

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

For

LEGACY METERING GROUP (LMGL)

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Audit report due date: 20-Dec-19

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EXECUTIVE SUMMARY

This participant audit was performed at the request of Legacy Metering (LMGL) to encompass the Authority's request for an audit, as required by clause 10.17A/11.8B, of the Electricity Industry Participation Code. The relevant clauses were audited as required by the Guidelines for Metering Equipment Provider v.2.0 issued by the Electricity Authority.

At the time of this audit the number of ICPs for which Legacy Metering is recorded as being the MEP, was 35,663. Legacy Metering is dependent on work conducted by ATHs and their compliance is reviewed by their audit. The responsibility of the MEP is to make sure that they deliver, which is in the form of contract management.

To assist us in assessing compliance with the Code, Legacy Metering provided registry files such as EDA, LIS, PR-255, Switch Breach Report, and Audit Compliance Report for the period 01/01/2019 to 31/08/19, and any other information requested for the audit.

We found 5 non-compliances

The level of compliance has improved in the following areas:

- The number of non-certified installations has decreased
- Installations where no load checks were recorded, or low burden identified in the last audit were revisit and corrected

The main issues identified during this audit are:

- Awaiting Project 1 resolution-Trustpower, Legacy and the Authority are the involved parties

Some of the issues identified in this audit need to be resolved by ATHs and the Authority. Clause 4(1) of Schedule 10.7 puts a number of obligations on Legacy Metering to 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.*

Legacy Metering do not employ their own technicians, all work is carried out by ATHs. The function of Legacy Metering is more of a technical administrative role rather than a low level technical one and they therefore rely heavily on the expertise of ATHs. ATHs obligations are assessed during their audits, some ATHs have been non-compliant for a while, which put Legacy Metering in a difficult situation. During the industry forum it was evident that in some areas the point of view of the Authority, ATHs and MEPs differs, which puts a lot of pressure on MEPs.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. Table 1 of the Guidelines for Reconciliation Participant audit provides some guidance on this matter. The Future Risk Rating score is 13 which results in an indicative audit frequency of 12 months. We support this as it will give Legacy Metering enough time to address the non-compliance of uncertified installations.

We thank Legacy Metering's staff for their full and complete cooperation in this audit. Their response to any request for information or clarification was answered in a timely manner.

AUDIT SUMMARY

NON-COMPLIANCES

| Subject | Section | Clause | Non Compliance | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|---|---------|--|---|----------|-------------------|--------------------|-----------------|
| Registry notification of metering records | 3.2 | 2 of Schedule 11.4 | 255 registry updates later than 15 business days | Moderate | Low | 2 | Identified |
| Changes to registry records | 4.10 | 3 of Schedule 11.4 | 255 registry updates later than 10 business days | Moderate | Low | 2 | Identified |
| Provision of registry information | 6.2 | 7 (1), (2) and (3) of Schedule 11.4 | Some registry records are incorrect or incomplete | Strong | Low | 1 | Identified |
| Cancellation of certification | 6.4 | 20(c)(ii) of Schedule 10.7 | Certification expired for 21,645 ICPs, the registry not updated | Moderate | Medium | 4 | Identified |
| Certification and maintenance | 7.1 | 10.38 (a), clause 1 and clause 15 of Schedule 10.7 | Certification expired or cancelled for 21,867 ICPs | Moderate | Medium | 4 | Identified |
| Future Risk Rating | | | | | | 13 | |
| Next audit date | | | | | | 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 | 12months | 6 months | 3 months |

RECOMMENDATIONS

| Subject | Section | Description | Recommendation |
|---------|---------|-------------|----------------|
| | | | Nil |

ISSUES

| Subject | Section | Description | Issue |
|---------|---------|-------------|-------|
| | | | 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

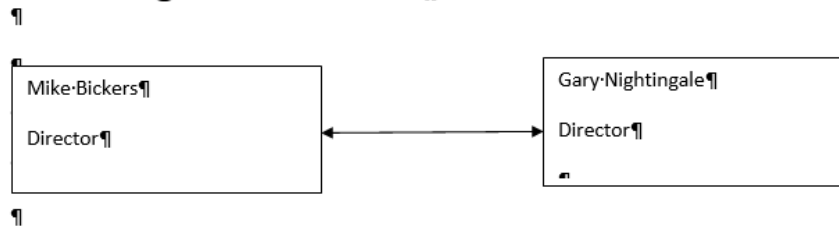
Legacy Metering does not have any exemptions granted to exempt them from compliance with all or any of the clauses.

Audit commentary

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

1.2. Structure of Organisation

LMGL-Organisation-Chart



1.3. Persons involved in this audit

| Name | Title | Company |
|------------------|--|----------------------|
| Gary Nightingale | Director | Legacy Metering |
| Mike Bickers | Director | Legacy Metering |
| Ewa Glowacka | Electricity Authority Approved Auditor | TEG & Associates Ltd |

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 fulfilment of the participant's 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

Legacy Metering employs ATHs to act as agents for management and storage for certification records. They are also certifying installations on behalf of Legacy Metering.

Audit commentary

All other functions are conducted by legacy metering's directors.

1.5. Hardware and Software

Legacy Metering uses Access Database as workflow and supporting Excel spreadsheets to manage their operations. They contain all the relevant metering information. Communication with the registry is via FileZilla or the registry web interface. All information is regularly backed up on site and off site as per industry protocol.

1.6. Breaches or Breach Allegations

No breaches or alleged breaches were lodged since the last audit.

1.7. ICP Data

| Metering Category | Number of ICPs |
|-------------------|----------------|
| 1 | 35,297 |
| 2 | 326 |
| 3 | 10 |
| 4 | 0 |
| 5 | 0 |
| 9 | 27 |

1.8. Authorisation Received

A letter of authorisation was received from Legacy Metering for the purposes of gathering information for this audit.

