related audit information

Within 10 business days of being advised by the registry that it is the gaining MEP for the metering installation for the ICP, the MEP must enter into an arrangement with the trader and advise the registry it accepts responsibility for the ICP and of the proposed date on which it will assume responsibility.

Audit observation

I checked the event detail report and switch breach history detail report to confirm whether all responses were within 10 business days.

Audit commentary

Delta was not nominated as MEP for any ICPs during the audit period.

Audit outcome

Compliant

6.2. Provision of Registry Information (Clause 7 (1) (1A), (2) and (3) of Schedule 11.4)

Code reference

Clause 7 (1), (2) and (3) of Schedule 11.4

Code related audit information

The MEP must provide the information indicated as being 'required' in Table 1 of clause 7 of Schedule 11.4 to the registry manager, in the prescribed form for each metering installation for which the MEP is responsible.

The MEP does not need to provide 'required' information if the information is only for the purpose of a distributor direct billing consumers on its network.

From 1 April 2015, a MEP is required to ensure that all the registry metering records of its category 1 metering installations are complete, accurate, not misleading or deceptive, and not likely to mislead or deceive.

The information the MEP provides to the registry manager must derive from the metering equipment provider's records or the metering records contained within the current trader's system.

Audit observation

I checked the audit compliance report, and the list file to identify discrepancies.

Audit commentary

Analysis of the audit compliance report and list file for all ICPs found some discrepancies. The table below shows these and includes a comparison with the previous audit results.

Quantity of ICPs 2021	Quantity of ICPs 2020	Quantity of ICPs 2019	Quantity of ICPs 2018	Quantity of ICPs 2016	Issue	Resolution
0	0	3	4	7	Blank metering records on the registry.	
0	0	0	1	0	Category 2 on the registry but with interim certification.	
0	0	0	0	1	Incorrect certification duration.	
0	0	0	1	0	Distributed generation installation without an injection register.	
0	0	0	1	1	Category 2 installations without CTs recorded on the registry.	
40	46	11	1	4	"Register Content Code" that requires a "Control Device" where a "Control Device" is not recorded in the registry.	Delta is investigating these ICPs
0	0	0	0	1	ICPs with a register content code of CN only.	
0	0	0	0	1	Day without night.	
0	0	0	0	75	Night without day.	
4	2	2	4	-	UN with a relay	Incorrect data entry
2	0	-	-	-	Register content code of IN24	One has been corrected.
0	0	2	0	0	Incorrect ATH recorded	

During the audit there were three Category 2 metering installations found where the certification had been updated incorrectly as part of the statistical sampling recertification project. Details of these are included in the following table.

Certification updated incorrectly as part of Category 1 statistical recertification project			
ICP	ATH	Category	Certification date
0000044568DE91D	DELT	2	15/12/2020
0000204505DEAFB	DELT	2	15/12/2020
0000046003DEE7C	DELT	2	15/12/2020

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.2 With: Clause 7 (1), (2) and (3) of Schedule 11.4 From: 01-Jul-20 To: 05-May-21	Some registry records incomplete or incorrect. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	I have recorded the controls as moderate in this area. There are still a small number of areas where improvement can be made. Some of the discrepancies have a minor impact on participants, customers or settlement. The relevant ones in this regard are tariff related. The audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
<ul style="list-style-type: none"> Registry-Gentrack discrepancy report to be run and discrepancies resolved. Audit Compliance report to be used to identify discrepancies and compliance staff to remedy 		31-10-2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<ul style="list-style-type: none"> Audit Compliance report to be used to identify discrepancies periodically and compliance staff to remedy Registry-Gentrack discrepancy report to be run each month and discrepancies resolved. 		31-10-2021	

6.3. Correction of Errors in Registry (Clause 6 of Schedule 11.4)

Code reference

Clause 6 of Schedule 11.4

Code related audit information

By 0900 hours on the 13th business day of each reconciliation period, the MEP must obtain from the registry:

- a list of ICPs for the metering installations the MEP is responsible for
- the registry metering records for each ICP on that list.

No later than five business days following collection of data from the registry, the MEP must compare the information obtained from the registry with the MEP's own records.

Within five business days of becoming aware of any discrepancy between the MEP's records and the information obtained from the registry, the MEP must correct the records that are in error and advise the registry of any necessary changes to the registry metering records.

Audit observation

I conducted a walkthrough of the validation processes to confirm compliance. I checked with Delta to confirm whether the timeliness requirements were being met.

Audit commentary

Delta has a reconciliation process which is run each month to compare its records with the registry information. A report is generated from the reconciliation process which identifies any discrepancies. I confirmed that reports were available for each month of the audit period. Whilst the reconciliation process is robust, some corrections are not made within five business days, which is recorded as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.3 With: Clause 6 of Schedule 11.4 From: 01-Jul-20 To: 05-May-21	Discrepancies not resolved within 5 business days. Potential impact: Medium Actual impact: Medium Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	Rationale for audit risk rating
Low	I have recorded the controls as moderate because they mitigate risk most of the time, but some late updates still occur. Some of the discrepancies may have a minor impact on participants, customers or settlement. The relevant ones in this regard are tariff related. The audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Reconciliation report to be analysed and rectifications taken in a more timely fashion (within 5 working days)	01/07/2021	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Allocation of tasks and responsibilities completed (for accountability) Better filing system to be employed.	01/07/2021	

6.4. Cancellation of Certification (Clause 20 of Schedule 10.7)

Code reference

Clause 20 of Schedule 10.7

Code related audit information

The certification of a metering installation is automatically cancelled on the date on which one of the following events takes place:

the metering installation is modified otherwise than under sub clause 19(3), 19(3A) or 19(3C)

the metering installation is classed as outside the applicable accuracy tolerances set out in Table 1 of Schedule 10.1, defective or not fit for purpose under this Part or any audit,

an ATH advises the metering equipment provider responsible for the metering installation of a reference standard or working standard used to certify the metering installation not being compliant with this Part at the time it was used to certify the metering installation, or the failure of a group of meters in the statistical sampling recertification process for the metering installation, or the failure of a certification test for the metering installation,

the manufacturer of a metering component in the metering installation determines that the metering component does not comply with the standards to which the metering component was tested,

an inspection of the metering installation, that is required under this Part, is not carried out in accordance with the relevant clauses of this Part,

if the metering installation has been determined to be a lower category under clause 6 and:

the MEP has not received the report under 6(2A)(a) or 6(2A)(b); or

the report demonstrates the maximum current is higher than permitted; or

the report demonstrates the electricity conveyed exceeds the amount permitted,

the metering installation is certified under clause 14 and sufficient load is available for full certification testing and has not been retested under clause 14(4)

a control device in the metering installation certification is, and remains for a period of at least 10 business days, bridged out under clause 35(1)

the metering equipment provider responsible for the metering installation is advised by an ATH under clause 48(6)(b) that a seal has been removed or broken and the accuracy and continued integrity of the metering installation has been affected.

