

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

For

**ALINTA ENERGY (ALTN)**

Prepared by: Ewa Glowacka

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Audit report due date: 22-Jan-18

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## EXECUTIVE SUMMARY

This participant audit was performed at the request of Alinta Energy to encompass the Authority's request for an audit, as required by clause 10.20, of Part 10, of the Electricity Industry Participation Code.

Alinta Energy provides the MEP's services to two category 5 metering installations (0716190001NSCCC and 0716190002NS00C) installed at NZ Steel.

The relevant clauses were audited as required by the Guidelines for Metering Equipment Provider v.2.0 issued by the Electricity Authority. The audit found three non-compliances with relevant clauses of the Code.

Based on documents provided by Alinta Energy, we noted that both metering installations for TG1 and TG2 were not certified during the period covered by this audit. It was identified as non-compliance. We identified actual impact as low because meter readings are closely watched by Alinta Energy and EMS and no irregularities were noted but it is a concern that category 5 metering installations were not certified for 10 months.

Overall, we identified four non-compliances related to lack of certification of compliance and late updates to the registry.

The date of the next audit is determined by the Electricity Authority and it is dependent on the level of compliance during this audit. In general, the controls in place are moderate. The breach rating risk total is 8, which results in the recommended audit frequency of 12 months. We agree with the recommendation.

We thank the Alinta Energy staff for their full and complete cooperation in this audit.

## AUDIT SUMMARY

### NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Participants to provide accurate information	2.5	11.2	For two ICPs, incorrect information of UPM and maximum interrogation cycle were recorded in the registry.	Medium	Low	2	
Changes to registry records	4.10	3 of Schedule 11.4	Four updates to the registry were late. Updates related to UOM, maximum interrogation cycle, and dates of certification.	Medium	Low	2	
Correction of errors in registry	6.3	6 of Schedule 11.4	For two ICPs, incorrect information of UOM and maximum interrogation cycle were not corrected in the registry	Medium	Low	2	
Certification and maintenance	7.1	10.38 (a)	Metering installations for TG1 was not certified for 10 and metering installation for TG2 was not certified for 9 months.	Moderate	Medium	4	
Future Risk Rating						10	

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	Description	Recommendation

## ISSUES

Subject	Section	Description	Issue

## 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.*

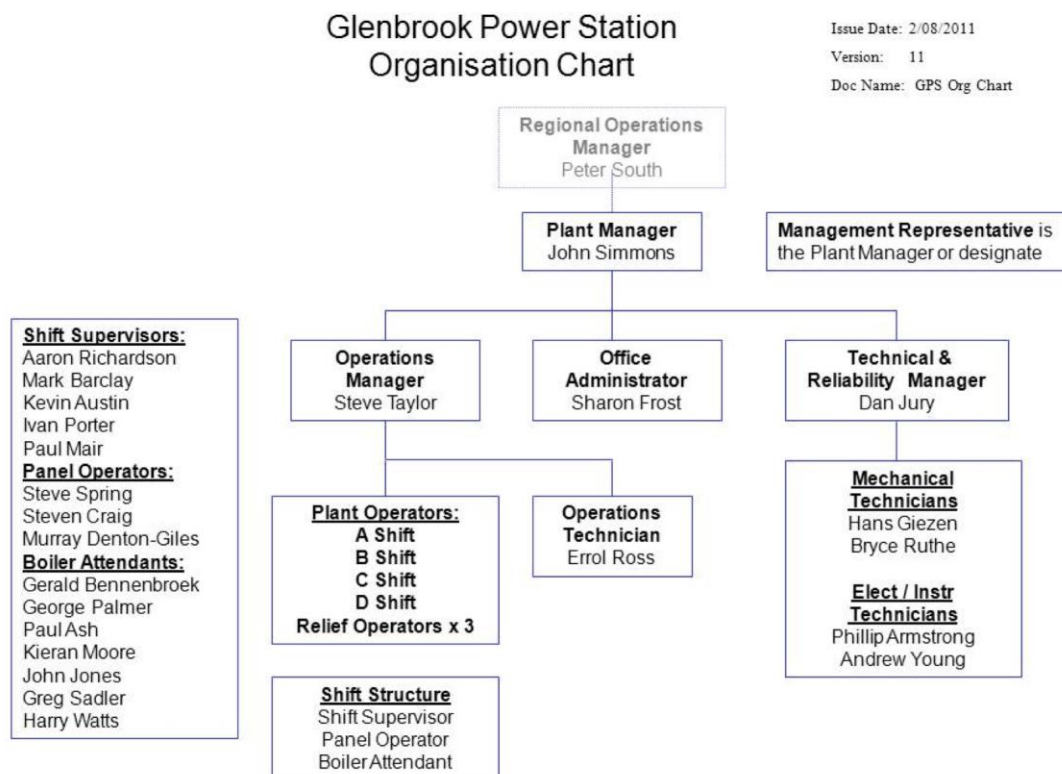
#### Audit observation

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

#### Audit commentary

Alinta Energy did not apply for any exemptions. We checked the Electricity Authority website and confirm that there are no exemptions in place.