1.9. Scope of Audit

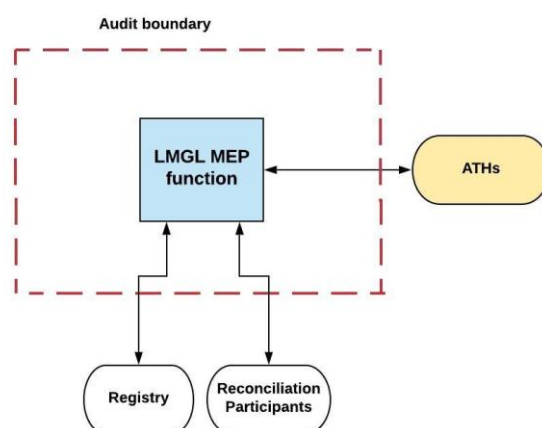
This participant audit was performed at the request of Legacy Metering Group Limited to encompass the Authority's request for an audit as required by clause 10.17A/11.8B of the Electricity Industry Participation Code.

The audit was carried out on the Legacy Metering premises at 35 Riccarton Road, in Christchurch, on the 10/11 September 2019.

The audit covered the following functions:

- Process for changing a MEP

- Installation and modification of metering installations
- Metering records
- Maintenance of registry information
- Certification of metering installations
- Inspection of metering installations
- Process for handling faulty metering installations
- Access to and provision of raw meter data and metering installations



1.10. Summary of previous audit

The previous audit was conducted in February 2019 by Steve Woods of Veritek. The table below shows non-compliances identified during this audit:

| Subject | Section | Clause | Non-Compliance | Comments |
|--|---------|--|---|-------------|
| Participants to Provide Accurate Information | 2.5 | 11.2/10.6 | Invalid certification for two ICPs due to uncertainty being greater than 0.6%, certification not corrected since the last audit | Cleared |
| Registry notification of metering records | 3.2 | 2 of Schedule 11.4) | 185 registry updates later than 15 business days. | Still exits |
| Metering Installation Design & Accuracy | 4.3 | 4(1) of Schedule 10.7 | Delta ATH not calculating uncertainty in accordance with the Code. Total uncertainty greater than 0.6% for ICPs 0000004050DE261 and 0000004057DEFAB. | Cleared |
| Changes to registry records | 4.10 | 3 of Schedule 11.4 | Some records updated on the registry later than 10 business days. | Still exits |
| Provision of registry information | 6.2 | Clause 7 (1), (2) and (3) of Schedule 11.4 | Some registry records incomplete or incorrect. | Still exits |

| | | | | |
|--------------------------------|-----|--|---|--------------|
| Cancellation of certification | 6.4 | 20(2) of Schedule 10.7 | Certification cancelled for following ICPs and the registry was not updated within 10 business days: 5 ICPs with low burden 29,353 ICPs with incorrect statistical sampling certification applied | Still exists |
| Certification of installations | 7.1 | 10.38(a) | Certification expired or cancelled for 29,358 ICPs | Still exists |
| Certification tests | 7.2 | 10.38(b) and clause 9 of Schedule 10.6 | Register advance and prevailing load tests not conducted for four installations | Cleared |
| Category 1 inspections | 8.1 | 46(1) of Schedule 10.7 | Incorrect Category 1 sample selection | 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

Legacy Metering provide the MEP services for metering installations of category 1 to 3. All installations are read by meter reading companies or agents employed by traders.

Audit commentary

Metering certification provided by Legacy Metering (40) showed that access interface was recorded on all of them. If meter readers have difficulties in reading meters because of problem with the service access interface, Legacy Metering is notified and asked to address it, which is done promptly.

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

Legacy Metering has a procedure in place for resolving any possible disputes.

Audit commentary

Legacy Metering confirmed that all disputes were resolved in good faith without involving the Authority. Utilities Disputes Limited is an independent avenue, which can be used to resolve customers' complaints.

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

The LIS file dated 02/09/19 was provided by Legacy Metering to assist in the assessment of compliance.

Audit commentary

According to the LIS file Legacy Metering use LMGL as their MEP identifier.

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

Legacy Metering is responsible for a number of metering installations which are read remotely using cell phones.

Audit commentary

Details of communication and strength of signal is recorded on certification certificates.

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

During the audit we reviewed activities conducted by Legacy Metering to determine whether all practicable steps had been taken to provide accurate information.

Audit commentary

We can say with confidence that Legacy Metering takes all practicable steps to ensure the accuracy and completeness of information provided to participants and the registry. It is not easy to achieve full

compliance because of the number of parties involved in the process such as retailers, customers, networks, and ATHs. Some parts of the Code are not clear and are open to interpretation and parties do not always agree.

Audit outcome

Compliant

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 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

We asked Legacy Metering if they sent or received invoices in relation to this clause.

Audit commentary

Legacy Metering stated that this clause was not exercised.

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 manager of the registry metering records for the metering installation within 15 days of becoming the MEP for the metering installation.

Audit observation

Legacy Metering provided the Event Listing file (EDA) and the Audit Compliance report for the audit period. We checked all records where Legacy Metering became the MEP to evaluate the timeliness of updates.

Audit commentary

The table below shows the results of analysis. It shows existing installations for which Legacy Metering was nominated as MEP.

The table also includes data from the previous audit to allow us to draw a conclusion as to whether the level of compliance stayed the same or changed.

| Year | Total number of updates | Over 15 BD | Average notification days | % Compliance | Late nominations |
|---------|-------------------------|------------|---------------------------|--------------|------------------|
| Dec-16 | 10,501 | 843 | | 92% | 323 |
| Oct-17 | 4,928 | 345 | 4.9 | 93% | 326 |
| June-18 | 548 | 145 | 20 | 74% | 145 |
| Feb-19 | 459 | 185 | 27 | 60% | 182 |
| Sept-19 | 1,222 | 255 | 24 | 79.1% | 255 |

There is a similar level of non-compliance as was recorded in the previous audit, but over a larger number of updates. The level of compliance has improved from 60% to 79.1%. Late MEP nominations have a significant impact on late registry updates. According to Contact Energy's process, Legacy Metering is not notified of a meter being installed until a job is complete.

