ELECTRICITY INDUSTRY PARTICIPATION CODE
METERING EQUIPMENT PROVIDER AUDIT REPORT

VERITEK

For

INFLUX ENERGY DATA LIMITED

NZBN: 9429037465971

Prepared by: Brett Piskulic – Veritek Limited

Date audit commenced: 8 November 2022

Date audit report completed: 20 April 2023

Audit report due date: 01-May-23

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EXECUTIVE SUMMARY

Influx Energy Data Limited (Influx) is a Metering Equipment Provider (MEP) and is required to undergo an audit by 1 May 2023 in accordance with clause 16A.17(b).

Influx is responsible for ICPs under the FCLM, TRUM and LMGL participant identifiers.

The audit found 18 non-compliances, makes two recommendations, and raises two issues for consideration by the Authority.

The Influx ATH conducted statistical sampling of a population of 6,104 ICPs containing EDMI Mk7A, Mk7C and Mk10D Class 1 meters. Non-compliance is recorded for the application of an incorrect certification period. I have raised two issues in **sections 7.13** and **7.17** for the Authority to consider in relation to statistical recertification.

Non-compliance continues to exist in relation to missing and inaccurate fields in certification records and from ATHs.

The other main areas of non-compliance related to following issues:

- late updating of registry information,
- inaccurate registry information,
- non-compliant ATH practices,
- certification cancelled or expired for 25,071 ICPs,
- time was not monitored every 12 months for 85 meters with time dependent registers,
- inspections not conducted for 62 metering installations,
- monitoring not conducted at six metering installations certified at a lower category, and
- remedial action not completed in required timeframe after notification of a faulty metering installation for three ICPs.

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 the responses from Influx to the areas of non-compliance I recommend an audit frequency of 12 months to reflect the improvements which have been made during the audit period.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
MEP responsibility for services access interface	2.1	10.9(2)	Services access interface not recorded in certification records for nine metering installations.	Moderate	Low	2	Identified
Provision of accurate information	2.5	11.2 and 10.6	Registry not always updated as soon as practicable in some cases.	Moderate	Low	2	Identified

Registry updates	3.2	2 of Schedule 11.4	Some registry updates later than 15 business days.	Strong	Low	1	Identified
Metering Installation Design & Accuracy	4.3	4(1) of Schedule 10.7	Design report not recorded for nine metering installations.	Strong	Low	1	Cleared
Changes to registry records	4.10	3 of Schedule 11.4	Some records updated on the registry later than ten business days.	Moderate	Low	2	Identified
Accurate and complete records	5.1	4(1) of Schedule 10.6	Some inaccurate or incomplete certification records.	Moderate	Low	2	Identified
Response to switch request	6.1	1(1) of Schedule 11.4	40 late MN files.	Strong	Low	1	Identified
Provision of Registry Information	6.2	7 (1), (2) and (3) of Schedule 11.4	Some registry records are incomplete or incorrect.	Strong	Low	1	Identified
Cancellation of certification	6.4	6 of Schedule 11.4	Certification cancelled and registry not updated for: • two installations certified as a lower category but not monitored, • two installations not fit four purpose due to low burden, • 58 installations without inspections conducted by the due date, • six installations with sum-check failures not remediated within three business days, • one control device replaced with device did not have the same characteristics, and • eight metering installations with invalid statistical sampling certification.	Moderate	Low	2	Identified
Certification of metering installations	7.1	10.38 (a), clause 1 and clause 15 of	Certification cancelled or expired for 25,071 ICPs.	Moderate	High	6	Identified

		Schedule 10.7					
Certification Tests	7.2	10.38(b) and clause 9 of Schedule 10.6	Minimum load requirement for certification tests not met during one Category 2 certification. All test results not recorded in 55 certification records.	Strong	Low	1	Investigating
Certification as a Lower Category	7.6	6(1)(b) and (d), and 6(2)(b) of Schedule 10.7	Certification cancelled for six ICPs where certification as a lower category monitoring is not conducted.	Moderate	Low	2	Identified
Timekeeping	7.10	23 of Schedule 10.7	85 meters with time dependent registers with time are not monitored every 12 months.	None	Low	5	Identified
Statistical Sampling	7.13	16(1) of Schedule 10.7	Incorrect certification period of seven years applied to 6,104 ICPs certified using the statistical recertification method.	Moderate	Low	2	Identified
Interim certification	7.19	18 of Schedule 10.7	283 FCLM ICPs with expired interim certification. One TRUM ICP with expired interim certification. 19,274 LMGL ICPs where most have expired interim certification.	Moderate	Medium	4	Identified
Category 2 to 5 inspections	8.2	46(1) of Schedule 10.7	FCLM Inspections not conducted within the allowable window for four Category 2, 15 Category 3 and two Category 5 metering installations. TRUM Inspections not conducted within the allowable window for 34 Category 2 and four Category 5 metering installations. LMGL Inspections not conducted within the allowable window for three Category 3 metering installations.	Moderate	Low	2	Identified

Timeframe for correct defects and inaccuracies	9.4	10.46A	Remedial action not completed in required timeframe after notification of a faulty metering installation for three ICPs.	Moderate	Low	2	Identified
Time Errors for Metering Installations	10.7	8(4) of Schedule 10.6	Clock errors greater than the threshold for 78 ICPs.	Strong	Low	1	Identified
					Future Risk Rating	**39**	
					Indicative Audit Frequency	**3 months**	

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

RECOMMENDATIONS

Subject	Section	Clause	Recommendation	Status
Temporary electrical connection	4.17	10.31A, 10.33 and 10.33A	Update the temporary electrical connection process and obtain an explicit blanket authorisation from both the traders and distributors.	Cleared
Timekeeping Requirements	7.10	23 of Schedule 10.7	Develop a process to identify meters which become subject to the timekeeping requirements of Clause 23 of Schedule 10.7 and ensure the time is monitored and corrected as required.	Identified

ISSUES

Subject	Section	Issue	Description
Statistical sampling	7.13	Regarding: Clause 16 of schedule 10.7	I recommend that the Authority consider amending the Code to ensure that an MEP is not disadvantaged when using meters with an accuracy class higher than the minimum class required by the Code. I also suggest that the Authority consider whether AS/NZS 1284 is still fit for purpose and whether a more appropriate process can be included in or prescribed by the Code.
Data storage device certification	7.17	Regarding: Clause 36(1) of Schedule 10.7	Certification of data storage devices when statistical recertification is conducted. The code requires an MEP to ensure that each data storage device incorporated in a metering installation is certified. It is unclear how this should be applied when conducting recertification by statistical recertification under clause 16 of Schedule 10.7.

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

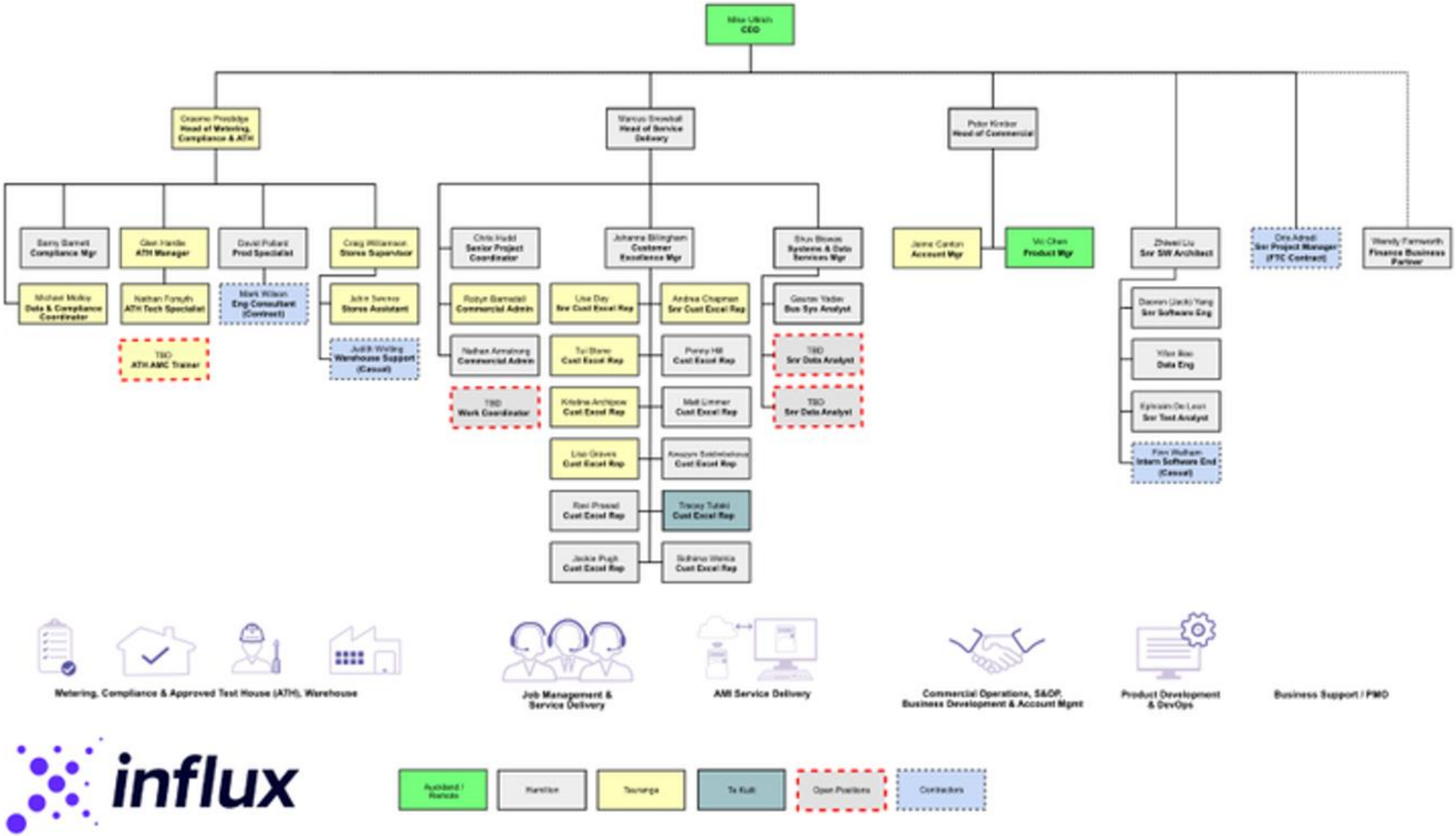
I checked the Electricity Authority website to confirm whether there were any exemptions in place.

Audit commentary

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

1.2. Structure of Organisation

FCLM Metering Structure – Effective 2022.



1.3. Persons involved in this audit

Auditor:

Brett Piskulic

Veritek Limited

Electricity Authority Approved Auditor

Influx personnel assisting in this audit were.

Name	Title
Barny Barnett	Compliance Manager
Shuv Biswas	Data Services Manager
Graeme Prestidge	Head of Metering Compliance and ATH

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

Influx 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

Influx 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

Data is held in Orion and Maximo, which is subject to backup arrangements in accordance with standard industry protocols.

1.6. Breaches or Breach Allegations

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

1.7. ICP Data

FCLM					
Metering Category	**Number of ICPs Apr 2019**	**Number of ICPs Nov 2019**	**Number of ICPs Oct 2020**	**Number of ICPs Dec 2021**	**Number of ICPs Nov 2022**
1	33,275	34,638	36,601	39,797	45,078
2	1,545	1,588	1,639	1,823	2,054
3	51	51	52	55	67
4	10	11	13	15	21
5	0	0	0	0	1
9	8	5	9	13	11
TRUM					
Metering Category	**Number of ICPs Jan 2019**	**Number of ICPs Nov 2019**	**Number of ICPs Oct 2020**	**Number of ICPs Dec 2021**	**Number of ICPs Nov 2022**
1	147,063	123,967	88,089	69,427	59,417
2	1,233	1,211	1,167	1,053	741
3	4	4	0	7	3
4	6	6	0	1	1
5	13	13	0	6	5
9	15	18	17	19	19
LMGL					
Metering Category				**Number of ICPs Dec 2021**	**Number of ICPs Nov 2022**
1				27,555	25,514
2				196	184
3				14	12
4				0	0
5				0	0
9				4	2

