

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

For



Contact

Prepared by: Brett Piskulic – Veritek Limited

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Date audit report completed: 3 October 2018

Audit report due date: 08-Oct-18

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EXECUTIVE SUMMARY

Contact Energy Limited (Contact) is a Metering Equipment Provider (MEP) and is required to undergo an audit by 08/10/18, in accordance with clause 1(1)(b) of schedule 10.5.

Contact has resolved the non-compliance caused by approved test houses relating to lack of information supplied in certification reports.

Processes have been put in place to ensure the timeframes for correction of errors identified between Contact's records and the registry are resolved within the required timeframes.

Five non-compliances are recorded the main issues are as follows;

- Late updates of some registry records.
- Incomplete or incorrect registry records.
- 5,423 ICPs where the metering installation certification has expired. 5,344 of these are where Contact is the MEP but not the component owner and is negotiating with the trader for them to nominate the component owner as the MEP. This is recorded as a medium impact because statistical sampling results demonstrate that a proportion of this pool of meters will not be recording accurately.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The table below provides some guidance on this matter and recommends an audit frequency of 12 months. I recommend an 18 month period as two of the non-compliances can effectively be combined (section 7.1 and 7.19) as they relate to the same issue.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Changes to registry records	4.10	3 of Schedule 11.4	Some records updated on the registry later than 10 business days	Strong	Low	1	Identified
Provision of Registry Information	6.2	Clause 7 (1), (2) and (3) of Schedule 11.4	Some registry records incomplete or incorrect	Strong	Low	1	Identified
Certification of metering installations	7.1	10.38 (a), clause 1 and clause 15 of Schedule 10.7	Certification expired for 5,423 ICPs	Moderate	Medium	4	Identified
Timekeeping Requirements	7.10	Clause 23 of Schedule 10.7	16 ICPs with time switches not checked within 12 months.	Low	Medium	1	Identified

Interim certification	7.19	18 of Schedule 10.7	5,313 ICPs with expired interim certification.	Moderate	Medium	4	Identified
Future Risk Rating						11	
Indicative Audit Frequency						12 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	Recommendation	Description

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

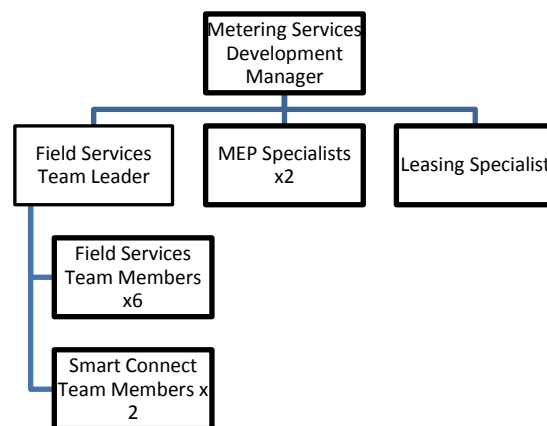
I checked the Electricity Authority website and I confirm there are no exemptions in place.

Audit commentary

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

1.2. Structure of Organisation

Contact Metering Services Structure – Effective 1st October 2017



1.3. Persons involved in this audit

Auditor: Brett Piskulic

Veritek Limited

Electricity Authority Approved Auditor

Contact personnel assisting in this audit were.

Name	Title
Nagham Anayi	MEP Specialist
Emma Fraser	MEP Specialist
Darren Law	Metering Manager

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 contractors 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

Contact engages with the VEMS and DELTA ATHs to conduct certification activities. Contact had previously relied on these ATHs to act as agents for the management and storage of Category 1 certification records. Contact is in the process of ceasing to use the ATHs as agents for the storage of certification records. I requested certification reports for 36 ICPs to confirm their compliance and availability.

Audit commentary

All certification records were provided, which achieves compliance with this clause. The reports provided by VEMS and Delta were compliant.

1.5. Hardware and Software

Contact MEP data is held in SAP, which is subject to backup arrangements in accordance with standard industry protocols.

1.6. Breaches or Breach Allegations

Contact confirmed there are no breach allegations related to the scope of this audit.

