ELECTRICITY INDUSTRY PARTICIPATION CODE
METERING EQUIPMENT PROVIDER AUDIT REPORT

VERITEK

For

COUNTIES ENERGY LIMITED
NZBN:9429038874208

Prepared by: Steve Woods – Veritek Limited

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Date audit report completed: 4 July 2024

Audit report due date: 01-Sep-24

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EXECUTIVE SUMMARY

Counties Energy Limited (Counties) is a Metering Equipment Provider (MEP) and was required to undergo an audit by 1 September 2024, in accordance with clause 16A.14.

Counties are recorded as the MEP for 47,855 ICPs on the Counties Energy network at the time of the audit. Counties use Intellihub and EDMI as agents for the collection and provision of data.

The number of uncertified category 1 metering installations is now only 344, and the majority of issues present are not ones that Counties can resolve, because they require customers and/or traders to resolve such issues as customer refusal, unsafe wiring or metering enclosure upgrades. EDMI is now included in the audit scope as a data collection agent, and their compliance is of a high standard.

The audit records 16 non-compliances and makes four recommendations, the main issues are as follows:

- some inaccuracies and late updating of registry information,
- certification reports are missing several fields,
- certification is cancelled for 24 metering installations, and
- expired or cancelled metering installation certification for 368 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 indicates an audit frequency of three months. I have considered the Counties responses to the areas of non-compliance and recommend an audit frequency of 12 months to reflect the following remedial actions already implemented:

- Counties has commenced operating under a different ATH, which will resolve three of the non-compliances.
- Data collection process improvements have been established.
- Most ICPs with cancelled certification have been recertified.

As mentioned in the last audit report, almost all of the uncertified metering installations need assistance from other parties to progress further.

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)	Each services access interface not identified for 27 metering installations.	Strong	Low	1	Identified
Provision of accurate information	2.5	11.2 and 10.6	Some information is incorrect, as recorded in **sections 5.1, 6.2** and **6.4**.	Moderate	Low	2	Identified
Registry updates	3.2	2 of Schedule 11.4	24 registry updates later than 15 business days.	Strong	Low	1	Identified
Design Reports for Metering Installations	4.1	2 of Schedule 10.7	Maximum interrogation cycle for each services access interface not	Strong	Low	1	Identified

			recorded in design reports. Design report not recorded for one installation certified by VCOM.				
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)(a) and (b) of Schedule 10.6, and Table 1, Schedule 11.4	Some inaccurate certification records. Wells certification reports do not clearly record the error and uncertainty for category 2 comparative certification.	Moderate	Low	2	Disputed
Provision of Registry Information	6.2	7 (1), (2) and (3) of Schedule 11.4	Some registry records incomplete or incorrect.	Moderate	Low	2	Investigating
Certification cancellation	6.4	20 of Schedule 10.7	Certification not cancelled within ten business days on the registry for: • two metering installation where the inspections were not completed, • one metering installation certified for insufficient load where monitoring was not conducted between January and May 2024, • seven metering installations not read within the maximum interrogation cycle where the AMI flag is still Y, and • three ICP with failed sum-check, which have now been recertified.	Moderate	Low	2	Identified
Certification and Maintenance	7.1	10.38 (a), clause 1 and	Certification expired for: • 250 previously interim certified category 1 ICPs, and	Moderate	Medium	4	Disputed