*the installation is an HHR AMI installation certified after 29 August 2013 and
the metering installation is not interrogated within the maximum interrogation cycle; or
the HHR and NHH register comparison is not performed; or
the HHR and NHH register comparison for the same period finds a difference of greater than 1 kWh and
the issue is not remediated within three business days,*

A metering equipment provider must (unless the installation has been recertified within the 10 business days) within 10 business days of becoming aware that one of the events above has occurred in relation to a metering installation for which it is responsible, update the metering installation’s certification expiry date in the registry.

If any of the events in Clause 20(1)(j) of Schedule 10.7 have occurred, update the AMI flag in the registry to ‘N’.

Audit observation

I checked for examples of all of the points listed above, and checked whether certification had been cancelled, and whether the registry had been updated within 10 business days.

Audit commentary

Inspection

There were no Category 2 metering installations which required inspection during the audit period. Delta has decided to recertify any Category 2 metering installations that were certified for a period of 15 years under the previous rules when they become due for inspection.

Low Burden

The previous audit identified 14 Category 2 metering installations that had been certified with burden lower than the lowest test point, without a Class A ATH confirming that the measuring transformers will not be adversely affected. These metering installations are not considered “fit for purpose”. Delta has ensured that burden has been added and the metering installations have been recertified. As recorded in **section 4.10** the registry has not been updated with the new certification details for three of the metering installations. I have recorded non-compliance as the certification for these three installations has not yet been cancelled.

Low burden from the previous audit, certification not cancelled		
ICP	ATH	Certification date
0000017097WEC0B	VEMS	4/03/2019
0000046798DE04D	DELT	24/10/2018
0979774282LC664	VEMS	2/07/2018

The Delta ATH has a documented process for the addition of burden resistors, and this has been used for all installations completed in the audit period.

Audit outcome

Non-compliant

Non-compliance	Description
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Audit Ref: 6.4 With: Clause 20 of Schedule 10.7 From: 01-Jul-20 To: 05-May-21	Certification cancelled, and registry not updated within 10 business days for three ICPs with low burden. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1	
Audit risk rating	Rationale for audit risk rating	
Low	I have recorded the controls as strong in this area because processes are managed with sufficient controls to avoid cancellation of certification. The installations with low burden have been recertified with burden added. The responsibility for Delta is to cancel certification on the registry once they know certification is cancelled and the impact of not doing this is minor, therefore the audit risk rating is low.	
Actions taken to resolve the issue	Completion date	Remedial action status
Registry was not updated BUT jobs had been completed. The internal notification process is flawed and needs to be reviewed.	31/07/2021	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
More Gentrack/Registry training required for staff Improvement of timeline and data entry notification process (field completion to Gentrack data entry)	31/07/2021	

6.5. Registry Metering Records (Clause 11.8A)

Code reference

Clause 11.8A

Code related audit information

The MEP must provide the registry with the required metering information for each metering installation the MEP is responsible for and update the registry metering records in accordance with Schedule 11.4.

Audit observation

This clause refers to schedule 11.4 which is discussed in **section 6.2**, apart from the requirement to provide information in the “prescribed form”. I checked for examples of Delta not using the prescribed form.

Audit commentary

This clause refers to schedule 11.4 which is discussed in **section 6.2**, apart from the requirement to provide information in the “prescribed form”. I checked for examples of Delta not using the prescribed form and did not find any exceptions.

Audit outcome

Compliant

7. CERTIFICATION OF METERING INSTALLATIONS

7.1. Certification and Maintenance (Clause 10.38 (a), clause 1 and clause 15 of Schedule 10.7)

Code reference

Clause 10.38 (a), clause 1 and clause 15 of Schedule 10.7

Code related audit information

The MEP must obtain and maintain certification for all installations and metering components for which it is responsible. The MEP must ensure it:

- *performs regular maintenance, battery replacement, repair/replacement of components of the metering installations,*
- *updates the metering records at the time of the maintenance,*
- *has a recertification programme that will ensure that all installations are recertified prior to expiry.*

Audit observation

I conducted the following checks to identify metering installations with expired, cancelled or late certification:

- the audit compliance report was checked to identify ICPs with expired certification, and
- I checked ICPs where certification was cancelled to ensure the registry was updated accordingly.

Audit commentary

The audit compliance report identified one Category 1 metering installation with expired certification. As recorded in **section 4.10**, Delta has obtained certification for this installation but at the time of my analysis had not updated the registry.

Audit outcome

Compliant

7.2. Certification Tests (Clause 10.38(b) and clause 9 of Schedule 10.6)

Code reference

Clause 10.38(b) and clause 9 of Schedule 10.6

Code related audit information

For each metering component and metering installation an MEP is responsible for, the MEP must ensure that:

- *an ATH performs the appropriate certification and recertification tests,*
- *the ATH has the appropriate scope of approval to certify and recertify the metering installation.*

Audit observation

I checked the certification records for 10 metering installations to confirm compliance. ATHs have shown that their processes include all tests, and reports confirm tests are completed.

Audit commentary

Delta has ensured ATH's have the appropriate approval for metering installation certification and recertification. I examined the certification records for 10 metering installations, and I confirm the

appropriate tests are conducted and the results are recorded. The instructions to field technicians are complete and accurate, making clear reference to Delta’s requirements.

In the previous audit it was recorded that the Delta ATH had updated its testing procedures to exclude the previous practise of conducting CT burden measurements at the test facility. It was recommended that the installations certified using this method of burden testing were revisited to conduct the burden measurements at the CT terminals. This was completed and some metering installations required the addition of burden resistors and were recertified. My certification checks for this audit found one Category 2 metering installation (ICP 0000005694DE322) where CT burden measurements were taken at the test facility. I repeat the recommendation that this installation is re-tested to ensure the burden figures are accurate.