1.7. ICP Data

Metering Category	Number of ICPs
1	37,357
2	316
3	0
4	1
5	0
9	11
Total	37,685

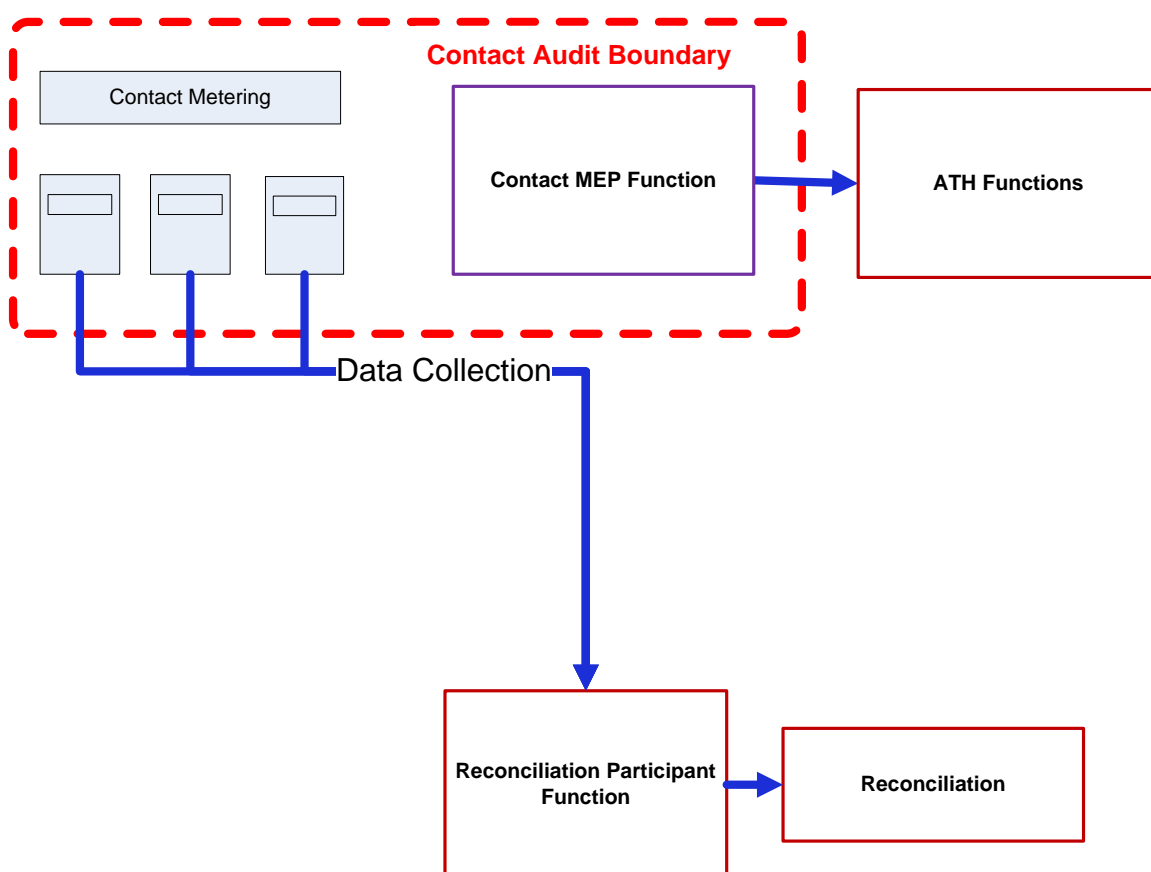
1.8. Authorisation Received

A letter of authorization was not required or requested.

1.9. Scope of Audit

This audit was conducted in accordance with the Guideline for Metering Equipment Provider Audits V2.1, which was published by the Electricity Authority.

The boundaries of this audit are shown below for greater clarity.



1.10. Summary of previous audit

The previous audit was conducted in September 2017 by Steve Woods of Veritek Limited. The table below shows the status of the issues which were raised.

Table of Non Compliance

Subject	Section	Clause	Non compliance	Status
Registry updates	3.2	2 of Schedule 11.4	11 registry updates later than 15 business days.	Cleared
Metering Installation Design & Accuracy	4.3	4(1) of Schedule 10.7	ATHs are not always recording the design report reference	Cleared
Changes to registry records	4.10	3 of Schedule 11.4	Some records updated on the registry later than 10 business days	Still existing
Provision of Registry Information	6.2	Clause 7 (1), (2) and (3) of Schedule 11.4	Some registry records incomplete or incorrect	Still existing
Correction of Errors in Registry	6.3	Clause 6 of Schedule 11.4	Discrepancies not resolved within 5 business days	Cleared
Certification of metering installations	7.1	10.38 (a), clause 1 and clause 15 of Schedule 10.7	Certification expired for 6,488 ICPs	Still existing
Interim certification	7.19	18 of Schedule 10.7	6,214 ICPs with expired interim certification.	Still existing
Investigation of Faulty Metering Installations	9.1	43(4) and (5)	Faulty meters not reported to traders within 20 business days.	Cleared

