

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

For

**VENTIA NZ OPERATIONS LIMITED**

**NZBN: 9429038074141**

Prepared by: Steve Woods – Veritek Limited

Date audit commenced: 1 December 2021

Date audit report completed: 21 January 2022

Audit report due date: 26-Jan-22

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## EXECUTIVE SUMMARY

**Ventia NZ Operations Limited (Ventia)** is a Metering Equipment Provider (MEP) and was required to undergo an audit by 26 January 2022, in accordance with clause 16A.14.

Ventia is the MEP for 82 HHR metering installations. They do not operate a data collection system and they do not have any mass market ICPs. Ventia is also an Approved Test House (ATH). The ATH function was not audited, although there is an overlap between the two operations.

Since the previous audit Ventia has recertified 18 metering installations. I checked the certification records for all 18 installations.

The audit identified 10 non-compliances. The major issues are as follows:

- two installations had certification applied without certification tests being conducted,
- three metering installations identified in previous audits have cancelled certification because low burden was not addressed and have not been updated on the registry as cancelled,
- some certification record fields are not correct,
- insufficient load monitoring not conducted for ICP 0007185578RN7F8, and
- a faulty register on meter at installation #2 at ICP 0800616065LCAA9 is considered defective and not fit for purpose; the Investigation was not conducted within five business days.

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 three months. After considering Ventia's responses to the areas of non-compliance, I suggest the Authority considers that four of the non-compliances are disputed, indicating that remedial actions are not planned. The four issues are not unique, and the Code has been applied during this audit in the same way as it has been for all other participants. I recommend the Authority sets a date for resolution of the matters raised and times the next audit to be soon after that date.

## AUDIT SUMMARY

### NON-COMPLIANCES

| Subject                           | Section | Clause               | Non-Compliance  | Controls | Audit Risk Rating | Breach Risk Rating | Remedial Action |
|-----------------------------------|---------|----------------------|---|----------|-------------------|--------------------|-----------------|
| Provision of accurate information | 2.5     | 11.2 and Clause 10.6 | All practicable steps have not been taken to ensure information is complete and accurate.                           | Weak     | Medium            | 6                  | Unknown         |
| Design reports                    | 4.1     | 2 of Schedule 10.7   | Design reports not recorded in 15 certification reports.<br><br>Design reports do not include all relevant details. | Weak     | Low               | 3                  | Identified      |
| Changes to registry records       | 4.10    | 3 of Schedule 11.4   | Records updated on the registry later than 10 business days.  | Moderate | Low               | 2                  | Identified      |

|  |     |  |   |          |        |   |   |
|--|-----|--|---|----------|--------|---|---|
|  |     |  | 9 of 18 event dates incorrect.  |          |        |   |   |
| Accurate and Complete Records.                 | 5.1 | 4(1)(a) and (b) of Schedule 10.6                   | Some incorrect certification report fields.   | Moderate | Low    | 2 | Identified                                      |
| Registry accuracy                              | 6.2 | 7 (1), (2) and (3) of Schedule 11.4                | Incorrect registry information.   | Moderate | Low    | 2 | Identified                                      |
| Cancellation of certification                  | 6.4 | 20 of Schedule 10.7                                | Certification cancelled, and registry not updated for three installations with low burden, two of which were not monitored for certification as a lower category.<br><br>Certification is cancelled, and the registry not updated for one installation with insufficient load certification where monitoring was not conducted. | Weak     | Medium | 6 | Disputed<br><br>Cleared for ICP 0007185578RN7F8 |
| Certification of metering installations        | 7.1 | 10.38 (a), clause 1 and clause 15 of Schedule 10.7 | Certification cancelled for four ICPs.  | Moderate | Medium | 4 | Disputed  |
| Certification tests                            | 7.2 | 10.38(b)   | Certification tests not conducted for two installations.<br><br>Register advance test not conducted for one installation.   | Moderate | Medium | 4 | Disputed  |
| Insufficient load                              | 7.7 | 14(3) and (4) of Schedule 10.7                     | Insufficient load monitoring not conducted for ICP 0007185578RN7F8.   | Weak     | Low    | 3 | Cleared   |
| Investigation of Faulty Metering Installations | 9.1 | 10.43(4) and (5)                                   | Faulty register on meter at installation #2 at ICP 0800616065LCAA9  | Moderate | Low    | 2 | Disputed  |

|                                   |  |  |   |  |  |  |                 |
|-----------------------------------|--|--|---|--|--|--|-----------------|
|                                   |  |  | considered defective and not fit for purpose. Investigation not conducted within 5 business days. |  |  |  |                 |
| <b>Future Risk Rating</b>         |  |  |   |  |  |  | <b>34</b>       |
| <b>Indicative Audit Frequency</b> |  |  |   |  |  |  | <b>3 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     | Require Accucal to identify and record all services access interfaces. | 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.*

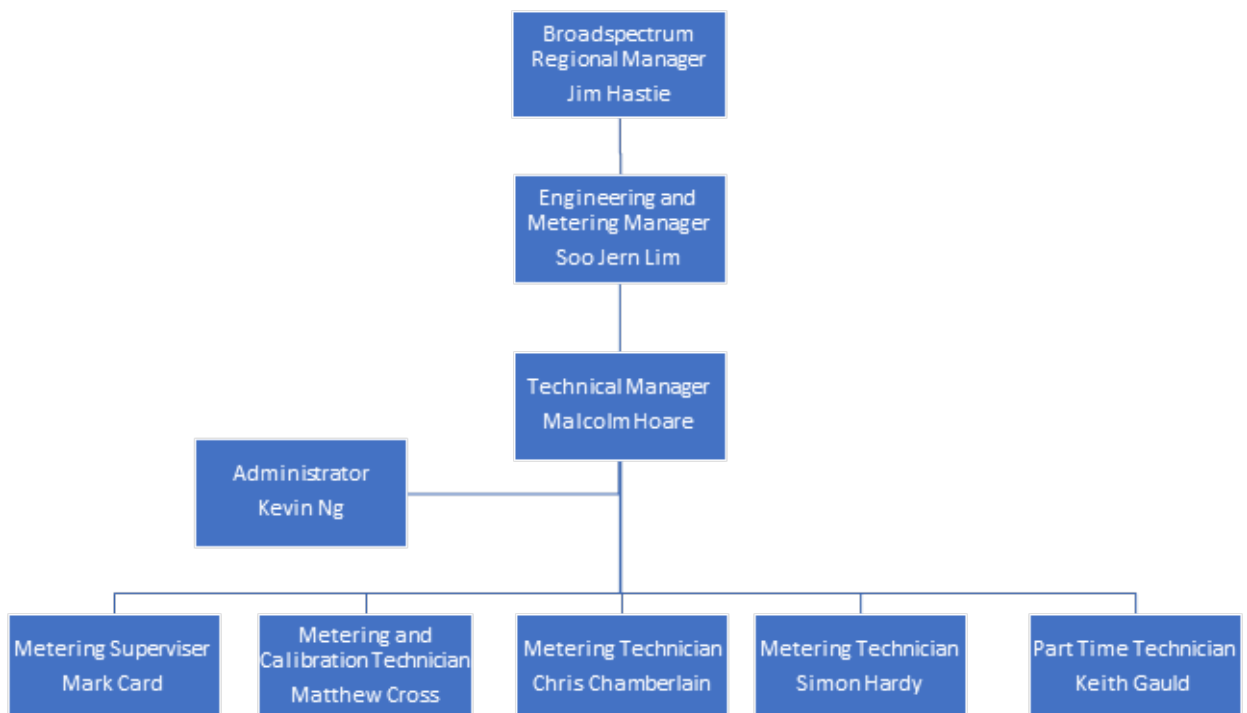
#### Audit observation

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

#### Audit commentary

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

### 1.2. Structure of Organisation





### 1.3. Persons involved in this audit

Auditor:

Steve Woods

**Veritek Limited**

**Electricity Authority Approved Auditor**

Ventia personnel assisting in this audit were:

| Name          | Title               |
|---------------|---------------------|
| Malcolm Hoare | Technical Manager   |
| Simon Hardy   | Metering Technician |

### 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

Ventia engages with ATHs to conduct certification activities and they are an ATH themselves, but there are no contractors used to perform MEP responsibilities.

#### Audit commentary

Ventia engages with ATHs to conduct certification activities and they are an ATH themselves, but there are no contractors used to perform MEP responsibilities.

### 1.5. Hardware and Software

Ventia MEP data is held in Sharepoint which is subject to backup arrangements in accordance with standard industry protocols.

### 1.6. Breaches or Breach Allegations

There are no breach allegations relevant to this audit.

## 1.7. ICP Data

| Metering Category | Number of Installations |
|-------------------|-------------------------|
| 1                 | 1                       |
| 2                 | 12                      |
| 3                 | 37                      |
| 4                 | 19                      |
| 5                 | 13                      |
| 9                 | 0                       |

## 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.

Ventia is the MEP for 82 HHR Installations. They do not operate a data collection system and they do not have any mass market ICPs. Ventia is also an Approved Test House (ATH). The ATH function was not audited, although there is an overlap between the two operations.

## 1.10. Summary of previous audit

The previous audit was conducted in December 2020 by Brett Piskulic of Veritek Ltd. The table below shows the status of the issues raised.

## Table of Non-Compliance

| Subject                                 | Section | Clause                              | Non-compliance  | Status         |
|---|---------|-------------------------------------|---|----------------|
| Provision of accurate information       | 2.5     | 11.2 and Clause 10.6                | All practicable steps have not been taken to ensure information is complete and accurate.         | Still existing |
| Metering Installation Design & Accuracy | 4.3     | 4(1) of Schedule 10.7               | Five metering installations certified with uncertainty greater the maximum stipulated in Table 1. | Cleared        |
| Changes to registry records             | 4.10    | 3 of Schedule 11.4                  | Records updated on the registry later than 10 business days.                                      | Still existing |
| Registry accuracy                       | 6.2     | 7 (1), (2) and (3) of Schedule 11.4 | Incorrect registry information.   | Still existing |
| Registry error correction               | 6.3     | 6 of Schedule 11.4                  | Registry validation not conducted.  | Cleared        |

| Subject                                 | Section | Clause   | Non-compliance   | Status                                 |
|---|---------|--|--|--|
| Cancellation of certification           | 6.4     | 20 of Schedule 10.7                                | Certification cancelled, and registry not updated for: <ul style="list-style-type: none"> <li>three installations with low burden,</li> <li>monitoring not conducted for two installations certified at a lower category, and</li> </ul> five metering installations certified with uncertainty greater the maximum stipulated in Table 1. | Still existing for three installations |
| Certification of metering installations | 7.1     | 10.38 (a), clause 1 and clause 15 of Schedule 10.7 | Certification cancelled for 10 ICPs.   | Still existing for three ICPs          |
| Certification as a Lower Category       | 7.6     | 6(1)(b) and (d), and 6(2)(b) of Schedule 10.7      | Monitoring not conducted for two installations certified at a lower category.  | Cleared                                |

## Table of Recommendations

| Subject | Section | Clause | Recommendation for improvement | Status |
|---------|---------|--------|--------------------------------|--------|
|         |         |        | Nil                            |        |

### 1.11. Audit Requirement (Clause 10.17A & 16A.17)

#### Code reference

*Clause 10.17A & 16A.17*

#### Code related audit information

*Each metering equipment provider must arrange to be audited regularly in accordance with Part 16A in respect of the metering equipment provider's obligations under this Part.*

*In relation to audits required under clauses 10.17A and 11.8B, a metering equipment provider must ensure that audits are completed as specified by the Authority under clause 16A.14.*

#### Audit observation

Ventia is a Metering Equipment Provider (MEP) and was required to undergo an audit by 26 January 2022, in accordance with clause 16A.14. The audit was completed within the required timeframe.

#### Audit outcome

Compliant

## 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 18 metering installations completed in the audit period.

#### Audit commentary

I checked 18 certification records and found the services access interface was recorded for all 18 Installations.

The Code now requires ATHs to determine and record in the metering installation certification report:

- a) all services access interfaces, and
- b) the conditions under which each services access interface may be used.

All Ventia installations are C&I HHR and there are at least two services access interfaces. One is at the installation via the modem, and the other is at the installation via the optical port for manual reading. The certification reports provided by Accucal do not identify both services access interfaces. I recommend Ventia requires Accucal to make this modification.

| Recommendation           | Description  | Audited party comment  | Remedial action |
|--------------------------|--|--|-----------------|
| Regarding Clause 10.9(2) | Require Accucal to identify and record all services access interfaces. | When AccuCal is next used as a ATH we will request them to record all services access information. | Identified      |

#### 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**

Ventia 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**

Ventia uses the TRSV 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**

Ventia ensures all communication equipment is appropriately certified with the relevant telecommunications standards. This is recorded in type test certificates. Telecommunications providers no longer provide "approval", but the type test reports confirm no interference will occur.

### **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 Ventia has not taken all practicable steps to ensure that information is complete and accurate. The following sections record that information is not correct.