Clause	Recommendation	Audited party comment	Remedial action
10.38(b)	Re-visit one metering installation to confirm the burden by conducting measurements at the CTs.	<p>Our technician has commented that she did not feel safe to measure the burden at the CTs where the busbars are exposed (not insulated). Delta’s health and safety guidelines instruct a worker to not proceed should they feel unsafe.</p> <p>The DELT MEP has a proposed plan to perform a comparison of burdens measured at the CT with results measured at the Test Block.</p> <p>This will be done by measuring the burden at the CTs AND at the testblock multiple times at varying loads then comparing the results to determine the accuracy of the “measured at testblock” formula.</p>	Identified

Audit outcome

Compliant

7.3. Active and Reactive Capability (Clause 10.37(1) and 10.37(2)(a))

Code reference

Clause 10.37(1) and 10.37(2)(a)

Code related audit information

For any category 2 or higher half-hour metering installation that is certified after 29 August 2013, the MEP must ensure that the installation has active and reactive measuring and recording capability.

Consumption only installations that is a category 3 metering installation or above must measure and separately record:

- a) import active energy,
- b) import reactive energy,
- c) export reactive energy.

Consumption only installations that are a category 2 metering installation must measure and separately record import active energy.

All other installations must measure and separately record:

- a) import active energy,
- b) export active energy,
- c) import reactive energy,
- d) export reactive energy.

All grid connected POCs with metering installations which are certified after 29 August 2013 should measure and separately record:

- a) import active energy,
- b) export active energy,
- c) import reactive energy,
- d) export reactive energy.

Audit observation

Delta is not the MEP for any HHR metering installations.

Audit commentary

Delta is not the MEP for any HHR metering installations.

Audit outcome

Compliant

7.4. Local Service Metering (Clause 10.37(2)(b))

Code reference

Clause 10.37(2)(b)

Code related audit information

The accuracy of each local service metering installation in grid substations must be within the tolerances set out in Table 1 of Schedule 10.1.

Audit observation

This clause relates to Transpower as an MEP.

Audit commentary

This clause relates to Transpower as an MEP.

Audit outcome

Not applicable

7.5. Measuring Transformer Burden (Clause 30(1) and 31(2) of Schedule 10.7)

Code reference

Clause 30(1) and 31(2) of Schedule 10.7

Code related audit information

The MEP must not permit a measuring transformer to be connected to equipment used for a purpose other than metering, unless it is not practical for the equipment to have a separate measuring transformer.

The MEP must ensure that a change to, or addition of, a measuring transformer burden or a compensation factor related to a measuring transformer is carried out only by:

- a) the ATH who most recently certified the metering installation,*
- b) for a POC to the grid, by a suitably qualified person approved by both the MEP and the ATH who most recently certified the metering installation.*

Audit observation

I asked Delta if there were any examples of burden changes, or the addition of non-metering equipment being connected to metering CTs.

Audit commentary

Delta deals with situations when CPD metering is installed. In all cases, the installation is recertified by an ATH. There were no specific examples during the audit period.

Audit outcome

Compliant

7.6. Certification as a Lower Category (Clauses 6(1)(b) and (d), and 6(2)(b) of Schedule 10.7)

Code reference

Clauses 6(1)(b) and (d), and 6(2)(b) of Schedule 10.7

Code related audit information

A category 2 or higher metering installation may be certified by an ATH at a lower category than would be indicated solely on the primary rating of the current if the MEP, based on historical metering data, reasonably believes that:

- the maximum current will at all times during the intended certification period be lower than the current setting of the protection device for the category for which the metering installation is certified, or is required to be certified by the Code; or*
- the metering installation will use less than 0.5 GWh in any 12-month period.*

If a metering installation is categorised under clause 6(1)(b), the ATH may, if it considers appropriate, and, at the MEP's request, determine the metering installation's category according to the metering installation's expected maximum current.

If a meter is certified in this manner:

- the MEP must, each month, obtain a report from the participant interrogating the metering installation, which details the maximum current from raw meter data from the metering installation by either calculation from the kVA by trading period, if available, or from a maximum current indicator if fitted in the metering installation conveyed through the point of connection for the prior month; and*
- if the MEP does not receive a report, or the report demonstrates that the maximum current conveyed through the POC was higher than permitted for the metering installation category it is certified for, then the certification for the metering installation is automatically cancelled.*

Audit observation

I checked the audit compliance report for examples where the CT ratio was above the threshold to confirm that protection was appropriate or that monitoring was in place.

Audit commentary

There are no examples of ICPs certified as a lower category.

Audit outcome

Compliant

7.7. Insufficient Load for Certification Tests (Clauses 14(3) and (4) of Schedule 10.7)

Code reference

Clauses 14(3) and (4) of Schedule 10.7

Code related audit information

If there is insufficient electricity conveyed through a POC to allow the ATH to complete a prevailing load test for a metering installation that is being certified as a half hour meter and the ATH certifies the metering installation the MEP must:

- *obtain and monitor raw meter data from the metering installation at least once each calendar month to determine if load during the month is sufficient for a prevailing load test to be completed:*
- *if there is sufficient load, arrange for an ATH to complete the tests (within 20 business days).*

Audit observation

I checked if there were any examples of Insufficient load certifications.

Audit commentary

This clause only applies to HHR installations and Delta is not the MEP for any HHR installations.

Audit outcome

Compliant

7.8. Insufficient Load for Certification – Cancellation of Certification (Clause 14(6) of Schedule 10.7)

Code reference

Clause 14(6) of Schedule 10.7

Code related audit information

If the tests conducted under clause 14(4) of Schedule 10.7 demonstrate that the metering installation is not within the relevant maximum permitted error:

- *the metering installation certification is automatically revoked:*
- *the certifying ATH must advise the MEP of the cancellation within one business day:*
- *the MEP must follow the procedure for handling faulty metering installations (clause 10.43 - 10.48).*

Audit observation

I checked if there were any examples of Insufficient load certifications.

Audit commentary

This clause only applies to HHR installations and Delta is not the MEP for any HHR installations.