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Status
Accuracy of records	5.1	Clause 4(1)(a) and (b) of Schedule 10.	Advise ATHs that Contact requires certification reports within 5 business days in accordance with clause 14 of schedule 10.4	Cleared
Accuracy of records	5.1	Clause 4(1)(a) and (b) of Schedule 10.	Require ATHs to provide certification records with better clarity.	Cleared
Broken or removed seals	8.4	Clause 48(4) and (5) of Schedule 10.7	Require ATHs to record seals replaced during inspections.	Cleared
Investigation of Faulty Metering Installations	9.1	Clause 43(4) and (5)	Meters found to be inaccurate during stat sampling recertification are reported to traders.	Cleared

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

I checked certification records for 36 metering installations, covering all relevant ATHs.

Audit commentary

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 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

Contact 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

Contact uses the CTCT identifier in all cases.

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

Contact is not the MEP for AMI metering installations where communication equipment is present.

Audit commentary

Contact is not the MEP for AMI 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

The content of this audit report indicates that Contact has taken all practicable steps to ensure that information is complete and accurate.

Audit outcome

Compliant

3. PROCESS FOR A CHANGE OF MEP

3.1. Payment of Costs to Losing MEP (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 notification requirements are met (in relation to the registry and the reconciliation manager).

The gaining MEP must pay the losing MEP a proportion of the costs within 20 business days of assuming responsibility.

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.

Audit observation

Contact has not sent or received any invoices in relation to this clause.

Audit commentary

Contact has not sent or received any invoices in relation to 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 event detail for the period 01/09/17 to 31/07/18 for all records where Contact became the MEP to evaluate the timeliness of updates.

Audit commentary

There were no late updates to the registry out of 6 events. Contact run a report "CTCT meter installed" which checks for records in SAP with no records on the registry. This report ensures that updates are completed as required.

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 Contact to confirm whether there had been any requests from other MEPs. LMGL have made requests for records.

Audit commentary

I checked two examples and confirmed that the requests were met on the same day.

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 MEPs 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 Contact has ceased to be responsible for some metering installations by checking the event detail report.

Audit commentary

Contact continues with their responsibilities, mainly in relation to the storage of records, which are kept indefinitely. I checked the records for ICP 0000000281NT366 where the meter had been removed, the records were still kept. I checked a list of ICPs which were transferred to LMGL, records were still kept.

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

Contact has engaged the VEMS and DELTA ATHs for certification activities. The ATHs have provided design reports for this work which I have checked.

Audit commentary

The design reports used by VEMS and DELTA include all relevant details required by the Code and ATHs had correctly recorded the design for all 36 metering installations checked.

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

I confirmed that Contact has used the VEMS and DELTA ATHs during the audit period, in order to check the Authority's website for scope of approval.

Audit commentary

I have checked the Authority's website and confirm that the VEMS and DELTA have current and appropriate scope of approvals.

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 Contact to ensure compliance with the design and with the error thresholds stipulated in Table 1. I also checked the certification records for 36 metering installations.

Audit commentary

With regard to the design of the installation (including data storage device and interrogation system), Contact ensures 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. There are no components installed where “coarse” rounding is in place for the data, or where meters with a low pulse rate are connected to separate data storage devices.

Contact has a process to ensure the metering installation complies with the design report and the requirements of Part 10 by requiring ATH’s to confirm the installations match the design, or by requiring updates to be provided if the installation does not match the design.

I checked 36 recent certification records and found that the design report was populated correctly in all cases. Compliance is achieved with the requirement to ensure metering installations comply with the design.

Audit outcome

Compliant

4.4. Subtractive Metering (Clause 4(2)(a) of Schedule 10.7)

Code reference

Clause 4(2)(a) of Schedule 10.7

Code related audit information

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

Audit commentary

Contact 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

Contact is not the MEP for any metering installations above Category 2.

Audit commentary

Contact is not the MEP for any metering 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

Contact is not the MEP for any NSP metering installations.

Audit commentary

Contact is not responsible for any NSP metering.

Audit outcome

Compliant

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

Contact is not responsible for any grid metering.

Audit commentary

Contact is not responsible for any grid metering.