- Section 4.1. Design reports are not all correct.
- Section 4.10. 9 of 18 event dates incorrect.
- Section 5.1. Some incorrect certification report fields.
- Section 6.2. Some incorrect registry information.
- Section 6.4 and 7.1. Registry not updated with cancelled certification for three installations.
- Section 7.2. Certification tests not conducted for two installations. Register advance test not conducted for one installation

### Audit outcome

Non-compliant

| Non-compliance   | Description   |
|--|---|
| Audit Ref: 2.5<br>With: Clauses 11.2 and Clause 10.6<br>From: 01-Dec-20<br>To: 02-Nov-21 | All practicable steps have not been taken to ensure information is complete and accurate.<br>Potential impact: Medium<br>Actual impact: Medium<br>Audit history: Three times<br>Controls: Weak<br>Breach risk rating: 6 |
| Audit risk rating  | Rationale for audit risk rating   |
| <b>Medium</b>  | The controls are recorded as weak because they will not ensure errors are mitigated.<br>The impact is medium. Mainly because installation accuracy cannot be confirmed without testing being completed.                 |

| Actions taken to resolve the issue                                | Completion date | Remedial action status |
|---|-----------------|------------------------|
| See comments in each section below                                |                 | Unknown                |
| Preventative actions taken to ensure no further issues will occur | Completion date |                        |
| See comments in each section below                                |                 |                        |

### 3. PROCESS FOR A CHANGE OF MEP

#### 3.1. Payment of Costs to Losing MEP (Clause 10.22)

##### Code reference

Clause 10.22

##### Code related audit information

*The MEP for a metering installation may change only if the responsible participant enters into an arrangement with another person to become the MEP for the metering installation, and if certain 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.*
- *within 3 business days, the gaining MEP replaces, removes or recertifies the metering component or metering installation*
- *the losing MEP has failed to provide notice of the costs to the gaining MEP within 40 business days.*

##### Audit observation

I checked if Ventia had sent or received any invoices.

##### Audit commentary

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

##### Audit outcome

Not applicable

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

##### Code reference

Clause 2 of Schedule 11.4

##### Code related audit information

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

##### Audit observation

I checked the audit compliance report for the period 1 December 2020 to 2 November 2021 for all records where Ventia became the MEP to evaluate the timeliness of updates.

##### Audit commentary

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



## Audit outcome

Compliant

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

#### Code reference

*Clause 5 of Schedule 10.6*

#### Code related audit information

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

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

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

#### Audit observation

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

#### Audit commentary

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

## Audit outcome

Compliant

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

#### Code reference

*Clause 10.23*

#### Code related audit information

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

*The MEP is responsible if it:*

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

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

*An MEP's obligations terminate only when;*

- *the ICP changes under clause 10.22(1)(a);*
- *the NSP changes under clause 10.22(1)(b), in which case the MEPs obligations terminate from the date on which the gaining MEP assumes responsibility,*

- *the metering installation is no longer required for the purposes of Part 15; or*
- *the load associated with an ICP is converted to be used solely for unmetered load.*

**Audit observation**

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

**Audit commentary**

There were no cases during the audit period where a Ventia ICPs were decommissioned. Ventia keeps records indefinitely, so will meet the requirement of this clause.

**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

Ventia has engaged the Accucal ATH and Ventia is an ATH themselves. I checked the design reports for two metering installations, and I checked that the design reference was included in 18 certification reports.

#### Audit commentary

I checked certification records for 18 metering installations completed within the audit period.

The Accucal certification reports have the design reference recorded. The Ventia certification reports do not have the design reference recorded.

I checked a standard design report and the findings are shown in the table below. The design reports have not been updated to cover the new requirements of the Code.

| ATH    | Category | Reference   | Appropriate skills | Schematic | Configuration scheme | Each SAI and MIC | Compensation arrangements | Method of cert   | Name signature and date               | Quantification error |
|--------|----------|-------------|--------------------|-----------|----------------------|------------------|---------------------------|--|---------------------------------------|----------------------|
| Ventia | 5        | SIA000784/2 | Yes                | Yes       | Not explicit         | No               | Not explicit              | No, however as Category 5 this will be fully certified | Some sheets have a signature and date | No                   |

## Audit outcome

Non-compliant

| Non-compliance  | Description   |                 |                        |
|---|---|-----------------|------------------------|
| Audit Ref: 4.1<br>With: Clause 2 of Schedule 10.7<br>From: 01-Dec-20<br>To: 21-Dec-21   | Design reports not recorded in 15 certification reports.<br>Design reports do not include all relevant details.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 3 |                 |                        |
| Audit risk rating   | Rationale for audit risk rating   |                 |                        |
| Low   | The controls require strengthening to ensure design reports are accurate and compliant.<br>The impact is minor; therefore, the audit risk rating is low.  |                 |                        |
| Actions taken to resolve the issue  |   | Completion date | Remedial action status |
| Same as AccuCal, we use our certification check sheet as our design report. We will make sure from now on to fill in the box that says design report ID |   | Completed       | Identified             |
| Preventative actions taken to ensure no further issues will occur   |   | Completion date |                        |
| Same as AccuCal, we use our certification check sheet as our design report. We will make sure from now on to fill in the box that says design report ID |   | Completed       |                        |

## 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 Ventia has used Accucal and their own ATH during the audit period.

### Audit commentary

I checked the Authority's website and confirmed that Ventia and Accucal have an appropriate 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 Ventia to ensure compliance with the design and with the error thresholds stipulated in Table 1. I also checked the certification records for 18 metering installations.

##### Audit commentary

The Ventia and Accucal ATHs were used to conduct certification for Category 2 to 5 metering installations. Both ATHs are correctly calculating uncertainty taking temperature variations into account.

The previous audit recorded incorrect recording of error and uncertainty results. This matter is now resolved and has not been repeated.

As recorded in **section 4.1**, the design report is not recorded for 15 metering installations checked as part of the audit. There's nothing to suggest the installations do not comply with the design but recording of design report references will need to occur in the future.

##### Audit outcome

Compliant

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

##### Code reference

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

##### Code related audit information

*MEPs must ensure that the metering installation records imported electricity separately from exported electricity. For category 1 and 2 installations the MEP must ensure the metering installation records imported and exported electricity separately for each phase. For category 3 or higher installations, the MEP does not need to ensure that imported and exported electricity is recorded separately for each phase.*

*If the metering installation contains multiple phases, the MEP may aggregate together the amounts of imported electricity recorded on different phases, or the amounts of exported electricity recorded on different phases. However, the MEP must not aggregate imported and exported electricity together. 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 Ventia to confirm whether subtraction was used for any metering installations where they were the MEP.

#### **Audit commentary**

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

#### **Audit outcome**

Compliant

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

#### **Code reference**

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

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

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

#### **Audit observation**

I checked the audit compliance report for the period 1 December 2020 to 2 November 2021 to confirm compliance with this requirement.

#### **Audit commentary**

I checked the audit compliance report for the period 1 December 2020 to 2 November 2021 and I confirm that all category 3 and above metering installations are HHR.

#### **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 Ventia is responsible for any NSP metering.

#### **Audit commentary**

Ventia is not responsible for any NSP metering.

#### **Audit outcome**

Not applicable

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

##### Code reference

Clause 10.26(10)

##### Code related audit information

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

##### Audit observation

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

##### Audit commentary

Ventia is not responsible for any grid metering.

##### Audit outcome

Not applicable

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

##### Code reference

Clause 4(4) of Schedule 10.7

##### Code related audit information

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

##### Audit observation

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

##### Audit commentary

The certification record contains a field in relation to this clause and the technician is required to confirm that installations are compliant and safe.

##### Audit outcome

Compliant

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

##### Code reference

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

##### Code related audit information

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

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



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

#### Audit observation

I checked whether appropriate consultation had occurred.

#### Audit commentary

There were no new connections or modifications to existing metering installations during the audit period which required consultations with distributors and traders.

#### 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 is updating the registry in accordance with 8(11)(b) of Schedule 10.6, it must do so within 10 business days after the most recent unsuccessful interrogation.