Audit outcome

Compliant

7.9. Alternative Certification Requirements (Clauses 32(2), (3) and (4) of Schedule 10.7)

Code reference

Clauses 32(2), (3) and (4) of Schedule 10.7

Code related audit information

If an ATH cannot comply with the requirements to certify a metering installation due to measuring transformer access issues, and therefore certifies the metering installation in accordance with clause 32(1) of Schedule 10.7, the MEP must:

- *advise the market administrator, by no later than 10 business days after the date of certification of the metering installation, of the details in clause 32(2)(a) of Schedule 10.7,*
- *respond, within five business days, to any requests from the market administrator for additional information,*
- *ensure that all of the details are recorded in the metering installation certification report,*
- *take all steps to ensure that the metering installation is certified before the certification expiry date.*

If the market administrator determines the ATH could have obtained access the metering installation is deemed to be defective, and the MEP must follow the process of handling faults metering installations in clauses 10.43 to 10.48.

Audit observation

I checked the registry records to confirm whether alternative certification had been applied.

Audit commentary

Alternative certification has not occurred. I confirmed this by checking the list file.

Audit outcome

Compliant

7.10. Timekeeping Requirements (Clause 23 of Schedule 10.7)

Code reference

Clause 23 of Schedule 10.7

Code related audit information

If a time keeping device that is not remotely monitored and corrected controls the switching of a meter register in a metering installation, the MEP must ensure that the time keeping device:

- a) *has a time keeping error of not greater than an average of 2 seconds per day over a period of 12 months,*
- b) *is monitored and corrected at least once every 12 months.*

Audit observation

I asked Delta whether there were any metering installations with time keeping devices-switches.

Audit commentary

The audit compliance report identified three Category 2 metering installations with day and night meter registers with no control device recorded. Delta confirmed that these metering installations had Landis + Gyr meters with internal time clocks used to switch between the day and night registers. Delta does not have a process for monitoring and correcting the time keeping error of these devices.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 7.10 With: Clause 23 of Schedule 10.7 From: 01-Jul-19 To: 23-Jun-21	Three metering installations with time keeping errors are not checked every 12 months. Potential impact: Low Actual impact: Low Audit history: Once Controls: None Breach risk rating: 5		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as none as there is no process in place to check the time keeping error for these installations. The impact on settlement and participants could be minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
DELTA have ordered a reader head and have downloaded the software required to perform these checks and adjustments. The reader head is on back order. DELTA will perform these checks and any required adjustments as soon as necessary equipment is available. Landys & Gyr have been chased up multiple times on this.		31/08/2021	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Once DELTA have the required equipment these checks, and any required adjustments will be scheduled periodically.		31/08/2021	

7.11. Control Device Bridged Out (Clause 35 of Schedule 10.7)

Code reference

Clause 35 of Schedule 10.7

Code related audit information

The participant must, within 10 business days of bridging out a control device or becoming aware of a control device being bridged out, notify the following parties:

- *the relevant reconciliation participant*
- *the relevant metering equipment provider.*

If the control device is used for reconciliation, the metering installation is considered defective in accordance with 10.43.

Audit observation

I checked the process for the management of bridged control devices, and I checked whether any notifications were required to other parties.

Audit commentary

There were no examples to examine as the normal process is for faulty control devices to be replaced rather than bridged. This includes after hours faults staff who are ATH approved.

Audit outcome

Compliant

7.12. Control Device Reliability Requirements (Clause 34(5) of Schedule 10.7)

Code reference

Clause 34(5) of Schedule 10.7

Code related audit information

If the MEP is advised by an ATH that the likelihood of a control device not receiving signals would affect the accuracy or completeness of the information for the purposes of Part 15, the MEP must, within three business days inform the following parties of the ATH's determination (including all relevant details):

- a) the reconciliation participant for the POC for the metering installation*
- b) the control signal provider.*

Audit observation

I checked the steps Delta had taken to identify regions with signal propagation issues.

Audit commentary

Delta's instruction is that control devices must not be installed to control registers if there is a signal propagation problem in a particular area. There are no known signal propagation issues. Most metering is on the Aurora network where there is 317 hz plant in operation resulting in good propagation.

Audit outcome

Compliant

7.13. Statistical Sampling (Clauses 16(1) and (5) of Schedule 10.7)

Code reference

Clauses 16(1) and (5) of Schedule 10.7

Code related audit information

The MEP may arrange for an ATH to recertify a group of category 1 metering installations for which the MEP is responsible using a statistical sampling process.

The MEP must update the registry in accordance with Part 11 on the advice of an ATH as to whether the group meets the recertification requirements.

Audit observation

Delta recertified 179 Category 1 metering installations in December 2020 through statistical sampling recertification using the Delta ATH. I checked the process and results to determine compliance.

Audit commentary

A sample of 52 meters were removed and tested using the testing by attributes method as described in AS/NZS 1284. When selecting the sample, the ATH is required to ensure that the sample is representative of the group and to document the process it follows and any assumptions it makes.

Clause 16(3) of Schedule 10.7 states,

An ATH must, when selecting a sample from the group under subclause (2)(a), —

(a) document the process it follows and any assumptions it makes; and

(b) keep records in accordance with clause 13 of Schedule 10.4, of—

(i) each step in the process; and

(ii) each metering installation in the sample; and

(iii) each metering installation in the group that is recertified using this process.

Clause 8.4 of AS/NS 1284 states,

Samples shall be randomly selected to be representative of the selected meter population.

Meters should be assessed for signs of tampering or damage. Meters that have been tampered with or damaged may be omitted from a population.

It is recommended that the number of meters selected should be 10% more than the required sample size to allow for the replacements if some meters are damaged.

The Guideline on recertification of category 1 metering installations by statistical sampling: The application of clause 16 of Schedule 10.7, issued by the Authority in September 2014 states,

25. Once the ATH has selected the meter sample, it must assess the meter sample to ensure it is representative of the group. Factors that the ATH should take into account to decide whether the meter sample represents the group include, but are not limited to:

(e) meter construction principles

(f) meter manufacturer

(g) the ATH's experience of the accuracy of meter make and model

(h) the range of environments in which the meters are installed.

26. As the integrity of the statistical sampling process depends on the meter sample being representative of the group, the ATH must satisfy itself that the meter sample properly represents the group. The ATH should keep auditable records to document the factors it considers in forming this view.

27. Depending on the make-up of the group, the ATH may require more than the minimum sample size to ensure the meter sample is representative of the group. The ATH and MEP should discuss the final sample size, and as necessary, refine or split the group.

