

ELECTRICITY INDUSTRY PARTICIPATION CODE  
METERING EQUIPMENT PROVIDER AUDIT REPORT

VERITEK

For

ACCUCAL LIMITED  
NZBN:9429031158022

Prepared by: Steve Woods – Veritek Limited

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Date audit report completed: 18 August 2023

Audit report due date: 29-Aug-23

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## EXECUTIVE SUMMARY

**Accucal Limited (Accucal)** is a Metering Equipment Provider (MEP) and is required to undergo an audit by 29 August 2023, in accordance with clause 16A.17(a).

The audit found five areas of non-compliance, a reduction from the eight found in the last audit. The main areas of non-compliance are as follows:

- a small number of late registry updates,
- one inspection not conducted, and
- one expired certification.

On 15 June 2023 the Electricity Authority published a memo detailing changes to data collection responsibilities. This memo changes the arrangements originally established in 2013, which stated that all data collection, apart from AMI data collection, was the responsibility of the reconciliation participant. The 2023 memo changes the responsibility for some data collection from the reconciliation participant to the MEP, where the MEP has not provided the capability to collect data to the reconciliation participant. This means that where Accucal is the MEP and they collect data, data collection is being conducted as an MEP. Therefore, the MEP data collection responsibilities will be recorded in this audit report. The table below shows the details of the recent memo.

Metering Type	Scenario	Responsibility	Comments
HHR	Where it is possible for other parties to interrogate the metering installation	Reconciliation Participant	Electronic interrogation.
HHR	Where the MEP <b>WILL NOT</b> provide the interrogation capability, password, or encryption details to the reconciliation participant.	<del>Reconciliation Participant</del> Metering Equipment Provider	<del>Although password means not possible for other parties to collect data, it is possible if MEP provides access. Electronic interrogation</del> If the MEP will not provide access, then the MEP must be responsible for interrogation.
HHR	Where the MEP <b>WILL</b> provide the interrogation capability, password, or encryption to the reconciliation participant.	Reconciliation Participant	Electronic interrogation.
AMI	Where the MEP <b>WILL NOT</b> provide the interrogation capability, password, or encryption details to the	Metering Equipment Provider	Note that where interrogation is via radio mesh or GPRS, the nature of communication and metering management systems means the MEP back-office systems are required to meet code obligations for interrogation.

Compliance is recorded for all data collection related clauses.

I've made four recommendations, to assist with compliance in future audits.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The table below provides some guidance on this matter and recommends an audit frequency of 24 months, after reviewing Accucal's responses I agree with this recommendation.

The matters raised are recorded in the tables below.

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Changes to registry records	4.10	3 of Schedule 11.4	One record updated on the registry later than 10 business days due to late nomination by the trader.	Strong	Low	1	Cleared. No actions are available to Accual to prevent this issue.
MEP Response to Switch Notification	6.1	1(1) of Schedule 11.4	Four late MN files.	Strong	Low	1	Identified
Certification cancellation	6.4	20 of Schedule 10.7	Certification not cancelled on the registry within 10 business days ICP 0003133903AA777 where the inspection was not conducted by the due date.	Strong	Low	1	Identified
Certification of metering installations	7.1	10.38 (a), clause 1 & clause 15 of Schedule 10.7	Certification expired for one metering installation. Certification cancelled for one metering installation.	Strong	Low	1	Identified
Category 2 to 5 Inspections	8.2	46(1) of Schedule 10.7	Inspection not conducted for ICP 0003133903AA777 within the allowable timeframe.	Strong	Low	1	Identified
<b>Future Risk Rating</b>						<b>5</b>	
<b>Indicative Audit Frequency</b>						<b>24 months</b>	

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

## RECOMMENDATIONS

Subject	Section	Recommendation	Remedial action
Services access interface	2.1	Add an additional services access interface of "remote" where Accucal is collecting data as an MEP.	Cleared
Design report approval	4.9	Ensure new design reports have appropriate approval by the trader and distributor.	Identified
MEP nominations	6.1	Develop a system for the identification of MEP nominations from the registry.	Identified
Clock errors	10.7	Keep a schedule of all clock errors outside the applicable thresholds.	Identified

## ISSUES

Subject	Section	Recommendation	Description
			Nil

## 1. ADMINISTRATIVE

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

#### Code reference

*Section 11 of Electricity Industry Act 2010.*

#### Code related audit information

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

#### Audit observation

I checked the Electricity Authority website, and I confirm there are four exemptions in place.

#### Audit commentary

Accucal had four exemptions in place during the audit period, all to allow the use of subtractive metering. The exemptions are listed below with the ICPs.

Exemption 246: 0009805800AL991, expires 30 June 2025. This exemption is no longer required because subtraction is no longer being used.

Exemption 334: 0000880392WEA92, expires 31 December 2024.

Exemption 187: 0000032431HR99C, expires 31 December 2023.

Exemption 292: 0003133903AA777, is no longer valid because the trader changed from Meridian to Mercury. Exemption 308 is the replacement.

Exemption 308: 0003133903AA777, expires December 2030.

### 1.2. Structure of Organisation

Russell Mann is the MEP Manager and has several metering technicians in the organisation. Russell is the main contact for compliance issues.

### 1.3. Persons involved in this audit

Auditor:

Steve Woods

**Veritek Limited**

**Electricity Authority Approved Auditor**

Accucal personnel assisting in this audit were:

Name	Title
Russell Mann	Technical Manager



#### 1.4. Use of Agents (Clause 10.3)

##### Code reference

Clause 10.3

##### Code related audit information

A participant who uses a contractor

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

##### Audit observation

Accucal does not use contractors to perform MEP responsibilities.

##### Audit commentary

Accucal does not use contractors to perform MEP responsibilities.

#### 1.5. Hardware and Software

Accucal MEP data is held in a spreadsheet. Data is stored on two servers in its Hamilton office, there are also servers in Hamilton, Christchurch and Auckland which are synced to the Hamilton office server. Backups of all data are also written to a separate hard drive on all four servers. A back-up is also written to a virtual PC six days per week.

Accucal operates three data collection systems, which are all backed up as described above. The systems are MV90, EzyView and ION Setup.

#### 1.6. Breaches or Breach Allegations

Accucal confirmed there were no breach allegations related to the scope of this audit.

#### 1.7. ICP Data

Metering Category	Number of ICPs
1	1
2	12
3	17
4	35
5	70

Accucal is also the MEP for 22 points of connection, as summarised below:

Reconciliation type	Number of POCs
EN	2
GD	2

GG	15
NP	3

### 1.8. Authorisation Received

A letter of authorisation was not required or requested.