### 1.2. Structure of Organisation





### 1.3. Persons involved in this audit

Name	Title	Company
Dan Jury	Technical & Reliability Manager	Alinta Energy Ltd
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates Ltd

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

#### Code reference

Clause 10.3

#### Code related audit information

*A participant who uses a contractor*

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

#### Audit observation

Alinta Energy does not use agents for the functions covered by this audit. All functions are conducted by Alinta Energy's employees.

#### Audit commentary

Alinta Energy does not use agents for any functions covered by this audit

### 1.5. Hardware and Software

Alinta Energy does not use any particular software to assist them to fulfil the MEP obligations. Any data entry is done through the web interface.

### 1.6. Breaches or Breach Allegations

The Electricity Authority has no record of breaches of the Electricity Industry Act 2010, various related Regulations and the Electricity Industry Participation Code 2010, by Alinta Energy since the last audit.

### 1.7. ICP Data

Metering Category	Number of ICPs
1	0
2	0
3	0
4	0

5	2
---	---

- 0716190001NSCCC – Power Station CB516 – TG1
- 0716190002NS00C – Power Station CB548 – TG2

#### 1.8. Authorisation Received

Alinta Energy provided a letter of authorisation to TEG & Associates permitting the collection of data from other parties for matters directly related to the audit.

#### 1.9. Scope of Audit

This participant audit was performed at the request of Alinta Energy to encompass the Authority's request for an audit as required by clause 10.20, of Part 10, of the Electricity Industry Participation Code.

The audit was carried out on the Alinta Energy premises at Mission Bush Road, Glenbrook, on 10<sup>th</sup> January 2018.

The audit covered the following functions:

- (i) Process for changing a MEP
- (ii) Installation and modification of metering installations
- (iii) Metering records
- (iv) Maintenance of registry information
- (v) Certification of metering installations
- (vi) Inspection of metering installations
- (vii) Process of handling faulty metering installations
- (viii) Access to and provision of raw meter data and metering installations

#### 1.10. Summary of previous audit

No non-compliances were found. Previous audit was dated 13<sup>th</sup> March 2016.

## 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

Two metering installations for which Alinta Energy provide the MEP services are read remotely by EMS using landlines.

#### Audit commentary

EMS will notify Alinta Energy of any issues of remote access to meters and the problem will be resolved as soon as possible

#### 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

Alinta Energy, being a trader, already has a procedure in place detailing how disputes between participants will be resolved if the need arises.

#### Audit commentary

#### 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**

Alinta Energy adopted the code of ALNT to the MEP functions. The registry file was checked.

#### **Audit commentary**

We checked two ICPs in the registry and confirm that the assigned MEP code is ALTN.

#### **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**

Two meters are read by EMS using a landline. Modems which are part of installations are compatible with the national network.

#### **Audit commentary**

Compliance confirmed based on the type of communication used and the type of meters. No issues of incompatibility were observed.

#### **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**

Information provided by Alinta Energy is accurate and provided as soon as requested.

#### **Audit commentary**

The only person who can request information will be NZ Steel.

#### **Audit outcome**

Non-compliant

Non-compliance	Description		
Audit Ref: 2.5 With: 11.2  From: 10-Jan-18 To: 12-Oct-17	For two ICPs, incorrect information of UOM and maximum interrogation cycle were recorded in the registry.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
<b>Low</b>	Controls are rated as moderate because there are some improvements that can be made to them. There is no impact on settlement, therefore audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Registry updated with correct information on 10 <sup>th</sup> January 2018		10/1/18	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Now correct in Registry – no further action required		10/1/18	

### 3. PROCESS FOR A CHANGE OF MEP

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

##### Code reference

Clause 10.22

##### Code related audit information

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

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

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

##### Audit observation

The business model of Alinta Energy, is to perform the MEP function only for Alinta Energy's 2 generation metering installations. No MEP services will be provided to other participants.

##### Audit commentary

This clause is not applicable.

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

##### Audit observation

Alinta Energy provides the MEP services to two metering installations. No MEP services will be provided to other participants.

##### Audit commentary

This clause is not applicable.