Audit outcome

Compliant

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

The VEMS design report contains reference to workmanship; ensuring access cannot be gained to live conductors; earthing arrangements and compliance with AS/NZS 3000.

Audit commentary

The VEMS design report contains reference to workmanship; ensuring access cannot be gained to live conductors; earthing arrangements and compliance with AS/NZS 3000. I have checked the DELTA process and confirmed that the MR-002 quality manual/operating instructions ensures compliance with relevant electrical legislation.

Audit outcome

Compliant

4.9. Installation & Modification of Metering Installations (Clauses 10.34(2), (2A) 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 installations:

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

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

Contact has written agreements in place with traders and these refer to “existing metering arrangements” and “compliance with the Code”. Contact has also consulted with distributors as required by this clause. 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

The MEP must advise the registry of the registry metering records or any change to the registry metering records for a metering installation for which it is responsible, no later than 10 business days following:

- a) *the electrical connection of an ICP that is not also an NSP*
- b) *any subsequent change in any matter covered by the metering records.*

Audit observation

I checked the event detail report for the period 01/09/17 to 31/07/18 to evaluate the timeliness of registry updates.

Audit commentary

The table below shows that registry updates were no new connections completed both of which were updated late.

There were 17542 updates of which 2026 were late, 88% of updates were compliant. 15578 were at 0 days for statistical sampling recertification updates.

I checked a sample of 30 Recertification updates from a total of 185. Of the sample I found that 7 were updated later than 10 days.

Event	Year	Total ICPs	ICPs Notified Within 10 Days	ICPs Notified Greater Than 10 Days	Average Notification Days	Percentage Compliant
New Connection	2016	23	22	1		96%
	2017	2	1	1	29	50%
	2018	0	-	-	-	-
Updates	2016	17262	12291	4971	94	71%
	2017	17542	15516	2026	54	88%
	2018	830	81	749	591	10%
Recertifications	2018	30	23	7	19	77%

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.10 With: Clause 3 of Schedule 11.4 From: 01-Sep-17 To: 31-Jul-18	Some records updated on the registry later than 10 business days. Potential impact: Low Actual impact: Low Audit history: Multiple times 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. The impact on participants, customers or settlement is minor, therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
All records have been updated to the registry accordingly		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Although CTCT has controls in place for this area of non-compliance we will review why some records were not updated within 10 business days and make amendments to our processes and controls to strengthen this area.		31/12/2018	

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

Contact does not have any AMI metering.

Audit commentary

Contact does not have any AMI metering.

Audit outcome

Compliant

4.12. Responsibility for Metering at ICP (Clause 11.18B(3))

Code reference

Clause 11.18B(3)

Code related audit information

If an ICP is to be decommissioned, the MEP who is responsible for each metering installation for the ICP must:

- *advise the trader no later than three business days prior to decommissioning that the trader must, as part of the decommissioning, carry out a final interrogation; or*
- *if the MEP is responsible for the interrogation of the metering installation, arrange for a final interrogation to take place.*

Audit observation

I checked whether Contact was the MEP at any decommissioned ICPs and whether notification had been provided to relevant traders.

Audit commentary

Contact has reminded all traders where Contact is the MEP, that as the trader is the responsible party, in future the trader must carry out a final interrogation for any ICPs that will be 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 Contact whether they had approved any burden changes during the audit period.

Audit commentary

There have been no burden changes during the audit period. Contact's processes show that any action leading to a change in burden results in recertification.

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

Contact is not the MEP for any installations where changes to ROM, software or firmware have occurred.

Audit commentary

Contact is not the MEP for any installations where changes to ROM, software or firmware have occurred.

Audit outcome

Compliant

4.15. Temporary Energization (Clause 10.28(6))

Code reference

Clause 10.28(6)

Code related audit information

An MEP must not request the temporary energisation of a new POC unless authorised to do so by the reconciliation participant responsible for that POC and has an arrangement with that reconciliation participant to provide metering services.

Audit observation

I checked for examples of insufficient load certification to determine whether there were any examples of temporary energisation for the purposes of testing. None were identified.

Audit commentary

I checked for examples of insufficient load certification to determine whether there were any examples of temporary energisation for the purposes of testing. None were identified.

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 36 metering installations and I also checked all available inspection records to evaluate compliance with this clause.

Audit commentary

Contact engages with the VEMS and DELTA ATHs to conduct certification activities. All 36 certification records were provided, I checked the records and confirmed that they met all of the above requirements.

The inspection reports I checked were signed and contained the required information.