Audit outcome

Non-compliant

| Non-compliance | Description | | |
|---|--|-----------------|------------------------|
| Audit Ref: 3.2 With: 2 of Schedule 11.4 From: 01-Jan-19 To: 31-Aug-19 | 255 registry updates later than 15 business days 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 | Controls are recorded as moderate, in many cases LMGL updates are late due to late MEP nominations. Audit risk is identified as low. | | |
| Actions taken to resolve the issue | | Completion date | Remedial action status |
| Monitor the missing metering reports and workflow returns to ensure all updates to the registry are completed as soon as they become available. | | 1/12/2019 | Identified |
| Preventative actions taken to ensure no further issues will occur | | Completion date | |
| As above and continue to feedback to ATHs and retailers regarding the return of workflow and progressing the MEP nominations of issued and returned work. | | Ongoing | |

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

It was discussed during the audit if Legacy Metering had been requested access to their metering records by a gaining MEP.

Audit commentary

Only FCLM has asked Legacy Metering for metering records since the last audit. This happened on only a few occasions. Compliance confirmed based on a verbal statement from Legacy Metering.

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

Legacy Metering never removed any records for metering installations for which they are or were responsible. They keep information in Workflow, all emails are archived, copies of Certification of Compliance are kept. There is full traceability of all information.

Audit commentary

During the audit we reviewed many records of metering installations. Some of them were decommissioned or moved to other MEPs. All records were still available.

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

Legacy Metering provides the MEP services for up to category 3 metering installations. The company has engaged several ATHs (AMS, Delta, Wells) to certify installations on their behalf.

Audit commentary

The design reports, used by the above listed ATHs, contain all relevant details required by this clause. Legacy Metering provided 20 certificates (AccuCal) for category 2 and higher metering installations and 26 certificates (AMS, Delta, AccuCal) for category 1 metering installations. All of them had the design report number.

Legacy Metering confirmed that no installations were modified which would require the creation of a new design report. There were no new design reports produced during the period covered by this audit.

As a result of last audit report, 4 metering installations (0103992006LCF3F, 0000101517EN109, 0060059625HB21B, 0001812940HB92C) had additional CT burden added by ATH (VEMS). The installations were recertified, and the registry was updated.

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

Legacy Metering has used VCOM, Delta, Wells, AccuCal and IndeServe ATHs during the audit period.

Audit commentary

The Authority website confirmed that all ATHs listed above have current and appropriate certification.

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

We reviewed 26 metering certifications and discussed with Legacy Metering which methods of certification were used. All certificates had the design report recorded. Legacy Metering examines all certifications issued for installations for which they are responsible.

Audit commentary

For category 1 metering installations Legacy metering is using a selective component method. The same method is preferred for category 2 but, if it is not possible to have a shutdown, a comparative method is used.

The company philosophy is to have CTs changed during recertification, if it is possible. When they are the new MEP for an installation CTs are always replaced with TWS 500/5.

During the period covered by this audit a number of metering installations were certified using a comparative method. Legacy Metering provided a list of installations.

| ICP | Certification Type | CT Manufacture | CT Model |
|-----------------|--------------------|----------------|-----------------|
| 0000004022DE7B9 | Comparative | TWS | SBQ60 500/5 |
| 0000004068DE78D | Comparative | TWS | SEW90B - 200/5 |
| 0004862885AL628 | Comparative | TWS | TWS EW90B 200/5 |
| 0004863328AL3C2 | Comparative | TWS | SEV86A 300/5 |
| 0005044140AL444 | Comparative | TWS | SEW18 500/5 |
| 0005634250AL634 | Comparative | ATCO | 1.5E 300/5 0.5 |
| 0006631452ALC5C | Comparative | Secura | B85 200/5 |

| | | | |
|-----------------|--------------------|-----|---|
| 0103992006LCF3F | Comparative | TWS | ATCO 3.3 150/5 |
| 0103992006LCF3F | Comparative | TWS | ATCO 3.3 150/5 |
| 0200800043LCDC9 | Selected Component | TWS | SEW34A 500/5 replacing CTs because of new MEP |

The previous audit described an issue for category 2 comparative certification because of Delta's error and the uncertainty calculation does not consider the temperature coefficient of the working standard, which has been present for several years. In the last LMGL audit 2 metering installations were found non-compliant because uncertainty was not calculated correctly, and certification was not cancelled in the registry.

- 0000004050DE261 - Uncertainty over 0.6%
- 0000004057DEFAB - Uncertainty over 0.6%

Legacy Metering asked Delta ATH to comment, their reply is below:

"The problem here is likely due to the old wording being used for the 0.445% uncertainty.

This was previously worded as "Instrument Error at stated site conditions"

This statement is now more accurately worded "Instrument Uncertainty at stated site conditions"

This means that the total uncertainty is 0.445 which is below 0.6.

The certs do not need to be cancelled"

Recently Legacy Metering received an email from Delta ATH stating:

The effect of temperature on the uncertainty of our standard and therefore certified installations is now calculated based on the onsite temperature rather than a worst case scenario, as it has been in the past.

We trust that the change of the uncertainty calculation by Delta will solve the issue which has been constant. It was identified as non-compliance in the Delta ATH audit report dated 26/08/17.

Any non-compliance identified during a Test House audit and not addressed promptly, put MEPs in a very difficult situation. We would identify this as a technical breach and the MEP does not have the tools to address it.

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

We asked Legacy Metering whether they provide MEP services for installations where subtraction is used to determine submission information

Audit commentary

No installations for which Legacy Metering is responsible use subtraction to determine submission information.

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

According to the LIS file dated 02/19/19, Legacy metering was responsible for 10 category 3 metering installations.

Audit commentary

We confirm that all category 3 installations have half-hour metering installed.

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

Legacy Metering is not responsible for such installations.

Audit commentary

This clause is not applicable. Compliance was not assessed.

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

Legacy Metering is not responsible for any metering installation for a point of connection to the grid.

Audit commentary

This clause is not applicable. Compliance was not assessed.

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

It was discussed during the audit how compliance with this clause is met. During the audit we checked 20 category 2 metering installations.

Audit commentary

Any certification work on Legacy Metering installations is carried out by ATHs. Legacy Metering does not employ their own technicians. Any work on metering installations is always like for like. Legacy Metering works in cooperation with retailers and distributors and ATHs to have physical and electrical characteristics for new connections taken into consideration. The company relies on the technical knowledge and experience of ATHs and they are regularly audited to assess their compliance with the Code.