##### Audit outcome

[Click here to choose outcome from the drop down list.](#)

#### 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

Alinta Energy provides the MEP services to two metering installations. No MEP services will be provided to other participants.

### Audit commentary

This clause is not applicable.

### Audit outcome

Not applicable

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

### Code reference

*Clause 10.23*

### Code related audit information

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

*The MEP is responsible if it:*

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

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

*An MEPs obligations terminate only when;*

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

### Audit observation

Alinta Energy will keep data records indefinitely.

### Audit commentary

It is not likely that Alinta Energy will nominate another MEP but Alinta Energy, as the MEP, will keep data records indefinitely.

#### **Audit outcome**

Compliant

DRAFT



## 4. INSTALLATION AND MODIFICATION OF METERING INSTALLATIONS

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

#### Code reference

*Clause 2 of Schedule 10.7*

#### Code related audit information

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

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

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

#### Audit observation

There are no plans, in the near future, to make any modifications to existing installations or to add another metering installation. The installations were designed back in 1987 when the plant was opened. There have not been any changes to existing metering installations since then. Any new installation would require changes to the NZ Steel plant and there are no plans for that.

#### Audit commentary

It was discussed during the audit and the company stated that if any modification to existing metering installations were to be required, the process will be followed. Once a decision is made to modify an existing installation, a conceptual design will be prepared by Alinta Energy's staff, which will be later forwarded to AccuCal to review.

#### Audit outcome

Compliant

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

#### Code reference

*Clause 9 of Schedule 10.6*

#### Code related audit information

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

#### Audit observation

Alinta Energy uses AccuCal for the generation installations, which is an Approved Test House (ATH)

#### Audit commentary

AccuCal is certified as a Test House class A, as per the Electricity Authority's website.

#### 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

The Installation Certifications issued by AccuCal were viewed for two installations. Each metering installation was individually tested, and results are noted in the reports. The results are shown below:

Cert number	ICP		Max Positive Error (%)	Max Negative Error (%)	Max Expanded Installation Uncertainty (%)
CERT-2017-666	0716190001NSCCC				
		Watthour measurement	+ 0.445	-0.103	± 0.13
		Varhour Measurement	+ 0.452	-0.103	± 0.13
CERT-2017-610	0716190002NS00C				
		Watthour measurement	+ 0.474	-0.110	± 0.13
		Varhour Measurement	+ 0.485	-0.110	± 0.13

##### Audit commentary

Compliance based on a review of the certification reports.

##### Audit outcome

Compliant

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

##### Code reference

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

##### Code related audit information

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

##### Audit observation

There are no installations managed by ALTN which use subtraction to determine volume information for ICPs.

##### Audit commentary

ALTN is responsible for only two metering installations of category 5. No subtraction 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

We sighted the certification reports issued by AccuCal. Both metering installations for which Alinta Energy provides the MEP services are category 5. There are HHR meters installed at each installation. The make of meter is Elster A1700, model PB2FBGRCT-L.

##### Audit commentary

Compliance confirmed based on a review of the certification documents.

##### 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

Alinta Energy does not provide the MEP services for NSPs.

**Audit commentary**

This clause is not applicable.

**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**

Alinta Energy does not provide the MEP services for point of connection to the grid.

**Audit commentary**

This clause is not applicable.

**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**

Alinta Energy's metering installations are appropriate for the physical and electrical characteristics of the point of connection which is proved by its accuracy and reliability.

**Audit commentary**

The test results provided by AccuCal confirm that the metering installations are appropriate to the physical and electrical characteristics of the POC.

**Audit outcome**

Compliant

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

**Code reference**

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

### Code related audit information

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

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

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

### Audit observation

In a situation where a new installation is proposed to be installed or modified, Alinta Energy will make sure that it is discussed and agreed with the distributor (New Zealand Steel) and Alinta Energy as a trader.

### Audit commentary

There were no modifications to the existing metering installations since the last audit.

### Audit outcome

Compliant

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

### Code reference

*Clause 3 of Schedule 11.4*

### Code related audit information

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

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

### Audit observation

We reviewed updates to the registry for two ICPs for which Alinta Energy is responsible. Four updates to the registry were late. Updates related to UOM and date of certification. Alinta Energy entered details of new certifications on 13/11/17, the installations were certified on 12/10/17. The update was done as soon as AccuCal emailed the paperwork, which was late. Alinta Energy relies on AccuCal to send the certification reports in a timely manner.

Alinta Energy also made two corrections in the registry for both installations. The corrections were related to UOM (changed from kW to kWh) and maximum interrogation cycle (changed from 1 day to 31 days) as per the certification reports. The correction was done on 10/01/18 (during the audit) and backdated to 12/10/17.