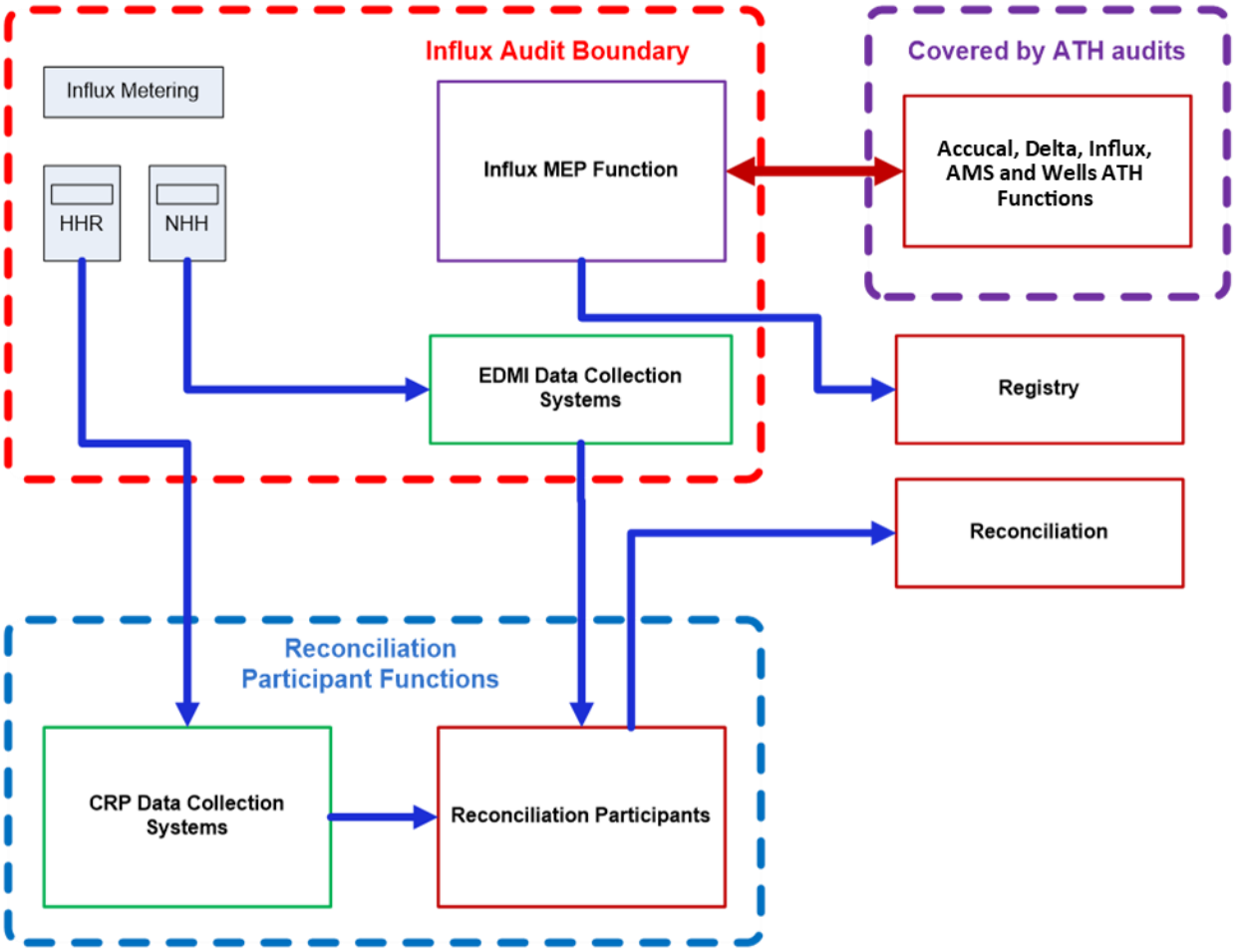
1.8. Authorisation Received

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.

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



1.10. Summary of previous audit

The previous audit was conducted in February 2022 by Steve Woods of Veritek Limited. The table below shows the issues raised and their current status.

Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
MEP responsibility for services access interface	2.1	10.9(2)	Services access interface not recorded in certification records for five metering installations.	Still existing
Provision of accurate information	2.5	11.2 and 10.6	Registry not always updated as soon as practicable in some cases.	Still existing
Registry updates	3.2	2 of Schedule 11.4	327 registry updates later than 15 business days.	Still existing
Design Reports for Metering Installations	4.1	2 of Schedule 10.7	Design Reports did not contain all relevant information.	Cleared
Metering Installation Design & Accuracy	4.3	4(1) of Schedule 10.7	Design Report not recorded for three metering installations.	Still existing
Changes to registry records	4.10	3 of Schedule 11.4	Some records updated on the registry later than 10 business days.	Still existing
Accurate and complete records	5.1	4(1) of Schedule 10.6	Some inaccurate certification records.	Still existing
Response to switch request	6.1	1(1) of Schedule 11.4	14 late MN files.	Still existing
Provision of Registry Information	6.2	7 (1), (2) and (3) of Schedule 11.4	Some registry records incomplete or incorrect.	Still existing

Subject	Section	Clause	Non-compliance	Status
Cancellation of certification	6.4	6 of Schedule 11.4	Certification cancelled and registry not updated for: • 1 installation with insufficient load not monitored, • 6 installations certified as a lower category but not monitored, • 14 installations not fit four purpose due to low burden, • 30 installations without inspections conducted by the due date, • 11 installations with invalid statistical sampling certification, • 19 installations with sum-check failures not remediated within three business days, • 3 ICPs with late inspections, and 22,547 installations with invalid statistical sampling certification.	Still existing
Certification of metering installations	7.1	10.38 (a), clause 1 and clause 15 of Schedule 10.7	Certification cancelled or expired for 25,379 ICPs.	Still existing
Certification Tests	7.2	10.38(b) and clause 9 of Schedule 10.6	Prevailing load test not conducted for one category 1 metering installation. Test results not all recorded for three TRUM installations.	Still existing
Certification as a Lower Category	7.6	6(1)(b) and (d), and 6(2)(b) of Schedule 10.7	Certification cancelled for 7 ICPs where certification as a lower category monitoring is not conducted.	Still existing
Insufficient Load for Certification Tests	7.7	14(3) and (4) of Schedule 10.7	ICP 0003133800AA2B3 was certified on 28/10/21 under the insufficient load clause but monitoring was not conducted. Certification is therefore cancelled.	Cleared
Timekeeping	7.10	23 of Schedule 10.7	31 meters with time clocks that are not monitored every 12 months.	Still existing

Subject	Section	Clause	Non-compliance	Status
Compensation factors	7.14	24(3) of Schedule 10.7	Incorrect compensation factor for ICP 0000616050WPE6E. Incorrect compensation factors for a further 6 ICPs.	Cleared
Interim certification	7.19	18 of Schedule 10.7	302 FCLM ICPs with expired interim certification. 22,547 LMGL ICPs where most have expired interim certification.	Still existing
Category 2 to 5 inspections	8.2	46(1) of Schedule 10.7	TRUM Inspections not conducted within the allowable window for 14 Category 2 installations. LMGL Inspections not conducted within the allowable window for six Category 2 installations.	Still existing
Access to Raw Meter Data	10.1	1 of Schedule 10.6	Data provided to one trader is not raw meter data.	Cleared
Time Errors for Metering Installations	10.7	8(4) of Schedule 10.6	Clock errors greater than the threshold for 73 ICPs.	Still existing

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Status
Temporary electrical connection	4.17	Regarding clause 10.31A, 10.33 and 10.33A	Update the temporary electrical connection process to include an authorisation step by the trader and network owner.	Still existing

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

FCLM

I checked certification records for 64 metering installations, covering all relevant ATHs.

TRUM

I checked certification records for 19 metering installations, covering all relevant ATHs.

LMGL

I checked certification records for 20 metering installations, covering all relevant ATHs.

Audit commentary

The Code places responsibility for maintaining the services access interface on the MEP and places responsibility for determining and recording it with ATHs. The Code requires the ATH to record each services access interface and the conditions under which each services access interface may be used.

FCLM

I checked 64 certification records and found each services access interface was not recorded correctly by the ATHs for nine of the certifications.

TRUM

I checked 19 certification records and found the services access interface was recorded correctly by the ATHs for all 19 of the certifications.

LMGL

I checked 20 certification records and found the services access interface was recorded correctly by the ATHs for all 20 of the certifications.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 10.9(2) From: 01-Mar-22 To: 08-Nov-22	Services access interface not recorded in certification records for nine metering installations. Potential impact: Low Actual impact: None Audit history: Twice Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating		
Low	I have recorded the controls as moderate because there is room for improvement. There is no impact because the MEP normally determines the location of the services access interface; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		**Completion date**	**Remedial action status**
Follow up with ATHs ATHs identified have resolved as per there Audits.		13/04/2023	Identified
Preventative actions taken to ensure no further issues will occur		**Completion date**	
Monitor Certs		On Going	

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

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

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

TRUM

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

LMGL

TRUM 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

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

FCLM uses the FCLM identifier in all cases.

TRUM

TRUM uses the TRUM identifier in all cases.

LMGL

LMGL uses the LMGL 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

Relevant documentation was checked to ensure the compatibility of communication equipment.

Audit commentary

FCLM

FCLM ensures all communication equipment is appropriately certified with the relevant telecommunications standards. This is recorded in type test certificates and other approval documents.

TRUM

TRUM did not certify any metering installations where communication equipment is present during the audit period. It has been previously recorded that all communication equipment is appropriately certified with the relevant telecommunications standards. This is recorded in type test certificates and other approval documents.

LMGL

LMGL certified one metering installation where communication equipment is present. LMGL ensures all communication equipment is appropriately certified with the relevant telecommunications standards. This is recorded in type test certificates and other approval documents.

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

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

The content of this audit report indicates that FCLM has taken all practicable steps to ensure that information is complete and accurate in most cases; however, in **sections 5** and **6** there are some registry and certification records which are not complete and accurate, and some information was not updated as soon as practicable. The main issue is that the registry is not always updated when certification is cancelled.

TRUM

The content of this audit report indicates that TRUM has taken all practicable steps to ensure that information is complete and accurate in most cases; however, in **sections 5** and **6** there are some registry and certification records which are not complete and accurate, and some information was not updated as soon as practicable. The main issue is that the registry is not always updated when certification is cancelled.

LMGL

The content of this audit report indicates that LMGL has taken all practicable steps to ensure that information is complete and accurate in most cases; however, in **sections 5** and **6** there are some registry and certification records which are not complete and accurate, and some information was not updated as soon as practicable. The main issue is that the registry is not always updated when certification is cancelled.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.5 With: Clause 11.2 and Clause 10.6 From: 01-Mar-22 To: 08-Nov-22	Registry not always updated as soon as practicable in some cases. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	I have recorded the controls as moderate because there is room for improvement. The impact on other participants is minor; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
These are mainly due to cancellation identified in the Audit due to technical issues and have been updated. Followed up ATHs on cancellation issues and confirmed majority have been from Omnibus changes and issues have now been resolved.	01/05/2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Cat 2 + certs now checked by Compliance Team before processed by CER team. Improvements in reporting to capture non-compliance 01/08/2023	Ongoing	

3. PROCESS FOR A CHANGE OF MEP

3.1. Change of metering equipment provider (Clause 10.22)

Code reference

Clause 10.22

Code related audit information

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

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

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

The gaining MEP is not required to pay costs if:

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

FCLM

I checked if FCLM had sent or received any invoices.

TRUM

I checked if TRUM had sent or received any invoices.

LMGL

I checked if LMGL had sent or received any invoices.

Audit commentary

FCLM

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

TRUM

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

LMGL

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

The table below shows that there is only one scenario where costs will be payable, and this is unlikely to occur.

Scenario	Likelihood of occurring	Costs payable
Gaining MEP replaces losing MEPs component	High	No
Gaining MEP removes losing MEPs component	High	No
Gaining MEP recertifies losing MEPs component	High	No
Gaining MEP replaces losing MEPs installation	High	No
Gaining MEP removes losing MEPs installation	High	No
Gaining MEP recertifies losing MEPs installation	High	No
Gaining MEP retains losing MEPs components and metering installation	Zero	Yes

Audit outcome

Compliant

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

Code reference

Clause 2 of Schedule 11.4

Code related audit information

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

Audit observation

FCLM

I checked the audit compliance report for the period 1 March 2022 to 8 November 2022 for all records where FCLM became the MEP to evaluate the timeliness of updates.

TRUM

I checked the audit compliance report for the period 1 March 2022 to 8 November 2022 for all records where TRUM became the MEP to evaluate the timeliness of updates.

LMGL

I checked the audit compliance report for the period 1 March 2022 to 8 November 2022 for all records where LMGL became the MEP to evaluate the timeliness of updates.

Audit commentary

FCLM

I examined the audit compliance report for 3,315 switches in relation to this clause and the findings are shown in the table below.

Of the 179 late updates, 61 were due to late nomination by the trader. I checked a sample of 20 of the remaining 118 late updates, and I found that seven were due to FCLM being unable to update the registry until the losing MEP reversed a metering event dated after the FCLM. Five were due to delays in receiving

and processing the certification information from the ATHs and eight had a correction made but the original update was on time.

The Code and the audit compliance reporting assume a change of MEP code constitutes a change of MEP, however there are now several MEPs with more than one MEP code. This means that a meter change with associated recertification at the time of an MEP code change will show in the report as a change of MEP, with a 15-day allowance rather than a 10-day allowance. An unknown number of the updates reported in this section will be for changes of MEP identifier from one Influx identifier to another Influx identifier. These late updates should appear in **section 4.10** and are subject to a 10-day requirement.

Audit	Total ICPs	Total within 15 days	Average days	% Compliant
Jun 2018	367	328	6	89%
April 2019	1,562	1,465	8	94%
Nov 2019	906	841	-	93%
Oct 2020	1,102	1,031	-	94%
Dec 2021	120	117	-	97.5%
Nov 2022	**3,315**	**3,136**	**-**	**94.6%**

TRUM

I examined the audit compliance report for 3,244 switches in relation to this clause and the findings are shown in the table below.