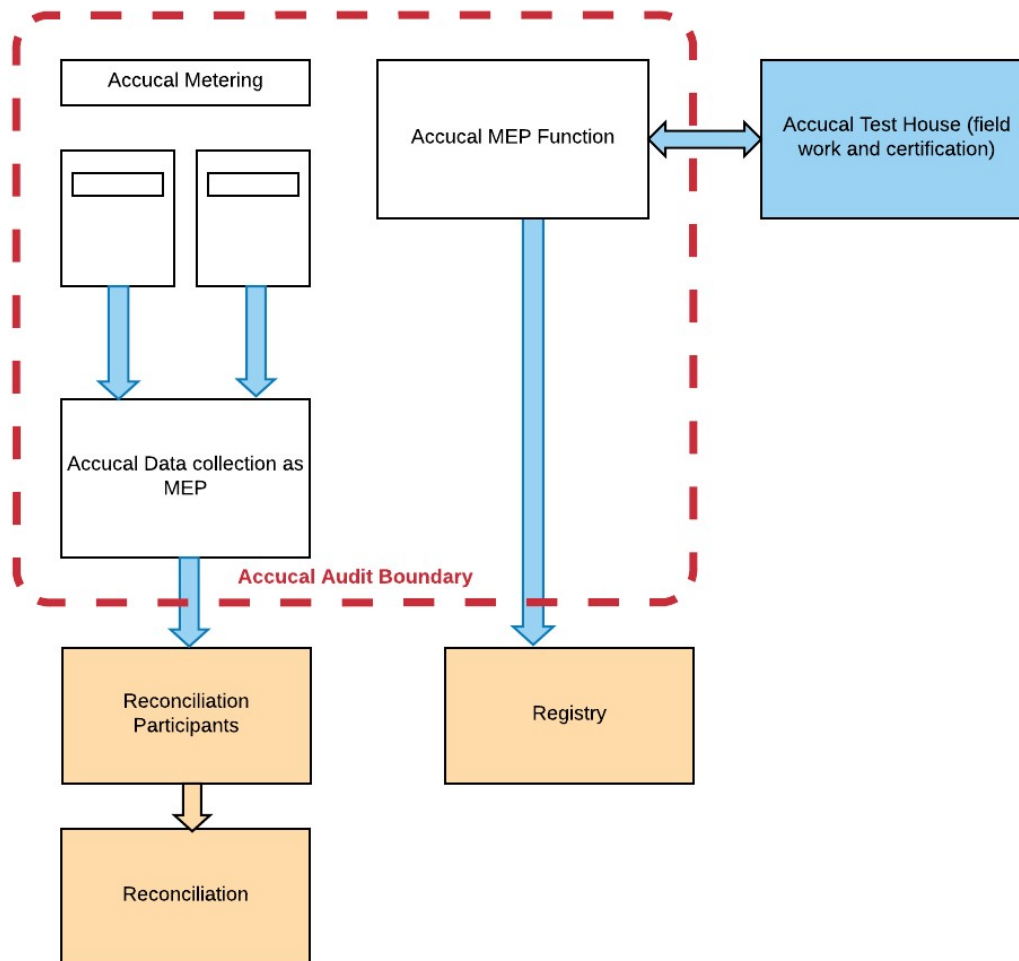
### 1.9. Scope of Audit

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

On 15 June 2023 the Electricity Authority published a memo detailing changes to data collection responsibilities. This memo changes the arrangements originally established in 2013, which stated that all data collection, apart from AMI data collection, was the responsibility of the reconciliation participant. The 2023 memo changes the responsibility for some data collection from the reconciliation participant to the MEP, where the MEP has not provided the capability to collect data to the reconciliation participant. This means that where Accucal is the MEP and they collect data, data collection is being conducted as an MEP. Therefore, the MEP data collection responsibilities will be recorded in this audit report. The table below shows the details of the recent memo.

Metering Type	Scenario	Responsibility	Comments
HHR	Where it is possible for other parties to interrogate the metering installation	Reconciliation Participant	Electronic interrogation.
HHR	Where the MEP <b>WILL NOT</b> provide the interrogation capability, password, or encryption details to the reconciliation participant.	<del>Reconciliation Participant</del> Metering Equipment Provider	<del>Although password means not possible for other parties to collect data, it is possible if MEP provides access. Electronic interrogation</del> If the MEP will not provide access then the MEP must be responsible for interrogation.
HHR	Where the MEP <b>WILL</b> provide the interrogation capability, password, or encryption to the reconciliation participant.	Reconciliation Participant	Electronic interrogation.
AMI	Where the MEP <b>WILL NOT</b> provide the interrogation capability, password, or encryption details to the	Metering Equipment Provider	Note that where interrogation is via radio mesh or GPRS, the nature of communication and metering management systems means the MEP back-office systems are required to meet code obligations for interrogation.

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



Accucal is the MEP for a small number of higher category metering installations, and they are also the ATH.

## 1.10. Summary of previous audit

The previous audit was conducted in May 2022 by Brett Piskulic of Veritek Limited. The table below shows the status of the issues raised.

### Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
Registry updates	3.2	2 of Schedule 11.4	One registry update later than 15 business days.	Cleared
Changes to registry records	4.10	3 of Schedule 11.4	11 records updated on the registry later than 10 business days.	Still existing
Accurate and Complete Records	5.1	Clause 4(1)(a) and (b) of Schedule 10.6, and Table 1, Schedule 11.4	Burden range not recorded in certification records for six ICPs.	Cleared
MEP Response to Switch Notification	6.1	1(1) of Schedule 11.4	Two late MN files.	Still existing
Registry validation	6.3	6 of schedule 11.4	Registry validation not conducted for every month of the audit period.	Cleared
Certification cancellation	6.4	20 of Schedule 10.7	Certification not cancelled on the registry within 10 business days for two metering installations certified at a lower category where monitoring was not conducted for each month.	Cleared
Certification of metering installations	7.1	10.38 (a), clause 1 & clause 15 of Schedule 10.7	Certification expired for one metering installation.	Still existing
Certification as a Lower Category	7.6	6(1)(b) and (d), and 6(2)(b) of Schedule 10.7	Monitoring was not conducted for each month for two metering installations certified at a lower category.	Cleared

### Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Status
			Nil	

## 2. OPERATIONAL INFRASTRUCTURE

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

#### Code reference

Clause 10.9(2)

#### Code related audit information

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

#### Audit observation

I checked certification records for 20 metering installations in relation to recording of the services access interface.

#### Audit commentary

The services access interface was recorded correctly for all 20 examples. The Electricity Authority recently changed its guidance regarding the responsibility for data collection, which has resulted in Accucal being responsible for data collection for eight metering installations. Accucal has previously recorded the services access interface as "Meter Data Logger" because when reconciliation participants were responsible for data collection this was correct. With the new interpretation from the Authority, I recommend an additional services access interface is recorded and this should be described as "remote" and the circumstances where Accucal is collecting data as the MEP. The "Meter Data Logger" services access interface can remain because it may be used for manual downloads.

Description	Recommendation	Audited party comment	Remedial action
Services access interface	Add an additional services access interface of "remote" where Accucal is collecting data as an MEP.	A change to certification templates has just been completed that highlights the SAI field in yellow when ACCM is the MEP and requires either "Remote (ACCM)" to be selected if ACCM collect data, or the highlighting to be cleared if not.	Cleared

#### Audit outcome

Compliant

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

#### Code reference

Clause 10.50(1) to (3)

#### Code related audit information

*Participants must in good faith use its best endeavours to resolve any disputes related to Part 10 of the Code. Disputes that are unable to be resolved may be referred to the Authority for determination. Complaints that are not resolved by the parties or the Authority may be referred to the Rulings Panel by the Authority or participant.*

#### Audit observation

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

### **Audit commentary**

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

### **Audit outcome**

Compliant

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

### **Code reference**

*Clause 7(1) of Schedule 10.6*

### **Code related audit information**

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

### **Audit observation**

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

### **Audit commentary**

Accucal uses the ACCM identifier in all cases.

### **Audit outcome**

Compliant

## 2.4. Communication Equipment Compatibility (Clause 40 Schedule 10.7)

### **Code reference**

*Clause 40 Schedule 10.7*

### **Code related audit information**

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

### **Audit observation**

I checked that the ATH has a process to check the relevant type test certificates to ensure compliance with this clause.

### **Audit commentary**

Accucal ensures all communication equipment is appropriately certified with the relevant telecommunications standards. This is recorded in type test certificates and other approval documents. A reference to the type test reports is included in the metering installation certification reports.

### **Audit outcome**

Compliant

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

### **Code reference**

*Clause 11.2 and Clause 10.6*

### **Code related audit information**

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

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

#### **Audit observation**

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

#### **Audit commentary**

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

#### **Audit outcome**

Compliant

### 3. PROCESS FOR A CHANGE OF MEP

#### 3.1. Change of metering equipment provider (Clause 10.22)

##### Code reference

Clause 10.22

##### Code related audit information

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

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

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

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

##### Audit observation

I checked if Accucal had sent or received any invoices.