Delta provided information detailing the process for selecting the sample. The information provided indicated that the ATH had not ensured that the sample was representative of the group. The group was made up of 499 meters of 19 different types. There were eight types represented in the sample and 11 types not represented in the sample. Details of the group and population are included in the table below:

Meter type	Number	Percent of Population	Percent of Sample	Number of phases
A1	1	0.20%	Not in sample	unknown
B11	9	1.80%	Not in sample	unknown
B12	1	0.20%	Not in sample	unknown
B4	1	0.20%	Not in sample	unknown
B42	1	0.20%	Not in sample	unknown

B71	8	1.60%	Not in sample	unknown
D4	25	5.01%	3.85%	3
D42	6	1.20%	1.92%	3
F1	1	0.20%	Not in sample	unknown
G1	30	6.01%	5.77%	1
G12	2	0.40%	Not in sample	unknown
I1	28	5.61%	3.85%	1
L1	13	2.61%	5.77%	1
Q11	330	66.13%	76.92%	1
Q12	4	0.80%	Not in sample	unknown
S1	23	4.61%	3.85%	1
S4	9	1.80%	Not in sample	unknown
S42	2	0.40%	Not in sample	unknown
S5	5	1.00%	1.92%	3
Grand Total	499	100.00%		
TOTAL not in sample	39.00	7.82%		

The group included a mix of electronic and ferraris disc meters with both single and three phase meters included. The test results for the sample included details of the number of phases and whether the meter was an electronic or ferraris disc type. This information was not provided for the meters not included in the sample. A breakdown of the sample is included in the following table:

Meter Type	Number	Percentage of sample	Percentage of population	Number of phases
Electronic	43	82.69%		
Q11	40	76.92%	66.13%	1
D4	2	3.85%	5.01%	3
D42	1	1.92%	1.20%	3
Ferraris	9	17.31%		
G1	3	5.77%	6.01%	1
I1	2	3.85%	5.61%	1
L1	1	1.92%	2.61%	1
S1	2	3.85%	4.61%	1
S5	1	1.92%	1.00%	3
Grand Total	52			

I have recorded non-compliance as the sample is not confirmed as representative of the group certified.

Delta has updated the registry with details of the certification for 179 ICPs where they were still the MEP, the remainder of the 499 had switched to other MEPs. As recorded in **section 4.10** the updates were made after 10 business days.

Audit outcome

Non-compliant

Non-compliance	Description
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Audit Ref: 7.13 With: Clause 16(1) of Schedule 10.7 From: 15-Dec-20 To: 23-Jun-21	Sample not representative of the group of meters certified using the statistical recertification method. Potential impact: Medium Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 6	
Audit risk rating	Rationale for audit risk rating	
Medium	I have rated the controls as weak because the Delta process did not ensure correct selection of samples. The impact could be significant, as it is likely that inaccurate metering installations have been recertified. The audit risk rating is medium.	
Actions taken to resolve the issue	Completion date	Remedial action status
The DELT MEP has followed the guideline and considers the sample to be representative of the group. <ul style="list-style-type: none"> • The experience of the lab technicians and the testing history of the meter types selected indicate that these meters have similar test results and would deteriorate at the same rate. • The range of environments are all very similar, as the meters are installed in the same part of the country. • The age of the meters are all very similar as they were initially installed and certified at a similar time resulting in a similar cert expiry date. • Despite individual models the meters have a very similar physical composition being made in a similar way with similar functionality with the same end result. 	complete	Disputed
Preventative actions taken to ensure no further issues will occur	Completion date	
The auditor's comments/recommendation shall be taken into consideration when selecting future groups for the ATH to select the sample from.	Date	

7.14. Compensation Factors (Clause 24(3) of Schedule 10.7)

Code reference

Clause 24(3) of Schedule 10.7

Code related audit information

If an external compensation factor must be applied to a metering installation that is an NSP, the MEP must advise the reconciliation participant responsible for the metering installation of the compensation factor within 10 days of certification of the installation.

In all other cases the MEP must update the compensation factor recorded in the registry in accordance with Part 11.

Audit observation

I checked the certification records against the registry for 10 metering installations and they were correct in all cases.

Audit commentary

I checked the certification records against the registry for 10 metering installations and they were correct in all cases.

Audit outcome

Compliant

7.15. Metering Installations Incorporating a Meter (Clause 26(1) of Schedule 10.7)

Code reference

Clause 26(1) of Schedule 10.7

Code related audit information

The MEP must ensure that each meter in a metering installation it is responsible for is certified.

Audit observation

I checked the certification records for 10 metering installations to confirm compliance.

Audit commentary

Meters were certified for all 10 metering installations.

Audit outcome

Compliant

7.16. Metering Installations Incorporating a Measuring Transformer (Clause 28(1) of Schedule 10.7)

Code reference

Clause 28(1) of Schedule 10.7

Code related audit information

The MEP must ensure that each measuring transformer in a metering installation it is responsible for is certified.

Audit observation

I checked the certification records for seven metering installations to confirm compliance.

Audit commentary

I checked the records for seven CT metered installations, and I confirm CTs are certified in accordance with this clause.

Audit outcome

Compliant

7.17. Metering Installations Incorporating a Data Storage Device (Clause 36(1) of Schedule 10.7)

Code reference

Clause 36(1) of Schedule 10.7

Code related audit information

The MEP must ensure that each data storage device in a metering installation it is responsible for is certified.

Audit observation

Delta is not the MEP for any HHR or AMI metering installations, no data storage devices are installed.

Audit commentary

Delta is not the MEP for any HHR or AMI metering installations, no data storage devices are installed.

Audit outcome

Compliant

7.18. Notification of ATH Approval (Clause 7 (3) Schedule 10.3)

Code reference

Clause 7 (3) Schedule 10.3

Code related audit information

If the MEP is notified by the Authority that an ATH's approval has expired, been cancelled or been revised, the MEP must treat all metering installations certified by the ATH during the period where the ATH was not approved to perform the activities as being defective and follow the procedures set out in 10.43 to 10.48.

Audit observation

I checked the ATH register to confirm compliance.

Audit commentary

All relevant ATHs have appropriate approval.

Audit outcome

Compliant

7.19. Interim Certification (Clause 18 of Schedule 10.7)

Code reference

Clause 18 of Schedule 10.7

Code related audit information

The MEP must ensure that each interim certified metering installation on 28 August 2013 is certified by no later than 1 April 2015.

Audit observation

I checked the registry records to identify any ICPs with interim certification recorded.