The audit compliance report identified 3,232 late updates. 3,228 related to the correction of the metering component owner field of ICPs transferred from Northpower to TRUM backdated to the April 2021 when Northpower meters were purchased by Influx. Of the remaining four late updates two were due to late nomination by the trader, and two had a correction made but the original update was on time.

Audit	Total ICPs	Total within 15 days	Average days	% Compliant
Nov 2019	34	23	-	68%
Oct 2020	9	5	-	56%
Dec 2021	6,534	6,255	-	95.73%
Nov 2022	**3,244**	**12**	**-**	**0.37%**

LMGL

I examined the audit compliance report for 28 switches in relation to this clause and the findings are shown in the table below.

The audit compliance report identified 10 late updates. Eight were corrections where the original update was on time. The remaining two were late due to delays in receiving and processing the certification information from the ATHs.

Audit	Total ICPs	Total within 15 days	Average days	% Compliant
Dec 2021	149	104	-	69.8%
Nov 2022	**28**	**18**	**-**	**64.29%**

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 With: Clause 2 of Schedule 11.4 From: 01-Mar-22 To: 08-Nov-22	Some registry updates later than 15 business days. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are in place to ensure the timeliness of updates, but Influx is often prevented from updating the registry due to late nomination by traders or late field notification. The impact on other participants is minor; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Identify reasons why Largely due to Late Retailer Nomination , Late ATH paperwork, Other MEP Events on the Registry (AMI Y/N) preventing update	30/04/2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Work with participants to improve. Discuss with EA on other MEP event dates now causing issues due to AMI Y/N as per Omnibus change requirements.	Ongoing	

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

Code reference

Clause 5 of Schedule 10.6

Code related audit information

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

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

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

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

This has not occurred, and no examples are available to examine. FCLM have stated that any information will be provided as necessary.

TRUM

This has not occurred, and no examples are available to examine. TRUM have stated that any information will be provided as necessary.

LMGL

This has not occurred, and no examples are available to examine. LMGL have stated that any information will be provided as necessary.

Audit outcome

Compliant

3.4. Termination of MEP Responsibility (Clause 10.23)

Code reference

Clause 10.23

Code related audit information

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

The MEP is responsible if it:

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

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

An MEPs obligations terminate only when:

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

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

FCLM has ceased to be responsible for some metering installations and they still continue with their responsibilities, mainly in relation to the storage or records, which are kept indefinitely.

TRUM

TRUM has ceased to be responsible for some metering installations and they still continue with their responsibilities, mainly in relation to the storage or records, which are kept indefinitely.

LMGL

LMGL has ceased to be responsible for some metering installations and they still continue with their responsibilities, mainly in relation to the storage or records, which are kept indefinitely.

Audit outcome

Compliant

4. INSTALLATION AND MODIFICATION OF METERING INSTALLATIONS

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

Code reference

Clause 2 of Schedule 10.7

Code related audit information

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

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

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

Audit observation

FCLM

FCLM has engaged five ATHs during the audit period. I checked the Influx design reports.

TRUM

TRUM has engaged three ATHs during the audit period. I checked the Influx design reports.

LMGL

LMGL has engaged four ATHs during the audit period. I checked the Influx design reports.

Audit commentary

FCLM

Influx put in place a new suite of design reports during the previous audit period. I checked the design reports and confirmed that all the required information was included.

TRUM

Influx put in place a new suite of design reports during the previous audit period. I checked the design reports and confirmed that all the required information was included.

LMGL

Influx put in place a new suite of design reports during the previous audit period. I checked the design reports and confirmed that all the required information was included.

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

FCLM

FCLM has engaged five ATHs during the audit period. I checked the Authority's website to confirm they had appropriate scopes of approval.

TRUM

TRUM has engaged three ATHs during the audit period. I checked the Authority's website to confirm they had appropriate scopes of approval.

LMGL

LMGL has engaged four ATHs during the audit period. I checked the Authority's website to confirm they had appropriate scopes of approval.

Audit commentary

I checked the Authority's website and I confirm that all ATHs have appropriate scopes 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

FCLM

I checked the processes used by FCLM to ensure compliance with the design and with the error thresholds stipulated in Table 1. I also checked the certification records for 64 metering installations.

TRUM

I checked the processes used by TRUM to ensure compliance with the design and with the error thresholds stipulated in Table 1. I also checked the certification records for 19 metering installations.

LMGL

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

Audit commentary

FCLM

The design report reference was recorded in 58 of the 64 certification records checked. Six of the certification records completed by the Influx ATH did not have a design report reference recorded.

All ATHs are now calculating uncertainty correctly for metering installations certified using the comparative method. The certification reports checked included 27 using the comparative recertification method and five using the fully calibrated method. In all 32 cases, the ATH had correctly calculated and recorded the error and uncertainty in the certification records.

TRUM

The design report reference was recorded in 17 of the 19 certification records checked. Two of the certification records completed by the Influx ATH did not have a design report reference recorded.

There were no certifications conducted during the audit period using the comparative recertification or the fully calibrated methods. TRUM uses the FCLM and Delta ATHs to conduct certification of Category 2 metering installations. Both ATHs are correctly calculating error and uncertainty.

LMGL

The design report reference was recorded in 18 of the 19 certification records checked. One of the certification records completed by the Delta ATH did not have a design report reference recorded.

There were no certifications conducted during the audit period using the comparative recertification or the fully calibrated methods, however ATHs now have compliant processes for calculating error and uncertainty.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.3 With: Clause 4(1) of Schedule 10.7 From: 01-Mar-22 To: 08-Nov-22	Design report not recorded for nine metering installations. Potential impact: Medium Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Controls are recorded as strong because processes are in place to ensure that correct design reports are used. The impact on other participants is minor; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Follow up with ATHs ATHs identified have resolved as per there Audits.	13/04/2023	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monitor Certs	Ongoing	

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

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

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

TRUM

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

LMGL

LMGL 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

FCLM

I checked FCLM's list file to confirm compliance with this requirement.

TRUM

I checked TRUM's list file to confirm compliance with this requirement.

TRUM

I checked LMGL's list file to confirm compliance with this requirement.

Audit commentary

FCLM

I checked FCLM's list file, and I confirm that all category 3 and above metering installations are HHR.

TRUM

I checked TRUM's list file, and I confirm that there are no category 3 and above metering installations.

LMGL

I checked LMGL's list file, and I confirm that there are no category 3 and above metering installations.

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

FCLM

I checked if FCLM is responsible for any NSP metering.

TRUM

I checked if TRUM is responsible for any NSP metering.

LMGL

I checked if LMGL is responsible for any NSP metering.

Audit commentary

FCLM

FCLM is responsible for metering at 32 NSPs. FCLM confirmed that subtraction is not used at these NSPs.

TRUM

TRUM is not responsible for metering at any NSPs.

LMGL

LMGL is not responsible for metering at any NSPs.

Audit outcome

Compliant

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

Code reference

Clause 10.26(10)

Code related audit information

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

Audit observation

FCLM

FCLM is not responsible for any grid metering.

TRUM

TRUM is not responsible for any grid metering.

LMGL

LMGL is not responsible for any grid metering.

Audit commentary

FCLM

FCLM is not responsible for any grid metering.

TRUM

TRUM is not responsible for any grid metering.

LMGL

LMGL is not responsible for any grid metering.

Audit outcome

Compliant

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

Code reference

Clause 4(4) of Schedule 10.7

Code related audit information

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

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

FCLM instructions to ATH's include several clauses in relation to physical and electrical characteristics. The recent audit reports for the ATHs confirm compliance with the requirement to ensure enclosures are suitable.

TRUM

TRUM instructions to ATH's include several clauses in relation to physical and electrical characteristics. The recent audit reports for the ATHs confirm compliance with the requirement to ensure enclosures are suitable.

LMGL

LMGL instructions to ATH's include several clauses in relation to physical and electrical characteristics. The recent audit reports for the ATHs confirm compliance with the requirement to ensure enclosures are suitable.

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.*

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

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

Audit observation

FCLM

I checked whether there were any new or modified designs during the audit period.

TRUM

I checked whether there were any new or modified designs during the audit period.

LMGL

I checked whether there were any new or modified designs during the audit period.

Audit commentary

FCLM

There were no new design reports implemented during the audit period. During the previous audit period a new suite of design reports was developed and implemented. Influx provided copies of communications provided to relevant parties.

TRUM

There were no new design reports implemented during the audit period. During the previous audit period a new suite of design reports was developed and implemented. Influx provided copies of communications provided to relevant parties.

LMGL

There were no new design reports implemented during the audit period. During the previous audit period a new suite of design reports was developed and implemented. Influx provided copies of communications provided to relevant parties.

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

FCLM

I checked the audit compliance report for the period 1 March 2022 to 8 November 2022 for all records where FCLM became the MEP to evaluate the timeliness of registry updates.

TRUM

I checked the audit compliance report for the period 1 March 2022 to 8 November 2022 for all records where TRUM became the MEP to evaluate the timeliness of registry updates.

LMGL

I checked the audit compliance report for the period 1 March 2022 to 8 November 2022 for all records where LMGL became the MEP to evaluate the timeliness of registry updates.

Audit commentary

FCLM

The table below shows that there were registry updates for 1,436 new connections completed of which 839 were late, and 41.57% of updates were compliant. Of the 839 late updates, 586 were due to late nomination by the trader (the nominations were made later than 10 business days after event). I checked a sample of 43 records in detail, and I found that 19 were due to delays in receiving and processing the certification information from the ATHs and 24 had a correction made but the original update was on time.

I was unable to accurately determine the total number of updates after recertification due to duplication in the audit compliance report between AC020MEP04 (metering update after recertification) and AC020MEP01 (new MEP not a new connection). As recorded in **section 3.2,** an issue was found with the audit compliance reporting assuming that a change of MEP code constitutes a change of MEP, however there are now several MEPs with more than one MEP code. This means that a meter change with associated recertification at the time of an MEP code change will show in the report as a change of MEP, with a 15-day allowance rather than a 10-day allowance for a recertification. An unknown number of the updates reported in **section 3.2** will be for changes of MEP identifier from one Influx identifier to another Influx identifier. These late updates should appear in this section and are subject to a 10-day requirement.

I checked a sample of 22 of the late updates identified by the audit compliance report and found that four were new MEP updates that were not later than 15 days. 15 were late updates due to delays in receiving and processing the certification information from the ATHs, and three had a correction made but the original update was on time.

Event	Audit	Total ICPs	ICPs Notified Within 10 Days	ICPs Notified Greater Than 10 Days	Average Notification Days	Percentage Compliant
New Connection	Jun 2018	322	284	38	7	88%

	April 2019	596	489	107	8	82%
	Nov 2019	796	540	256	-	68%
	Oct 2020	597	320	277	-	54%
	Dec 2021	47	43	4	-	91.49%
	Nov 2022	**1,436**	**597**	**839**	**-**	**41.57%**
Recertification	Jun 2018	19,524	18,839	685	9	96%
	April 2019	14,123	11,967	2,156	49	85%
	Nov 2019	1,842	1,542	300	79	84%
	Oct 2020	1,818	1,632	186	20	90%
	Dec 2021	159	154	5	7.87	96.86
	Nov 2022	**Unable to determine**	**Unable to determine**	**Unable to determine**	**Unable to determine**	**Unable to determine**

TRUM

The table below shows that there were registry updates for nine new connections completed of which four were late, and 55.56% of updates were compliant. I checked all four records in detail, and I found that late updates were caused by late nomination for two of the four. One of the late updates was due to a replaced event where the original update was on time. The remaining one was the result of a delay in receiving and processing the certification information from the ATH by TRUM.

I was unable to accurately determine the total number of updates after recertification due to duplication in the audit compliance report between AC020MEP04 (metering update after recertification) and AC020MEP01 (new MEP not a new connection). The audit compliance report identified 20 late updates. I checked all 20 records in detail, and I found that four were new MEP updates duplicated from AC020MEP01. Of the remaining 16 late updates, six were due to replaced events where the original updates were on time and 10 were the result of delays in receiving and processing the certification information from the ATH.

Event	Year	Total ICPs	ICPs Notified Within 10 Days	ICPs Notified Greater Than 10 Days	Average Notification Days	Percentage Compliant
New connection	2017	145	138	7	5.7	95.2%
	2018	2,297	2,141	156	4.5	93.2%
	2019	2,297	2,181	116	-	95%
	2020	499	439	60	-	88%
	2021	103	68	35	-	66%
	2022	**9**	**5**	**4**	**-**	**55.56%**

Recertification	2017	17,776	5,756	12,020	24.7	32.4%
	2018	6,361	4617	1,774	129	72.6%
	2019	44,770	43,991	779	14.6	98%
	2020	306	268	38	15.33	88%
	2021	187	145	42	16.69	77.54%
	2022	**Unable to determine**	**Unable to determine**	**16**	**Unable to determine**	**Unable to determine**

LMGL

The table below shows that there were registry updates for 556 new connections completed of which 36 were late, and 95.53% of updates were compliant. I checked all 36 records in detail, and I found that late updates were caused by late nomination for 11 of the 36. 10 of the late updates were due to replaced events where the original updates were on time. The remaining 15 were the result of delays in receiving and processing the certification information from the ATH.