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 Contact whether any requests had been made for copies of inspection reports.

Audit commentary

Contact has not been requested to supply any inspection reports, but these are available and can be supplied on request.

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 a directory of metering records from 2014 to confirm compliance.

Audit commentary

Contact keeps records indefinitely and the availability of the 2014 records confirms compliance. I checked and confirmed that records for an ICP which was decommissioned in 2012 were still 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

Contact has provided information to ATH's in the past and this may occur in future. There are no current examples to examine.

Audit commentary

Contact has provided information to ATH's in the past and this may occur in future. There are no current examples to examine

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 for the period 01/09/17 to 31/07/18 to confirm whether all responses were within 10 business days.

Audit commentary

All 6 MN files were sent within 10 business days.

Audit outcome

Compliant

6.2. Provision of Registry Information (Clause 7 (1), (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, in the prescribed form for each metering installation for which the MEP is responsible.

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 must derive from the metering equipment provider's records or the metering records contained within the current traders system.

Audit observation

I checked the list file for 100% of records and I checked the Category 1 inspection records to identify discrepancies.

Audit commentary

I examined the records for 335 metering installations where Contact had conducted inspections during 2018. A number of data related issues were present, as follows:

- 17 installations where the on-site certification date was unreadable because the sticker was faded, unreadable or missing

I checked all of Contact's records to identify discrepancies with their data. The table below shows the results.

Quantity of ICPs September 2018	Quantity of ICPs September 2017	Quantity of ICPs September 2016	Quantity of ICPs August 2015	Issue
0	0	0	0	Blank records on the registry.
0	0	0	11	Interim certified installations over Category 1.
0	0	6	36	Fully certified installations with compensation factors of 3.
0	0	0	2	Category 1 Installations with compensation factors greater than 3.
8,957	10,824	40,464	61,920	Control device details not populated in the registry. CTCT Reply: CTCT investigating this issue further as to what we could achieve
0	1	2	40	Incorrect certification date or certification expiry date for Cat 2.
0	0	2	51	Incorrect certification duration on Category 1 installations.
5,220	0	7,470	0	Interim certified installations recorded as fully certified with certification and expiry dates both 01/04/15. A number of these have been sold to LMGL, Trustpower refused to nominate LMGL, Stat sample happening now Trustpower will nominate LMGL when certified. CTCT Reply – LMGL have now completed their Stat sampling project which and successfully recertified their interim certified meter fleet. LMLG have now confirmed that Trust power updated the MEP nomination in the registry.
83	27	665	268	Interim certified ICPs without 01/04/15 as the certification expiry date. Expiry dates of 31/12/99 for unmetered streetlight ICPs
0	0	0	354	New connection ICPs with no certification date populated and showing as interim certified.
0	0	0	47	Installations with AMI but 365 days for interrogation cycle.
0	3	2	85	Category 2 plus installations without CT information on the registry.
0	0	0	124	CN only (residential)
0	0	2	8	Day and night do not = 24.
7	6	6	25	ICPs with generation but with no injection register. This could be an error with the distributor's field. Not CTCT MEP
0	0	2	46	Day with no night.
0	0	5	520	Night with no day.
0	13			Max interrogation cycle of zero days. Unmetered.
6	12			Expired full certification. CTCT Reply: 1 x CAT 1 installation where registry is updated 2 x CAT1 installation are going to be added to current Stat Sample 1 x CAT 1 installation where SMCO meter installed on site on the 23/06/2017 – registry still to be updated

				<p>1 x Prepay installation where a new job to be re-issued once the customer fixed the wiring on site</p> <p>1 x CAT 2 installation where meter board High up pole, has VT and CT and meter is single phase and multi of 41 (special site)</p>
1	1	1	1	<p>Quantity of metering installations with compensation factor of 101</p> <p>CTCT Reply: This AMP is metered with one amplifier on a multiplier of 1 (x1), currently the number of amplifiers spread over the Kapiti coast which is according to Telstra one hundred and one hence the multiplier of 101</p>

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.2 With: Clause 7 (1), (2) and (3) of Schedule 11.4 From: 01-Sep-17 To: 31-Jul-18	Some registry records incomplete or incorrect. Potential impact: Medium Actual impact: Low Audit history: Multiple times 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. Completion of the statistical recertification of meters will improve the numbers. Very few of the discrepancies have an impact on participants, customers or settlement. The only relevant ones in this regard are tariff related and there were only a small number. The audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Comments have been included in the Table above		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Comments have been included in the Table above		Ongoing	

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 all records in the event detail report to confirm whether the timeliness requirements were being met.