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 installation's:

- *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

It was discussed during the audit. The previous audit noted that the Authority determined that MEPs are not required to consult with distributors and traders unless the design of an installation is altered. Last year the company sent a letter to relevant participants advising them of their intentions.

Audit commentary

Legacy Metering stated that for all installations in the audit period, there were no modifications of metering installations. It was always like for like.

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 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:

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

Audit observation

We reviewed the EDA file and the Audit Compliance report for the audit period.

Audit commentary

The results of the analysis are shown below. It covers updated to existing installations and uploading data for new connections.

| Event | Year | Total number of updates | Over 10 BD | Average | % Compliance |
|-----------------|------|-------------------------|------------|---------|--------------|
| New Connections | 2016 | 436 | 85 | 8.7 | 80% |
| | 2017 | 535 | 42 | 5.3 | 92% |
| | 2018 | 452 | 34 | 5.3 | 93% |

| | | | | | |
|------------------------|-------|--------|-----|------|-------|
| | 12/18 | 214 | 91 | 6 | 89% |
| | 09/19 | 495 | 91 | 9.2 | 81.6% |
| Existing installations | 2016 | 32,111 | 934 | 1.7 | 97% |
| | 2017 | 18,200 | 601 | 10.5 | 97% |
| | 2018 | 4,501 | 347 | 12.8 | 92% |
| | 12/18 | 2,231 | 99 | 9.9 | 96% |
| | 09/19 | 1,222 | 255 | 24.3 | 79.1% |

Overall, the number of MEP nominations for new connections or existing connection has increased since the last audit. Relative to the increase of installations the percentage of compliance decreased slightly.

Audit outcome

Non-compliant

| Non-compliance | Description | | |
|---|---|-----------------|------------------------|
| Audit Ref: 4.10 With: 3 of Schedule 11.4 From: 01-Jan-19 To: 31-Aug-19 | 255 registry updates later than 10 business days Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2 | | |
| Audit risk rating | Rationale for audit risk rating | | |
| Low | Controls are recorded as moderate, in many cases LMGL updates are late due to late MEP nominations. Audit risk is identified as low. | | |
| Actions taken to resolve the issue | | Completion date | Remedial action status |
| Monitor the missing metering reports and workflow returns to ensure all updates to the registry are completed as soon as they become available. | | 1/12/2019 | Identified |
| Preventative actions taken to ensure no further issues will occur | | Completion date | |
| As above and continue to feedback to ATHs and retailers regarding the return of workflow and progressing the MEP nominations of issued and returned work. | | Ongoing | |

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

We reviewed the LIS file to check if Legacy Metering is responsible for any HHR meters.

Audit commentary

According to the registry file, Legacy Metering is responsible for 142 HHR metering installations. 100 of them are category 2 metering installations, installed meters are EDM1. Legacy metering does not read meters themselves. It is arranged by traders submitting volumes to the reconciliation manager, all of them are reconciled as HHR. We checked 5 Certificates of Compliance issued by AccuCal, each of them confirms a full certification and communication checked.

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

We reviewed the decommissioning process. Legacy Metering provided 10 examples for decommissioned installations in the audit period.

Audit commentary

A request for the decommissioning of an installation always comes from a trader. We reviewed provided examples in the form of Metering Reports and verified the registry updates. The date in the registry was the same as in the contractor metering report.

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

During the audit we asked Legacy Metering whether any burden changes occurred during the period covered by this audit.

Audit commentary

The company's request to ATHs who do work on their behalf, is that, if a change of burden is necessary, an installation needs to be recertified and design modified.

As per **section 4.1**, 4 metering installations (0103992006LCF3F, 0000101517EN109, 0060059625HB21B, 0001812940HB92C) had additional CT burden added by ATH (VEMS) during the audit period. The installations were recertified, and the registry was updated.

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

The meters used in HHR metering installations have data storage devices integrated with the meter.

Audit commentary

If there is a need to change a data storage device software, ROM or firmware, an existing meter will be removed. A new meter will be installed, and the installation recertified.

Audit outcome

Compliant

4.15. Temporary Electrical Connection (Clauses 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

Legacy Metering is not responsible for such installations.

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Legacy Metering is not responsible for such installations.

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

It was discussed during the audit.

Audit commentary

In the period covered by this audit Legacy Metering did not ask any distributor to temporarily electrically connect an ICP.

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

Legacy Metering provided 40 records for metering installations for which they provide MEP services.

Audit commentary

As described in **section 4.1**, Legacy Metering uses a number of ATHs to certify installations on their request. For all installations Legacy Metering was able to provide records listed in clause 4(1) of Schedule 10.6.

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

It was discussed during the audit, whether any requests had been made for copies of inspection reports.

Audit commentary

If Legacy Metering is requested to provide a signed inspection report it will provide this to a participant as a scanned copy of the Metering Report prepared by one of the contractors. Since last year's audit, no trader has asked for an inspection report.

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

Legacy Metering holds historic installation records in an electronic format. All records will be kept indefinitely.

Audit commentary

Compliance confirmed on observation during the audit when checking historic information.

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

Legacy Metering uses a number of ATHs to certify metering installations.

Audit commentary

It was confirmed that if the situation described in this clause were to occur, Legacy Metering will provide all relevant metering records to the new ATH.

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 manager 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 manager it accepts responsibility for the ICP and of the proposed date on which it will assume responsibility.

Audit observation

The EDA file and Switch Breach report for the period covered by this audit was reviewed.

Audit commentary

Legacy Metering received 1,584 MEP nominations. All of them were accepted within 10 BD. Usually MEP nominations are accepted the same day or following.

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

Audit observation

The EDA file and the Audit Compliance report were reviewed.