I was unable to accurately determine the total number of updates after recertification due to duplication in the audit compliance report between AC020MEP04 (metering update after recertification) and AC020MEP01 (new MEP not a new connection). The audit compliance report identified 30 late updates. I checked all 30 records in detail, and I found that 12 were new MEP updates duplicated from AC020MEP01. Of the remaining 18 late updates, 12 were due to replaced events where the original updates were on time and six were the result of delays in receiving and processing the certification information from the ATH.

Event	Year	Total ICPs	ICPs Notified Within 10 Days	ICPs Notified Greater Than 10 Days	Average Notification Days	Percentage Compliant
New connection	2021	778	706	72	-	90.75%
	2022	**556**	520	36	**-**	**93.53%**
Recertification	2021	343	220	123	83.31	64.14%
	2022	**Unable to determine**	**Unable to determine**	**18**	**Unable to determine**	**Unable to determine**

Audit outcome

Non-compliant

Non-compliance	Description

Audit Ref: 4.10 With: Clause 3 of Schedule 11.4 From: 01-Mar-22 To: 08-Nov-22	Some records updated on the registry later than ten business days. Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	I have recorded the controls as moderate in this area because they reduce risk most of the time but there is still room for improvement, especially with new connection updates. The late updates for new connections occurred after the trader had populated their records, therefore the impact on participants, customers or settlement is minor, therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Identify reasons Why Largely due to Late Retailer Nomination , Late ATH paperwork,	30/04/2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Work with participants to improve processes	Ongoing	

4.11. Metering Infrastructure (Clause 10.39(1))

Code reference

Clause 10.39(1)

Code related audit information

The MEP must ensure that for each metering installation:

- *an appropriately designed metering infrastructure is in place,*
- *each metering component is compatible with, and will not interfere with any other component in the installation,*
- *collectively, all metering components integrate to provide a functioning system,*
- *each metering installation is correctly and accurately integrated within the associated metering infrastructure.*

Audit observation

FCLM

FCLM metering infrastructure was examined as part of this audit to confirm compliance.

TRUM

TRUM metering infrastructure was examined as part of this audit to confirm compliance.

LMGL

LMGL metering infrastructure was examined as part of this audit to confirm compliance.

Audit commentary

FCLM

FCLM metering infrastructure was examined as part of this audit, and I confirm compliance.

TRUM

TRUM metering infrastructure was examined as part of this audit, and I confirm compliance.

LMGL

LMGL metering infrastructure was examined as part of this audit, and I confirm compliance.

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

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

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

TRUM

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

LMGL

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

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

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

TRUM

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

LMGL

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

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

FCLM advised that there were no firmware or software changes during the audit period. They are currently working on a plan to update the communications firmware of their EDMI meters. Details of testing which was carried out by two Class A ATHs was provided. The testing confirmed that the planned upgrade of the communications firmware did not affect the integrity of the metering or data storage functions of the meters.

TRUM

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

LMGL

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

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

FCLM

FCLM is not responsible for any grid metering.

TRUM

TRUM is not responsible for any grid metering.

LMGL

LMGL is not responsible for any grid metering.

Audit commentary

FCLM

FCLM is not responsible for any grid metering.

TRUM

TRUM is not responsible for any grid metering.

LMGL

LMGL is not responsible for any grid metering.

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

FCLM

I checked if any NSPs where FCLM is the MEP had been temporarily electrically connected during the audit period.

TRUM

TRUM is not the MEP for any NSPs.

LMGL

LMGL is not the MEP for any NSPs.

Audit commentary

FCLM

There were no temporary electrical connections of NSPs where FCLM is the MEP during the audit period.

TRUM

TRUM is not the MEP for any NSPs.

LMGL

LMGL is not the MEP for any NSPs.

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

Clause 10.33 is also relevant to this audit because it outlines responsibilities for traders and MEPs in relation to temporary electrical connection.

FCLM

I checked for examples where the metering installation certification date was prior to the initial electrical energisation date of the ICP to determine whether there were any examples of temporary electrical connection for the purposes of testing and certification.

TRUM

I checked for examples where the metering installation certification date was prior to the initial electrical energisation date of the ICP to determine whether there were any examples of temporary electrical connection for the purposes of testing and certification.

LMGL

I checked for examples where the metering installation certification date was prior to the initial electrical energisation date of the ICP to determine whether there were any examples of temporary electrical connection for the purposes of testing and certification.

Audit commentary

FCLM

No examples of temporary electrical connection were identified.

In the last audit it was recommended that Influx update the temporary electrical connection process to include an authorisation step by the trader and network owner. Influx provided details of its response to the Authority following review of the audit which states that a blanket authorisation from the distributors and traders exists in the form of the Use of Systems Agreement and MEP/Retailer Contracts. These documents contain broad statements that the parties will conduct activities in accordance with Part 10 of the Code. I repeat the recommendation from the previous audit that Influx update its temporary electrical process and obtain an explicit blanket authorisation from both the traders and distributors.

Recommendation	Description	Audited party comment	Remedial action
Regarding clause 10.31A, 10.33 and 10.33A	Update the temporary electrical connection process and obtain an explicit blanket authorisation from both the traders and distributors.	We have provided information both to the EA and Auditor that we are compliant with the code .	Cleared

TRUM

No examples of temporary electrical connection were identified.

LMGL

No examples of temporary electrical connection were identified.

Audit outcome

Compliant

5. METERING RECORDS

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

Code reference

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

Code related audit information

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

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

Audit observation

FCLM

I checked all registry records and the certification records for 64 metering installations to evaluate compliance with this clause.

TRUM

I checked all registry records and the certification records for 19 metering installations to evaluate compliance with this clause. I also checked the latest category 1 inspection reports.

LMGL

I checked all registry records and the certification records for 20 metering installations to evaluate compliance with this clause. I also checked the latest category 1 inspection reports.

Audit commentary

FCLM

Some issues were identified with the content of certification reports and registry records. They are listed in the table below.

Quantity Nov 2022	Quantity Dec 2021	Quantity Nov 2020	Issue
5	12	0	Certification reports not provided. In many cases, job completion notes were supplied instead
21	-	-	All test results not recorded
0	1	0	Incorrect metering category
3	4	7	Incorrect ATH
0	3	0	Meter certification date and certifying ATH not recorded
0	0	0	Meter certification expiry date not recorded
30	12	4	HHR/NHH, Maximum interrogation cycle or services access interface not correctly recorded correctly
0	2	0	CT expiry date earlier than installation expiry date
1	7	4	Incorrect installation certification expiry date
0	1	0	Incorrect installation certification date
0	6	7	CT metered installations without measuring transformer information on the registry
1	4	0	Incorrect certification method
0	10	0	Validity period not recorded
8	9	0	Burden range not recorded
0	17	0	CTs recorded as certified without re-calibration

TRUM

Some issues were identified with the content of certification reports and registry records. They are listed in the table below.

Quantity Nov 2022	Quantity Dec 2021	Quantity Nov 2020	Quantity Nov 2019	Quantity April 2019	Issue
1	5	0	0	0	Certification reports not provided. In some cases, job completion notes were provided
16	-	-	-	-	All test results not recorded
0	0	0	0	0	Incorrect metering category
6	3	20	1	38	Incorrect ATH
0	11	0	0	13	Meter certification date and certifying ATH not recorded
0	0	0	0	6	Meter certification expiry date not recorded
4	1	11	0	6 (HHR/NHH)	HHR/NHH, Maximum interrogation cycle or services access interface not recorded correctly
0	0	0	0	0	CT expiry date earlier than installation expiry date
1	4	0	0	0	Incorrect installation certification expiry date
0	1	0	0	7	Incorrect installation certification date
0	0	0	-	-	CT metered installations without measuring transformer information on the registry

The inspection process identified the following incorrect TRUM data fields out of 500 inspections of TRUM and LMGL metering installations:

Quantity Nov 2022	Quantity Dec 2021	Quantity Nov 2019	Quantity April 2019	Issue
9	27	22	24	TARIFF ERROR – meter configuration discrepancy
0	0	0	19	CERT EXPIRY – Installation Expiry date incorrectly recorded
0	0	0	34	RELAY DETAILS – incorrect details in records

LMGL

Some issues were identified with the content of certification reports and registry records. They are listed in the table below.

Quantity Nov 2022	Quantity Dec 2021	Issue
15	3	Certification reports not provided. In some cases, job completion notes were provided
18	-	All test results not recorded
0	0	Incorrect metering category
2	0	Incorrect ATH
0	1	Meter certification date not recorded
0	0	Meter certification expiry date not recorded
18	1	HHR/NHH, Maximum interrogation cycle or services access interface not recorded correctly
0	0	CT expiry date earlier than installation expiry date
0	0	Incorrect installation certification expiry date
0	0	Incorrect installation certification date
0	0	CT metered installations without measuring transformer information on the registry
0	1	Certification method not recorded
0	1	Burden range not recorded

The inspection process identified the following incorrect LMGL data fields out of 500 inspections of TRUM and LMGL metering installations:

Quantity Nov 2022	Quantity Dec 2021	Issue
6	8	TARIFF ERROR – meter configuration discrepancy
0	0	CERT EXPIRY – Installation Expiry date incorrectly recorded
0	0	RELAY DETAILS – incorrect details in records

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 5.1 With: Clause 4(1) of Schedule 10.6 From: 01-Mar-22 To: 08-Nov-22	Some inaccurate or incomplete certification records. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	I have recorded the controls as moderate because there is room for improvement. There is a minor impact on other participants; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Follow up with ATHs ATHs identified have resolved most of the issues mainly related to Omnibus Changes.	30/04/2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monitor Certs	Ongoing	

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

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

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

TRUM

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

LMGL

LMGL 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

FCLM

I checked the FCLM record keeping processes to confirm compliance.

TRUM

I checked the TRUM record keeping processes to confirm compliance.

LMGL

I checked the LMGL record keeping processes to confirm compliance.

Audit commentary

FCLM

FCLM keeps metering records indefinitely.

TRUM

TRUM keeps metering records indefinitely.

LMGL

LMGL keeps metering records indefinitely.

Audit outcome

Compliant

5.4. Provision of Records to ATH (Clause 6 Schedule 10.6)

Code reference

Clause 6 Schedule 10.6

Code related audit information

If the MEP contracts with an ATH to recertify a metering installation and the ATH did not previously certify the metering installation, the MEP must provide the ATH with a copy of all relevant metering records not later than 10 business days after the contract comes into effect.

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

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

TRUM

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

LMGL

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

Audit outcome

Compliant

6. MAINTENANCE OF REGISTRY INFORMATION

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

Code reference

Clause 1(1) of Schedule 11.4

Code related audit information

Within 10 business days of being advised by the registry 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

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

The switch breach history detail report for the audit period contained 37 ICPs where the FCLM response was later than 10 business days.

TRUM

The switch breach history detail report for the audit period contained two ICPs where the TRUM response was later than 10 business days.

LMGL

The switch breach history detail report for the audit period contained one ICP where the LMGL response was later than 10 business days.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.1 With: 1(1) of Schedule 11.4 From: 01-Mar-22 To: 08-Nov-22	40 late MN files. Potential impact: Low Actual impact: None Audit history: Three times Controls: Strong Breach risk rating: 1		
Audit risk rating	**Rationale for audit risk rating**		
Low	The controls are recorded as strong because they mitigate risk to an acceptable level. There was no impact; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		**Completion date**	**Remedial action status**
Follow up in reporting as to reasons why.		Ongoing	Identified
Preventative actions taken to ensure no further issues will occur		**Completion date**	
Follow up in reporting as to reasons why.		Ongoing	

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.