Audit commentary

Contact conducts a complete validation at least once every week. This ensures that the requirement to obtain a list by 0900 hours on the 13th business day of each reconciliation period is met. I checked the records of emails confirming the files were obtained from the registry. I checked the records of the results of the comparisons and subsequent corrections and confirmed that they were made within the required five business days.

Audit outcome

Compliant

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:

- a) the metering installation is modified otherwise than under sub clause 19(3) or 19(6)*
- b) 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*
- c) 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*
- d) 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*
- e) 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*
- f) if the metering installation has been determined to be a lower category under clause 6 and the maximum current conveyed through the metering installation at any time exceeds the current rating of its metering installation category as set out in Table 1 of Schedule 10.1*
- g) 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)*
- h) 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)*
- i) 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.*

A metering equipment provider must, 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.

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

I checked for examples of bridged control devices and there were no examples.

There were also no examples of any of the other points listed above.

Audit outcome

Compliant

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 Contact 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 Contact 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 registry PR255 report was checked to identify ICPs with expired certification.
- the new connections process was checked by using the event detail report, PR255 and the list file to identify ICPs where the certification was not conducted within five business days of energisation.
- I checked ICPs where certification was cancelled to ensure the registry was updated accordingly.

Audit commentary

The registry shows 5,423 ICPs have expired certification. The table below gives a breakdown of these.

Quantity	Details
5,344	Contact is the MEP but not the component owner and is negotiating with the trader for them to nominate the component owner as the MEP
7	Expired statistical certification
6	Expired full certification
66	Expired interim certification

Although some meters have been sold, Clauses 10.22 and 10.23 state that the MEPs responsibilities continue until the relevant trader enters into an agreement with another MEP, which in this case has not occurred.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 7.1</p> <p>With: Clause 10.38 (a), clause 1 and clause 15 of Schedule 10.7</p> <p>From: 12-Aug-14</p> <p>To: 31-Jul-18</p>	<p>Certification expired for 5423 ICPs</p> <p>Potential impact: High</p> <p>Actual impact: Medium</p> <p>Audit history: Multiple times</p> <p>Controls: Moderate</p> <p>Breach risk rating: 4</p>		
Audit risk rating	Rationale for audit risk rating		
Medium	<p>I have recorded the controls as moderate in this area because certification has been expired for a number of years for some ICPs and because some of the expired installations were fully certified at one point.</p> <p>The impact on settlement is recorded as moderate because of the increased likelihood of failure or inaccuracy for metering installations with expired certification, therefore the audit risk rating is medium.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>Issue 1: 5,344 interim certified installations not re-certified, these assets have been sold to LMGL (which was inferred we could do as per our EA settlement agreement conditions) but a retailer has refused to make the update to the registry to nominate LMGL as the new MEP. LMGL have re-certified these legacy ICPs that they took over in 2016. LMGL emailed the retailer mentioned above to process a MEP nomination across to LMGL from CTCT so that LMGL can update the registry with the appropriate certification details (Meter Installation Certification Form and ICP list can be provided where required).</p> <p>Issue 2: 7 Expired statistical certification –2 x assets have been sold to TRUS, 3 x are going to be added to the current stat sample programme 1 x SMC meter installed on site on the 23/06/2017 – registry still to be updated and 1 x Prepay installation where a new job to be re-issued once the customer fixed the wiring on site</p> <p>Issue 3: 6 installations have expired full certification - 1 x Resolved and registry updated, 3 x installations have been included in our current statistical sampling program, 1 x SMC meter installed on site on the 23/06/2017 – registry still to be updated and 1 x Prepay installation where a new job to be re-issued once the customer fixed the wiring on site.</p> <p>Issue 4: 66 x unmetered – Streetlight supply</p>		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>CTCT has controls in place to monitor and maintain the certification of its assets and has the relevant programs in place to maintain the certification going forward. The main issue for our certification problems relates to assets where we are no longer the equipment owner and have contracted the certification to another MEP.</p>		Ongoing	

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 36 metering installations to confirm compliance. ATHs have shown that their processes include all tests and reports confirm tests are completed

Audit commentary

My checks of the certification reports confirmed that the appropriate tests are conducted and the results are recorded.

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

Contact does not have any HHR installations.

Audit commentary

Contact does not have any HHR 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

Compliant

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

Audit commentary

There are no examples of burden changes having occurred.