##### Audit commentary

Accucal has not sent or received any invoices in relation to this clause during the audit period.

##### Audit outcome

Compliant

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

##### Code reference

Clause 2 of Schedule 11.4

##### Code related audit information

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

##### Audit observation

I checked the audit compliance reports for the period 1 June 2022 to 31 May 2023 for all records where Accucal became the MEP to evaluate the timeliness of updates.

##### Audit commentary

There were no late updates identified by the audit compliance report.

##### Audit outcome

Compliant



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

#### Code reference

Clause 5 of Schedule 10.6

#### Code related audit information

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

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

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

#### Audit observation

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

#### Audit commentary

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

#### Audit outcome

Compliant

### 3.4. Termination of MEP Responsibility (Clause 10.23)

#### Code reference

Clause 10.23

#### Code related audit information

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

*The MEP is responsible if it:*

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

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

*An MEPs obligations terminate only when:*

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

**Audit observation**

I confirmed that Accucal has not ceased to be responsible for any metering installations by checking the event detail report.

**Audit commentary**

Whilst Accucal has not ceased to be responsible for any metering installations, they still continue with their responsibilities, mainly in relation to the storage or records, which are kept indefinitely.

**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 for each services access interface, any compensation factor arrangements, method of certification required, and name and signature of the person who prepared the report and the date it was signed.*

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

#### Audit observation

I checked Accucal's standard design reports to confirm compliance.

#### Audit commentary

Accucal is an ATH and an MEP, therefore there are no examples of provision of design reports to other parties. I checked the Accucal design reports, and I confirmed that they contained all of the points listed above and they were prepared by a person with the appropriate level of skills, expertise, experience and qualifications.

HV installations have individual design reports. I checked the design for metering at a proposed new solar farm and confirm compliance.

#### Audit outcome

Compliant

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

#### Code reference

*Clause 9 of Schedule 10.6*

#### Code related audit information

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

#### Audit observation

I confirmed that Accucal is also an ATH, and they haven't used any other ATHs during the audit period.

#### Audit commentary

I confirmed that Accucal is also an ATH, and they haven't used any other ATHs during the audit period. Accucal has an appropriate and current scope of approval.

## Audit outcome

Compliant

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

#### Code reference

*Clause 4(1) of Schedule 10.7*

#### Code related audit information

*The MEP must ensure:*

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

#### Audit observation

I checked the processes used by Accucal to ensure compliance with the design and with the error thresholds stipulated in Table 1. I also checked the certification records for 20 metering installations.

#### Audit commentary

Accucal has their own calculator for recording error and uncertainty results. This calculator uses meter class accuracy and has results over a load range of 5% to 120% at different power factors. This approach is conservative and takes into account forecast load by including multiple load points. The system used by Accucal has been approved by IANZ during the ISO 17025 audit; therefore, I have confirmed compliance in this report. The calculator includes consideration of temperature and temperature is recorded as part of the certification tests.

With regard to the design of the installation (including data storage device and interrogation system), Accucal ensures the sum of the measured error and the smallest possible increment of the energy value of the raw meter data does not exceed the maximum permitted error set out in Table 1 of Schedule 10.1 for the category of installation. There are no components installed where “coarse” rounding is in place for the data, or where meters with a low pulse rate are connected to separate data storage devices.

Accucal ensures the metering installation complies with the requirements of Part 10 and the design reports were referenced in the 20 certification records checked.

#### Audit outcome

Compliant

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

#### Code reference

*Clause 4(2)(a) of Schedule 10.7*

#### Code related audit information

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

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

#### **Audit observation**

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

#### **Audit commentary**

Accucal has four ICPs with subtractive metering. Exemptions which allow the use of subtraction are in place for these four ICPs as recorded in **section 1.1**.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 4(2)(b) of Schedule 10.7*

#### **Code related audit information**

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

#### **Audit observation**

I checked the audit compliance report to confirm compliance with this requirement.

#### **Audit commentary**

I checked the audit compliance report and I confirm compliance with this requirement.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 4(3) of Schedule 10.7*

#### **Code related audit information**

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

#### **Audit observation**

I checked if Accucal is responsible for any NSP metering.

#### **Audit commentary**

Accucal is the MEP for two embedded networks with NSP metering. I checked and confirmed that subtraction is not used to determine submission information.

#### **Audit outcome**

Compliant

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

##### **Code reference**

*Clause 10.26(10)*

##### **Code related audit information**

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

##### **Audit observation**

I checked if Accucal is responsible for any GXP metering by reviewing the NSP Mapping Table.

##### **Audit commentary**

Accucal is recorded as the MEP for 17 points of connection. The metering installations are certified, and the certification expiry dates are recorded in the NSP Table.

##### **Audit outcome**

Compliant

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

##### **Code reference**

*Clause 4(4) of Schedule 10.7*

##### **Code related audit information**

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

##### **Audit observation**

I asked Accucal to provide details of how they ensure the suitability of metering installations.

##### **Audit commentary**

Accucal has appropriate practices and documentation to ensure compliance with this requirement. The completed compliance check sheets include an Electrical Safety Certificate which confirms that the prescribed electrical work completed meets the requirements of regulation 74A of the Electricity Safety Regulations. Accucal has not identified any installations with inappropriate physical or electrical characteristics.

##### **Audit outcome**

Compliant

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

##### Code reference

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

##### Code related audit information

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

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

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

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

##### Audit observation

I checked whether appropriate consultation had occurred.

##### Audit commentary

There were no design changes during the audit period. Accucal has previously provided copies of the design reports to all relevant distributors and traders in order to achieve compliance with this requirement.

I recommend a change to the sign-off section of new design reports to ensure the distributor and trader are included. The proposed solar farm mentioned in **section 4.1** will need to have these approvals.

Description	Recommendation	Audited party comment	Remedial action
Design report approval	Ensure new design reports have appropriate approval by the trader and distributor.	[For new designs and/or if new trader or distributor are involved, a field will be added for approval from said party.]	Identified

##### Audit outcome

Compliant

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

##### Code reference

Clause 3 of Schedule 11.4

##### Code related audit information

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

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

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

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

##### Audit observation

I checked the audit compliance report and the event detail report for the period 1 June 2022 to 31 May 2023 to evaluate the timeliness of registry updates.

##### Audit commentary

The event detail report and audit compliance report confirmed that all registry updates for recertifications were made on time.

There were two new connections, and one was updated late. The late update was due to late nomination by the trader. ICP 0009801327ALC80 was certified on 3 April 2023 but the trader didn't nominate Accucal until 21 April 2023 and Accucal updated the registry the same day.

##### Audit outcome

Non-compliant

Non-compliance	Description	
Audit Ref: 4.10 With: Clause 3 of Schedule 11.4  From: 19-Apr-23 To: 21-Apr-23	One record updated on the registry later than 10 business days due to late nomination by the trader.  Potential impact: Low  Actual impact: Low  Audit history: Multiple times  Controls: Strong  Breach risk rating: 1	
Audit risk rating	Rationale for audit risk rating	
<b>Low</b>	I have recorded the controls as strong in this area because Accucal has checks in place to identify and resolve discrepancies and there was only one late update.  The impact on participants, customers or settlement could be minor where a tariff change may be required; therefore, the audit risk rating is low.	
<b>Actions taken to resolve the issue</b>	<b>Completion date</b>	<b>Remedial action status</b>



We don't believe there is much we can do here, this was due to the Network not communicating with the Trader until after liveness and therefore was out of our hands	N/A	Cleared
<b>Preventative actions taken to ensure no further issues will occur</b>	Completion date	
N/A. Existing controls for timely registry updates are working.	N/A	

#### 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

The Authority's new interpretation regarding data collection responsibilities means Accucal is now collecting data as an MEP. Accucal has addressed compatibility issues, and this was demonstrated during the audit.