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

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

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

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

Analysis of the list file and audit compliance report for the period 1 March 2022 to 8 November 2022 for all FCLM ICPs found the issues detailed in the table below:

Nov 22	Dec 21	Oct 20	Nov 19	Apr 19	Jul 18	Issue	FCLM comment
7	10	2	3	11	30	Blank metering records	Unmetered, decommissioned, meters removed or FCLM meters never installed.
0	6	3	0	0	0	Category 2 ICP recorded as Category 1	-
1	-	-	-	-	-	Incorrect Category	Corrected
2	1	1	1	0	0	Compensation factor of 3 on recently certified installations	Certification is cancelled for one and one has been displaced
0	0	0	0	0	1	ICPs over Category 1 with interim certification	-
0	0	0	0	0	15	ICPs with Y for the HHR flag but with NHH installations	-
5	2	2	1	0	1	Category 2 installations certified for more than 10 years or for zero years (cert date = expiry date)	Corrected.
1	1	0	1	0	1	Category 4 installations certified for more than 5 years	Corrected
0	0	2	2	6	3	Category 1 installations certified for more than 15 years or for zero years (cert date = expiry date)	-
5	0	0	2			Day + Night not equal to 24	Corrected
2	3	8	10	2	1	ICPs with IN24. The EA has advised that IN24 should not be used.	Corrected
0	0	0	0	0	0	ICPs with IN0	-

0	3	3	3	0	0	ICPs with UN0	-
0	**0**	1	1			ICPs with UN19	-
0	1					ICPs with UN12	-
3	0	1	1	0	0	Day without night	Corrected
3	5	5	3	3	296	Night without day	Corrected
0	0	0	0	0	3	CN only, these should have an associated code, or they could be IN	-
3,555	3,632	73	189	12	592	Controlled load with no control device	Mostly AMI not communicating EDMI meters with integrated relay.
133	276	174	195			UN only with a relay installed	Historical data not held by FCLM. Update on compliance rollout.
2	6	7	8	19	56	Installations without CT information populated on the registry	Historical data not held by FCLM. Update on compliance rollout.
1	2	2	2	0	0	Interim certification expiry dates incorrect	
0	0	0	1	2	2	Category 3 or 4 with a NHH meter installation type	-
0	6	0	3			Category 1 with CTs.	-
1	3	4	2			Certification or expiry dates incorrect	Corrected
286	11	7	-	-	-	Incorrect ATH Identifier	

TRUM

Analysis of the audit compliance report for the period 1 March 2022 to 8 November 2022 for all TRUM ICPs found the issues detailed in the table below:

Nov 22	Dec 21	Oct 20	Nov 19	Dec 18	Dec 17	Issue	TRUM Response
4,771	5,620	7,602	11,949	2	46	No control device information on the registry.	Working through these continuously - low impact numbers have reduced.
19	1	21	28	0	0	Blank metering records on the registry.	Unmetered, decommissioned, meters removed, or TRUM meters never installed.
0	0	47	47	-	-	Day + Night not equal to 24	-
0	0	0	0	0	0	Day without night.	-
0	0	1	0	0	1	Night without day.	-
0	0	0	0	0	1	UN12 - these are metered streetlights. They are likely to be NC12, but this needs to be confirmed.	-
231	270	353	488	1,474	1680	UN only with a relay installed	Working through these continuously on compliance and Legacy to Smart
0	0	2	2	0	0	HHR profile with NHH meter.	-
0	0	0	0	0	1	Category 2 with no CTs on the registry.	-
0	0	0	1	30	957	Certification or expiry dates incorrect	-
7	5	11	11	13	22	Compensation factor of 3 certified after 29/08/13.	Certification cancelled.
0	0	0	0	0	2	Category 1 with CTs.	-
22	26	30	37	58	18	CN only on residential ANZSIC code (these are all pumps and are correct)	All correct
4	2	-	-	-	-	Incorrect ATH identifier of NPOW	

LMGL

Analysis of the audit compliance report for the period 1 March 2022 to 8 November 2022 for all LMGL ICPs found the issues detailed in the table below:

Nov 22	Dec 21	Issue	LMGL Response
3,653	4,028	No control device information on the registry.	Data quality on acquisition.
3	25	Blank metering records on the registry.	Unmetered, decommissioned and investigating.
1	6	Day + Night not equal to 24	Updated.
0	0	Day without night.	-
2	1	Night without day.	1x corrected, 1x to be updated on compliance rollout.
0	0	UN without POA of 24	-
35	53	UN only with a relay installed	Data Quality
0	0	HHR profile with NHH meter.	-
0	0	Category 2 with no CTs on the registry.	-
3	12	Certification or expiry dates incorrect	All now corrected
43	0	Compensation factor of 3 certified after 29/08/13.	Certification cancelled
0	0	Category 1 with CTs.	-
0	0	CN only on residential ANZSIC code (these are all pumps and are correct)	-
86	0	Incorrect ATH identifier of VEMS instead of VCOM.	
2	-	Incorrect ATH identifier.	

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.2 With: Clause 7 (1), (2) and (3) of Schedule 11.4 From: 01-Mar-22 To: 08-Nov-22	Some registry records are incomplete or incorrect. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	I have recorded the controls as strong in this area. The number of discrepancies is very small. Very few of the discrepancies have an impact on participants, customers or settlement. The only relevant ones in this regard are tariff-related and there were only a small number. The audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Complete implementation of discrepancy reporting to identify incorrect records.	01/08/2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Discrepancy reporting actioned daily to identify and resolve issues.	01/08/2023	

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

FCLM

I conducted a walkthrough of the validation processes to confirm compliance.

TRUM

I conducted a walkthrough of the validation processes to confirm compliance.

LMGL

I conducted a walkthrough of the validation processes to confirm compliance.

Audit commentary

FCLM

FCLM runs a discrepancy report on a monthly basis; corrections are made within five days. I checked the latest report to confirm that it had been run and checked the file location to confirm that the report had been run for each month of the audit period.

TRUM

TRUM runs a discrepancy report on a nightly basis, exceptions are reported daily, and corrections are made within five days of confirming an error is present. I checked examples of recent reports to confirm the process was followed.

LMGL

LMGL runs a discrepancy report on a nightly basis, exceptions are reported daily, and corrections are made within five days of confirming an error is present. I checked examples of recent reports to confirm the process was followed.

Audit outcome

Compliant

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

Code reference

Clause 20 of Schedule 10.7

Code related audit information

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

- *a) the metering installation is modified otherwise than under sub clause 19(3), 19(3A) or 19(3C)*
- *b) the metering installation is classed as outside the applicable accuracy tolerances set out in Table 1 of Schedule 10.1, defective or not fit for purpose under this Part or any audit,*
- *c) an ATH advises the metering equipment provider responsible for the metering installation of a reference standard or working standard used to certify the metering installation not being compliant with this Part at the time it was used to certify the metering installation, or the failure of a group of meters in the statistical sampling recertification process for the metering installation, or the failure of a certification test for the metering installation,*
- *d) the manufacturer of a metering component in the metering installation determines that the metering component does not comply with the standards to which the metering component was tested,*
- *e) an inspection of the metering installation, that is required under this Part, is not carried out in accordance with the relevant clauses of this Part,*
- *f) if the metering installation has been determined to be a lower category under clause 6 and:*
    - *a. the MEP has not received the report under 6(2A)(a) or 6(2A)(b); or*

b. the report demonstrates the maximum current is higher than permitted; or
c. the report demonstrates the electricity conveyed exceeds the amount permitted,

g) the metering installation is certified under clause 14 and sufficient load is available for full certification testing and has not been retested under clause 14(4)

h) a control device in the metering installation certification is, and remains for a period of at least 10 business days, bridged out under clause 35(1)

i) the metering equipment provider responsible for the metering installation is advised by an ATH under clause 48(6)(b) that a seal has been removed or broken and the accuracy and continued integrity of the metering installation has been affected.

j) the installation is an HHR AMI installation certified after 29 August 2013 and
a. the metering installation is not interrogated within the maximum interrogation cycle; or
b. the HHR and NHH register comparison is not performed; or
c. the HHR and NHH register comparison for the same period finds a difference of greater than 1 kWh and the issue is not remediated within three business days.

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

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

Audit observation

FCLM

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.

TRUM

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.

FCLM

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

FCLM

I checked all of the points mentioned above and found the following:

Insufficient load certification

In the previous audit there was one example of a metering installation certified with insufficient load where FCLM had not conducted monitoring since certification. The certification of this installation has subsequently been cancelled and the registry has been updated. Two new examples were identified during my certification report checks, I confirmed that both had been added to the monitoring list and had been monitored each month since certification.

Lower Category certification

The previous audit identified six ICPs which were certified as a lower category and monitoring was not conducted. The certification of four of the six installations has subsequently been cancelled and the registry has been updated. The two ICPs which have not been cancelled are shown in the table below.

ICP	Compensation factor	Metering category	Certification date
0000025157EA4EA	160	2	16 July 2021
0000201030TU28D	160	2	13 May 2021

Low Burden

I checked for examples of low burden on CT metered installations. The Code requires ATHs to: *"ensure that the in-service burden on the measuring transformer is within the range specified in the certification report for the measuring transformer by installing burdening resistors to increase the in-service burden if necessary"*. One installation was certified by the Influx ATH where the burden was lower than the lowest test point that the CTs were calibrated for, and burden resistors were not added. Certification is therefore cancelled. The ICP is recorded in the table below, along with one ICP from the previous audit where certification was cancelled but the registry was not updated at the commencement of the audit.

ICP	Certification date	ATH	CT make/ model	Ratio	Rated burden	Lowest in-service burden	Comment
From previous audits							
0000616050WPE6E	16/06/2021	WELL	TWS	300/5	5VA	1.12	No burden resistors added.
From this audit							
0000530401NRCE9	6/09/2022	FCLM	TWS	150/5	2.5VA	0.33	No burden resistors added.

Inspection

I checked the registry records to identify Category 2 and above ICPs where inspections were due. There were four Category 2, 15 Category 3 and two Category 5 metering installations due to be inspected during the audit period. Inspections were not conducted, and certification was not cancelled within 10 business days for all 21 metering installations.

Maximum interrogation cycle

I checked for examples where meters were not interrogated within the maximum interrogation and the AMI flag is still "Y" and certification was not cancelled. As recorded in **section 10.5** the Influx process ensures that the AMI flag is switched to "Y" before the maximum interrogation cycle is reached, there were no examples of meters exceeding the maximum interrogation cycle.

Sum-check failure

As recorded in **section 10.9**, six ICPs failed sum-check and the cause was not remediated within three business days, therefore certification is cancelled.

TRUM

I checked all the points mentioned above and found two issues resulting in cancellation of certification, as follows:

Inspection

I checked the registry records to identify Category 2 and above ICPs where inspections were due. There were 34 Category 2 and four Category 5 metering installations due to be inspected during the audit period. Inspections were not conducted for all 38 metering installations; certification is therefore cancelled. Certification was not cancelled within 10 business days for 34 of the 38 metering installations. At the time of my analysis certification had been cancelled for a further 14 ICPs, three had been displaced by another MEP and 17 had not been cancelled.

Modification of metering installations

Clause 35 of Schedule 10.7 requires metering installation certification to be cancelled if a control device which is used for the purposes of part 15 is bridged out. Clause 19(3A) of Schedule 10.7 permits a control device that does not switch meter registers to be replaced with a control device with the same characteristics without causing automatic cancellation of certification under Clause 20(1)(a) of Schedule 10.7.

TRUM provided details of three examples of metering installations where control devices had been bridged. In one of the cases the control device was unbridged, in the second case the control device was found to be faulty and was replaced with a control device with the same characteristics. In both of these cases there was no requirement to cancel certification as the GXP profile was used. In the third case (ICP 0000900724TU04D) the ATH replaced a faulty pilot contactor with a ripple replay and did not recertify the metering installation. As the ripple relay does not have the same characteristics of the pilot contactor it replaced certification is cancelled. Non-compliance is recorded as certification was not cancelled within 10 business days.

LMGL

I checked all the points mentioned above and found two issues resulting in cancellation of certification, as follows:

Inspection

I checked the registry records to identify Category 2 and above ICPs where inspections were due. There were three Category 3 metering installations due to be inspected during the audit period. Inspections were not conducted, and certification was not cancelled within 10 business days for all three metering installations.

Invalid statistical sampling certification

The previous audit identified 22,547 ICPs with invalid statistical sampling certification for which certification had not been cancelled. LMGL subsequently cancelled the certification of the vast majority of these metering installations. I found that there were eight metering installations at active ICPs that had been missed and were not cancelled at the time of my analysis, these are detailed in the table below.

ICP	Metering installation number	Certification date	Certification expiry date	Certification number
0000001902NT842	1	10 September 2018	10 September 2023	LMGSS_201809
0000013175MOD98	2	19 October 2020	24 August 2027	LMG_SS_20120-10
0000013700MO38C	2	19 October 2020	24 August 2027	LMG_SS_2020-10
0000021045MO108	2	19 October 2020	24 August 2027	LMG_SS_2020-10
0000247211MP58E	1	10 September 2018	10 September 2023	LMG_SS_201809

0000438348MP86D	1	10 September 2018	10 September 2023	LMG_SS_201809
0000766240HBED8	1	10 September 2018	10 September 2023	LMG_SS_201809
0006591507ALA43	1	19 October 2020	24 August 2027	LMG_SS_202010

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.4 With: Clause 20 of Schedule 10.7 From: 01-Mar-22 To: 08-Nov-22	Certification cancelled and registry not updated for: • two installations certified as a lower category but not monitored, • two installations not fit four purpose due to low burden, • 58 installations without inspections conducted by the due date, • six installations with sum-check failures not remediated within three business days, • one control device replaced with device did not have the same characteristics, and • eight metering installations with invalid statistical sampling certification. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	I have recorded the controls as moderate in this area as there is room for improvement with missed inspections. The responsibility for the MEP is to cancel certification on the registry once they know certification is cancelled and the impact of not doing this is minor, therefore the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Cancel all certs identified in the Audit. All cat 2 + certs checked by the compliance team before being processed by the CER team to capture technical issues. Ensure work orders are created for all ICPs cancelled.	30/04/2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	

Follow up with the EA as to a process for exemptions on ICPs missed inspections due to reasons out of our control. Examples Covid, Cyclone Gabrielle. Upgrade monitoring system for lower category monitoring. Sum check reporting process improvements to capture cancellation requirements.	01/08/2023	

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

FCLM

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 FCLM not using the prescribed form.

TRUM

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 TRUM not using the prescribed form.

LMGL

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 LMGL not using the prescribed form.