### Audit commentary

The information recorded for two ICPs for which Alinta Energy provides MEP services do not change frequently. Up to know, the only reason to change information in the registry was to update a

certification date and certification expire date after installations were re-certified by AccuCal. Alinta Energy compliance is dependent on timeliness of provision of the paperwork by ATH.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 2.5 With: 11.2  From: 10-Jan-18 To: 12-Oct-17	For two ICPs, incorrect information of UOM and maximum interrogation cycle were recorded in the registry.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as moderate because there are some improvements that can be made to them. There is no impact on settlement, therefore audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Registry updated with correct information on 10 <sup>th</sup> January 2018		10/1/18	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Now correct in Registry – no further action required		10/1/18	
Non-compliance	Description		
Audit Ref: 4.10 With: 3 of Schedule 11.4  From: 10-Jan-18 To: 12-Oct-17	Four updates to the registry were late. Updates related to UOM, maximum interrogation cycle, and dates of certification.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as moderate because there are some improvements that can be made to them. There is no impact on settlement, therefore audit risk rating is low.		

Actions taken to resolve the issue	Completion date	Remedial action status
Registry updated with correct information on 10 <sup>th</sup> January 2018	10/1/18	Cleared
<b>Preventative actions taken to ensure no further issues will occur</b>	<b>Completion date</b>	
Now correct in Registry – no further action required	10/1/18	

#### 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

Alinta Energy have Elster meters installed, which has an integrated meter with a modem. Additionally, both metering installations consist of CTs and VTs. The metering installations were designed in conjunction with an ATH.

##### Audit commentary

Both metering installations are re-certified every 18 months, thorough tests are conducted to confirm that the Code requirements are met and that all metering components are integrated to provide a functioning system

##### Audit outcome

Compliant

#### 4.12. Decommissioning of an ICP (Clause 11.18B (3))

##### Code reference

Clause 11.18B (3)

##### Code related audit information

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

- *advise the trader no later than 3 business days prior to decommissioning that the trader must, as part of the decommissioning, carry out a final interrogation; or*
- *if the MEP is responsible for the interrogation of the metering installation, arrange for a final interrogation to take place.*

#### Audit observation

Alinta Energy has not decommissioned any ICP since the last audit.

#### Audit commentary

It is not very likely that in the near future any of the two installations will be decommissioned.

#### Audit outcome

Compliant

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

#### Code reference

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

#### Code related audit information

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

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

#### Audit observation

Alinta Energy understands its obligation and, as was noted before, these two installations are very important to NZ Steel therefore no additions or changes to the burden will be introduced lightly. There were no changes to measuring transformer burden or compensation factor since the last audit. Any changes will be fully consulted with AccuCal in advance.

#### Audit commentary

As per our discussion with Alinta Energy, any changes will be fully consulted with AccuCal in advance.

#### Audit outcome

Compliant

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

#### Code reference

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

#### Code related audit information

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

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

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



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

#### **Audit observation**

The data storage device of Elster meters is an integral part of installed meters. If any changes to software are required, a meter will be replaced, and the installation recertified by AccuCal.

#### **Audit commentary**

Compliance is confirmed based on the company's policy which is well applied within the electricity industry.

#### **Audit outcome**

Compliant

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

#### **Code reference**

Clause 10.29A

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

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

#### **Audit observation**

Alinta Energy does not provide the MEP services to such connections.

#### **Audit commentary**

This clause is not applicable.

#### **Audit outcome**

Not applicable

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

#### **Code reference**

Clause 10.30A

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

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

#### **Audit observation**

Alinta Energy does not provide the MEP services for new connections.

#### **Audit commentary**

This clause is not applicable.

### Audit outcome

[Click here](#) to choose outcome from the drop down list.

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

### Code reference

Clause 10.31A

### Code related audit information

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

### Audit observation

Alinta Energy does not provide the MEP services for new connections.

### Audit commentary

This clause is not applicable.

### Audit outcome

Not applicable

## 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

Alinta Energy provided evidence that metering records and documentation are in its possession, as required by clause 4(1)(b). The Installation Certifications issued by AccuCal were sighted where all of the information related to these metering installations is recorded.

#### Audit commentary

Compliance confirmed based on a review of the certification reports. The certification reports are stored electronically on a secure server.

#### Audit outcome

Compliant

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

#### Code reference

*Clause 4(2) of Schedule 10.6*

#### Code related audit information

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

#### Audit observation

Alinta Energy is both the MEP and a trader, therefore this clause requirement is easily met.

**Audit commentary**

Compliance met.

**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**

Alinta Energy has kept all records since 1987, when the plant started to operate, and will continue to do so until it is closed down.