##### Audit commentary

The Authority's new interpretation regarding data collection responsibilities means Accucal is now collecting data as an MEP. Accucal has addressed compatibility issues, and this was demonstrated during the audit.

##### Audit outcome

Compliant

#### 4.12. Decommissioning of an ICP (Clause 10.23A)

##### Code reference

Clause 10.23A

##### Code related audit information

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

- if the MEP is responsible for interrogating the metering installation, arrange for a final interrogation to take place before the metering installation is decommissioned, and provide the raw meter data from the interrogation to the responsible trader,

- *if another participant is responsible for interrogating the metering installation, advise the other participant not less than 3 business days before the decommissioning of the time and date of the decommissioning, and that the participant must carry out a final interrogation.*

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

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

#### **Audit observation**

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

#### **Audit commentary**

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

#### **Audit outcome**

Compliant

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

#### **Code reference**

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

#### **Code related audit information**

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

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

#### **Audit observation**

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

#### **Audit commentary**

There were no examples of burden changes where Accucal is the MEP. Accucal is the MEP and ATH, so the requirements of this clause will be met with existing processes.

#### **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

I checked if there are any examples of changes in accordance with these clauses.

#### Audit commentary

No changes occurred during the audit period. The Accucal process ensures that any changes would lead to recertification of the metering installations affected.

#### Audit outcome

Compliant

### 4.15. Temporary Electrical Connection (Clauses 10.29A)

#### Code reference

Clause 10.28(6)

#### 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

I checked if there were any examples of temporary electrical connection for the purposes of testing.

#### Audit commentary

Accucal does not conduct temporary electrical connection, all metering installations are certified at the time of connection.

#### Audit outcome

Compliant

#### 4.16. Temporary Electrical Connection (Clause 10.30A)

##### Code reference

Clause 10.30A

##### Code related audit information

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

##### Audit observation

I checked if there were any examples of temporary electrical connection for the purposes of testing.

##### Audit commentary

Accucal does not conduct temporary electrical connection, all metering installations are certified at the time of connection.

##### Audit outcome

Compliant

#### 4.17. Temporary Electrical Connection (Clause 10.31A)

##### Code reference

Clause 10.31A

##### Code related audit information

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

##### Audit observation

I checked if there were any examples of temporary electrical connection for the purposes of testing.

##### Audit commentary

Accucal does not conduct temporary electrical connection, all metering installations are certified at the time of connection.

##### Audit outcome

Compliant

## 5. METERING RECORDS

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

#### Code reference

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

#### Code related audit information

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

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

#### Audit observation

I checked certification records for 20 metering installations to evaluate compliance with this clause. I also checked six inspection reports for the audit period.

#### Audit commentary

All certification records were complete and accurate. The last audit recorded that the burden range was not recorded in certification reports for measuring transformers. This matter is now resolved. In **section 2.1** I have recommended a change to the services access interface recording where Accucal is the MEP. This change results from the Authority's change regarding data collection responsibilities.

The inspection process did not identify any information related issues.

#### Audit outcome

Compliant

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

### Code reference

*Clause 4(2) of Schedule 10.6*

### Code related audit information

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

### Audit observation

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

### Audit commentary

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

### Audit outcome

Compliant

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

### Code reference

*Clause 4(3) of Schedule 10.6*

### Code related audit information

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

### Audit observation

I checked the Accucal record keeping processes to confirm compliance.

### Audit commentary

Accucal keeps records indefinitely.

### 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

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

**Audit commentary**

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

**Audit outcome**

Compliant

## 6. MAINTENANCE OF REGISTRY INFORMATION

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

#### Code reference

Clause 1(1) of Schedule 11.4

#### Code related audit information

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

#### Audit observation

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

#### Audit commentary

The switch breach history detail report for the audit period contained four ICPs where the Accucal response was later than 10 business days. The details are shown in the table below. I suggested Accucal ask Ourpower Limited to reverse and re-send the nomination for ICP 0000054751WEC1C so Accucal could accept within 10 business days of the new nomination in order to avoid non-compliance, however Ourpower Limited has refused this request. The metering is not yet installed and certified.

ICP	Nomination Date	Acceptance Date	Days overdue
1001138684UNE16	27 October 2022	14 November 2022	2
0000034881HBA47	27 October 2022	25 November 2022	11
0000054751WEC1C	12 May 2023		25
0007175157WA699	13 July 2022	2 September 2022	27

Registry notification files are received and there is an automated email stating “you have files” when notifications are received, however most days have upcoming certification expiry alerts, and the notification files tend not to be checked because normally the only files present are the certification expiry alerts. I recommend the implementation of an alert system for just the nomination notifications.

Description	Recommendation	Audited party comment	Remedial action
MEP nominations	Develop a system for the identification of MEP nominations from the registry.	This was mainly due to an incorrect understanding by ACCM that the nomination acceptance needed to happen at time of metering install/commission. This will now be handled correctly, i.e. nominations accepted prior to meter install/commission. We will also look at ways to filter the notifications system to ignore RSPAlerts.]	Identified

#### Audit outcome



Non-compliant

Non-compliance	Description		
Audit Ref: 6.1 With: 1(1) of Schedule 11.4 From: 13-Jul-22 To: 12-May-23	Four late MN files. Potential impact: Low Actual impact: None Audit history: Once Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	The controls are recorded as strong because they mitigate risk to an acceptable level. There was no impact; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
ACCM understanding of timely acceptance of nominations is now correct and we will monitor registry files at least weekly		18 <sup>th</sup> Aug 2023	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
System to notify of registry notifications to be enhanced		By 31 Dec 2023	

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

**Code reference**

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

**Code related audit information**

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

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

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

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

**Audit observation**

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

### Audit commentary

Analysis of the audit compliance report and list file identified no discrepancies.

### Audit outcome

Compliant

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

### Code reference

*Clause 6 of Schedule 11.4*

### Code related audit information

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

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

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

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

### Audit observation

I conducted a walkthrough of the validation processes to confirm compliance. I checked Accucal's process to identify and update errors.

### Audit commentary

This clause is quite specific and prescriptive in that it requires a complete metering record comparison to be undertaken.

Accucal has a spreadsheet tool to enable a complete validation of registry records. The validation process was run for each month of the audit period, and I saw evidence that errors were corrected within five business days of identification.

### 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), 19(3A) or 19(3C),*
- 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:*
  - a. *the MEP has not received the report under 6(2A)(a) or 6(2A)(b); or*
  - b. *the report demonstrates the maximum current is higher than permitted; or*
  - c. *the report demonstrates the electricity conveyed exceeds the amount permitted,*
- 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.*
- j) *the installation is an HHR AMI installation certified after 29 August 2013 and*
  - a. *the metering installation is not interrogated within the maximum interrogation cycle; or*
  - b. *the HHR and NHH register comparison is not performed, or*
  - c. *the HHR and NHH register comparison for the same period finds a difference of greater than 1 kWh and the issue is not remediated within three business days.*

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

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

#### **Audit observation**

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

#### **Audit commentary**

I checked the points mentioned above as follows:

##### **Insufficient load certification**

I checked one example of a metering installation certified with insufficient load, Accucal confirmed that monitoring had been conducted. Sufficient load was subsequently identified, and the ATH returned and completed the certification tests. The details are recorded in **section 7.7**.