If the MEP is updating the registry in accordance with clause 8(13) of Schedule 10.6, it must do so within 3 business days following the expiry of the time period or date from which the MEP determines it cannot restore communications.

#### Audit observation

I checked the audit compliance report for the period 1 December 2020 to 2 November 2021 for all records where TRSV became the MEP or conducted recertification, to evaluate the timeliness of registry updates.

#### Audit commentary

The table below shows that there were 24 late updates. Of these 19 were late corrections and five were late updates following recertification.

| Event          | Audit Year | Total ICPs | ICPs Notified Within 10 Days | ICPs Notified Greater Than 10 Days | Average Notification Days | Percentage Compliant |
|----------------|------------|------------|------------------------------|------------------------------------|---------------------------|----------------------|
| New connection | 2019       | 2          | 0                            | 2                                  | 27                        | 0%                   |
| Update         | 2019       | 65         | 16                           | 49                                 | 785                       | 24.6%                |
| New connection | Jan 2020   | 0          | -                            | -                                  | -                         | -                    |
| Update         | Jan 2020   | 9          | 3                            | 7                                  | 208                       | 22%                  |

|                       |                 |           |          |           |            |           |
|-----------------------|-----------------|-----------|----------|-----------|------------|-----------|
| New connection        | Dec 2020        | 0         | -        | -         | -          | -         |
| Update                | Dec 2020        | 64        | 54       | 10        | 196        | 84.4%     |
| <b>New connection</b> | <b>Dec 2021</b> | <b>0</b>  | <b>-</b> | <b>-</b>  | <b>-</b>   | <b>-</b>  |
| <b>Update</b>         | <b>Dec 2021</b> | <b>24</b> | <b>0</b> | <b>24</b> | <b>422</b> | <b>0%</b> |

I also checked the registry updates for all recertified installations during the audit period. There were nine incorrect event dates out of 18 updates and five of 18 updates were later than 10 business days.

### Audit outcome

Non-compliant

| Non-compliance  | Description   |                 |                        |
|---|---|-----------------|------------------------|
| Audit Ref: 4.10<br>With: Clause 3 of Schedule 11.4<br>From: 01-Dec-20<br>To: 02-Nov-21  | Records updated on the registry later than 10 business days.<br>9 of 18 event dates incorrect.<br>Potential impact: Low<br>Actual impact: Low<br>Audit history: Multiple times<br>Controls: Moderate<br>Breach risk rating: 2 |                 |                        |
| Audit risk rating   | Rationale for audit risk rating   |                 |                        |
| <b>Low</b>  | I have recorded the controls as moderate in this area as there is room for improvement.<br>The impact on participants, customers or settlement is likely to be minor, therefore the audit risk rating is low.                 |                 |                        |
| Actions taken to resolve the issue  |   | Completion date | Remedial action status |
| There was a lot of updates that happened as part of our registry comparison programme which showed the sites that needed to be corrected to display accurate information. The corrections have now been completed to match our records.   |   |                 | Identified             |
| Preventative actions taken to ensure no further issues will occur   |   | Completion date |                        |
| Quite often the late updates are due to Test houses taking longer than 10 days to send us the site report and certificate, so there is no way we can update the registry that quickly in those instances. We will attempt to have all Ventia reports processed withing the timeframe and limit the use of other test houses |   |                 |                        |

#### 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

Ventia does not operate a data collection system. I checked whether their installations meet the requirements of this clause.

##### Audit commentary

The type test reports, design reports and certification reports confirm that the infrastructure will operate in a compliant manner.

##### 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 Ventia was the MEP at any decommissioned ICPs 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 Ventia whether they had approved any burden changes during the audit period.

#### **Audit commentary**

There have not been any examples of burden changes occurring during the audit period except at the time of recertification.

#### **Audit outcome**

Compliant

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

#### **Code reference**

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

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

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

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

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

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

#### **Audit observation**

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

#### **Audit commentary**

There were no firmware changes conducted during the audit period.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 10.29A*

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

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

#### **Audit observation**

Ventia has not completed any new connections during the audit period, so there have been no temporary electrical connections made.

#### **Audit commentary**

Ventia has not completed any new connections during the audit period, so there have been no temporary electrical connections made. Ventia understands its responsibilities regarding temporary electrical connections.

#### **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**

Ventia has not completed any new connections during the audit period, so there have been no temporary electrical connections made.

#### **Audit commentary**

Ventia has not completed any new connections during the audit period, so there have been no temporary electrical connections made. Ventia understands its responsibilities regarding temporary electrical connections.

#### **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**

Ventia has not completed any new connections during the audit period, so there have been no temporary electrical connections made.

##### **Audit commentary**

Ventia has not completed any new connections during the audit period, so there have been no temporary electrical connections made. Ventia understands its responsibilities regarding temporary electrical connections.

##### **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 requested certification records for 18 metering installations and inspection reports for two metering installations to evaluate compliance with this clause.

#### Audit commentary

Metering installation certification reports were provided for all 18 installations. The certification reports contained most of the details required by this clause. There were a small number of fields where changes are required, as follows:

- all services access interfaces were not recorded for three installations with Accucal certification,
- there are still references to Broadspectrum and Transfield in some records,
- when CTs are certified the burden range is not recorded, and
- design reports are not recorded in most certification reports.

Inspection reports were provided for the two installations due for inspection. The inspection reports contained the details required by this clause.

#### Audit outcome

Non-compliant

| Non-compliance   | Description  |                 |                        |
|--|--|-----------------|------------------------|
| Audit Ref: 5.1<br>With: Clause 4(1)(a) and (b) of Schedule 10.6<br><br>From: 01-Feb-21<br>To: 22-Dec-21  | Some incorrect certification report fields.<br><br>Potential impact: Low<br><br>Actual impact: Low<br><br>Audit history: None<br><br>Controls: Moderate<br><br>Breach risk rating: 2                                     |                 |                        |
| Audit risk rating  | Rationale for audit risk rating  |                 |                        |
| <b>Low</b>   | The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.<br><br>The impact on settlement and participants is minor; therefore, the audit risk rating is low. |                 |                        |
| Actions taken to resolve the issue   |  | Completion date | Remedial action status |
| <ul style="list-style-type: none"> <li>We have multi purpose documents, which is both a certification report and the design report</li> <li>The references to Broadspectrum and Transfield services will remain for some time as the company is using a soft changeover and these references will be changed in due course.</li> <li>Recording CT burden certification range is an oversight on our part.</li> </ul> |  |                 | Identified             |
| Preventative actions taken to ensure no further issues will occur  |  | Completion date |                        |
| Our Ventia Test House will modify their CT Calibration/certification reports to include the CT burden certification range.   |  |                 |                        |

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

### Audit commentary



Ventia 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 policy for retention of metering records.

**Audit commentary**

Ventia’s policy is to keep records indefinitely. I confirmed this by checking the availability of records from 2017.

**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**

I checked if Ventia provides information to ATHs as required by this clause.

**Audit commentary**

Ventia contracts Accucal to conduct certification and provides them with all relevant information as required.