**Audit commentary**

Compliance confirmed based on observation.

**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**

For a number of years Alinta Energy has been using AccuCal for their generation sites. If it changes in the future and Alinta Energy decides to use an alternative ATH, they will provide a new ATH with a copy of all relevant metering records.

**Audit commentary**

There are no plans to change the ATH in near future.

**Audit outcome**

Compliant

## 6. MAINTENANCE OF REGISTRY INFORMATION

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

#### Code reference

*Clause 1(1) of Schedule 11.4*

#### Code related audit information

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

#### Audit observation

From the very beginning Alinta Energy provided the MEP services to Alinta Energy only. It won't provide such services to any other company.

#### Audit commentary

This clause is not applicable because Alinta Energy will provide the MEP services to itself only.

#### Audit outcome

Not applicable

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

#### Code reference

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

#### Code related audit information

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

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

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

#### Audit observation

We reviewed registry information on 8<sup>th</sup> of January 2018. All information for the two ICPs is recorded in the registry. As we noted in section 2.5, information about UOM on one of the channels was incorrect as was the number of days for maximum interrogation cycle.

#### Audit commentary

Incorrect information in the registry, corrected during the audit, was identified as non-compliance of clause 11.2.

#### Audit outcome

Non-compliant

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

#### Code reference

Clause 6 of Schedule 11.4

#### Code related audit information

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

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

No later than 5 business days following collection of data from the registry, the MEP must compare the information obtained from the registry with the MEP's own records.

Within 5 business days of becoming aware of any discrepancy between the MEP's records and the information obtained from the registry, the MEP must correct the records that are in error and advise the registry manager of any necessary changes to the registry metering records.

#### Audit observation

Alinta Energy logs in to the registry, once per month, to check that the information recorded there is the same as their own records.

#### Audit commentary

As it was noted in the above section that Alinta Energy did not notice, during its check, that the information for two ICPs was incorrect.

#### Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.3 With: 6 of Schedule 11.4  From: 10-Jan-18 To: 12-Oct-17	For two ICPs, incorrect information of UOM and maximum interrogation cycle were not corrected in the registry  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Moderate  Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are rated as moderate because there are some improvements that can be made to them. There is no impact on settlement, therefore audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Registry updated with correct information on 10 <sup>th</sup> January 2018		10/1/18	Cleared

Preventative actions taken to ensure no further issues will occur	Completion date	
Now correct in Registry – no further action required	10/1/18	

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

##### Code reference

Clause 20 of Schedule 10.7

##### Code related audit information

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

- a) the metering installation is modified otherwise than under sub clause 19(3) or 19(6)*
- b) the metering installation is classed as outside the applicable accuracy tolerances set out in Table 1 of Schedule 10.1, defective or not fit for purpose under this Part or any audit*
- c) an ATH advises the metering equipment provider responsible for the metering installation of a reference standard or working standard used to certify the metering installation not being compliant with this Part at the time it was used to certify the metering installation, or the failure of a group of meters in the statistical sampling recertification process for the metering installation, or the failure of a certification test for the metering installation*
- d) the manufacturer of a metering component in the metering installation determines that the metering component does not comply with the standards to which the metering component was tested*
- e) an inspection of the metering installation, that is required under this Part, is not carried out in accordance with the relevant clauses of this Part*
- f) if the metering installation has been determined to be a lower category under clause 6 and the maximum current conveyed through the metering installation at any time exceeds the current rating of its metering installation category as set out in Table 1 of Schedule 10.1*
- g) the metering installation is certified under clause 14 and sufficient load is available for full certification testing and has not been retested under clause 14(4)*
- h) a control device in the metering installation certification is, and remains for a period of at least 10 business days, bridged out under clause 35(1)*
- i) the metering equipment provider responsible for the metering installation is advised by an ATH under clause 48(6)(b) that a seal has been removed or broken and the accuracy and continued integrity of the metering installation has been affected.*

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

##### Audit observation

The reasons for a certification cancellation described in this clause can be put into two groups. The first group of reasons consists of situations where Arc Innovations has no influence at all. They are listed in subsection c) and d). In such circumstances, the company can only rely on advice given by responsible parties and act accordingly.

The second group are events covered in a), b), e), f), g), h) and i) which, if take place, will cause the cancellation of an installations certification. Each of these events were discussed in relevant parts of this report.