##### **Certification at a lower category**

I checked three examples of metering installations certified at a lower category which required monitoring. Metering installation Nos 3 and 4 at ICP 0009805800AL991 which are nominally Category 5 were certified at Category 4 on 31 July 2023. ICP 1002112881LC300 is nominally Category 5 but was certified as Category 4 on 19 October 2020. These installations are set up in Accucal's MV90 system with

a pre-set threshold where notification is provided if the load exceeds the threshold. Compliance is confirmed.

### Inspection

The inspection for ICP 0003133903AA777 was due to be completed by 24 June 2023, but it has not been completed due to difficulty negotiating access with the customer. The certification was not cancelled until 16 August 2023.

### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.4 With: Clause 20 of Schedule 10.7  From: 10-Jul-23 To: 16-Aug-23	Certification not cancelled on the registry within 10 business days ICP 0003133903AA777 where the inspection was not conducted by the due date.  Potential impact: Medium  Actual impact: None  Audit history: Once  Controls: Strong  Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	I have recorded the controls as strong in this area because most processes are managed with sufficient controls to avoid cancellation of certification.  The inspection is required to determine if there is any impact, but this is unlikely, therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Certification has been cancelled as of inspection window expiry. General ACCM team are being educated as to impact of this when we are the MEP. This has only arisen due to kick-back from customer claiming they know nothing about the MEP agreement. Negotiations are on-going to resolve this issue		16 Aug 2023	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Registry check system to be enhanced to flag when installation certification needs to be cancelled		By 31 <sup>st</sup> Dec 2023	

## 6.5. Registry Metering Records (Clause 11.8A)

### Code reference

Clause 11.8A

### Code related audit information

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

#### **Audit observation**

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

#### **Audit commentary**

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

#### **Audit outcome**

Compliant

## 7. CERTIFICATION OF METERING INSTALLATIONS

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

#### Code reference

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

#### Code related audit information

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

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

#### Audit observation

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

- the audit compliance report was checked to identify ICPs with expired certification, and
- the new connections process was checked by using the event detail report, PR255 and the list file to identify ICPs where the certification was not conducted within five business days of energisation.

#### Audit commentary

At the time of the audit there was one metering installation with expired certification, ICP 1000024020BP627. This ICP is for a backup supply which is rarely used. Due to an inability to access the measuring transformers to conduct certification tests this metering installation had alternative certification which expired on 19th January 2020. It was expected that the customer would have completed a planned upgrade of the switchgear on site prior to the certification expiry date. The switchgear upgrade has been delayed and the customer has advised that it is planned to take place in 2023.

As recorded in **section 6.4**, ICP 0003133903AA777 has cancelled certification due to the inspection not being conducted.

#### Audit outcome

Non-compliant

Non-compliance	Description
<p>Audit Ref: 7.1</p> <p>With: Clause 10.38 (a), clause 1 and clause 15 of Schedule 10.7</p> <p>From: 19-Jan-20</p> <p>To: 17-Aug-23</p>	<p>Certification expired for one metering installation.</p> <p>Certification cancelled for one metering installation.</p> <p>Potential impact: Low</p> <p>Actual impact: Low</p> <p>Audit history: Twice</p> <p>Controls: Strong</p> <p>Breach risk rating: 1</p>
<b>Audit risk rating</b>	<b>Rationale for audit risk rating</b>

<b>Low</b>	I have recorded the controls as strong as Accucal has a good process for monitoring certification expiry dates and has taken reasonable steps to arrange to recertify.  The impact on settlement is recorded as low because it is unlikely that the lack of certification will lead to failure or inaccuracy of the metering installation. The audit risk rating is recorded as low.	
Actions taken to resolve the issue	Completion date	Remedial action status
Actions for ICP 0003133903AA777 are detailed in previous section. New switchboard for ICP 1000024020BP627 is currently being installed and we are scheduled to complete certification in October 2023	By Nov 2023	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Registry check system to be enhanced to flag when installation certification needs to be cancelled and will also be flagged to admin staff as well as the Technical Manager	By 31 <sup>st</sup> Dec 2023	

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

### Code reference

*Clause 10.38(b) and clause 9 of Schedule 10.6*

### Code related audit information

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

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

### Audit observation

I checked the certification records for 20 metering installations to confirm compliance.

### Audit commentary

Accucal is the MEP and ATH which ensures the appropriate approval is complied with. I checked 20 metering installation records to confirm the appropriate tests were conducted. The certification records contain fields which detail the tests that are completed.

### 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

All relevant metering is compliant with this clause.

#### 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

This clause relates to Transpower as an MEP.

#### Audit commentary



This clause relates to Transpower as an MEP.

**Audit outcome**

Not applicable

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

**Code reference**

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

**Code related audit information**

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

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

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

**Audit observation**

I asked Accucal if there were any examples of burden changes or the addition of non-metering equipment being connected to measuring transformers.

**Audit commentary**

Some installations certified by the Accucal ATH have other equipment connected to the measuring transformers. I checked an example where the CTs and VTs were also used for instrumentation. The design report and certification records include all relevant details and calculations in relation to non-metering equipment connected. The certification report contains a field which records if any other equipment is connected to the CTs or VTs. See extract from certification report below:

Wiring and Connection Details		
Item	Details	Comments
CT secondary earth point location	CT Secondary Terminals	
CT dedicated to metering	Shared with Instrumentation	
VT secondary earth point location	VT Secondary Terminals	
VT dedicated to metering	Shared with Instrumentation	

**Audit outcome**

Compliant

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

**Code reference**

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

**Code related audit information**

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

- the maximum current will at all times during the intended certification period be lower than the current setting of the protection device for the category for which the metering installation is certified, or is required to be certified by the Code; or*

- the metering installation will use less than 0.5 GWh in any 12-month period.

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

If a meter is certified in this manner:

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

#### Audit observation

I checked if there were any examples of certification at a lower category.

#### Audit commentary

I checked three examples of metering installations certified at a lower category which required monitoring. Metering installation Nos 3 and 4 at ICP 0009805800AL991 which are nominally Category 5 were certified at Category 4 on 31 July 2023. ICP 1002112881LC300 is nominally Category 5 but was certified as Category 4 on 19 October 2020. These installations are set up in Accucal's MV90 system with a pre-set threshold where notification is provided if the load exceeds the threshold. Compliance is confirmed.

#### Audit outcome

Compliant

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

#### Code reference

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

#### Code related audit information

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

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

#### Audit observation

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

#### Audit commentary

I checked two examples where insufficient load certification was conducted by the Accucal ATH. These are both now fully certified. Recertification occurs either when monitored load shows there is sufficient to conduct testing, or when Accucal is advised by the customer that load is available for testing.

#### Audit outcome

Compliant

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

### Code reference

*Clause 14(6) of Schedule 10.7*

### Code related audit information

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

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

### Audit observation

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

### Audit commentary

I checked two examples where insufficient load certification was conducted by the Accucal ATH. These are both now fully certified. Recertification occurs either when monitored load shows there is sufficient to conduct testing, or when Accucal is advised by the customer that load is available for testing.

In both examples testing confirmed that the metering installation was within the relevant maximum permitted error.

I confirmed that Accucal understands the requirement to cancel certification 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.

### Audit outcome

Compliant

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

### Code reference

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

### Code related audit information

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

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

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

#### **Audit observation**

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

#### **Audit commentary**

Alternative certification has been applied to three metering installations. The details are shown in the table below.

<b>ICP</b>	<b>Certification date</b>	<b>Expiry date</b>	<b>Reason</b>
0000100550WP341	1 April 2022	1 April 2024	This station is currently out of action and will be certified once it is recommissioned.
0001111025WM17C	26 May 2023	25 May 2025	Outage constraints
0001111027WM1F9	26 May 2023	26 May 2024	Outage constraints

All notifications and records are compliant.