Audit commentary

FCLM

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

TRUM

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

LMGL

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

Audit outcome

Compliant

7. CERTIFICATION OF METERING INSTALLATIONS

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

Code reference

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

Code related audit information

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

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

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

Influx provided a copy of their compliance plan for all three participant codes. The plan includes quantities per year where recertification is required by statistical sampling or by replacement.

FCLM

1,190 ICPs have expired or cancelled certification. The table below gives a breakdown of these.

Nov 2022	Dec 2021	Oct 2020	Nov 2019	April 2019	Jul 2018	Sep 2017	Description
283	302	702	826	896	1,118	1,648	Expired interim certification
751	735	1607	1507	1,572	1800	1,539	Expired full certification (Category 1)
122	192	137	52	50	67	39	Expired full certification (Category 2)
0	1	1					Expired alternative certification (Category 2)
1	0	2	0	2	2	0	Expired full certification (Category 3)
4	0	0	1	1	0	0	Expired full certification (Category 4)
4	0	0	1	0	0	0	Cancelled certification due to overdue inspections (Category 2)
15	0	0	1	5	0	0	Cancelled certification due to overdue inspections (Category 3,4 & 5)
2	6	0	3	5	7	9	Cancelled certification due to certification as a lower category and monitoring not conducted
2	1	11	3	17	0	0	Cancelled due to low burden
0	1						Cancelled certification due to certification as a lower category and the consumption threshold exceeded
0	1						Cancelled certification due to insufficient load certification without monitoring
0	11						Invalid statistical sampling certification
6	19						Sum-check failures not remediated within three business days
1,190	**1,269**	**2,549**	**2,395**	**2,558**	**2,995**	**3,236**	**Total**

TRUM

The registry shows 2,215 ICPs have expired or cancelled certification. The table below gives a breakdown of these.

Quantity 2022	Quantity 2021	Quantity 2020	Quantity 2019	Description
0	0	1	2	Interim certified without another MEP nominated
1	0	0	1	Interim certified with another MEP nominated
320	379	126	37	Cancelled or expired Category 2 installations
2	4	-	-	Cancelled or expired Category 3 installations
0	2	-	-	Cancelled or expired Category 5 installations
34	17	9	19	Cancelled Category 2 due to inspections not conducted within the allowable window
0	0	0	1	Cancelled Category 4 due to inspection not conducted within the allowable window

1				Cancelled Category 1 due to modification of metering installation
4	-	-	-	Cancelled Category 5 due to inspection not conducted within the allowable window
1,854	1,014	26	13	Category 1 fully certification expired
2,216	**1,402**	**162**	**73**	**Total**

LMGL

20,396 ICPs have cancelled or expired certification. The table below gives a breakdown of these.

Quantity 2022	Quantity 2021	Description
6	6	Cancelled certification due to late inspections
3	-	Cancelled Category 3 due to inspection not conducted within the allowable window
6	6	Cancelled or expired Category 2 installations
1,107	137	Category 1 full certification expired
19,274	22,547	Cancelled certification due to invalid statistical sampling
20,396	**22,696**	**Total**

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 7.1 With: Clause 10.38 (a), clause 1 and clause 15 of Schedule 10.7 From: 01-Mar-22 To: 08-Nov-22	Certification cancelled or expired for 25,071 ICPs. Potential impact: High Actual impact: High Audit history: Multiple times Controls: Moderate Breach risk rating: 6
Audit risk rating	**Rationale for audit risk rating**
High	I have recorded the controls as moderate in this area because certification has been expired for a number of years for some ICPs and because some of the expired installations were fully certified at one point. The controls for FCLM and TRUM for Category 1 certification appear to be sound but the LMGL controls appear weak and 79% of ICPs have cancelled or expired certification. The impact on settlement is recorded as high because of the increased likelihood of failure or inaccuracy for metering installations with expired certification, therefore the audit risk rating is high.

Actions taken to resolve the issue	Completion date	Remedial action status
Comprehensive plan submitted to the E.A Data quality Sample testing Legacy to AMI commenced.	Ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Compliance plan composes replacement , stat sampling over the next three years.	Ongoing	

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

Code reference

Clause 10.38(b) and clause 9 of Schedule 10.6

Code related audit information

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

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

Audit observation

FCLM

I checked the certification records for 64 metering installations to confirm compliance.

TRUM

I checked the certification records for 19 metering installations to confirm compliance.

LMGL

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

Audit commentary

FCLM

Certification activities have been conducted by the Accucal, AMS, Delta, Influx and Wells ATHs.

Category 2 and above certification tests

The certification records for all 38 Category 2 and above metering installations included test results which confirmed that all required testing had been completed. There was one example certified by the Influx ATH at ICP 0000046802NTEB3 where the load during testing was recorded as 5.92A. Non-compliance is recorded as this does not meet the minimum load requirement of 10 amps.

Category 1 certification tests

I checked a sample of 26 Category 1 certification records to confirm if all required testing had been completed. The certification records included confirmation that testing had been conducted. As recorded

in **section 5.1** there were a number of certification records with inaccurate or missing information including the results of testing conducted by the Delta and Influx ATHs.

TRUM

Category 1 certification activities have been conducted by the Delta, Influx and Wells ATHs.

I checked a sample of 19 Category 1 certification records to confirm if all required testing had been completed. The certification records included confirmation that testing had been conducted. As recorded in **section 5.1** there were a number of certification records with inaccurate or missing information including the results of testing conducted by the AMS, Delta and Influx ATH.

LMGL

Certification activities have been conducted by the Accucal, Delta, Influx and AMS ATHs.

Category 1 certification tests

I checked a sample of 19 Category 1 certification records to confirm if all required testing had been completed. The certification records included confirmation that testing had been conducted. As recorded in **section 5.1** there were a number of certification records with inaccurate or missing information including the results of testing conducted by the AMS, Delta and Influx ATHs.

Category 2 certification tests

The certification record for one Category 2 metering installation included test results which confirmed that all required testing had been completed.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 7.2 With: Clause 10.38(b) and clause 9 of Schedule 10.6 From: 01-Mar-22 To: 08-Nov-22	Minimum load requirement for certification tests not met during one Category 2 certification. All test results not recorded in 55 certification records. Potential impact: Low Actual impact: Low Audit history: Once Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as strong because sufficient testing is conducted to ensure the installation is accurate. The impact is low as the accuracy of the metering installation is unlikely to have been impacted by the minimum load requirement not being met, the audit risk rating is low.
Actions taken to resolve the issue	**Completion date** / **Remedial action status**

Follow up with ATHs ATHs identified have resolved most of the issues mainly related to Omnibus Changes.	30/04/2023	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Monitor Certs	Ongoing	

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

FCLM

All relevant metering is compliant with this clause.

TRUM

All relevant metering is compliant with this clause.

LMGL

All relevant metering is compliant with this clause.

Audit commentary

FCLM

All relevant metering is compliant with this clause.

TRUM

All relevant metering is compliant with this clause.

LMGL

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

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

There are no examples of burden changes having occurred.

TRUM

There are no examples of burden changes having occurred.

LMGL

There are no examples of burden changes having occurred.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

If a meter is certified in this manner:

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

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

34 category 2 metering installations have CT ratios above 500/5. I confirmed that 21 of these had appropriate protection in place to limit the maximum current to less than 500A.

I checked the recent monitoring reports and confirmed that monitoring is conducted correctly each month for the remaining metering installations, and I found there are five ICPs which were identified in the previous audit as not monitored following certification at a lower category. The certification of three of the five installations has subsequently been cancelled and the registry has been updated. Non-compliance is recorded in **section 6.4** for the two ICPs which have not had certification cancelled on the registry cancelled. Non-compliance is recorded in this section for all five ICPs where monitoring has not been conducted.

ICP	Compensation factor	Metering category	Certification date	Certification cancelled on registry
0000025157EA4EA	160	2	16 July 2021	No
0085261336LC2A3	120	2	6 June 2017	10 February 2023
0001148945WA829	120	2	23 April 2021	10 February 2023
0000201030TU28D	160	2	13 May 2021	No
0000025613EA847	240	2	29 June 2021	10 February 2023

TRUM

Nine category 2 metering installations have CT ratios above 500/5. The certification records for all nine installations were checked in previous audits, and it was confirmed that appropriate protection is in place to limit the maximum current to less than 500A.

LMGL

One category 2 metering installation at ICP 0001501996ENB0C has 1200/5 CTs. Monitoring is not conducted, and certification is cancelled in the registry.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 7.6 With: Clauses 6(1)(b) and (d), and 6(2)(b) of Schedule 10.7 From: 01-Mar-22 To: 08-Nov-22	Certification cancelled for six ICPs where certification as a lower category monitoring is not conducted. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. 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
Cancel certs for ICPs identified.	30/04/2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Upgrade monitoring system for lower category monitoring	01/08/2023	

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

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

I found two examples of insufficient load certification during my certification report checks. Both certification reports included a statement from the ATH advising the MEP of the requirement to monitor monthly and advise when load is available. FCLM demonstrated that monitoring is in place as required by this clause and both examples had been added to the monitoring list and monitoring had been taken place each month.

I confirmed that the metering installation at ICP 0003133800AA2B3 which was cancelled at the time of the last audit due to monitoring not being conducted was recertified in January 2022 with sufficient load.

TRUM

TRUM does not allow certification in accordance with this clause. Load banks are required to be used to increase the load to conduct testing. My checks of recent certifications did not identify any installations certified with insufficient load.

LMGL

LMGL does not allow certification in accordance with this clause. Load banks are required to be used to increase the load to conduct testing. My checks of recent certifications did not identify any installations certified with insufficient load.

Audit outcome

Compliant

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

Code reference

Clause 14(6) of Schedule 10.7

Code related audit information

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

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

Audit observation

FCLM

Two metering installations were certified with insufficient load, but testing has not yet been conducted.

TRUM

TRUM has not conducted monitoring of insufficient load certifications.

LMGL

LMGL has not conducted monitoring of insufficient load certifications.

Audit commentary

FCLM

Two metering installations were certified with insufficient load, but testing has not yet been conducted.

TRUM

TRUM has not conducted monitoring of insufficient load certifications.

LMGL

LMGL has not conducted monitoring of insufficient load certifications.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

Alternative certification was applied to the metering installations at four NSPs due to access issues during the audit period. In all four cases the certification records contained appropriate details and notification was sent to the Authority using the prescribed form within 10 business days.

TRUM

Alternative certification has not been applied to any metering installations during the audit period.

LMGL

Alternative certification has not been applied to any metering installations during the audit period.

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

FCLM

I asked FCLM whether there were any metering installations with time switches switching meter registers or any AMI metering installations with time dependant register content codes where the AMI flag had been changed to "N" for more than 12 months.

TRUM

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

LMGL

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

Audit commentary

FCLM

FCLM has some Landis + Gyr meters with internal time clocks. FCLM is in the process of replacing these meters, of which there are currently nine. A decrease of 22 from the 31 identified in the last audit. The time error has not been monitored and corrected every 12 months for all nine meters.

FCLM has AMI meters with configurations using multiple registers that are remotely monitored to meet the requirements of Clause 8(4) of Schedule 10.6. In cases where AMI meters fail to communicate the MEP switches the AMI flag in the registry to "N" to avoid cancellation of certification. When the meter is not communicating its time is no longer monitored and it becomes subject to the requirements of this clause if there are registers switched by the time of meter. 76 ICPs with time dependent register content codes where the AMI flag had been changed to "N" due to an inability to communicate for more than 12 months were identified. I have recorded non-compliance for these ICPs as the requirement to monitor and correct time at least once every 12 months has not been met.

I recommend that FCLM develops a process to identify meters which become subject to the timekeeping Requirements of Clause 23 of Schedule 10.7 and ensure the time is monitored and corrected as required.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 23 of Schedule 10.7	Develop a process to identify AMI meters which become subject to the timekeeping requirements of Clause 23 of Schedule 10.7 and ensure the time is monitored and corrected as required.	Landis & Gyr meters remaining are on our UTI list after many attempts to change the meters. There is little impact on the market as they are using a RPS profile. We will be working with the retailers to change their content codes to UN24. AMI meters - Influx Energy has a modem upgrade project in place to visit all non-communicating meters in 2023. This process involves time check obligations. Storm mobile tool to be investigated for use of time checks and correction after modem upgrade.	Identified

TRUM

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

LMGL

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

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 7.10 With: Clause 23 of Schedule 10.7 From: 01-Dec-20 To: 27-Jan-22	85 meters with time dependent registers with time are not monitored every 12 months. Potential impact: Low Actual impact: Low Audit history: Three times previously Controls: None Breach risk rating: 5		
Audit risk rating	**Rationale for audit risk rating**		
Low	I have recorded the controls as none as there isn't a process in place to check the time setting on these meters. The impact on settlement and participants could be minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		**Completion date**	**Remedial action status**

Influx Energy has a modem upgrade project in place to visit all non-communicating meters in 2023. This process involves time check obligations.	Dec 24	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Seek clarification from the E.A to confirm requirements of the code. We believe it will be highly likely that there are several reasons for not being able to carry out this check. Eg main switches turned off, vacant. Do we then treat them as control certification not compliant and change register content codes to UN24 and change the control certification flag to N. This will then remove any risk to market submissions. Investigate Storm mobile as a tool to carry out checks post modem project.	01/11/2023	

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

FCLM

I checked the process for the management of bridged control devices, and I checked whether any notifications were required to other parties.