**Audit outcome**

Compliant

## 6. MAINTENANCE OF REGISTRY INFORMATION

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

#### Code reference

*Clause 1(1) of Schedule 11.4*

#### Code related audit information

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

#### Audit observation

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

#### Audit commentary

There were no examples of Ventia becoming the MEP for existing ICPs or new connections.

#### Audit outcome

Compliant

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

#### Code reference

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

#### Code related audit information

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

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

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

#### Audit observation

I checked the audit compliance report to and registry records to identify any discrepancies.

#### Audit commentary

Analysis of the audit compliance report and registry records for all TRSV ICPs found the issues detailed in the table below.

| Quantity Dec 2021 | Quantity Dec 2020 | Quantity Jan 2020 | Issue                                 |
|-------------------|-------------------|-------------------|---------------------------------------|
| 0                 | 0                 | 0                 | Incorrect maximum interrogation cycle |
| 0                 | 0                 | 1                 | Incorrect certification dates         |
| 0                 | 0                 | 0                 | Incorrect certification expiry dates  |

|   |    |   |  |
|---|----|---|--|
| 3 | 2  | 2 | Incorrect metering category                |
| 2 | 11 | 1 | Incorrect ATH (VEMS instead of VCOM)       |
| 9 | -  | - | Incorrect event dates for registry updates |

ICP 0137841035LCBAC is certified as Category 2 but is recorded as Category 3 in the registry.

### Audit outcome

Non-compliant

| Non-compliance   | Description   |                 |  |
|--|---|-----------------|--|
| Audit Ref: 6.2<br>With: Clause 7 (1), (2) and (3) of Schedule 11.4<br><br>From: 01-Dec-20<br>To: 02-Nov-21   | Incorrect registry information.<br><br>Potential impact: Low<br><br>Actual impact: Low<br><br>Audit history: Multiple times<br><br>Controls: Moderate<br><br>Breach risk rating: 2                                |                 |  |
| Audit risk rating  | Rationale for audit risk rating   |                 |  |
| <b>Low</b>   | I have recorded the controls as moderate in this area as there is room for improvement.<br><br>The impact on participants, customers or settlement is likely to be minor, therefore the audit risk rating is low. |                 |  |
| Actions taken to resolve the issue   |   | Completion date | Remedial action status   |
| Having correct registry information is important, but it becomes a no win situation when you get black marks for updating the registry for errors and also when updating after work has been completed and you have been waiting for the paper work.<br><br>The reports for the sites are from VirCom EMS not Vector AMS, hence their registry ATH identifier should be VEMS not VCOM. |   |                 | Identified   |
| Preventative actions taken to ensure no further issues will occur  |   | Completion date | Auditor comment:   |
| We have re-read the event date in the registry, now we realise we had some confusion as to what the event date was and will input the correct date from now on.  |   |                 | Vircom EMS (VEMS) is no longer a participant. The ATH was purchased by Advanced Metering Services Limited (VCOM) |

### 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 checked the validation processes to confirm compliance.

#### Audit commentary

Ventia has developed a process for conducting a comparison between the registry information and its MEP records. I checked the output of this and confirm it meets the requirements of the Code. Corrections are made as soon as they are identified.

#### 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 3 business days*

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

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

#### **Audit observation**

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

#### **Audit commentary**

##### **Inspection**

During the audit period there were two inspections due to be conducted, both were conducted by the due date.

##### **Low burden**

The next issue relates to low burden on CT metered installations. The Authority provided a memo on 4 April 2016 clarifying that:

The Electricity Industry Participation Code 2010 (Code) requires an ATH to ensure that an approved calibration laboratory or a class A ATH has confirmed that all measuring transformers comply with the standards in Table 5 of Schedule 10.1 (clause 3(b) of Schedule 10.8). If the errors are within the limits set by the standards, the transformer has passed the test and may be certified as accurate within that range of burden (clause 3 of Schedule 10.8 and Table 5 of Schedule 10.1).

If a measuring transformer is installed in a metering installation with the burden lower than the lowest test point used in the measuring transformer's calibration, then burdening resistors must be used to ensure that the measuring transformer operates within its calibration range.<sup>1</sup>

The memo also states:

If an ATH certifies a metering installation with under-burdened measuring transformers, and it has not complied with clause 31(7) of Schedule 10.7 of the Code, then:

1. The ATH will breach clause 31(7) of Schedule 10.7 and also clause 43 of Schedule 10.7 by failing to grant certification in accordance with Part 10
2. The metering installation may be classed outside the applicable accuracy tolerances specified in Table 1 of Schedule 10.1, or not be fit for purpose, and if so, the metering installation certification is cancelled (clause 20(1)(b) of Schedule 10.7)
3. In certifying the metering installation, the ATH may breach clause 21 of Schedule 10.7 by certifying a metering installation that exceeds that maximum permitted error set out in Table 1 of Schedule 10.1.

The Authority confirmed on 1 March 2018 that certification is cancelled for installations where low burden is not addressed.

In one of the previous audits there were three metering installations that had been certified with burden lower than the lowest test point, without a Class A ATH confirming that the measuring transformers will not be adversely affected.

ICP 0137841035LCBAC is recorded as Category 3 in the registry but is certified at a lower category as Category 2. Certification was cancelled for two reasons; low burden was not addressed, and monitoring was not conducted. New certification was applied on 21 January 2021, and a new certification report was created, but certification tests were not conducted, and the low burden issue was not addressed. The burden is 1.4583 VA but the CTs are rated at 15VA, therefore the burden needs to be 3.75VA.

ICP 0000890104TU8B6 is certified at a lower category as Category 3. Certification was cancelled for two reasons; low burden was not addressed, and monitoring was not conducted. New certification was applied on 21 January 2021, and a new certification report was created, but certification tests were not conducted, and the low burden issue was not addressed. The burden is 0.88 VA but the CTs are rated at 5VA, therefore the burden needs to be 1.25VA.

ICP 0000100345UN663 is certified as Category 2. Certification was cancelled due to low burden, but the registry has not been updated.

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

As mentioned above, metering installations at two ICPs had cancelled certification because monitoring was not conducted. New certification was applied on 21 January 2021, but certification tests were not conducted.

#### **Error and uncertainty**

There were no examples of incorrectly recorded errors or uncertainty.

#### **Insufficient load**

The Category 5 metering installation at ICP 0007185578RN7F8 was certified on 16 August 2021 with insufficient load to conduct the prevailing load test. Monitoring has not been conducted since certification. Ventia intends to add this installation to the monitoring list, but certification is still cancelled.