Audit commentary

The results from the Audit Compliance report for the period 01/01/19 to 30/09/19 are shown below:

| Query | Number of ICPs | Comment |
|---|---|--|
| Active with no metering | 1 ICP (0000450321WP2F8) | CTCT to nominate NGCM as the MEP, NGCM meter is already installed It appears that this query looks at MEP nomination of audited party, this installation is still metered by another MEP. This query should be re-designed |
| Accuracy of certification dates | All correct | |
| Certification duration | 65 ICPs cat 2 certified for 15 years | They were certified by previous MEP when 15 years was permitted under Cat2 rules |
| Cat 3 and above without HHR Submission or HHR Metering or HHR installations | 0 | |
| Compensation Factor on Category 1 Metering Installation | 0 | |
| CT component installed on category 1 metering installation | 0 | |
| HHR profile and submission type and meter or installation type is not HHR | 0 | |
| Blank Registry records | 2 | Meters are removed but retailers still show the status "active" |
| Compensation factor of 3 | 217 | Certification is cancelled |
| Over category 1 with no CT's | 0 | |
| All compensation factors | 0 | |
| CN only | 0 | |
| No control device recorded | 6,238 | It was discussed with LMGL during the audit. The company provided comment for each installation. Out of 6,238 71% of ICPs don't need to have control devices recorded in the registry because of existing meter configuration or network configuration e.g. pilot wire. The registry does not have a field to record this |
| Day + night not = 24 | 224 | 211 ICPs are located on Alpine network |
| Day without night | 0 | |
| Night without day | 0 | |

| | | |
|-------------------------------|----|--|
| IN24 or IN0 | 0 | |
| UN not = 24 | 0 | |
| UN only with a control device | 61 | 35 ICPs are located on Mainpower network, all of them have real relays installed |

Audit outcome

Non-compliant

| Non-compliance | Description | | |
|--|--|-----------------|------------------------|
| Audit Ref: 6.2 With: 7 (1), (2) and (3) of Schedule 11.4 From: 01-Jan-19 To: 30-Sep-19 | Some registry records are incorrect 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 | Controls are recorded as strong. LMGL keeps good records of each installation, they are able to explain each discrepancy identified by the Audit Compliance report. Many so called-inaccuracies are due to network configurations. LMGL operates on a significant number of networks. The audit risk rating is recorded as low | | |
| Actions taken to resolve the issue | | Completion date | Remedial action status |
| Complete the update of any obvious errors in return paperwork or other information. | | 1/12/2019 | Identified |
| Preventative actions taken to ensure no further issues will occur | | Completion date | |
| Continue to monitor returns and actively feedback any issues/errors for correction or clarification. Advise networks and retailers where perceived errors appear from their updates. | | Ongoing process | |

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 5 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 5 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 manager of any necessary changes to the registry metering records.

Audit observation

We checked the process of the validation of registry records as described in the LMG Process called "check of our records vs Registry".

Audit commentary

The registry is Legacy Metering's database of records for installations for which they provide MEP services. In April'17 Legacy Metering proposed a code amendment (CAR148) to the above clause. The objective of the proposal was:

The end objective is to have the code reflect that not all MEPs update the registry from a 'completely separate (internal) database' standpoint. That the opportunities for discrepancies between the two cannot take place if a MEP actually updates the Registry directly and manually from the "change" (certification) paperwork.

Legacy Metering compares their master database containing metering fields against the registry fields as per the documented process. Any errors are corrected as soon as they are discovered. The company is very thorough in their endeavours to meet compliance with this clause.

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

We asked Legacy Metering to show us examples of all the points listed above.

- (a) Installation modification – this was covered in section **4.1** – 4 installations were modified, CT burdens were added
- (b) Accuracy tolerance – this is covered in **section 4.3**
- (e) Lack of inspection - this is covered in **section 8.2**.
- (f) Certification to a lower category – 4 ICPs. For one, certification is cancelled. It is discussed in **section 7.6**
- (g) Insufficient load for full certification – this is covered in **section 7.8**
- (h) Bridged out load control device – the process is described in **section 7.11**
- (i) Seal broken – the process is discussed in **section 8.4**.

Audit commentary

The last audit described the Projects 1 and 2 that would be using statistical sampling to extend the certification of category 1 metering installations. As described in **section 7.13**, Project 2 issues have been resolved. There is still the outstanding Project 1 statistical sampling methodology, which requires a resolution between Trustpower, Legacy Metering, and the Authority. As it has not been resolved at the time this report was finalised, our obligation is to note that 20,000 ICPs have expired certification, and the registry is not updated.

The previous audit listed in this section, 4 ICPs which had been certified with burden lower than the lowest test point. The ICPs are

- 0000101086EN7AE – VEMS stance, does not agree that installation is considered by the Authority as “not fit for purpose”. Certification completed under Clause 12 burden changes not required – Certification should continue.
- 0000551859HBDBA - VEMS stance, does not agree that installation is considered by the Authority as “not fit for purpose”
- 0001812940HB92C – fixed as noted in **section 7.2**
- 0005001070CNA16 – fixed as noted in **section 7.2**

It is not our place to resolve a different point of view between VEMS and the Authority. It should be resolved outside of this audit.

Audit outcome

Non-compliant

| Non-compliance | Description | | |
|---|---|---------------------|------------------------|
| Audit Ref: 6.4 With: 20(c)(ii) of Schedule 10.7 From: 01-Jan-19 To: 31-Oct-19 | Certification expired for 21,645 ICPs, the registry not updated Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2 | | |
| Audit risk rating | Rationale for audit risk rating | | |
| Medium | Controls are recorded as moderate because Legacy Metering are using their best endeavours to resolve the issues. It is an administrative oversight not technical. We recorded audit risk rating as medium because of the number of ICPs effected. | | |
| Actions taken to resolve the issue | | Completion date | Remedial action status |
| Resolution activity between Trustpower, Legacy Metering, and the Authority is underway regarding Project 1. Project 2 ICPs are updated in registry per the agreed approach between Delta ATH and Authority. | | Currently underway. | Identified |
| Preventative actions taken to ensure no further issues will occur | | Completion date | |
| Project 2 sampling programme recommencing in 2020. | | 20/08/2020 | |

6.5. Registry Metering Records (Clause 11.8A)

Code reference

Clause 11.8A

Code related audit information

The MEP must provide the registry manager 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

We reviewed the PR-255 and the LIS file.

Audit commentary

In **section 6.2** we analysed the correctness of registry information. Legacy Metering uploaded all information required by the Code in the prescribed form. When information is uploaded to the registry that does not conform to the registry specifications they are rejected.

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

We reviewed registry files such as PR-255, the EDA file, and Audit Compliance report for the audit period.