#### **Audit outcome**

Compliant

### 7.10. Timekeeping Requirements (Clause 23 of Schedule 10.7)

#### **Code reference**

*Clause 23 of Schedule 10.7*

#### **Code related audit information**

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

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

#### **Audit observation**

I asked Accucal whether there were any metering installations with time switches switching meter registers.

#### **Audit commentary**

Accucal confirmed there are no metering installations with with time switches switching meter registers.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 35 of Schedule 10.7*

### Code related audit information

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

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

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

### Audit observation

Accucal is not the MEP for any metering installations with control devices.

### Audit commentary

Accucal is not the MEP for any metering installations with control devices.

### Audit outcome

Compliant

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

### Code reference

*Clause 34(5) of Schedule 10.7*

### Code related audit information

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

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

### Audit observation

Accucal is not the MEP for any metering installations with control devices.

### Audit commentary

Accucal is not the MEP for any metering installations with control devices.

### Audit outcome

Compliant

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

### Code reference

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

### Code related audit information

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

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

### Audit observation

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

#### **Audit commentary**

Accucal has not conducted any statistical sampling during the audit period.

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

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

#### **Audit observation**

I checked the records for 20 Category 2 and above metering installations to confirm that compensation factors were correctly recorded on the registry. I also checked an example of a non-standard compensation factor identified by the audit compliance report.

#### **Audit commentary**

Compensation factors have been updated accurately on the registry. I confirmed this by checking the records for 20 ICPs. Accucal confirmed that the non-standard compensation factor identified by the audit compliance report was correct.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 26(1) of Schedule 10.7*

#### **Code related audit information**

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

#### **Audit observation**

I checked the certification records for 20 metering installations to confirm compliance.

#### **Audit commentary**

Meters were certified for all 20 installations.

#### **Audit outcome**

Compliant

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

##### Code reference

Clause 28(1) of Schedule 10.7

##### Code related audit information

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

##### Audit observation

I checked the certification records for 20 metering installations to confirm compliance.

##### Audit commentary

Measuring transformers were certified for all 20 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

I checked the certification records for 20 metering installations to confirm compliance.

##### Audit commentary

The 20 certification records that I checked confirmed that data storage devices are being correctly certified.

##### Audit outcome

Compliant

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

##### Code reference

Clause 7 (3) Schedule 10.3

##### Code related audit information

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

##### Audit observation

I checked the ATH register to confirm compliance.

##### Audit commentary

Accucal as an ATH has appropriate approval.

**Audit outcome**

Compliant

**7.19. Interim Certification (Clause 18 of Schedule 10.7)**

**Code reference**

*Clause 18 of Schedule 10.7*

**Code related audit information**

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

**Audit observation**

I checked the registry records (PR255) to identify any ICPs with interim certification recorded.

**Audit commentary**

Accucal does not have any 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 126 months from the date of the metering installation's most recent certification or*
- *for each 12-month period, commencing 1 January and ending 31 December, ensure an ATH has completed inspections of a sample of the category 1 metering installations selected under clause 45(2) of Schedule 10.7.*

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

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

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

- *any defects identified that have affected the accuracy or integrity of the raw meter data recorded by the metering installation,*
- *any discrepancies identified under clause 44(5)(b),*
- *relevant characteristics, sufficient to enable reporting of correlations or relationships between inaccuracy and characteristics,*
- *the procedure used, and the lists generated, to select the sample under clause 45(2).*

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

- *comply with clause 10.43,*
- *arrange for an ATH to recertify the metering installation if the metering is found to be inaccurate under Table 1 of Schedule 10.1, or defective or not fit for purpose.*

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

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

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

#### Audit observation

Accucal is responsible for one Category 1 metering installation, I checked if this installation was due for inspection during the audit period.

#### Audit commentary

Accucal has not been required to complete any Category 1 inspections during the audit period. The Category 1 metering installation is due for inspection in 2026.

## Audit outcome

Compliant

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

### Code reference

Clause 46(1) of Schedule 10.7

### Code related audit information

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

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

### Audit observation

I checked the registry information to confirm which ICPs were due for inspection, and I then checked the inspection records for all relevant ICPs and a sample of six completed inspection reports.

### Audit commentary

There were 34 inspections required to be completed during the audit period. 33 inspections were conducted within the applicable period. The inspection for ICP 0003133903AA777 was due by 24 June 2023 but has not been completed due to difficulties in making access arrangements with the customer.

All six inspection reports requested were provided and contained all the required information.

## Audit outcome

Non-compliant

Non-compliance	Description	
Audit Ref: 8.2 With: Clause 46(1) of Schedule 10.7  From: 24-Jun-23 To: 16-Aug-23	Inspection not conducted for ICP 0003133903AA777 within the allowable timeframe.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Strong  Breach risk rating: 1	
Audit risk rating	Rationale for audit risk rating	
<b>Low</b>	The controls are recorded as strong, because reporting is in place and Accucal has been attempting to contact the customer and arrange access for some time.  The impact on settlement and participants could be minor; therefore, the audit risk rating is low.	
Actions taken to resolve the issue	Completion date	Remedial action status

ACCM team working on gaining site access and will complete the re-certification as soon as possible.	By end of Aug 2023	Identified
<b>Preventative actions taken to ensure no further issues will occur</b>	<b>Completion date</b>	
A review of MEP agreements is to be completed to ensure similar problems don't occur	By 31 <sup>st</sup> Dec 2023	

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

#### Code reference

*Clause 44(5) of Schedule 10.7*

#### Code related audit information

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

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

#### Audit observation

I checked the inspection process and a sample of six completed inspection reports from the 37 completed to confirm compliance.

#### Audit commentary

All inspections are conducted by the Accucal ATH. The inspection check-sheet is prepopulated with all of the existing metering information. A comparison is done by the technician on-site and any discrepancies recorded. The registry is updated if any discrepancies are found on return of the check-sheet.

#### Audit outcome

Compliant

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

#### Code reference

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

#### Code related audit information

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

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

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

*The MEP must make the above arrangements within*

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

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

**Audit observation**

I checked for examples of notification of missing seals.

**Audit commentary**

Accucal has a documented process in place for the management of seals and any subsequent investigation and reporting. No examples were identified.

**Audit outcome**

Compliant

## 9. PROCESS FOR HANDLING FAULTY METERING INSTALLATIONS

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

#### Code reference

*Clause 10.43(4) and (5)*

#### Code related audit information

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

- a) 20 business days for Category 1,*
- b) 10 business days for Category 2 and*
- c) 5 business days for Category 3 or higher.*

#### Audit observation

I checked the Accucal processes and whether there had been any faulty metering installations during the audit period.

#### Audit commentary

Accucal has a documented process in place for the management of faulty metering installations and any subsequent investigation and reporting.

Two examples were identified during the audit period. The details are discussed below:

- ICP 1000023001BP357 at Aniwhenua was certified by the BOPE ATH on 5 February 2016 and Accucal became the MEP on 1 April 2021, then recertified the installation on 5 April 2022 which identified that one CT had reversed polarity; the issue was investigated, and appropriate reporting provided within 10 business days and contained the details required by a “statement of situation”, and
- ICP 0000052524NT900 at Cobb was faulty due to battery failure of the batteries providing the voltage to the metering; this matter was immediately resolved, and a statement of situation was provided to the Authority on 16 August 2023.

Compliance is confirmed with the requirement to report on issues within the prescribed timeframes.

#### Audit outcome

Compliant

### 9.2. Testing of Faulty Metering Installations (Clause 10.44)

#### Code reference

*Clause 10.44*

#### Code related audit information

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

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

- a) test the metering installation,*

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

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

#### **Audit observation**

I checked the Accucal processes and whether there had been any faulty metering installations during the audit period.

#### **Audit commentary**

Accucal has a documented process in place for the management of faulty metering installations and any subsequent investigation and reporting.