#### **Audit outcome**

Non-compliant

| Non-compliance  | Description   |                 |                        |
|---|---|-----------------|------------------------|
| <p>Audit Ref: 6.4</p> <p>With: Clause 20 of Schedule 10.7</p> <p>From: 14-Dec-18</p> <p>To: 22-Dec-21</p>   | <p>Certification cancelled, and registry not updated for three installations with low burden, two of which were not monitored for certification as a lower category.</p> <p>Certification is cancelled, and the registry not updated for one installation with insufficient load certification where monitoring was not conducted.</p> <p>Potential impact: Medium</p> <p>Actual impact: Medium</p> <p>Audit history: Multiple</p> <p>Controls: Weak</p> <p>Breach risk rating: 6</p> |                 |                        |
| Audit risk rating   | Rationale for audit risk rating   |                 |                        |
| <b>Medium</b>   | <p>I have recorded the controls as weak because the issues raised have been raised in three audits now and have not been addressed.</p> <p>The impact on settlement and participants could be moderate; therefore, the audit risk rating is medium.</p>   |                 |                        |
| Actions taken to resolve the issue  |   | Completion date | Remedial action status |
| <p>My understanding of the comparative certification clause is that you are not certifying the CTs but you are certifying the whole installation by completing an end to end load run. Therefore the meter has to be calibrated and certified, The CTs however only have to be fit for service, in their installed conditions. The CTs are proved to be fit for service (as installed regardless of burden) by the end to end load run. Therefore the certification is not cancelled.</p> <p>Some certifications were reissued to typographical errors, and not because there was an issue with the metering installation, so the previously completed certification checks were used.</p> <p>See 7.7 below</p> |   |                 | <p>Disputed</p>        |
| <p>Cleared for ICP<br/>0007185578RN7F8</p>  |   |                 |                        |
| Preventative actions taken to ensure no further issues will occur   |   | Completion date |                        |
|   |   |                 |                        |

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

### Code reference

Clause 11.8A

### Code related audit information

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

#### **Audit observation**

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 Ventia 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 Ventia not using the prescribed form and did not find any exceptions.

#### **Audit outcome**

Compliant



## 7. CERTIFICATION OF METERING INSTALLATIONS

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

#### Code reference

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

#### Code related audit information

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

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

#### Audit observation

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

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

#### Audit commentary

There were no installations with expired certification.

As recorded in **section 6.4**, three metering installations have had certification cancelled and the registry has not been updated. Two had new certification dates applied but certification tests were not conducted, therefore the certification is not valid.

Certification is cancelled, and the registry not updated for one installation with insufficient load certification where monitoring was not conducted.

#### Audit outcome

Non-compliant

| Non-compliance  | Description   |
|---|---|
| Audit Ref: 7.1<br>With: Clause 10.38 (a),<br>clause 1 and clause 15<br>of Schedule 10.7<br><br>From: 14-Dec-18<br>To: 22-Dec-21 | Certification cancelled for four ICPs.<br><br>Potential impact: High<br>Actual impact: Medium<br>Audit history: Multiple<br>Controls: Moderate<br>Breach risk rating: 4 |
| <b>Audit risk rating</b>  | <b>Rationale for audit risk rating</b>  |

|   |   |                        |                               |
|---|---|------------------------|-------------------------------|
| <b>Medium</b>   | I have recorded the controls as moderate as there is now a process to ensure expired certification is identified and recertified. There is room to improve processes regarding cancelled certification.<br><br>The impact on settlement and participants could be moderate; therefore, the audit risk rating is medium. |                        |                               |
| <b>Actions taken to resolve the issue</b>   |   | <b>Completion date</b> | <b>Remedial action status</b> |
| See 6.4 and 7.7<br><br>The site has now been recertified pending load run and to be monitored. As there still was no load during the site visit it was added to our monitoring list to check when a load run can be done. |   |                        | Disputed                      |
| <b>Preventative actions taken to ensure no further issues will occur</b>  |   | Completion date        |                               |
|   |   |                        |                               |

## 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 18 metering installations to confirm compliance.

### Audit commentary

As mentioned in **sections 6.4** and **7.1**, two installations had certification dates applied but certification tests were not conducted. There are many clauses in the Code stipulating the range of certification tests required.

As recorded in **section 9.1**, the metering installation #2 at ICP 0800616065LCAA9 has a faulty LCD display, which is unreadable. By logging into the meter, it's possible to view the register and confirm it advances, but it's my view that the physical register (the LCD that is viewable without logging in to the device) must be working and confirmed as advancing.

### Audit outcome

Non-compliant

| Non-compliance  | Description   |                 |                        |
|---|---|-----------------|------------------------|
| Audit Ref: 7.2<br>With: Clause 10.38(b)<br><br>From: 21-Jan-21<br>To: 22-Dec-21 | Certification tests not conducted for two installations.<br>Register advance test not conducted for one installation.<br>Potential impact: High<br>Actual impact: Medium<br>Audit history: None<br>Controls: Moderate<br>Breach risk rating: 4              |                 |                        |
| Audit risk rating   | Rationale for audit risk rating   |                 |                        |
| <b>Medium</b>   | The controls are recorded as moderate because certification tests are conducted in most instances.<br><br>The impact is considered medium because if the installations had issues they would not be identified; therefore, the audit risk rating is medium. |                 |                        |
| Actions taken to resolve the issue  |   | Completion date | Remedial action status |
| See 6.4 and 9.1 below   |   |                 | Disputed               |
| Preventative actions taken to ensure no further issues will occur               |   | Completion date |                        |
| See 6.4 and 9.1 below   |   |                 |                        |

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

#### Audit commentary

There are no examples of burden changes or addition of non-metering equipment having occurred.

#### Audit outcome

Compliant

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

#### Code reference

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

#### Code related audit information

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

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

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

*If a meter is certified in this manner:*

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

#### Audit observation

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

#### Audit commentary

There are two installations certified where the CT ratio was above the category threshold as follows:

- ICP 0000890104TU8B6 was certified as category 3 and has 1500/5 CTs, the certification report states that the MEP must monitor load, and
- ICP 0137841035LCBAC was certified as category 2 and has 600/5 CTs, the certification report states that the MEP must monitor load.

Ventia now has a process for monitoring, and monitoring has been conducted for these two metering installations since January 2021. Monitoring was not conducted prior to January 2021 and the previous report recorded that certification was cancelled. As recorded in **sections 6.4** and **7.1**, new certification

dates were applied on 21 January 2021; however, certification tests were not conducted, making the certification reports invalid. I have recorded compliance in this section, because monitoring is conducted.

There have been no certifications at a lower category during this audit period. Ventia has instructed ATHs not to certify metering installations at a lower category.

**Audit outcome**

Compliant

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

**Code reference**

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

**Code related audit information**

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

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

**Audit observation**

I checked if there were any examples of Insufficient load certifications

**Audit commentary**

Ventia normally does not allow certification in accordance with this clause. Load banks are required to be used to increase the load to conduct testing.

The Category 5 metering installation at ICP 0007185578RN7F8 was certified on 16 August 2021 with insufficient load to conduct the prevailing load test. Monitoring has not been conducted since certification. Ventia intends to add this installation to the monitoring list, but certification is still cancelled.