Audit commentary

The results of the investigation are shown below:

| Quantity 12/19 | Quantity 12/18 | Quantity 07/2018 | Details |
|----------------|----------------|------------------|---|
| 212 | 334 | 259 | Expired full certification category 1 |
| 12 | 8 | 20 | Expired full certification category 2 |
| 21,645 | 29,353 | 0 | Cancelled due to non-compliant statistical sampling (Project 1 described in section 7.13) |

The list of category 2 metering installations with expired certification is shown below:

| ICP | Cert number | Cat | Comment form LMGL |
|-----------------|---------------------|-----|--|
| 0000016893NTE65 | UncertNTE65 | 2 | UTI - board unsafe |
| 0000101517EN109 | VC00204 | 2 | Gisborne Girls High (requires customer works. BOPE taking over MEP upon change) |
| 0000202088DE02F | 524256 | 2 | UTI - site unsafe – with Retailer (SWCH). |
| 0000566890HB148 | NOCERT | 2 | Meridian confirmed that AMS has been scheduled to do this. |
| 0001031004AL19D | 789023 | 2 | Customer refusal - with SMCO and Retailer |
| 0001102395AL69C | 789028 | 2 | Issued to ALPE (SMCO). |
| 0001501996ENB0C | Girls High Gisborne | 2 | Known issue – with Retailer (Nova) and site customer re board changes. |
| 0005943535ALB2A | 338996 | 2 | SmartCo waiting for job to be raised from AMS/ Meridian |
| 0006651460AL979 | 327983 | 2 | Sub Station (waiting for workplan) – SMCO waiting on Network company as they hold the key to access and approval. |
| 0006651465AL436 | 327984 | 2 | Also part of the above Sub Station (waiting for workplan) – SMCO waiting on Network company as they hold the key to access and approval. |
| 0006732356AL4D8 | 648044 | 2 | Access issue. Trying to be sorted with the Retailer via Customer. Retailer has raised SR# MERISPI3022279 |
| 0007519774HBF0E | NOCERT | 2 | Network refusing access. Retailer currently trying to resolve issue. |

The number of sites with multiplier 3 been coming down, of course the pace has slowed since the earlier visits revealed the % that now exists that the remainder are the hardest of the hard in respect to UTI reasons.

| Audit File Date | Multiplier 3 sites |
|-----------------|--------------------|
| 27/11/2016 | 338 |
| 29/10/2018 | 265 |
| 22/01/2019 | 264 |
| 4/06/2019 | 259 |
| 5/09/2019 | 255 |
| 7/10/2019 | 216 |
| 10/12/2019 | 209 |

The table below shows installations which were already visited but can't be re-certified for various reasons

| Row Labels | Count of UTI reason |
|-------------------------------|---------------------|
| UTI - Board issue (Build) | 45 |
| UTI - major asbestos | 2 |
| UTI - Safety | 1 |
| UTI - space | 5 |
| UTI - Access | 2 |
| UTI - Customer rejection | 3 |
| UTI - Main Switch issue | 1 |
| UTI - meter box non-compliant | 1 |
| UTI - No change rejection | 8 |
| UTI - owner authorisation | 1 |
| UTI - Retailer info reason | 8 |
| UTI - safety | 3 |
| UTI – Wiring | 8 |
| Grand Total | 88 |

Audit outcome

Non-compliant

| Non-compliance | Description | | |
|---|---|-----------------|------------------------|
| Audit Ref: 7.1 With: 10.38 (a), clause 1 and clause 15 of Schedule 10.7 From: 01-Jan-19 To: 31-Aug-19 | Certification expired or cancelled for 21,867 ICPs Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2 | | |
| Audit risk rating | Rationale for audit risk rating | | |
| Medium | Controls are recorded as moderate; certification process is managed as circumstances allow. All so-called “easy” installations are certified. As with other MEPs, Audit risk rating is assigned medium because of the high number of ICPs | | |
| Actions taken to resolve the issue | | Completion date | Remedial action status |
| 3 x multiplier replacement / revisit programme underway . Cat 2 programme ongoing. Stat sample programme resolutions as described in 6.4 underway. | | 1/6/2020 | Identified |
| Preventative actions taken to ensure no further issues will occur | | Completion date | |
| Ongoing monitoring of certification status along with the progression of the proactive certification projects. Cat 2 issues remain challenging due to access and complexity of work – but MEP continues to work with retailers and ATHs to resolve. | | 1/6/2020 | |

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

We checked certification records for 40 installations to assess compliance.

The Authority website confirms that ATHs used by Legacy Metering have the required certification.

Audit commentary

The last audit recorded that the ICPs 0000101517EN109, 0000551859HBDBA, and 0001812940HB92C, and 0060059625HB21B did not have load test results recorded. We followed up with Legacy Metering during this audit.

- 0000551859HBDBA – this ICP is inactive since 26/11/18, the Code does not require certification for inactive connections
- 0000101517EN109 – installation was revisited by VEMS (This site is now recertified by VCOM as at 27/11/2019 on VC06669 and registry updated.)
- 0001812940HB92C – installation was revisited by VEMS, the registry is updated
- 0060059625HB21B - installation was revisited by VEMS, the registry is updated

A review of the certification for 40 installations confirms that ATHs performed the appropriate certification and recertification test, which were duly noted in relevant documents.

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

We analysed the PR-255 to assess compliance.

Audit commentary

All relevant metering is compliant with this clause.

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

Legacy Metering does not provide the MEP services to local services metering installations in grid substations.

Audit commentary

This clause is not applicable. Compliance was not assessed.

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

Current transformers (CTs) used for revenue metering at ICP's, for which Legacy Metering provides the MEP services, are used only for metering.

During the audit we asked Legacy Metering if there were any examples of burden changes or the addition of non-metering equipment being connected to metering CTs.

Audit commentary

Legacy Metering confirmed that for installations for which they provide MEP services there were no changes to a measuring transformer burden except ICPs listed in **section 7.2**. If new CTs need to be installed, non-compensated CTs such as TWS 500/5 CTs, or greater, are always used.

Legacy Metering stated that they understand that the policy of VirCom and Delta is now to apply CT burden irrespective of site conditions.

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

The Audit Compliance report for the period covered by this audit was reviewed.