- (a) Installation modification – this was discussed with Dan Jury and covered in section 4.9
- (b) Accuracy tolerance – this is covered in section 4.3
- (e) Lack of inspection – inspections were conducted
- (f) Certification to lower category – Alinta Energy does not have such ICP
- (g) Insufficient load for full certification – this was discussed in section 7.7.
- (h) Bridged out load control device – control devices are not part of category 5 metering installations
- (i) Seal broken – the process was discussed in section 0

#### **Audit commentary**

If Alinta Energy becomes aware of any events described in this clause occurring, it will update the registry. The date in the registry needs to be changed to the date that one of the listed above events occurred.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 11.8A*

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

*The MEP must provide the registry 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**

Alinta Energy provided the required metering information to the registry to their best knowledge. The information was provided in the prescribed form and the registry records were uploaded as per Schedule 11.4

#### **Audit commentary**

The information in the registry was checked. The information was entered manually using the registry web interface in the prescribed form.

#### **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

Alinta Energy is responsible for the certification of HHR meters, CTs and VTs for two generation installations. Generation metering installations' compliance and recertification is managed by the Technical & Reliability Manager of Alinta Energy, in cooperation with AccuCal. Maintenance is scheduled in the SMSS database, which keeps track of tasks, dates and sends reminders. Batteries are replaced every time a metering installation is re-certified (18 months).

At the time of this audit both metering installations were certified.

0716190001NSCCC – Power Station CB516 – TG1 – Date of certification 12/10/2017, Certification Expire Date 12/10/2020 CERT-2017-666

0716190002NS00C – Power Station CB548 – TG2 – Date of certification 14/09/2017, Certification Expire Date 14/09/2020 -CERT-2017-610

During the audit we noted that the certifications of both installations did not have continuity.

Previous certification for TG1 expired on 12/12/2016, which means that this installation was not certified for 10 months.

Previous certification for TG2 expired on 12/12/2016, which means that this installation was not certified for 9 months.

#### Audit commentary

Based on Certificates of Compliance provided by Alinta Energy, we noted that both metering installations for TG1 and TG2 were not certified during the time period covered by this audit. It constitutes non-compliance. We identified actual impact as low because meter readings are closely watched by Alinta Energy and EMS and no irregularities were noted but it is a concern that category 5 metering installations were not certified for 10 months.

#### Audit outcome

Non-compliant

Non-compliance	Description
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Audit Ref: 7.1 With: 10.38(a)  From: 12-Dec-16 To: 14-Sep-17	Metering installations for TG1 was not certified for 10 and metering installation for TG2 was not certified for 9 months.  Potential impact: Low  Actual impact: Low  Audit history: None  Controls: Moderate  Breach risk rating: 4		
Audit risk rating	Rationale for audit risk rating		
Medium	Controls are rated as moderate because the non-compliance situation was rectified but there still room for improvement. There is no impact on settlement, therefore audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Both installations were recertified in 2017		12/10/17	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Preventative Maintenance checks have been set up in Maximo to prompt for inspections due. Due dates had drifted due to inspections being done early on previous occasions and frequency settings . Due dates have now been corrected in Maximo to match certificates which will now prompt for inspections at the due date.		22/1/18	

## 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

Alinta Energy contracts AccuCal to perform the appropriate recertification test, which is certified as Test House Class A.

### Audit commentary

Alinta Energy stated that they rely on information published on the Authority website in relation to ATH certification. Once certification tests are received from AccuCal they are checked by Alinta Energy.

#### Audit outcome

Compliant

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

#### Code reference

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

#### Code related audit information

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

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

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

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

*All other installations must measure and separately record:*

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

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

- a) import active energy*
- b) export active energy*
- c) import reactive energy*
- d) export reactive energy*

#### Audit observation

The Revenue Metering Installation Certificates were sighted, and we confirm both meters record Import/Export active/reactive energy.

#### Audit commentary

Compliance confirmed based on a review of the certifications.

#### 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

Alinta Energy does not provide MEP services for metering installations for a point of connection to the grid.

### Audit commentary

This clause is not applicable.

### 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

CTs (class 0.2) are used for metering purposes only. Protection circuits use CTs class 0.5. VTs are used for both metering and protection purposes. It is practical, and it is common industry practise, to use it for both purposes. During installation recertification done by AccuCal, installation accuracy is confirmed, and tolerances meet the Code guidelines (Table 1 Schedule 10.1).

### Audit commentary

Compliance is confirmed based on Alinta Energy's assurance. No physical inspection was conducted.

### 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

Alinta Energy does not have such installations.

#### Audit commentary

This clause is not applicable.

#### Audit outcome

Not applicable

### 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

Alinta Energy confirmed that since the last audit, there were no new installations commissioned which had insufficient electricity conveyed to allow AccuCal to complete a reliable load test for half-hour metering installations.