TRUM

I checked the process for the management of bridged control devices, and I checked whether any notifications were required to other parties.

LMGL

I checked the process for the management of bridged control devices, and I checked whether any notifications were required to other parties.

Audit commentary

FCLM

FCLM has a process for dealing with control devices which have been bridged out. If any are bridged out for more than 10 business days, they notify as required by this clause. There were no recent examples to review.

TRUM

TRUM has a process for dealing with control devices which have been bridged out, which is that they are immediately resolved. The records for three ICPs showed that the reconciliation participant was notified within 10 business days. None of the control devices were used for load or time switching profiles.

LMGL

LMGL has a process for dealing with control devices which have been bridged out, which is that they are immediately resolved. There were no recent examples to review.

Audit outcome

Compliant

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

Code reference

Clause 34(5) of Schedule 10.7

Code related audit information

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

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

Audit observation

FCLM

I checked the steps FCLM had taken to identify regions with signal propagation issues.

TRUM

I checked the steps TRUM had taken to identify regions with signal propagation issues.

LMGL

I checked the steps LMGL had taken to identify regions with signal propagation issues.

Audit commentary

FCLM

FCLM has not been advised of any areas by the ATHs.

TRUM

TRUM has not been advised of any areas by the ATHs.

LMGL

LMGL has not been advised of any areas by the ATHs.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

FCLM engaged the Influx ATH to conduct statistical sampling of a population of 6,104 ICPs containing EDMI Mk7A, Mk7C and Mk10D Class 1 meters. The population was selected to include meters likely to pass testing and a check was conducted to ensure the sample matched the population. The sample passed testing and certification has been applied for seven years. Table 5 of AS/NZS 1284 states that Class 1 meters can be recertified for a maximum period of five years. The ATH has treated the meters as "General purpose" and has applied a certification period of seven years. I have recorded non-compliance as the ICPs have been certified for longer than the maximum period specified by the standard. I have also raised this as an issue for the Authority to consider amending the Code to ensure that an MEP is not disadvantaged for using meters with an accuracy class higher than the minimum class required by the Code. I also suggest that the Authority consider whether AS/NZS 1284 is still fit for purpose and whether a more appropriate process can be included in or prescribed by the Code.

Issue	Description
Regarding: Clause 16 of schedule 10.7	I recommend that the Authority consider amending the Code to ensure that an MEP is not disadvantaged when using meters with an accuracy class higher than the minimum class required by the Code. I also suggest that the Authority consider whether AS/NZS 1284 is still fit for purpose and whether a more appropriate process can be included in or prescribed by the Code.

TRUM

TRUM has not conducted statistical sampling during the audit period.

LMGL

LMGL has not conducted statistical sampling during the audit period. As recorded in **sections 6.4** and **7.1**, statistical sampling conducted in earlier years is invalid and certification is cancelled.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 7.13 With: Clause 16(1) of Schedule 10.7 From: 07-Sep-22 To: 28-Feb-23	Incorrect certification period of seven years applied to 6,104 ICPs certified using the statistical recertification method. Potential impact: None Actual impact: None Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	I have rated the controls as moderate as the statistical sampling process used is robust apart from the determination of the certification period. There is likely to be no impact as the meters used are of a higher class than required by the Code for use in Category 1 metering installations and the calibration results have confirmed their accuracy. The audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Application for a Rule change with the EA by ATH	17/04/2023	Investigating
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Historically sample test has contained both induction and electronic meters with a mix of class 1&2 and been given a maximum of 7 years. Albeit the standard says 5 years for electronic meters. The sample test is only for category one and therefore the purpose and results should be aligned with category one.	Ongoing	

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

FCLM

I checked the records for 38 Category 2 and above metering installations to confirm that compensation factors were correctly recorded on the registry. I checked the audit compliance report for invalid compensation factors.

TRUM

All certification conducted during the audit period was for Category 1 installations. I checked the audit compliance report for invalid compensation factors.

LMGL

One Category 3 installation was certified during the audit period and the compensation factor is correct. I checked the audit compliance report for invalid compensation factors.

Audit commentary

FCLM

Compensation factors were updated accurately on the registry for the 38 ICPs checked. No examples of incorrect compensation factors were identified by the audit compliance report.

Following the non-compliance identified in the last audit where six ICPs were found to have incorrect compensation factors FCLM has checked and confirmed the accuracy of all compensation factors and added discrepancy reporting to identify any errors.

TRUM

Compensation factors have been updated accurately on the registry. I confirmed this by checking the records for two ICPs.

LMGL

One Category 3 installation was certified during the audit period and the compensation factor is correct. I checked the audit compliance report for invalid compensation factors, and none were found.

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

FCLM

I checked the certification records for 64 metering installations to confirm compliance.

TRUM

I checked the certification records for 19 metering installations to confirm compliance.

LMGL

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

Audit commentary

FCLM

Meters were certified for all 64 installations.

TRUM

Meters were certified for all 19 installations.

LMGL

Meters were certified for all 20 installations.

Audit outcome

Compliant

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

Code reference

Clause 28(1) of Schedule 10.7

Code related audit information

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

Audit observation

FCLM

I checked the certification records for 11 Category 2 and above metering installations certified using the selected component and fully calibrated methods to confirm compliance.

TRUM

Only Category 1 certification was conducted during the audit period.

LMGL

I checked the certification records for the one Category 3 metering installation certified during the audit period to confirm compliance.

Audit commentary

FCLM

Measuring transformers were certified for all 11 Category 2 and above metering installations certified using the selected component and fully calibrated methods.

TRUM

Only Category 1 certification was conducted during the audit period.

LMGL

Measuring transformers were certified for the one installation.

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

FCLM

I checked the certification records for 64 metering installations to confirm compliance.

TRUM

TRUM did not certify any metering installations containing data storage devices during the audit period.

LMGL

I checked the certification records for one Category 3 metering installation to confirm compliance.

Audit commentary

FCLM

The 64 certification records that I checked confirmed that the data storage devices are being correctly certified.

FCLM conducted statistical sampling of a population of 6,104 ICPs containing EDMI Mk7A, Mk7C and Mk10D Class 1 meters with integrated data storage devices. As the Code is unclear on the requirements for certification of data storage devices when statistical recertification is conducted, I have raised this as an issue to be considered by the Authority.

Issue	Description
Regarding: Clause 36(1) of Schedule 10.7	Certification of data storage devices when statistical recertification is conducted. The code requires an MEP to ensure that each data storage device incorporated in a metering installation is certified. It is unclear how this should be applied when conducting recertification by statistical recertification under clause 16 of Schedule 10.7.

TRUM

TRUM did not certify any metering installations containing data storage devices during the audit period.

LMGL

The certification record that I checked confirmed that the data storage device was 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

FCLM

I checked the ATH register to confirm compliance.

TRUM

I checked the ATH register to confirm compliance.

LMGL

I checked the ATH register to confirm compliance.

Audit commentary

FCLM

All relevant ATHs have appropriate approval.

TRUM

All relevant ATHs have appropriate approval.

LMGL

All relevant ATHs have appropriate approval.

Audit outcome

Compliant

7.19. Interim Certification (Clause 18 of Schedule 10.7)

Code reference

Clause 18 of Schedule 10.7

Code related audit information

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

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

There are 283 previously interim certified metering installations with expired certification.

TRUM

There is one previously interim certified metering installation with expired certification.

LMGL

As recorded in **sections 6.4** and **7.1** there are 19,274 installations with invalid statistical sampling certification. Most of these installations had interim certification, which is effectively still in place.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 7.19 With: Clause 18 of Schedule 10.7 From: 01-Apr-15 To: 08-Nov-22	283 FCLM ICPs with expired interim certification. One TRUM ICP with expired interim certification. 19,274 LMGL ICPs where most have expired interim certification. Potential impact: High Actual impact: Medium Audit history: Multiple times Controls: Moderate Breach risk rating: 4
Audit risk rating	**Rationale for audit risk rating**
Medium	I have recorded the controls as moderate in this area because certification has been expired for almost eight years for these ICPs. The impact on settlement is recorded as moderate because of the increased likelihood of failure or inaccuracy for metering installations with expired certification, therefore the audit risk rating is medium.

Actions taken to resolve the issue	Completion date	Remedial action status
Duplicated as per uncertified	ongoing	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Duplicated as per uncertified	Ongoing	

8. INSPECTION OF METERING INSTALLATIONS

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

Code reference

Clause 45 of Schedule 10.7

Code related audit information

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

- *have been inspected by an ATH within 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

FCLM

FCLM does not intend to commence Category 1 inspections through sampling. They intend to re-certify installations rather than do inspections.

TRUM

I checked whether TRUM had conducted sample inspections for Category 1 metering installations.

LMGL

I checked whether LMGL had conducted sample inspections for Category 1 metering installations.

Audit commentary

FCLM

FCLM does not intend to commence Category 1 inspections through sampling. They intend to re-certify installations within 120 months rather than do inspections.

TRUM

TRUM had completed Category 1 inspections through statistical sampling. I checked the inspection process and the associated reporting, which confirms compliance with the Code.

LMGL

LMGL had completed Category 1 inspections through statistical sampling. I checked the inspection process and the associated reporting, which confirms compliance with the Code.

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

FCLM

I checked the registry information to confirm which ICPs were due for inspection, and I then checked the inspection records for all relevant ICPs.

TRUM

I checked the registry information to confirm which ICPs were due for inspection, and I then checked the inspection records for all relevant ICPs.

LMGL

I checked the registry information to confirm which ICPs were due for inspection, and I then checked the inspection records for all relevant ICPs.

Audit commentary

FCLM

As recorded in **section 6.4**, inspections were not conducted within the allowable window for four Category 2, 15 Category 3 and two Category 5 metering installations.

TRUM

As recorded in **section 6.4**, inspections were not conducted within the allowable window for 34 Category 2 and four Category 5 metering installations.

LMGL

As recorded in **section 6.4**, inspections were not conducted within the allowable window for three Category 3 metering installations.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 8.2 With: Clause 46(1) of Schedule 10.7 From: 01-Mar-22 To: 08-Nov-22	**FCLM** Inspections not conducted within the allowable window for four Category 2, 15 Category 3 and two Category 5 metering installations. **TRUM** Inspections not conducted within the allowable window for 34 Category 2 and four Category 5 metering installations. **LMGL** Inspections not conducted within the allowable window for three Category 3 metering installations. Potential impact: Medium Actual impact: Low Audit history: Three times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. The impact on settlement and participants could be minor; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status

Updated all category 2 ICPs to have an expiry date of 10Yeas as we no longer carry out cat 2 inspections. Cat 3 plus certs cancelled for inspections not carried out post covid and work orders sent to recertify.	30/04/2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Follow up with the EA as to a process for exemptions on ICPs missed inspections due to reasons out of our control. Examples Covid, Cyclone Gabrielle. 01/08/2023 Implement changes to ensure scheduling and completion of work is actioned in the timeframes required for cat 3 plus inspections.	01/08/2023	

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

Code reference

Clause 44(5) of Schedule 10.7

Code related audit information

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

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

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

FCLM reviews and updates records as required following inspections.

TRUM

The inspection report information was checked against TRUM's records within the required timeframe.

LMGL

The inspection report information was checked against LMGL's records within the required timeframe.

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

FCLM

I checked two examples of category 1 installations which had seals removed and the meters were bridged.

TRUM

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

LMGL

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

Audit commentary

FCLM

The FCLM process requires that all unsealed meters are tested by the ATH and recertified if required. There were no examples of broken or removed seals available from the audit period to examine.

TRUM

During the inspections of 500 TRUM and LMGL Category 1 metering installations 49 examples of missing component seals were found. In all cases re-sealing occurred after a check of the integrity of the installation.

LMGL

During the inspections of 500 TRUM and LMGL Category 1 metering installations 49 examples of missing component seals were found. In all cases re-sealing occurred after a check of the integrity of the installation.

I checked three examples where the field technician found unsealed LMGL meters whilst conducting inspection of category 1 installations. In all three cases an investigation was conducted on-site, and the meters were re-sealed on the same day.

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

FCLM

I checked the process for the management of faulty metering. There were no examples to examine.

TRUM

I checked six examples of faulty Category 1 metering installation investigations; the meters had stopped or the displays were faulty for five examples. In one example the meter had been bridged by the distributor.

LMGL

I checked the process for the management of faulty metering. There were no examples to examine.

Audit commentary

FCLM

The process for the management of faulty metering is compliant. The same process is used as for TRUM, which confirms compliance.

TRUM

In all six examples the faulty metering installations were investigated and recertified. Notification was provided to the traders within 20 business days for all six examples.

LMGL

The process for the management of faulty metering is compliant. The same process is used as for TRUM, which confirms compliance.

Audit outcome

Compliant

9.2. Testing of Faulty Metering Installations (Clause 10.44)

Code reference

Clause 10.44

Code related audit information

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

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

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

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

Audit observation

FCLM

I checked the process for the management of faulty metering. There were no examples to examine.

TRUM

I checked six examples of faulty Category 1 metering installation investigations; the meters had stopped or the displays were faulty for five examples. In one example the meter had been bridged by the distributor.