**Audit outcome**

Non-compliant

| Non-compliance   | Description   |
|--|---|
| Audit Ref: 7.7<br>With: Clauses 14(3) and (4) of Schedule 10.7<br>From: 16-Aug-21<br>To: 22-Dec-21 | Insufficient load monitoring not conducted for ICP 0007185578RN7F8.<br>Potential impact: Medium<br>Actual impact: Low<br>Audit history: None<br>Controls: Weak<br>Breach risk rating: 3 |
| Audit risk rating  | Rationale for audit risk rating   |

|   |   |                        |                               |
|---|---|------------------------|-------------------------------|
| <b>Low</b>  | The controls require strengthening to identify installations certified with insufficient load to ensure they are added to the monitoring list.<br><br>A recent report shows the load hasn't increased; therefore, the audit risk rating is low. |                        |                               |
| <b>Actions taken to resolve the issue</b>   |   | <b>Completion date</b> | <b>Remedial action status</b> |
| The Ventia MEP has added this installation to the monitoring list, and the installation recertified after completion of an onsite inspection.                                       |   | Complete               | Cleared                       |
| <b>Preventative actions taken to ensure no further issues will occur</b>  |   | <b>Completion date</b> |                               |
| While we have completed the above actions, to dot the I's and cross the t's it was known that there would be no load on this installation due to the downstream site configuration. |   | Complete               |                               |

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

### Code reference

*Clause 14(6) of Schedule 10.7*

### Code related audit information

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

- *the metering installation certification is automatically revoked:*
- *the certifying ATH must advise the MEP of the cancellation within 1 business day:*
- *the MEP must follow the procedure for handling faulty metering installations (clause 10.43 - 10.48).*

### Audit observation

Ventia does not normally allow certification in accordance with this clause. Load banks are required to be used to increase the load to conduct testing.

### Audit commentary

Ventia does not normally allow certification in accordance with this clause. Load banks are required to be used to increase the load to conduct testing.

The Category 5 metering installation at ICP 0007185578RN7F8 was certified on 16 August 2021 with insufficient load to conduct the prevailing load test. Monitoring has not been conducted since certification. Ventia intends to add this installation to the monitoring list, but certification is still cancelled, as recorded in Sections 6.4 and 7.7.

Load tests have not yet been conducted.

### Audit outcome

Compliant

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

### Code reference

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

### Code related audit information

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

- *advise the market administrator, by no later than 10 business days after the date of certification of the metering installation, of the details in clause 32(2)(a) of Schedule 10.7*
- *respond, within 5 business days, to any requests from the market administrator for additional information*
- *ensure that all of the details are recorded in the metering installation certification report*
- *take all steps to ensure that the metering installation is certified before the certification expiry date.*

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

### Audit observation

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

### Audit commentary

There are no alternative certifications in place.

### 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 Ventia whether there were any metering installations with time switches.

### Audit commentary

Ventia confirmed there are no metering installations with time switches.

### Audit outcome

Not applicable



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

### Code reference

*Clause 35 of Schedule 10.7*

### Code related audit information

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

Ventia does not have any installations with control devices.

### Audit commentary

Ventia does not have any installations with control devices.

### Audit outcome

Not applicable

## 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

Ventia does not have any installations with control devices.

### Audit commentary

Ventia does not have any installations with control devices.

### Audit outcome

Not applicable

### 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

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

#### Audit outcome

Not applicable

### 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 18 metering installations to confirm that compensation factors were correctly recorded.

#### Audit commentary

Compensation factors have been updated accurately on the registry. In all cases, compensation factors are programmed into the meters.

#### 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 18 metering installations to confirm compliance.

##### **Audit commentary**

Meters were certified for all 18 metering installations.

##### **Audit outcome**

Compliant

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

##### **Code reference**

*Clause 28(1) of Schedule 10.7*

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

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

##### **Audit observation**

I checked the certification records for 18 metering installations to confirm compliance.

##### **Audit commentary**

Measuring transformers were certified for all 18 metering 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 18 metering installations to confirm compliance.

##### **Audit commentary**

The 18 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**

Ventia has used the Accucal and Ventia ATHs, both ATHs have appropriate approval.

##### **Audit outcome**

Compliant

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

##### **Code reference**

*Clause 18 of Schedule 10.7*

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

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

##### **Audit observation**

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

##### **Audit commentary**

There are no interim certified metering installations.

##### **Audit outcome**

Not applicable

## 8. INSPECTION OF METERING INSTALLATIONS

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

#### Code reference

*Clause 45 of Schedule 10.7*

#### Code related audit information

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

- *have been inspected by an ATH within 126 months from the date of the metering installation's most recent certification or*
- *for each 12-month period, commencing 1 January and ending 31 December, ensure an ATH has completed inspections of a sample of the category 1 metering installations selected under clause 45(2) of Schedule 10.7.*

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

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

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

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

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

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

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

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

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

#### Audit observation

I checked the registry information to confirm if there were Category 1 ICPs due for inspection.

#### Audit commentary

No category 1 ICPs were due for inspection during the audit period.

### 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:*

- *126 months for Category 2*
- *63 months for Category 3*
- *33 months for Category 4*
- *19 months for Category 5.*

### Audit observation

I checked the registry information to confirm which Category 2 to 5 ICPs were due for inspection.

### Audit commentary

There were two metering installations due for inspection during the audit period. I checked the inspection reports and found that both metering installations were inspected during the inspection window.

### Audit outcome

Compliant

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

### Code reference

*Clause 44(5) of Schedule 10.7*

### Code related audit information

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

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

### Audit observation

I checked the inspection process and the results to confirm compliance.

### Audit commentary

There were two inspections of metering installations completed by the Ventia ATH. My checks of the inspection reports confirmed that the inspection had recorded all of the required details found on site. The Ventia process includes a comparison of the information received with the MEP records. In both cases there were no discrepancies identified so there was no requirement to update the registry records.

### Audit outcome

Compliant

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

##### Code reference

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

##### Code related audit information

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

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

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

*The MEP must make the above arrangements within*

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

*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

Ventia has a documented process in place for the management of seals and any subsequent investigation and reporting. There were no examples found during the audit period, which is an expected result given that most installations are located in secure areas.

##### 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 for any examples of faulty metering installations.

#### Audit commentary

Metering installation #2 at ICP 0800616065LCAA9 has a faulty LCD display, which is unreadable. By logging into the meter, it's possible to view the register and confirm it advances, but it's my view that the physical register (the LCD that is viewable without logging in to the device) must be working and advancing. I have recorded that this metering installation is not fit for purpose and should be investigated.