#### Audit commentary

Two existing metering installations were certified since the last audit. As per AccuCal certifications, there was sufficient load to conduct certification tests.

#### Audit outcome

Compliant

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

##### Code reference

*Clause 14(6) of Schedule 10.7*

##### Code related audit information

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

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

##### Audit observation

Alinta Energy does not have such installations.

##### Audit commentary

This clause is not applicable.

##### Audit outcome

Not applicable

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

##### Code reference

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

##### Code related audit information

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

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

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

##### Audit observation

Alinta Energy does issue to provide AccuCal with access to measuring transformers to conduct certification tests.

##### Audit commentary

Compliance confirmed based on a review of certification documents.

## 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

Alinta Energy does not have such installations.

#### Audit commentary

This clause is not applicable.

#### Audit outcome

Not applicable

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

#### Code reference

*Clause 35 of Schedule 10.7*

#### Code related audit information

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

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

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

#### Audit observation

Alinta Energy provides the MEP services only for category 5 metering installations. No control devices are used.

#### Audit commentary

This clause is not applicable.

#### 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 3 business days inform the following parties of the ATH's determination (including all relevant details):*

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

##### Audit observation

Alinta Energy provides the MEP's services only for category 5 metering installations. No control devices are used.

##### Audit commentary

This clause is not applicable.

##### 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

This clause is not applicable.

##### Audit commentary

This clause is not applicable.

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

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

#### **Audit observation**

We reviewed the Certification Reports for both ICPs and the meters' multiplier is 1.

#### **Audit commentary**

Compliance confirmed based on a review of the Certification Reports.

#### **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**

Alinta Energy provided the Certificates of Calibration for meters installed at ICPs 0716190001NSCCC and 071619000NS00C. Meters were calibrated on 12<sup>th</sup> October 2017, test conditions: In-Situ.

#### **Audit commentary**

The Certificates of Calibration confirmed that meters were within the required limits of accuracy.

#### **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**

Alinta Energy provided the Certificates of Calibration for measuring transformers installed at ICPs 0716190001NSCCC and 071619000NS00C.

Current and voltage transformers for 0716190001NSCCC were calibrated by AccuCal on 20<sup>th</sup> November 2014. Certification validity period is 120 months. These CTs/VTs were within the required limits of accuracy at connected service burden.

Current and voltage transformers for 071619000NS00C were calibrated by AccuCal on 24<sup>th</sup> June 2014. Certification validity period is 120 months. These CTs/VTs were within the required limits of accuracy at connected service burden.

#### **Audit commentary**

Compliance confirmed based on a review of calibration reports for both ICPs.

#### **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**

Data storage devices are incorporated within Elster meters.

#### **Audit commentary**

Data storage devices are “certified” as part of meter certification.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause 7 (3) Schedule 10.3*

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

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

#### **Audit observation**

Alinta Energy understands clause 7 and if it occurs will take appropriate action.

#### **Audit commentary**

The process is not documented; it is prudent to assume that it does not happen. We would expect that it would be a major undertaking for all participants if an ATH's approval were to expire.

#### **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

This clause is not applicable.

### Audit commentary

This clause is not applicable.

### Audit outcome

Not applicable

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## 8. INSPECTION OF METERING INSTALLATIONS

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

#### Code reference

*Clause 45 of Schedule 10.7*

#### Code related audit information

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

- *have been inspected by an ATH within 120 months from the date of the metering installation's most recent certification or*
- *for each 12-month period, commencing 1 January and ending 31 December, a sample of the category 1 metering installations selected under clause 45(2) of Schedule 10.7 has been inspected by an ATH.*

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

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

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

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

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

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

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

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

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

#### Audit observation

This clause is not applicable.

#### Audit commentary

This clause is not applicable.

#### Audit outcome

Not applicable

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

### Code reference

*Clause 46(1) of Schedule 10.7*

### Code related audit information

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

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

### Audit observation

We discussed with Alinta Energy the inspection of metering installations. Metering installations of category 5 must be inspected within 18 Months  $\pm$  1 months. Metering installation (TG1) ICP 0716190001NSCCC was inspected on 22<sup>nd</sup> June 2016. Report reference INSP-2016-167. Metering installation (TG2) ICP 0716190002NS00C was re-certified on 10th March 2016, due to being late for inspection as should have been 18 months +/- 1 month from 24th June 2014. Expiry stated then as 12th Dec 2016.

### Audit commentary

We confirm compliance based on analysis of documents provided by Alinta Energy and AccuCal.

### 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

Once inspection reports are received from AccuCal, they are investigated. If any issues are identified they are discussed with AccuCal.

### Audit commentary

The last inspection was conducted in 2016, no issues were identified.