Audit commentary

There are no metering installations with interim certification.

Audit outcome

Compliant

8. INSPECTION OF METERING INSTALLATIONS

8.1. Category 1 Inspections (Clause 45 of Schedule 10.7)

Code reference

Clause 45 of Schedule 10.7

Code related audit information

The MEP must ensure that category 1 metering installations (other than interim certified metering installations):

have been inspected by an ATH within 126 months from the date of the metering installation's most recent certification or

for each 12-month period, commencing 1 January and ending 31 December, ensure an ATH has completed inspections of a sample of the category 1 metering installations selected under clause 45(2) of Schedule 10.7.

Before a sample inspection process can be carried out, the MEP must submit a documented process for selecting the sample to the Electricity Authority, at least 2 months prior to first date on which the inspections are to be carried out, for approval (and promptly provide any other information the Authority may request).

The MEP must not inspect a sample unless the Authority has approved the documented process.

The MEP must, for each inspection conducted under clause 45(1)(b), keep records detailing:

any defects identified that have affected the accuracy or integrity of the raw meter data recorded by the metering installation,

any discrepancies identified under clause 44(5)(b)

relevant characteristics, sufficient to enable reporting of correlations or relationships between inaccuracy and characteristics,

the procedure used, and the lists generated, to select the sample under clause 45(2).

The MEP must, if it believes a metering installation that has been inspected is or could be inaccurate, defective or not fit for purpose:

comply with clause 10.43,

arrange for an ATH to recertify the metering installation if the metering is found to be inaccurate under Table 1 of Schedule 10.1, or defective or not fit for purpose.

The MEP must by 1 April in each year, provide the Authority with a report that states whether the MEP has, for the previous 1 January to 31 December period, arranged for an ATH to inspect each category 1 metering installation for which it is responsible under clause 45(1)(a) or 45(1)(b).

This report must include the matters specified in clauses 45(8)(a) and (b).

If the MEP is advised by the Authority that the tests do not meet the requirements under clause 45(9) of Schedule 10.7, the MEP must select the additional sample under that clause, carry out the required inspections, and report to the Authority, within 40 business days of being advised by the Authority.

Audit observation

I checked the process and results for Category 1 inspections.

Audit commentary

Delta conducted Category 1 inspections in accordance with a process approved by the Authority. The required minimum number of inspections to be completed by 31 December 2020 was 50. 68 inspections were completed in 2020. The results are shown in the table below:

Quantity	Comments
68	Total inspections
3	Missing or unreadable certification sticker
1	Loose termination
3	Loose Assets on board

I have recorded non-compliance as the inspection report was not provided to the Authority by 1st April 2021 as required. The report was provided to the Authority on 17th May 2021.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 8.1 With: Clause 45 of Schedule 10.7 From: 01-Apr-21 To: 17-May-21	Category 1 inspection report for 2020 not provided to the Authority by 1 st April 2021. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	I have recorded the controls as moderate because there is room for improvement. There was no impact; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Inspection report was supplied to the EA prior to the audit		complete	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Annual reminders have been set in our compliance calendar to ensure these are sent on time.		Complete	

8.2. Category 2 to 5 Inspections (Clause 46(1) of Schedule 10.7)

Code reference

Clause 46(1) of Schedule 10.7

Code related audit information

The MEP must ensure that each category 2 or higher metering installation is inspected by an ATH at least once within the applicable period. The applicable period begins from the date of the metering installation's most recent certification and extends to:

- *120 months for Category 2*
- *60 months for Category 3*
- *30 months for Category 4*
- *18 months for Category 5.*

Audit observation

I checked the inspection process for Category 2 installations.

Audit commentary

There were no inspections due for Category 2 installations during the audit period.

Audit outcome

Compliant

8.3. Inspection Reports (Clause 44(5) of Schedule 10.7)

Code reference

Clause 44(5) of Schedule 10.7

Code related audit information

The MEP must, within 20 business days of receiving an inspection report from an ATH:

- *undertake a comparison of the information received with its own records,*
- *investigate and correct any discrepancies,*
- *update the metering records in the registry.*

Audit observation

I checked that Delta had checked their records and resolved any issues.

Audit commentary

Delta checked the relevant details during inspections, and I observed evidence that updates had occurred where discrepancies were found.

Audit outcome

Compliant

8.4. Broken or removed seals (Clause 48(1G), (4) and (5) of Schedule 10.7)

Code reference

Clause 48(4) and (5) of Schedule 10.7

Code related audit information

If the MEP is advised of a broken or removed seal it must use reasonable endeavours to determine

- a) who removed or broke the seal,*
- b) the reason for the removal or breakage.*

and arrange for an ATH to carry out an inspection of the removal or breakage and determine any work required to remedy the removal or breakage.

The MEP must make the above arrangements within

- a) 3 business days, if the metering installation is category 3 or higher,*
- b) 10 business days if the metering installation is category 2,*
- c) 20 business days if the metering installation is category 1.*

If the MEP is advised under 48(1B)(c) or (48(1F)(d) the MEP must update the relevant meter register content code for the relevant meter channel.

Audit observation

I checked if there were any examples of broken or missing seals during the audit period.

Audit commentary

There were no missing seals identified during the inspections completed and Delta did not receive any notifications of missing seals. Delta has a documented process in place for the management of seals and any subsequent investigation and reporting.

Audit outcome

Compliant

9. PROCESS FOR HANDLING FAULTY METERING INSTALLATIONS

9.1. Investigation of Faulty Metering Installations (Clause 10.43(4) and (5))

Code reference

Clause 10.43(4) and (5)

Code related audit information

If the MEP is advised or becomes aware that a metering installation may be inaccurate, defective, or not fit for purpose, it must investigate and report on the situation to all affected participants as soon as reasonably practicable after becoming aware of the information, but no later than:

- a) 20 business days for Category 1,*
- b) 10 business days for Category 2 and*
- c) five business days for Category 3 or higher.*

Audit observation

Delta has a documented process in place for the management of faulty metering installations and any subsequent investigation and reporting. No specific examples were identified during the audit period.

Audit commentary

Delta has a documented process in place for the management of faulty metering installations and any subsequent investigation and reporting. No specific examples were identified during the audit period.