Two examples were identified during the audit period. The details are discussed below:

- ICP 1000023001BP357 at Aniwhenua was certified by the BOPE ATH on 5 February 2016 and Accucal became the MEP on 1 April 2021, then recertified the installation on 5 April 2022 which identified that one CT had reversed polarity; the issue was investigated, and appropriate reporting provided within 10 business days and contained the details required by a “statement of situation”, and
- ICP 0000052524NT900 at Cobb was faulty due to battery failure of the batteries providing the voltage to the metering; this matter was immediately resolved, and a statement of situation was provided to the Authority on 16 August 2023.

Compliance is confirmed with the requirement to provide statements of situation. There are no timeframes for the provision of statements of situation unless the MEP states the installations are accurate and a participant disagrees with this claim.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause10.46(2)*

#### **Code related audit information**

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

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

#### **Audit observation**

I checked the Accucal processes and whether there had been any faulty metering installations during the audit period.

#### **Audit commentary**

Accucal has a documented process in place for the management of faulty metering installations and any subsequent investigation and reporting.

Two examples were identified during the audit period. The details are discussed below:

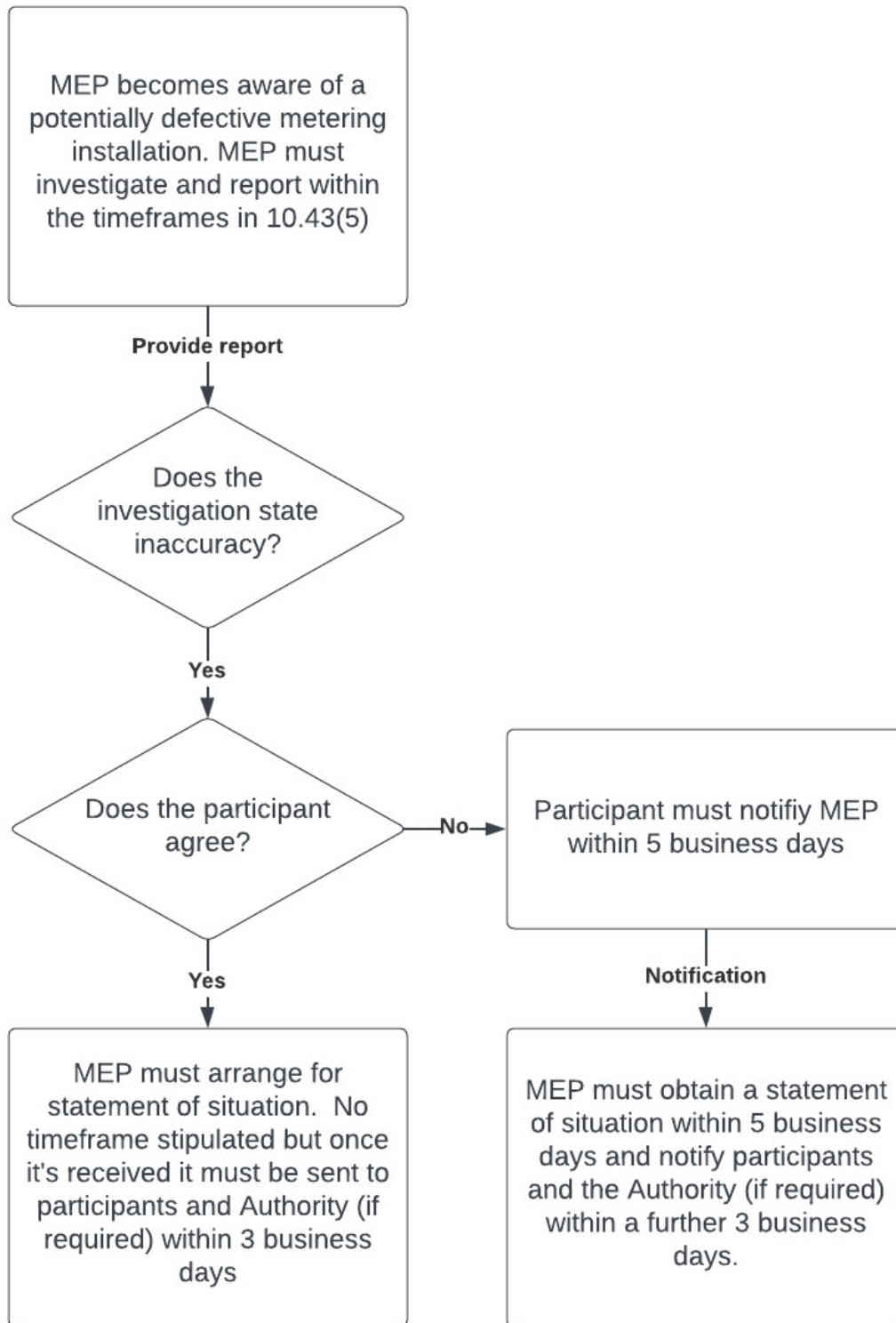
- ICP 1000023001BP357 at Aniwhenua was certified by the BOPE ATH on 5 February 2016 and Accucal became the MEP on 1 April 2021, then recertified the installation on 5 April 2022 which identified that one CT had reversed polarity; the issue was investigated, and appropriate reporting provided within 10 business days and contained the details required by a “statement of situation”, and
- ICP 0000052524NT900 at Cobb was faulty due to battery failure of the batteries providing the voltage to the metering; this matter was immediately resolved, and a statement of situation was provided to the Authority on 16 August 2023.

Compliance is confirmed with the requirement to provide statements of situation. There are no timeframes for the provision of statements of situation unless the MEP states the installations are accurate and a participant disagrees with this claim.

ICP 1000023001BP357 is Category 2 and the statement of situation is not required to be sent to the Authority.

ICP 0000052524NT900 is Category 5 and the statement of situation is required to be sent to the Authority within three business days of the statement of situation being provided to the MEP. The statement of situation was prepared on 15 August 2023 and provided to the Authority on 16 August 2023, therefore compliance is achieved.

The timeframes stipulated in the Code for the resolution of potentially defective metering installations are very long and it’s unlikely that any participant would ever take this length of time. There is no timeframe for the MEP to prepare a statement of situation unless a participant disagrees with the MEPs conclusion that an installation is accurate. The chart below shows the operation of the wording of the Code.





## Audit outcome

Compliant

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

#### Code reference

Clause10.46A

#### Code related audit information

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

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

#### Audit observation

I checked the Accucal processes and whether there had been any faulty metering installations during the audit period.

#### Audit commentary

Accucal has a documented process in place for the management of faulty metering installations and any subsequent investigation and reporting.

Two examples were identified during the audit period. The details are discussed below:

- ICP 1000023001BP357 at Aniwhenua was certified by the BOPE ATH on 5 February 2016 and Accucal became the MEP on 1 April 2021, then recertified the installation on 5 April 2022 which identified that one CT had reversed polarity; the issue was investigated, and appropriate reporting provided within 10 business days and contained the details required by a “statement of situation”, and
- ICP 0000052524NT900 at Cobb was faulty due to battery failure of the batteries providing the voltage to the metering; this matter was immediately resolved, and a statement of situation was provided to the Authority on 16 August 2023.

In both cases, the remedial actions were taken immediately. Compliance is confirmed.

## Audit outcome

Compliant

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

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

#### Code reference

*Clause 1 of Schedule 10.6*

#### Code related audit information

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

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

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

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

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

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

#### Audit observation

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

#### Audit commentary

Accucal has not had any requests for access to raw meter data.

Accucal provides data collection services to three participants for seven ICPs and one NSP. Access has been granted for all other installations to enable participants to access raw meter 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

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

#### Audit commentary

Accucal has not had any requests for access to raw meter data.