### Audit outcome

Compliant

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

##### Code reference

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

##### Code related audit information

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

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

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

*The MEP must make the above arrangements within*

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

##### Audit observation

Access to the metering installation is restricted to authorised personnel. They are based in the control room. If any technical issues forced the breaking of a VTs seal AccuCal will be asked to inspect the installation.

##### Audit commentary

Since the last audit no situations of broken seals have been identified.

##### Audit outcome

Compliant

## 9. PROCESS FOR HANDLING FAULTY METERING INSTALLATIONS

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

#### Code reference

*Clause 10.43(4) and (5)*

#### Code related audit information

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

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

#### Audit observation

If Alinta Energy becomes aware that any installation could be inaccurate or defective, prompt action will be taken. It is of the utmost importance for the company to have accurate metering installations. Both meters are read daily therefore if there is any inaccuracy of data it will be identified quickly by EMS, which will alert Alinta Energy.

#### Audit commentary

If EMS notifies Alinta Energy of any issues which could indicate the possibility of a defective metering installation, the situation will be investigated and Alinta Energy (trader) will be notified.

#### Audit outcome

Compliant

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

#### Code reference

*Clause 10.44*

#### Code related audit information

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

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

- a) test the metering installation*
- b) provide the MEP with a statement of situation within 5 business days of:*
- c) becoming aware that the metering installation may be inaccurate, defective or not fit for purpose; or*
- d) reaching an agreement with the participant.*

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

#### Audit observation

According to the process, Alinta Energy will ask AccuCal to conduct testing and provide a “statement of situation”. This statement will be provided to Alinta Energy (trader).

#### **Audit commentary**

Compliance confirmed based on the process.

#### **Audit outcome**

Compliant

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

#### **Code reference**

*Clause10.46(2)*

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

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

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

#### **Audit observation**

AccuCal will be contacted promptly and appropriate testing will be carried out as soon as practical. A “statement of situation” will be written by AccuCal and provided to the market administrator. No such situation has occurred since the last audit.

#### **Audit commentary**

Compliance confirmed based on the process.

#### **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

Meters are read by EMS; the raw data is stored by EMS.

#### Audit commentary

Alinta Energy will arrange access to such data when requested.

#### 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

Alinta Energy does not give access to raw meter data to companies which are not authorised to receive it.

#### Audit commentary

The only company which can have access to raw data is NZ Steel.

#### 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

The metering is in the Control Room. Access will be provided but Health and Safety protocols must be followed.

#### Audit commentary

Access to metering installations will be provided when necessary.

#### Audit outcome

Compliant

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

#### Code reference

*Clause 3(5) of Schedule 10.6*

#### Code related audit information

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

#### Audit observation

Metering is in the Control Room. Access will be provided but Health and Safety protocols must be followed.

#### Audit commentary

As above, access to metering installations will be provided when necessary.

#### Audit outcome

Compliant

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

### Code reference

*Clause 8(2), 8(3), 8(5) and 8(6) of Schedule 10.6*

### Code related audit information

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

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

*When raw meter data can only be obtained from an MEP's back office, the MEP must ensure that the internal clock is accurate, to within  $\pm 5$  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 malfunctioning or tampering, and if this is detected, carry out the appropriate requirements of Part 10.*

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

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

*in a form that is accessible to authorised personnel.*

### Audit observation

Meters are read by EMS, not by Alinta Energy.

### Audit commentary

This clause is not applicable to Alinta Energy. Compliance with this clause will be covered by EMS's audit.

### 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**

Meters are read by EMS, not by Alinta Energy.

**Audit commentary**

This clause is not applicable to Alinta Energy. Compliance with this clause will be covered by EMS's audit.

**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**

Meters are read by EMS, not by Alinta Energy.

**Audit commentary**

This clause is not applicable to Alinta Energy. Compliance with this clause will be covered by EMS's audit.

**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**

Meters are read by EMS, not by Alinta Energy.

#### **Audit commentary**

This clause is not applicable to Alinta Energy. Compliance with this clause will be covered by EMS's audit.

#### **Audit outcome**

Not applicable

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

#### **Code reference**

*Clause 8(9) of Schedule 10.6*

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

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

#### **Audit observation**

Meters are read by EMS

#### **Audit commentary**

This clause is not applicable to Alinta Energy. Compliance with this clause will be covered by EMS's audit.

#### **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**

Meters are read by EMS.

#### **Audit commentary**

This clause is not applicable to Alinta Energy. Compliance with this clause will be covered by EMS's audit.

#### **Audit outcome**

Not applicable

## CONCLUSION

## PARTICIPANT RESPONSE

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