Audit outcome

Compliant

9.2. Testing of Faulty Metering Installations (Clause 10.44)

Code reference

Clause 10.44

Code related audit information

If a report prepared under clause 10.43(4)(c) demonstrates that a metering installation is inaccurate, defective, or not fit for purpose, the MEP must arrange for an ATH to test the metering installation and provide a 'statement of situation'.

If the MEP is advised by a participant under clause 10.44(2)(a) that the participant disagrees with the report that demonstrates that the metering installation is accurate, not defective and fit for purpose, the MEP must arrange for an ATH to:

- a) test the metering installation,*
- b) provide the MEP with a statement of situation within five business days of:*
- c) becoming aware that the metering installation may be inaccurate, defective or not fit for purpose; or*
- d) reaching an agreement with the participant.*

The MEP is responsible for ensuring the ATH carries out testing as soon as practicable and provides a statement of situation.

Audit observation

Delta has a documented process in place for the management of faulty metering installations and any subsequent investigation and reporting. No specific examples were identified during the audit period.

Audit commentary

Delta has a documented process in place for the management of faulty metering installations and any subsequent investigation and reporting. No specific examples were identified during the audit period.

Audit outcome

Compliant

9.3. Statement of Situation (Clause10.46(2))

Code reference

Clause10.46(2)

Code related audit information

Within three business days of receiving the statement from the ATH, the MEP must provide copies of the statement to:

- *the relevant affected participants*
- *the market administrator (for all category 3 and above metering installations and any category 1 and category 2 metering installations) on request.*

Audit observation

Delta has a documented process in place for the management of faulty metering installations and any subsequent investigation and reporting. No specific examples were identified during the audit period.

Audit commentary

Delta has a documented process in place for the management of faulty metering installations and any subsequent investigation and reporting. No specific examples were identified during the audit period.

Audit outcome

Compliant

9.4. Timeframe for correct defects and inaccuracies (Clause10.46A)

Code reference

Clause10.46A

Code related audit information

When the metering equipment provider is advised under 10.43 or becomes aware a metering installation it is responsible for is inaccurate, defective or not fit for purpose the metering equipment provider must undertake remedial actions to address the issue.

The metering equipment provider must use its best endeavours to complete the remedial action within 10 business days of the date it is required to provide a report to participants under 10.43(4)(c).

Audit observation

Delta has a documented process in place for the management of faulty metering installations and any subsequent investigation and reporting. No specific examples were identified during the audit period.

Audit commentary

Delta has a documented process in place for the management of faulty metering installations and any subsequent investigation and reporting. No specific examples were identified during the audit period.

Audit outcome

Compliant

10. ACCESS TO AND PROVISION OF RAW METER DATA AND METERING INSTALLATIONS

10.1. Access to Raw Meter Data (Clause 1 of Schedule 10.6)

Code reference

Clause 1 of Schedule 10.6

Code related audit information

The MEP must give authorised parties access to raw meter data within 10 business days of receiving the authorised party making a request.

The MEP must only give access to raw meter data to a trader or person, if that trader or person has entered into a contract to collect, obtain, and use the raw meter data with the end customer.

The MEP must provide the following when giving a party access to information:

- a) the raw meter data; or*
- b) the means (codes, keys etc.) to enable the party to access the raw meter data.*

The MEP must, when providing raw meter data or access to an authorised person use appropriate procedures to ensure that:

- the raw meter data is received only by that authorised person or a contractor to the person,*
- the security of the raw meter data and the metering installation is maintained,*
- access to the raw meter data is limited to only the specific raw meter data under clause 1(7)(c) of Schedule 10.6.*

Audit observation

I checked whether any parties had requested access to raw meter data.

Audit commentary

Delta is not the MEP for any AMI or HHR metering installations so raw data can only be obtained from meter registers. Delta will assist with access to raw meter data when required, but there have not been any specific requests.

Audit outcome

Compliant

10.2. Restrictions on Use of Raw Meter Data (Clause 2 of Schedule 10.6)

Code reference

Clause 2 of Schedule 10.6

Code related audit information

The MEP must not give an authorised person access to raw meter data if to do so would breach clause 2(1) of Schedule 10.6.

Audit observation

I checked whether any parties had requested access to raw meter data.

Audit commentary

Delta is not the MEP for any AMI or HHR metering installations so raw data can only be obtained from meter registers. Delta will assist with access to raw meter data when required, but there have not been any specific requests.

Audit outcome

Compliant

10.3. Access to Metering Installations (Clause 3(1), (3) and (4) of Schedule 10.6)

Code reference

Clause 3(1), (3) and (4) of Schedule 10.6

Code related audit information

The MEP must within 10 business days of receiving a request from one of the following parties, arrange physical access to each component in a metering installation:

- *a relevant reconciliation participant with whom it has an arrangement (other than a trader)*
- *the Authority*
- *an ATH*
- *an auditor*
- *a gaining MEP.*

This access must include all necessary means to enable the party to access the metering components,

When providing access, the MEP must ensure that the security of the metering installation is maintained and physical access is limited to only the access required for the purposes of the Code, regulations in connection with the party's administration, audit and testing functions.

Audit observation

I checked whether any parties had requested access to metering installations.

Audit commentary

No requests have been received but Delta advised access could be granted in accordance with this clause if necessary.

Audit outcome

Compliant

10.4. Urgent Access to Metering Installations (Clause 3(5) of Schedule 10.6)

Code reference

Clause 3(5) of Schedule 10.6

Code related audit information

If the party requires urgent physical access to a metering installation, the MEP must use its best endeavours to arrange physical access.

Audit observation

I checked whether any parties had requested access to metering installations.

Audit commentary

No requests have been received, but Delta advised access could be granted in accordance with this clause if necessary.

Audit outcome

Compliant

10.5. Electronic Interrogation of Metering Installations (Clause 8 of Schedule 10.6)

Code reference

Clause 8 of Schedule 10.6

Code related audit information

When raw meter data can only be obtained from an MEP's back office, the MEP must

- *ensure that the interrogation cycle does not exceed the maximum interrogation cycle shown in the registry,*
- *interrogate the metering installation at least once within each maximum interrogation cycle.*

When raw meter data can only be obtained from an MEP's back office, the MEP must ensure that the internal clock is accurate, to within ± 5 seconds of:

- *New Zealand standard time; or*
- *New Zealand daylight time.*

When raw meter data can only be obtained from an MEP's back office, the MEP must record in the interrogation and processing system logs, the time, the date, and the extent of any change in the internal clock setting in the metering installation.