Audit commentary

According to the report the following installations are certified as a lower category.

| ICP Identifier | Compensation factor | Highest Metering Category | ICP Status | Comment |
|-----------------|---------------------|---------------------------|------------|----------------------------|
| 0005943975AL583 | 160 | 2 | 2 | 500 amp fuses |
| 0007600616AL3C1 | 120 | 2 | 2 | 350 amp fuses |
| 0001072686ALB21 | 120 | 2 | 2 | 100 amp fuses |
| 0001501996ENB0C | 240 | 2 | 2 | Gisborne Girls High School |

The first 3 metering installations have protection devices rated at 500A. The last ICP, which is Gisborne Girls High School, is a problem one. Legacy Metering showed that more than 150 emails, phone call records and other interactions that have been exchanged between a trader and the company. As Legacy Metering commented in the last audit, they have been providing the MEP services for this installation

since 12/5/17. Since then the customer switched from TODD to GENE on 28/03/19 and back to TODD. On 29/05/19 BOPE accepted the MEP nomination but their metering has not been installed and certified yet. Legacy Metering wanted to change CTS of the lower rating, but it would require additional work done by the customer.

It would be in the customers best interest to be certified as cat 2, not cat 3 with the pricing tariff and the increase in lease charges that occurs with having cat3 certification, and the need for 5 yearly inspections. Legacy Metering proposed a few options to solve it but the school rejects all of this and does not want to change (spend money on the alterations/install of fusing and main switch). It was confirmed that the max demand MDIs that have been here since day one (in the kiosk) have not exceeded 400amps

Legacy Metering is using its best endeavours to resolve it, in the meantime the installation has had its certification cancelled for lack of monitoring.

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

During the audit we asked Legacy Metering if there were any examples where it had insufficient load for certification tests.

Audit commentary

There were no such examples since the last audit.

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

As described in **section 7.7**, there were no metering installations for which there was insufficient load for certification tests.

Audit commentary

There are no examples of tests conducted showing that the metering installation is not within the relevant maximum permitted error. In such situations a metering installation won't be certified

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 Authority, 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 Authority 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 Authority 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

We checked PR-255 to determine whether alternative certification had been applied.

Audit commentary

There were no installations for which the Certification Variations flag was "Y."

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

We asked Legacy Metering whether there were any metering installations with time clocks for which they provide the MEP services.

Audit commentary

Legacy Metering stated there were no metering installations timeclocks.

Audit outcome

Not applicable

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, advise 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

The process of managing bridged out controls devices was reviewed.

Audit commentary

We were provided with 4 examples 0000052834NT6A5, 0000140796EN834, 0000405813TEC57, and 0000551943TU466. We reviewed both the trader request and Metering report for each ICP. In all cases all jobs were completed within 10BD.

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 3 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

We reviewed PR-255 to see if control devices are certified.

Audit commentary

50% of control devices are certified. Legacy Metering has not been advised by any ATH of any areas where a control device will not receive signals.

No traders notified Legacy Metering of any installations where a control device could affect the accuracy or completeness of volumes for the purpose of Part 15.

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

During period covered by this audit Legacy Metering used the statistical sampling process to certify 49 ICPs.

Audit commentary

Delta ATH conducted testing using accepted processes. The certification period was extended to 7 years. The list reference number is LMG_SS_201903 Certified ICPs.

The last audit described Project 1 and 2 for statistical sampling to extend the certification of category 1 metering installations.

Project 1 was for 40,196 meters and Project 2 for 20,942 meters.

Project 1 – the methodology was found non-compliant because it was done across two MEPs identifiers as shown in the registry. As per comment in the report it was an administrative oversight and it is up to the Authority to determine if the sampling needs to be re-done or if there could be another way to resolve it.

Project 2 – according to the last audit report, sampling results did not fully comply with AS/NZS 1284 because the required sample was 100, but the number of tested meters was 116. The first 100 results were considered per table 2 AS1284. Unfortunately the “cut-off” point of 100 excluded a high proportion of inaccurate meters. This resulted in the un-certification of 20,942 ICPs. [The population in Project 2 is now 3,770 ICPs]

On 7th November 2019 Legacy Metering was notified by Delta ATH as follows

The Electricity Authority recommended that Delta re-analyse the original project 2 stat sampling results by re-randomising the 116 results and then taking the first 100 into account.

We have completed this process and found that the population now passes under a criteria 3, meaning a 2 year certification period from the original certification date. ICP reference is LMG-SS_201808 Certified ICPs.

Legacy Metering updated the registry to reflect the new certification expiry date. LMGL has also commenced the preparation work for a new Stat Sampling Certification programme due for completion in August 2020 before the new certification expires. The original population of 20,942 ICPs is has since reduced to 3,770 active ICPs.

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 update the compensation factor recorded in the registry in accordance with Part 11.

Audit observation

We checked 20 records for category 2 metering installations.

Audit commentary

It was confirmed that the information recorded by ATH and information recorded in the registry was correct. Legacy Metering adopted the following logic. For C&I installations the compensation factor is recorded as 1 because it is programmed into a meter. For non C&I installations the compensation factor is recorded in the Certificate of Compliance, traditionally for these installations multipliers are applied by traders.

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

During the audit we reviewed 26 certifications.

Audit commentary

For all reviewed installations meters were certified.

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

During the audit we reviewed 16 certifications of installations where CTs were installed.

Audit commentary

VTs certification was provided for all reviewed installations.

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

We reviewed 20 certification records.

Audit commentary

We confirm that data storage devices were certified for all relevant metering installations.

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 given notice 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 clauses 10.43 to 10.48.

Audit observation

Legacy Metering understands clause 7 and, if it occurs, will take appropriate action.

Audit commentary

We checked ATHs certification (DELTA, AMS and AccuCal) used by Legacy Metering on the Authority web site to confirm compliance.

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

We checked the PR255 file dated 02/09/19 to see if there were any ICPs with interim certification recorded.

Audit commentary

Legacy Metering does not provide the MEP services for interim certified metering installations.

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 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 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

Legacy Metering has a statistical sampling inspection regime in place for category 1 metering installations as per the Code requirements.