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 all ICPs 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 certification at 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

There are no examples of insufficient load certifications.

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 1 business day:*
- *the MEP must follow the procedure for handling faulty metering installations (clause 10.43 - 10.48).*

Audit observation

There are no examples of insufficient load certifications.

Audit commentary

There are no examples of insufficient load certifications.

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 5 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 been applied to any metering installations.

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 Contact whether there were any metering installations with time switches.

Audit commentary

Contact confirmed there are 187 metering installations with time switches, triple saver. I checked the process for checking the time. Contact is currently 46% through for this year. Contact's process requires that any time switches found with excessive errors are replaced with another MEP's smart meters.

One trader has refused access to perform the time checks for 16 ICPs as they are planning to displace the meters. As a result of this the time switches have not been checked within the required 12 months since they were last checked in August 2017.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 7.10 With: Clause 23 of Schedule 10.7 From: 07-Aug-18 To: 31-Aug-18	16 ICPs with time switches not checked within 12 months. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	Rationale for audit risk rating

Low	<p>I have recorded the controls as strong in this area because Contact has processes to ensure time switches are checked every 12 months.</p> <p>The impact is low as the trader is not using the timed registers for submission, therefore the audit risk rating is medium.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>CTCT has explained to the trader many times that regardless of their intentions to displace CTCT's asset we are still have a requirement to inspect any site where our meters are still installed.</p> <p>CTCT is planning to visit these installations next year to comply with this part of the code</p>		31/08/2018	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
<p>CTCT will discuss the issue further with the trader to gain access to these installations and in case of refusal CTCT will raise a complaint to the EA</p>		Ongoing	

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

Contact has a process for dealing with control devices which have been bridged out. If any are bridged out for more than 10 business days, they notify as required by this clause. There have not been any recent examples.

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 Contact had taken to identify regions with signal propagation issues.

Audit commentary

Contact has not been advised of any areas by the ATHs

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

I checked whether statistical sampling had occurred during the audit period.

Audit commentary

Contact engaged Vircom-EMS to conduct Statistical sampling recertification of populations of 1,359 and 6,062 meters. I checked the certification records for this and confirm that the process employed is compliant.

Audit outcome

Compliant

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 a 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 advise the registry of the compensation factor.

Audit observation

There were no certifications completed for category 2 and above metering installations during the audit period. I checked a sample of ten registry records for category 2 installations to check if any compensation were correctly recorded.

Audit commentary

There were no certifications completed for category 2 and above metering installations during the audit period. I checked a sample of ten registry records for category 2 installations and confirmed that the compensation factors were correctly recorded in all ten 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 36 metering installations to confirm compliance.

Audit commentary

Meters were certified for all 36 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

There were no certifications completed for category 2 and above metering installations during the audit period. No measuring transformers were certified.

Audit commentary

There were no certifications completed for category 2 and above metering installations during the audit period. No measuring transformers were certified.

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

I checked the certification records for 36 metering installations to confirm compliance.

Audit commentary

None of the installations checked contain data storage devices, Contact is not the MEP for any installations containing data storage devices.

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 (PR255) to identify any ICPs with interim certification recorded.

Audit commentary

There are 5,313 previously interim certified installations with expired certification.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 7.19 With: Clause 18 of Schedule 10.7 From: 01-Sep-17 To: 31-Jul-18	5,313 ICPs with expired interim certification. Potential impact: High Actual impact: Medium Audit history: Multiple times Controls: Moderate Breach risk rating: 4		
Audit risk rating	Rationale for audit risk rating		
Medium	I have recorded the controls as moderate in this area because certification has been expired for a number of years for these ICPs. The impact on settlement is recorded as moderate because of the increased likelihood of failure or inaccuracy for metering installations with expired certification, therefore the audit risk rating is medium.		
Actions taken to resolve the issue		Completion date	Remedial action status
As stated in point 7.1. the Certification and Maintenance (Clause 10.38 (a), clause 1 and clause 15 of Schedule 10.7)		Completed	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
As stated in point 7.1. the Certification and Maintenance (Clause 10.38 (a), clause 1 and clause 15 of Schedule 10.7)		Ongoing	

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 120 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, a sample of the category 1 metering installations selected under clause 45(2) of Schedule 10.7 has been inspected by an ATH.*

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 two 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 the results for the Category 1 inspection regime to confirm compliance.

Audit commentary

Contact has conducted category 1 inspections by statistical sample in accordance with this clause. The process for selection of the sample was approved by the Authority; the field process was compliant. The records were checked and appropriate reporting was provided to the Authority.