The MEP must compare the time on the internal clock of the data storage device with the time on the interrogation and processing system clock, calculate and correct (if required by this provision) any time error, and advise the affected reconciliation participant.

When raw meter data can only be obtained from an MEP's back office, the MEP must, when interrogating a metering installation, download the event log, check the event log for evidence of an events that may affect the integrity or operation of the metering installation, such as malfunctioning or tampering.

The MEP must investigate and remediate any events and advise the reconciliation participant.

The MEP must ensure that all raw meter data that can only be obtained from the MEPs back office, that is downloaded as part of an interrogation, and that is used for submitting information for the purpose of Part 15 is archived:

- *for no less than 48 months after the interrogation date*
- *in a form that cannot be modified without creating an audit trail*
- *in a form that is secure and prevents access by any unauthorised person*

in a form that is accessible to authorised personnel.

Audit observation

Delta does not conduct electronic data collection.

Audit commentary

Delta does not conduct electronic data collection.

Audit outcome

Not applicable

10.6. Security of Metering Data (Clause 10.15(2))

Code reference

Clause 10.15(2)

Code related audit information

The MEP must take reasonable security measures to prevent loss or unauthorised access, use, modification or disclosure of the metering data.

Audit observation

Delta does not conduct electronic data collection.

Audit commentary

Delta does not conduct electronic data collection.

Audit outcome

Not applicable

10.7. Time Errors for Metering Installations (Clause 8(4) of Schedule 10.6)

Code reference

Clause 8(4) of Schedule 10.6

Code related audit information

When raw meter data can only be obtained from the MEPs back office, the MEP must ensure that the data storage device it interrogates does not exceed the maximum time error set out in Table 1 of clause 8(5) of Schedule 10.6.

Audit observation

Delta does not conduct electronic data collection.

Audit commentary

Delta does not conduct electronic data collection.

Audit outcome

Not applicable

10.8. Event Logs (Clause 8(7) of Schedule 10.6)

Code reference

Clause 8(7) of Schedule 10.6

Code related audit information

When raw meter data can only be obtained from the MEP's back office, the MEP must, when interrogating a metering installation:

- a) *ensure an interrogation log is generated,*
- b) *review the event log and:*
 - i. *take appropriate action,*
 - ii. *pass the relevant entries to the reconciliation participant,*
- c) *ensure the log forms part of an audit trail which includes:*
 - i. *the date and*

- ii. *time of the interrogation*
- iii. *operator (where available)*
- iv. *unique ID of the data storage device*
- v. *any clock errors outside specified limits,*
- vi. *method of interrogation*
- vii. *identifier of the reading device used (if applicable).*

Audit observation

Delta does not conduct electronic data collection.

Audit commentary

Delta does not conduct electronic data collection.

Audit outcome

Not applicable

10.9. Comparison of HHR Data with Register Data (Clause 8(9) of Schedule 10.6)

Code reference

Clause 8(9) of Schedule 10.6

Code related audit information

When raw meter data can only be obtained from the MEP’s back office, the MEP must ensure that each electronic interrogation that retrieves half-hour metering information compares the information against the increment of the metering installations accumulating meter registers for the same period.

Audit observation

Delta does not conduct electronic data collection.

Audit commentary

Delta does not conduct electronic data collection.

Audit outcome

Not applicable

10.10. Correction of Raw Meter Data (Clause 10.48(2),(3))

Code reference

Clause 10.48(2),(3)

Code related audit information

If the MEP is notified of a question or request for clarification in accordance with clause 10.48(1), the MEP must, within 10 business days:

- *respond in detail to the questions or requests for clarification,*
- *advise the reconciliation participant responsible for providing submission information for the POC of the correction factors to apply and period the factors should apply to.*

Audit observation

Delta does not conduct electronic data collection.

Audit commentary

Delta does not conduct electronic data collection.

Audit outcome

Not applicable

10.11.Raw meter data and compensation factors (Clause 8(10) of Schedule 10.6)

Code reference

Clause 8(10) of Schedule 10.6

Code related audit information

The MEP must not apply the compensation factor recorded in the registry to raw meter data downloaded as part of the interrogation of the metering installation.

Audit observation

Delta does not conduct electronic data collection.

Audit commentary

Delta does not conduct electronic data collection.

Audit outcome

Not applicable

10.12.Investigation of AMI interrogation failures (Clause 8(11), 8(12) and 8(13) of Schedule 10.6)

Code reference

Clause 8(11), 8(12) and 8(13) of Schedule 10.6

Code related audit information

If an interrogation does not download all raw meter data, the MEP must investigate the registry why or update the registry to show the meter is no longer AMI.

If the MEP chooses to investigate the reasons for the failure the MEP has no more than 30 days or 25% of the maximum interrogation cycle, from the date of the last successful interrogation (whichever is shorter).

If the MEP does not restore communications within this time or determines they will be unable to meet this timeframe they must update the registry to show the meter is no longer AMI.

Audit observation

Delta does not conduct electronic data collection.

Audit commentary

Delta does not conduct electronic data collection.

Audit outcome

Not applicable

CONCLUSION

The audit identified eight areas of non-compliance. The main areas of non-compliance are as follows:

- certification cancelled and registry not updated for three ICPs where low burden was not addressed,
- monitoring of timekeeping devices has not been conducted for three ICPs,
- some registry information incomplete or incorrect,
- the registry is not always updated as soon as possible, and
- sample not representative of the group of meters certified using the statistical recertification method.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The future risk rating provides some guidance on this matter and recommends an audit frequency of six months. After reviewing Delta's responses, I agree with this recommendation.

PARTICIPANT RESPONSE

The DELT MEP disputes the issue around stat sampling as we consider the sample to be representative of the group as per our comments above.

Other issues will be resolved via the Reconciliation and Audit Compliance report. Whilst the Reconciliation report is run monthly, the Compliance Report is to be run periodically and used to identify discrepancies and compliance staff to remedy in a timely fashion.

The DELT MEP has taken actions to remedy non-compliances identified in previous MEP audits that we have still been found non-compliant is purely because the required checks had not been in place for a prolonged period due logistical challenges in transferring Gentrack/Registry responsibilities from Aurora to Delta.

Considering the steps and controls that are already in place and the additional checks and reports that will be implemented, the DELT MEP an audit period of 12 to 18 months is acceptable.