Audit commentary

The last audit recorded non-compliance as there was an incorrect category 1 sample selection. On 23/4 19 the Authority clarified that the requirements for inspections of category 1 metering installations are

insufficiently clear as to when and how the sample inspections must be performed and completed therefore certification was not cancelled though the inspections were not completed within the period 01/01/18 to 31/12/18.

The company almost completed their inspections of category 1 metering installations for year ending 2019. The results will be provided to the Authority as per the Code requirements. We discussed with the company which confirmed, that the methodology of sampling was changed to accommodate suggestions from the last audit. The methodology should be audited in the next audit.

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

Legacy metering does not inspect category 2 metering installations, they are recertified. The PR-255 file was reviewed.

Audit commentary

We confirm that no category 2 or 3 metering installations were due for inspections.

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

The process was reviewed.

Audit commentary

Inspections for category 3 metering installations are conducted by AccuCal. Legacy Metering compared the information on the report supplied and with its own records and the registry is updated as required.

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) 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.*

Audit observation

It was discussed during the audit. According to the process if a trader sends them a SR asking to reseal meters, it is actioned promptly. Also, if during category 1 inspections, a technician comes across a broken seal, it is replaced.

Audit commentary

Legacy Metering provided 3 examples where broken seals were replaced. If broken seals are discovered during an inspection, a technician asks for a SR to re-seal equipment.

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

We reviewed the process for the situation when Legacy Metering becomes aware of faulty metering at an installation. The company keep track of each job, recording notification date, completion date, and notification to a retailer.

Audit commentary

The company showed 22 examples of faulty installations. We found the process robust and well managed.

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 5 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

In **section 9.1** Legacy Metering provided 22 examples of faulty installations. In each example a faulty meter was replaced by a new one.

Audit commentary

We found the process used by Legacy Metering compliant. Legacy Metering did not have any faulty installations of category 3.

Audit outcome

Compliant

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

Code reference

Clause10.46(2)

Code related audit information

Within 3 business days of receiving the statement from the ATH, the MEP must provide copies of the statement to:

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

Audit observation

Legacy Metering confirmed that there were no instances, since the last audit, where an installation was faulty and inaccuracies in raw data were discovered as a result.

Audit commentary

There were no examples of faulty cat 3 installations which required a statement of situation.

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

NHH meters (legacy) are read manually by meter reading companies appointed by the traders. Legacy Metering also provides MEP services to metering installations where HHR meters are installed. The retailers have a contract with meter reading companies such as AMCI and EMS for the provision of HHR data from these meters.

Audit commentary

Legacy metering does not have access to NHH or HHR raw meter data. No request has been received to give access to raw data.

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

Legacy Metering, as the MEP, does not have access to raw NHH or HHR meter data. Only traders or their agents have access to it.

Audit commentary

No request has been received to give access to raw data.

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

Since the last audit, Legacy Metering was not asked by parties listed in this clause to have access to components in metering installations.

Audit commentary

Legacy Metering will use its best endeavours to arrange access to a metering installation if requested. It will be solely dependent on the customer's availability or health and safety concerns due to the nature of the customer's business that determines if access is granted and within what time frame.

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

Since the last audit, Legacy Metering was not asked by parties listed in this clause to have access to components in metering installations.

Audit commentary

As described in **section 10.3**, Legacy Metering confirmed that it will use its best endeavours to provide physical access to an installation if requested. Legacy Metering will provide any codes, keys, or other

means to enable another party to obtain physical access to all metering components in a metering installation if it is necessary and Legacy Metering is in a position to do so.

Audit outcome

Compliant

10.5. Electronic Interrogation of Metering Installations (Clause 8(2), 8(3), 8(5) and 8(6) of Schedule 10.6)

Code reference

Clause 8(2), 8(3), 8(5) and 8(6) 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 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

Legacy Metering does not read meters via their back office.

Audit commentary

This clause is not applicable. Compliance was not assessed.

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

Legacy Metering does not read meters via their back office.

Audit commentary

This clause is not applicable. Compliance was not assessed.

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

Legacy Metering does not read meters via their back office.

Audit commentary

This clause is not applicable. Compliance was not assessed.

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

Legacy Metering does not read meters via their back office.

Audit commentary

This clause is not applicable. Compliance was not assessed.

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

Legacy Metering does not read meters via their back office.

Audit commentary

This clause is not applicable. Compliance was not assessed.

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

Legacy Metering does not read meters via their back office.

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

CONCLUSION

PARTICIPANT RESPONSES

LMGL continues to take a proactive approach to its Code obligations and notes the issues and recommendations in this report and has initiated actions to monitor and resolve them.

As observed, LMGL does not employ technicians. All work is carried out by ATHs. The function of LMGL is more of a technical administrative role as LMGL relies heavily on the detailed, technical expertise of ATHs. ATHs obligations are assessed during the ATH audits and some ATHs have been non-compliant for a while, which results in an invidious position for the MEP. Whilst “commercial pressure” can be applied it is of limited effectiveness in relation to the comparative size of the MEP and the limited number of suitable ATHs.

Non-certification of Cat1 sites resulting from the 3x multiplier issue is an ongoing challenge. LMGL has commenced a programme (in conjunction with VCOM and TASM) to recertify / replace / revisit the 3 x sites, but the initial work indicates that there is likely to be an issue with the general suitability of the boards and wiring to the metering points. LMGL aims to be able to present more information as an outcome of the project as well as propose an approach to addressing these particular (peculiar) sites.

The Cat 2 recertification presents ongoing (although not unique) challenges as the MEP, ATH and retailer continue to work together to gain access to some of the more difficult sites. LMGL continues to monitor and engage with all parties to affect a positive outcome.

LMGL has commenced on the rectification programme by replacement (rather than by statistical sampling) as this will give the best outcome in terms of certification longevity for a given installation. There are a number of sites that are being turned down due to access and suitability and LMGL is actively looking for ways to address these from a certification perspective.

LMGL requested the audit to be undertaken prior to determination of the audit timing by the Authority in order to clarify and correct some of the previous findings as well as to demonstrate progress on some other issues.

LMGL believes that the purpose of the audit is to review the effectiveness of the MEPs compliance with the Code and the operational activities to support the compliance and as such it can be used as a tool that can lead to genuine improvement. LMGL is absolutely committed to compliance and accepts the findings and commentary of the auditor in the report.