Accucal provides data collection services to three participants for seven ICPs and one NSP. Access has been granted for all other installations to enable participants to access raw meter data and this access does not breach the Code.

#### **Audit outcome**

Compliant

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

#### **Code reference**

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

#### **Code related audit information**

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

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

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

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

#### **Audit observation**

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

#### **Audit commentary**

Access will be provided as required. No requests have been made.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 3(5) of Schedule 10.6*

#### **Code related audit information**

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

#### **Audit observation**

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

#### **Audit commentary**

Access will be provided as required. No requests have been made.

## Audit outcome

Compliant

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

#### Code reference

*Clause 8 of Schedule 10.6*

#### Code related audit information

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

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

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

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

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

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

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

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

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

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

#### Audit observation

Accucal provides data collection services to three participants for seven ICPs and one NSP. I checked compliance with the relevant clauses of the Code.

#### Audit commentary

##### **Maximum interrogation cycle.**

Data is collected monthly and in all cases was within the maximum interrogation cycle.

##### **Clock synchronisation**

This is discussed in **section 10.7**.

## Event logs

This is discussed in **section 10.8**.

## Archiving and storage

This is discussed in **section 10.6**.

### Audit outcome

Compliant

## 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

Accucal provides data collection services to three participants for seven ICPs and one NSP. I checked compliance with the relevant clauses of the Code.

### Audit commentary

All data is archived in accordance with these clauses for a period more than 48 months. This was confirmed by viewing raw meter data from 2019.

Password protection is in place to ensure raw meter data cannot be accessed by unauthorised personnel. I observed login processes during the audit and noted password protection was in place for systems used to retrieve and store raw meter data.

Raw data is never modified, a secure version of the raw data is saved, and any corrections are made to a working copy, which is also saved with a log of any corrections. Data from EDM1 meters is “appended”, which means all data from the time the meter was first set up is collected. Accucal selects the relevant data for the month and sends this data, not the entire raw data file.

### Audit outcome

Compliant

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

### Code reference

*Clause 8(4) of Schedule 10.6*

### Code related audit information

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

### Audit observation

Accucal provides data collection services to three participants for seven ICPs and one NSP. I checked compliance with the relevant clauses of the Code.

## Audit commentary

The EDM I proprietary system EziView was used to collect the data. Accucal's server is synchronised against an internet time source prior to data collection. During each interrogation, the data logger internal clock is compared with the data collection system clock, and any time errors are assessed individually. If they are outside the allowable threshold, a correction is made. No examples could be recalled; however, I recommend that for future audits, a table is kept recording all clock errors outside the applicable thresholds to enable easier identification of these events.

Description	Recommendation	Audited party comment	Remedial action
Clock errors	Keep a schedule of all clock errors outside the applicable thresholds.	Time is typically corrected if found to be more than 2 seconds out. If any times outside of the table 1 limits are encountered a record will be held as to this occurrence and it will be notified to the RP.	Identified

When time errors less than or equal to 60 seconds are detected, the data is not corrected. The entire adjustment occurs within the half hour that the time is adjusted. Notification of time errors outside those stipulated in Table 1 will be made to reconciliation participants if they require this reporting.

The interpretation of this clause was discussed. The wording of the clause is as follows:

*"If a time error...is greater than the applicable time error set out in Table 1 [the participant must] correct any affected raw meter data."*

In the unlikely scenario of clocks being fast by more than 30 minutes, the data will be downloaded prior to time synchronisation taking place to ensure data is not over written.

It was confirmed during this audit that clock synchronisation occurs during manual data collection.

## Audit outcome

Compliant

## 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

Accucal provides data collection services to three participants for seven ICPs and one NSP. I checked compliance with the relevant clauses of the Code.

### Audit commentary

The walkthrough of the data collection process confirmed the following information is collected during each automated interrogation of HHR metering:

- the unique identifier (serial no) of the meter or data logger,
- the interrogation time,
- the system time and the data logger time,
- the half-hour metering information for each trading period, and
- events log.

All possible events are downloaded and checked as part of the data collection process.

A data collection summary sheet is sent for all points of connection. This includes the data and time of the interrogation, any events, the system and data logger times and whether time correction occurred.

### Audit outcome

Compliant

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

### Code reference

*Clause 8(9) of Schedule 10.6*

### Code related audit information

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

### Audit observation

Accucal does not conduct electronic data collection of AMI installations as an MEP.

### Audit commentary

Accucal does not conduct electronic data collection of AMI installations as an MEP.

### 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

Accucal provides data collection services to three participants for seven ICPs and one NSP. I checked compliance with the relevant clauses of the Code.

### Audit commentary

Raw data is never modified, a secure version of the raw data is saved, and any corrections are made to a working copy, which is also saved with a log of any corrections. Data from EDMI meters is “appended”, which means all data from the time the meter was first set up is collected. Accucal selects the relevant data for the month and sends this data, not the entire raw data file.

### Audit outcome

Compliant

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

### Code reference

*Clause 8(10) of Schedule 10.6*

### Code related audit information

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

### Audit observation

Accucal provides data collection services to three participants for seven ICPs and one NSP. I checked compliance with the relevant clauses of the Code.

### Audit commentary

Compensation factors are programmed into the meters for seven installations and for the other installation the associated log stipulates that the participant must apply the compensation factor.

### Audit outcome

Compliant

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

### Code reference

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

### Code related audit information

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

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

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

### Audit observation

Accucal does not conduct electronic data collection of AMI installations as an MEP.



**Audit commentary**

Accucal does not conduct electronic data collection of AMI installations as an MEP.

**Audit outcome**

Not applicable

## CONCLUSION

The audit found five areas of non-compliance, a reduction from the eight found in the last audit. The main areas of non-compliance are as follows:

- a small number of late registry updates,
- one inspection not conducted, and
- one expired certification.

On 15 June 2023 the Electricity Authority published a memo detailing changes to data collection responsibilities. This memo changes the arrangements originally established in 2013, which stated that all data collection, apart from AMI data collection, was the responsibility of the reconciliation participant. The 2023 memo changes the responsibility for some data collection from the reconciliation participant to the MEP, where the MEP has not provided the capability to collect data to the reconciliation participant. This means that where Accucal is the MEP and they collect data, data collection is being conducted as an MEP. Therefore, the MEP data collection responsibilities will be recorded in this audit report. The table below shows the details of the recent memo.

Metering Type	Scenario	Responsibility	Comments
HHR	Where it is possible for other parties to interrogate the metering installation	Reconciliation Participant	Electronic interrogation.
HHR	Where the MEP <b>WILL NOT</b> provide the interrogation capability, password, or encryption details to the reconciliation participant.	<del>Reconciliation Participant</del> Metering Equipment Provider	<del>Although password means not possible for other parties to collect data, it is possible if MEP provides access. Electronic interrogation</del> If the MEP will not provide access, then the MEP must be responsible for interrogation.
HHR	Where the MEP <b>WILL</b> provide the interrogation capability, password, or encryption to the reconciliation participant.	Reconciliation Participant	Electronic interrogation.
AMI	Where the MEP <b>WILL NOT</b> provide the interrogation capability, password, or encryption details to the	Metering Equipment Provider	Note that where interrogation is via radio mesh or GPRS, the nature of communication and metering management systems means the MEP back-office systems are required to meet code obligations for interrogation.

Compliance is recorded for all data collection related clauses.

I've made four recommendations, to assist with compliance in future audits.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The table below provides some guidance on this matter and recommends an audit frequency of 24 months, after reviewing Accucal's responses I agree with this recommendation.

## PARTICIPANT RESPONSE

AccuCal is continually looking to improve it's MEP functionality and is possibly expanding this business by close to 100%. This will enable more resource to be allocated to this function.