Audit outcome

Compliant

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 registry information to confirm which ICPs were due for inspection. There were no category 2 metering installations with certification dates prior to 2009; therefore none are due for inspection.

Audit commentary

I checked the registry information to confirm which ICPs were due for inspection. There were no category 2 metering installations with certification dates prior to 2009; therefore none are due for inspection.

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 the process and results from inspection regimes to ensure any incorrect records were updated.

Audit commentary

Contact 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(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) three 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.*

Audit observation

I checked all examples of notification of missing seals, which were all as a result of inspection processes or notification by field technicians.

Audit commentary

I checked 8 examples of seals found missing during cat 1 inspections. In all 8 cases the seals were replaced by the ATH at the time of inspection.

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) 5 business days for Category 3 or higher.*

Audit observation

I checked three examples where Contact had become aware of suspected faulty metering installations found during inspections. The ATH reported that there was no consumption which could be due to stopped meters.

Audit commentary

In all three cases it was determined that the meters were not faulty and the meters weren't advancing due to there being no load. The notification to the traders were completed within the required timeframes in all three cases. The traders were emailed on the same day that the inspection results were reviewed.

I also found that there were examples of meters found to be outside the allowable accuracy requirements during recertification by statistical sampling. In these cases, the traders were notified by email on the day the results were reviewed.

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

I checked three examples where Contact had become aware of suspected faulty metering installations.

Audit commentary

In all three cases the issue was found and reported on by the ATH conducting the inspection activity. Subsequent investigation confirmed that the metering installations were not inaccurate, defective or not fit for purpose. In all three cases the meters were not advancing due to no load being present at the time of inspection. As the installations were accurate, not defective and fit for purpose there was no requirement for statements of situation to be issued.

There were no other cases identified where statements of situation were required to be issued.

Audit outcome

Compliant

9.3. Statement of Situation (Clause 10.46(2))

Code reference

Clause 10.46(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

I checked if there were any cases where statements of situation were received from ATHs. There were no cases identified where statements of situation were required to be issued.

Audit commentary

I checked if there were any cases where statements of situation were received from ATHs. There were no cases identified where statements of situation were required to be issued.

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

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

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

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

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 Contact 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 Contact 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.

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

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 malfunctioning or tampering, and if this is detected, carry out the appropriate requirements of Part 10.

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

Contact is not the MEP for AMI metering installations and does not conduct data collection as an MEP.

Audit commentary

Contact is not the MEP for AMI metering installations and does not conduct data collection as an MEP.

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

I checked the security and storage of data by looking at examples of data more than 48 months old.

Audit commentary

All data is secure and any transmission is via FTP.

Audit outcome

Compliant

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

Contact is not the MEP for AMI metering installations.

Audit commentary

Contact is not the MEP for AMI metering installations.

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

Contact is not the MEP for AMI metering installations.

Audit commentary

Contact is not the MEP for AMI metering installations.

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.

Audit observation

Contact is not the MEP for AMI HHR metering installations.

Audit commentary

Contact is not the MEP for AMI HHR metering installations.

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

Contact has not received any requests in relation to this clause.

Audit commentary

Contact has not received any requests in relation to this clause.

Audit outcome

Not applicable

CONCLUSION

Contact has resolved the non-compliance caused by approved test houses relating to lack of information supplied in certification reports.

Processes have been put in place to ensure the timeframes for correction of errors identified between Contact's records and the registry are resolved within the required timeframes.

Five non-compliances are recorded the main issues are as follows;

- Late updates of some registry records.
- Incomplete or incorrect registry records.
- 5,423 ICPs where the metering installation certification has expired. 5,344 of these are where Contact is the MEP but not the component owner and is negotiating with the trader for them to nominate the component owner as the MEP. This is recorded as a medium impact because statistical sampling results demonstrate that a proportion of this pool of meters will not be recording accurately.

PARTICIPANT RESPONSE

Contact continues to make steady progress in addressing its non-compliances. We have reduced the volume of discrepancies to the registry and our focus is to continuously make improvements to our processes and procedures.

We have received notification from LMGL that upon the conclusion of a reasonably significant piece of stat sampling work, the Legacy ICPs they took over in 2016 have now been re-certified. They are currently in the process of updating the MEP status in the registry from CTCT to LMGL. This will remove our largest area of non-compliance.

Contact takes its code compliance obligations seriously and we will continue to address these issues as soon as practicable.