LMGL

I checked the process for the management of faulty metering. There were no examples to examine.

Audit commentary

FCLM

The process for the management of faulty metering is compliant. The same process is used as for TRUM, which confirms compliance.

TRUM

In all six examples the faulty metering installations were investigated and recertified. Notification was provided to the traders within 20 business days for all five examples. The forms completed in the field by the ATHs contain sufficient information to report to relevant parties and meet the requirement for the provision of a statement of situation.

LMGL

The process for the management of faulty metering is compliant. The same process is used as for TRUM, which confirms compliance.

Audit outcome

Compliant

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

Code reference

Clause10.46(2)

Code related audit information

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

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

Audit observation

FCLM

I checked the processes in place where FCLM had become aware of faulty metering installations.

TRUM

I checked six examples of faulty Category 1 metering installation investigations; the meters had stopped, or the displays were faulty for five examples. In one example the meter had been bridged by the distributor.

LMGL

I checked the processes in place where LMGL had become aware of faulty metering installations.

Audit commentary

FCLM

The statements of situation were all provided within the appropriate timeframes for TRUM. The same process is used for FCLM, which confirms compliance.

TRUM

The statements of situation were all provided within the appropriate timeframes.

LMGL

The statements of situation were all provided within the appropriate timeframes for TRUM. The same process is used for LMGL, which confirms compliance.

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

FCLM

I checked the processes in place where FCLM had become aware of faulty metering installations. There were no examples to examine.

TRUM

I checked six examples of faulty Category 1 metering installation investigations; the meters had stopped, or the displays were faulty for five examples. In one example the meter had been bridged by the distributor.

LMGL

I checked the processes in place where LMGL had become aware of faulty metering installations. There were no examples to examine.

Audit commentary

FCLM

The process for the management of faulty metering is the same process is used as for TRUM.

TRUM

The required timeframe for an MEP to complete remedial action is within 10 business days of the date it is required to provide a report to participants under 10.43(4)(c). Clause 10.43(5) specifies the time period for providing the report as 20 business days after becoming aware of the event or circumstance for a Category 1 metering installation. Therefore, to achieve compliance with these clauses the remedial work must be completed within 30 business days of TRUM receiving notification of bridging of meters. I have recorded non-compliance as three of six examples of faulty meters were not remedied within 30 days.

ICP	Notification date	Completed date	Business days
0005502378ML81A	13 December 2022	21 February 2023	44
0006611903ML4E7	20 December 2022	20 February 2023	38
0008805107MLBD8	30 September 2022	18 November 2022	34

LMGL

The process for the management of faulty metering is the same process is used as for TRUM.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 9.4 With: Clause 46A From: 12-Nov-22 To: 21-Feb-23	Remedial action not completed in required timeframe after notification of a faulty metering installation for three ICPs. Potential impact: Low Actual impact: Low Audit history: None Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	I have recorded the controls as moderate as there is room for improvement. The impact on settlement and participants is minor based on the number of ICPs affected; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Field service Resource constraints identified	30/04/2023	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Building field services capacity via ATH	Ongoing	

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 one business day and include the date of bridging in its advice.

Audit observation

FCLM

I checked for examples of bridged meters.

TRUM

I checked for examples of bridged meters.

LMGL

I checked for examples of bridged meters.

Audit commentary

FCLM

FCLM does not bridge meters as an MEP, the FCLM process requires faulty meters to be replaced.

TRUM

TRUM provided details of one example where a faulty Category 1 meter had been bridged by the distributor. TRUM replaced the meter and recertified the metering installation within two days of receiving the notification. TRUM does not bridge meters as an MEP.

LMGL

LMGL does not bridge meters as an MEP, the LMGL process requires faulty meters to be replaced.

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

FCLM

I checked whether any parties had requested access to raw meter data. I checked the processes for handling and provision of raw meter data.

TRUM

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

LMGL

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

Audit commentary

FCLM

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

In previous audits non-compliance was recorded as some data sent to Meridian was rounded from three to zero decimal places. This issue has now been resolved, FCLM now sends both the complete raw meter data and the rounded data. The data is clearly labelled to distinguish between the raw meter data and altered data, compliance is now recorded.

TRUM

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

LMGL

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

Audit outcome

Compliant

10.2. Restrictions on Use of Raw Meter Data (Clause 2 of Schedule 10.6)

Code reference

Clause 2 of Schedule 10.6

Code related audit information

The MEP must not give an authorised person access to raw meter data if to do so would breach clause 2(1) of Schedule 10.6.

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

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

TRUM

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

LMGL

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

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

- *a gaining MEP.*

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

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

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

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

TRUM

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

LMGL

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

Audit outcome

Compliant

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

Code reference

Clause 3(5) of Schedule 10.6

Code related audit information

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

Audit observation

FCLM

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

TRUM

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

LMGL

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

Audit commentary

FCLM

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

TRUM

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

LMGL

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

Audit outcome

Compliant

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

Code reference

Clause 8 of Schedule 10.6

Code related audit information

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

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

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

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

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

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

FCLM

I requested reporting on interrogation cycle to confirm compliance.

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

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit commentary

FCLM

I checked a report sent by FCLM which detailed the status of non-communicating meters. The FCLM process is that this report is run daily and any meters that have not communicated have the AMI flag changed to "N". My analysis of the report confirmed that all meters with an AMI flag of "Y" were interrogated within the maximum interrogation cycle.

Data is stored indefinitely, and this was confirmed by checking some historic data.

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit outcome

Compliant

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

Code reference

Clause 10.15(2)

Code related audit information

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

Audit observation

FCLM

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

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit commentary

FCLM

All data is secure, and any transmission is via SFTP, or password protected email.

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit outcome

Compliant

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

Code reference

Clause 8(4) of Schedule 10.6

Code related audit information

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

Audit observation

FCLM

I conducted a walkthrough of the management of time errors, and I checked the relevant reports.

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit commentary

FCLM

The MEP must ensure that a data storage device in a metering installation does not exceed the maximum time error set out in Table 1 of clause 8(5) of Schedule 10.6. The MEP must compare the time on the internal clock of the data storage device with the time on the interrogation and processing system clock, calculate and correct (if required by this provision) any time error, and advise the affected reconciliation participant. The relevant part of this table is shown below:

Metering Installation Category	HHR Metering Installations (seconds)	NHH Metering Installations (seconds)
1	±30	±60
2	±10	±60

During interrogation, the system time is compared to the data logger time. MultiDrive and Storm automatically adjust any clock errors up to the appropriate pre-set value. Errors over the threshold are investigated and the time is adjusted manually unless fieldwork is required to resolve an issue.

The event information supplied to FCLM by EDMI contains clock adjustment information and this is sent to retailers as required by this clause.

I checked the most recent reports for time errors greater than the prescribed limits. The reports contained 78 examples between November 2022 and January 2023.

This clause is clear that when errors are outside the threshold, compliance is not achieved. The exact text is as follows:

"A metering equipment provider must ensure that a data storage device in a metering installation for which it is responsible for interrogating does not exceed the maximum time error set out in Table 1 of sub-clause (5)."

EDMI provides data in NZST and FCLM converts to NZDT in the MDX Processing Application. I checked this in the system and confirm it is operating as expected.

I examined the situation where clocks are fast by more than one trading period to confirm what happens to the data in those trading periods. EDMI confirmed that the data would need to be manually apportioned to prior periods. This will be a rare event, but EDMI and FCLM have a process in place to deal with this if required.

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 10.7 With: Clause 8(4) of Schedule 10.6 From: 03-Nov-22 To: 11-Jan-23	Clock errors greater than the threshold for 78 ICPs. Potential impact: Low Actual impact: None Audit history: Three times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	The controls are recorded as strong because interrogation is attempted daily, and clock errors are addressed during all interrogations. The errors were all small and none were across a trading period, therefore there is no impact on participants or settlement. The audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Time adjusted when identified as outside tolerances	At the time	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Time adjusted when identified as outside tolerances	At the time	

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

FCLM

I conducted a walkthrough of the event management process, and I checked the most recent reports sent to all relevant retailers.

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit commentary

FCLM

The FCLM process includes a step where the event logs are opened daily from the location where they are automatically stored. The events are reviewed, and actions taken including creation of field jobs as required. Event reports are sent to retailers and the files are then moved to an archive location. I checked the reports provided to 13 retailers during January 2023.

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit outcome

Compliant

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

Code reference

Clause 8(9) of Schedule 10.6

Code related audit information

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

Audit observation

FCLM

I conducted a walkthrough of the sum-check process, and I checked the most recent reporting.

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit commentary

FCLM

The sum-check process is conducted in Orion and the reporting identifies meters which have failed. The register read materiality threshold is set at 1KWh. An example of the report was examined, and it identified six meters where the sum-check had failed. The report is analysed by FCLM to determine if further action is required, the six examples were sent to EDMI to be investigated further. Non-compliance is recorded in **section 6.4** for the six ICPs that had failed sum-check and were not resolved within three business days where the registry was not updated with the cancellation within 10 business days.

Compliance is achieved with this clause because sum-check is conducted.

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit outcome

Compliant

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

FCLM

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

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit commentary

FCLM

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

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

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

FCLM

I checked whether compensation factors were applied to raw meter data.

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit commentary

FCLM

Compensation factors are not applied to data where the installation is recorded as AMI.

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

FCLM

I requested reporting on interrogation cycles to confirm compliance.

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit commentary

FCLM

I checked a report sent by FCLM which detailed the status of non-communicating meters or meters where data is incomplete. The FCLM process is that this report is run daily and any meters that have not communicated have the AMI flag changed to "N". My analysis of the report confirmed that all meters with an AMI flag of "Y" were interrogated within the maximum interrogation cycle.

TRUM

TRUM does not conduct electronic data collection.

LMGL

LMGL does not conduct electronic data collection.

Audit outcome

Compliant

CONCLUSION

The audit found 18 non-compliances, makes two recommendations, and raises two issues for consideration by the Authority.

The Influx ATH conducted statistical sampling of a population of 6,104 ICPs containing EDMI Mk7A, Mk7C and Mk10D Class 1 meters. Non-compliance is recorded for the application of an incorrect certification period. I have raised two issues in section 7.13 and 7.17 for the Authority to consider in relation to statistical recertification.

Non-compliance continues to exist in relation to missing and inaccurate fields in certification records and from ATHs.

The other main areas of non-compliance related to following issues:

- late updating of registry information,
- inaccurate registry information,
- non-compliant ATH practices,
- certification cancelled or expired for 25,071 ICPs,
- time was not monitored every 12 months for 85 meters with time dependent registers,
- inspections not conducted for 62 metering installations,
- monitoring not conducted at six metering installations certified at a lower category, and
- remedial action not completed in required timeframe after notification of a faulty metering installation for three ICPs.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The Future Risk Rating provides some guidance on this matter and recommends an audit frequency of three months. After considering the responses from Influx to the areas of non-compliance I recommend an audit frequency of 12 months to reflect the improvements which have been made during the audit period.

PARTICIPANT RESPONSE

Influx Data would like to thank Brett Piskulic from Veritek for his input into the review of our MEP compliance audit. Robust discussions were had over several issues that have been concerning us and existed for several years.

We are pleased that the issue of statistical sampling has been raised with the E.A in the audit. Influx Data has also submitted a request for changes regarding the miss alignment between AS 1284-1 and the code.

We note that thirteen of the totals of thirty-nine points are reliant on other participants and a minor rating. Seven of those are related to ATHs practices in relation to Omnibus changes and have now been actioned by them as per there audits. The other six are related to timeliness of updating records and will always be a minor issue in the industry for MEPs.

Of the remaining twenty-six points, eleven are of a minor issue and Influx Data has plans in place to reduce these.

The remaining 15 relate to three issues.

1. Audit Reference 7.1 – Certification cancelled or expired for 25,071 ICPs Risk – High Rating – 6
2. Audit Reference 7.19 19558 ICPs with interim certification Risk – Medium Rating - 4

We note that Audit Reference 7.1 and 7.19 appears to be a double up of points and reference to interim certification should not exist anymore.

Note: these were acquired from a LMGL Acquisition where their sample testing non-compliance was under dispute. Influx requested on multiple occasions for an official decision which was not provided. Influx voluntary cancelled the certification for these sites regardless of lack of evidence so find it ironic to be penalised so heavily.

3. Audit Reference 7.10 – 85 meters with time dependent registers with time are not monitored every 12 months. Risk rating – Low Rating- 5

Audit Reference 7.10 says we do not have a process in place even though we have stated that a modem upgrade project in place and the ICPs identified will have time checks carried out in 2023/2024. We also seek advice as to the process for meters that are not able to be accessed.

We believe the risk rating for the three issues involved is excessive.

As noted to the E.A we have purchased many of the industries problem ICPs over the last few years and are committed to both achieving and maintaining compliance for our metering fleet. The plan we recently submitted to the EA identifies all resources required to meet these goals and a projected time frame that is over several years.

The reduction of Risk Rating points from 53 in 2022 to 39 in 2023 is a reflection to Influx's commitment to compliance and the continuous improvement we aspire to.

We therefore request a timeframe of 24 months for our next audit as appropriate.

David Barnett

Compliance Manger Influx Service Delivery