#### Audit outcome

Non-compliant

| Non-compliance  | Description   |
|---|---|
| Audit Ref: 9.1<br>With: Clause 10.43(4) and (5)<br><br>From: 31-Jul-21<br>To: 22-Dec-21 | Faulty register on meter at installation #2 at ICP 0800616065LCAA9 considered defective and not fit for purpose. Investigation not conducted within 5 business days.<br><br>Potential impact: Low<br><br>Actual impact: Low<br><br>Audit history: None<br><br>Controls: Moderate<br><br>Breach risk rating: 2 |
| Audit risk rating   | Rationale for audit risk rating   |
| <b>Low</b>  | The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.<br><br>The impact is low because the data used for settlement is accurate; therefore, the audit risk rating is low.  |



| Actions taken to resolve the issue  | Completion date    | Remedial action status |
|---|--------------------|------------------------|
| The Ventia MEP and ATH does not regard this metering installation as defective or not fit for purpose, as the installation is metering correctly and providing accurate data to the retailer. | No Action required | Disputed               |
| Preventative actions taken to ensure no further issues will occur   | Completion date    |                        |
| No action required as the installation mention is not regarded as being defective, we will however look into why the display is locked.   | No Action required |                        |

## 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 for any examples of faulty metering installations.

### Audit commentary

Metering installation #2 at ICP 0800616065LCAA9 has a faulty LCD display, which is unreadable. By logging into the meter, it's possible to view the register and confirm it advances, but it's my view that the physical register (the LCD that is viewable without logging in to the device) must be working and advancing. I have recorded in section 9.1 that this metering installation is not fit for purpose and should be investigated. The report under clause 10.43(4)(c) has not been completed, therefore the requirements of this clause are not yet relevant.

### Audit outcome

Compliant

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

#### Code reference

Clause 10.46(2)

#### Code related audit information

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

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

#### Audit observation

I checked for any examples of faulty metering installations.

#### Audit commentary

Metering installation #2 at ICP 0800616065LCAA9 has a faulty LCD display, which is unreadable. By logging into the meter, it's possible to view the register and confirm it advances, but it's my view that the physical register (the LCD that is viewable without logging in to the device) must be working and advancing. I have recorded in section 9.1 that this metering installation is not fit for purpose and should be investigated. The report under clause 10.43(4)(c) has not been completed, therefore the requirements of this clause are not yet relevant.

#### Audit outcome

Compliant

### 9.4. Timeframe to correct defects and inaccuracies (Clause 10.46A)

#### Code reference

Clause 10.46A

#### 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 for any examples of faulty metering installations.

#### Audit commentary

Metering installation #2 at ICP 0800616065LCAA9 has a faulty LCD display, which is unreadable. By logging into the meter, it's possible to view the register and confirm it advances, but it's my view that the physical register (the LCD that is viewable without logging in to the device) must be working and advancing. I have recorded in section 9.1 that this metering installation is not fit for purpose and should be investigated. The report under clause 10.43(4)(c) has not been completed, therefore the requirements of this clause are not yet relevant.

#### Audit outcome

Compliant

## 9.5. Meter bridging (Clause 10.33C)

### Code reference

Clause 10.33C

### Code related audit information

*An MEP may only electrically connect an ICP in a way that bypasses a meter that is in place (“bridging”) if the MEP has been authorised by the responsible trader.*

*The MEP can then only proceed with bridging the meter if, despite best endeavours:*

- *the MEP is unable to remotely electrically connect the ICP*
- *the MEP cannot repair a fault with the meter due to safety concerns*
- *the consumer will likely be without electricity for a period which would cause significant disadvantage to the consumer*

*If the MEP bridges a meter, the MEP must notify the responsible trader within 1 business day and include the date of bridging in its advice.*

### Audit observation

I checked for any examples of meter bridging.

### Audit commentary

There were no examples of meter bridging, and this is unlikely to occur.

### 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

Ventia does not have a data collection system, but they will assist with access to raw meter data if possible.

#### Audit commentary

Ventia does not have a data collection system, but they will assist with access to raw meter data if possible.

#### 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

Ventia does not have a data collection system, but they will assist with access to raw meter data if possible.

#### Audit commentary

Ventia does not have a data collection system, but they will assist with access to raw meter data if possible.

### **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**

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

### **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**

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

### **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 any 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

Ventia does not have a data collection system.

### Audit commentary

Ventia does not have a data collection system.

### Audit outcome

Not applicable

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

### Code reference

Clause 10.15(2)

### Code related audit information

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

### Audit observation

Ventia does not have a data collection system.

### Audit commentary

Ventia does not have a data collection system.

### Audit outcome

Not applicable

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

### Code reference

Clause 8(4) of Schedule 10.6

### Code related audit information

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

### Audit observation

Ventia does not have a data collection system.

### Audit commentary

Ventia does not have a data collection system.

### Audit outcome

Not applicable

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

### Code reference

Clause 8(7) of Schedule 10.6

### Code related audit information

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

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

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

**Audit observation**

Ventia does not have a data collection system.

**Audit commentary**

Ventia does not have a data collection system.

**Audit outcome**

Not applicable

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

**Code reference**

*Clause 8(9) of Schedule 10.6*

**Code related audit information**

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

**Audit observation**

Ventia does not have a data collection system.

**Audit commentary**

Ventia does not have a data collection system.

**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**

Ventia does not have a data collection system.



#### **Audit commentary**

Ventia does not have a data collection system.

#### **Audit outcome**

Not applicable

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

#### **Code reference**

*Clause 8(10) of Schedule 10.6*

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

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

#### **Audit observation**

Ventia does not have a data collection system.

#### **Audit commentary**

Ventia does not have a data collection system.

#### **Audit outcome**

Not applicable

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

#### **Code reference**

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

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

*If an interrogation does not download all raw meter data, the MEP must investigate the reason 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**

Ventia does not have a data collection system.

#### **Audit commentary**

Ventia does not have a data collection system.

#### **Audit outcome**

Not applicable

## CONCLUSION

Ventia is the MEP for 82 HHR metering installations. They do not operate a data collection system and they do not have any mass market ICPs. Ventia is also an Approved Test House (ATH). The ATH function was not audited, although there is an overlap between the two operations.

Since the previous audit Ventia has recertified 18 metering installations. I checked the certification records for all 18 installations.

The audit identified 10 non-compliances. The major issues are as follows:

- two installations had certification applied without certification tests being conducted,
- three metering installations identified in previous audits have cancelled certification because low burden was not addressed and have not been updated on the registry as cancelled,
- some certification record fields are not correct,
- insufficient load monitoring not conducted for ICP 0007185578RN7F8, and
- a faulty register on meter at installation #2 at ICP 0800616065LCAA9 is considered defective and not fit for purpose; the Investigation was not conducted within five business days.

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 three months. After considering Ventia's responses to the areas of non-compliance, I suggest the Authority considers that four of the non-compliances are disputed, indicating that remedial actions are not planned. The four issues are not unique, and the Code has been applied during this audit in the same way as it has been for all other participants. I recommend the Authority sets a date for resolution of the matters raised and times the next audit to be soon after that date.

## PARTICIPANT RESPONSE

This audit highlights a number of questions, some of which I have highlighted below.

- While the Ventia MEP has endeavoured to correct and maintain the process of correcting information creates other issues which also affect the non-compliances. Our records and certifications are in a far better state than they were last year, but we have ended up with a higher non-compliance score than last year. To me this indicates that there is something wrong with the whole auditing process.
- Another Issue that arises relates to the comparative certification process, as this process is certifying the Installation the requirements are to have a fully calibrated meter, a CT that is fit for purpose and the installation passing the error and uncertainty requirements. The CT being fit for purpose is proven by the error and uncertainty requirements, regardless of how low the burden on the CT is.
- CT burdening is another issue that needs some clarification, as it is my view that the certified range of the CT only relates to installations that are certified using selected component certification.