		clause 15 of Schedule 10.7	• 94 category 1 ICPs, Certification cancelled for 24 metering installations.				
Insufficient Load for Certification Tests	7.7	14(3) and (4) of Schedule 10.7	ICP 1099584667CNB0F certified for insufficient load not monitored between 18 December 2023 to 5 June 2024.	Moderate	Low	2	Cleared
Metering Installations Incorporating a Meter	7.15	26(1) of Schedule 10.7	18 metering installation certification reports without meter certification details recorded.	Moderate	Low	2	Identified
Interim certification	7.19	18 of Schedule 10.7	250 ICPs with expired interim certification.	Moderate	Medium	4	Disputed
Cat 2 – 5 inspections	8.2	Clause 46(1) of Schedule 10.7	Inspections not conducted for two category 5 metering installations.	Strong	Low	1	Cleared
Electronic Interrogation of Metering Installations	10.5	8 of Schedule 10.6	20 ICPs not read within the maximum interrogation cycle, where the AMI flag is still "Y".	Moderate	Low	2	Identified
Time Errors for Metering Installations	10.7	8(4) of Schedule 10.6	51 examples of clock errors outside the allowable thresholds for April 2024.	Strong	Low	1	Disputed
Investigation of AMI interrogation failures	10.12	8(11), 8(12) and 8(13) of Schedule 10.6	AMI flag not changed to "N" for 11 ICPs where interrogation was not successful within 30 days or 25% of the interrogation cycle.	Moderate	Low	2	Identified
					Future Risk Rating	**31**	
					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	Description	Remedial Action
Audit compliance reports	6.3	Run and check the audit compliance reports on a regular basis.	Identified
Cancellation of certification	6.4	Require Wells to produce two new certification reports for ICPs 0003404652CN0C6 and 0069016303CN40E, with new certification dates, certification numbers and correct content.	Identified
Certification Tests	7.2	Work with the Bluecurrent ATH to ensure the details and results of all testing completed are recorded in the metering installation certification reports provided.	Cleared
Meter certification	7.15	Work with the Bluecurrent ATH to ensure the details of meter calibration and certification are recorded in the metering installation certification reports provided.	Cleared

ISSUES

Subject	Section	Recommendation	Description
		Nil	

1. ADMINISTRATIVE

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

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

Audit observation

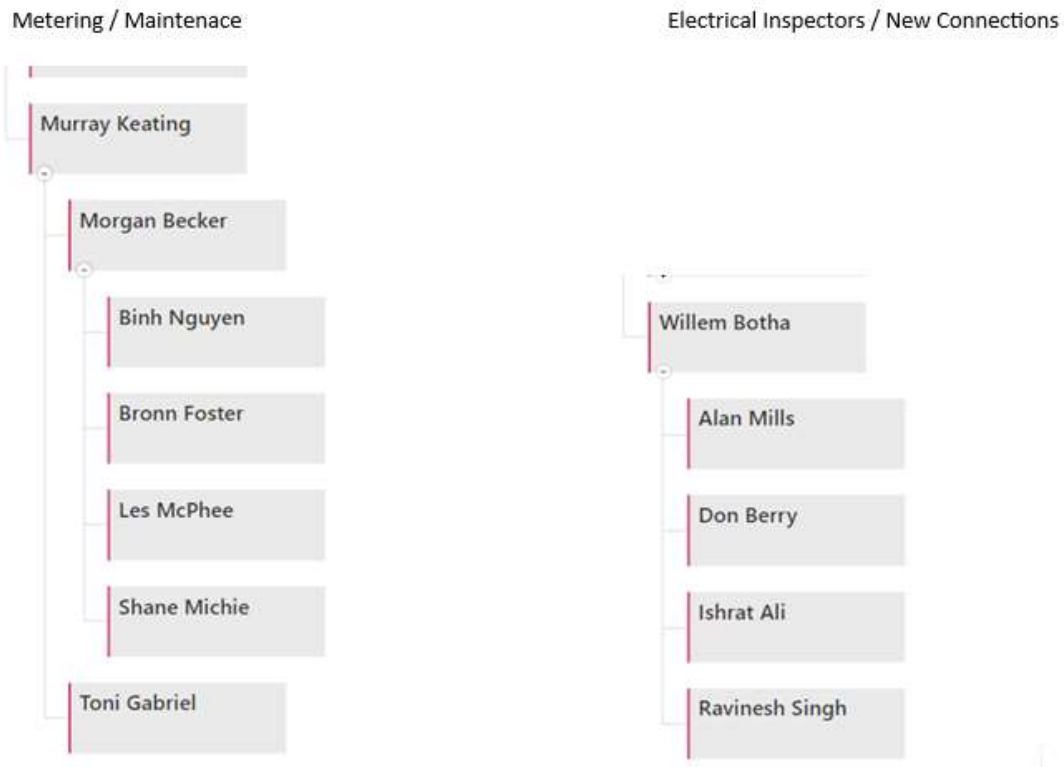
I checked the Electricity Authority website and I confirm there are no exemptions in place.

Audit commentary

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

1.2. Structure of Organisation

Counties MEP Structure:



1.3. Persons involved in this audit

Auditor: Steve Woods

Veritek Limited

Electricity Authority Approved Auditor

Counties personnel assisting in this audit were:

Name	Title
Murray Keating	Downstream Technology Manager
Morgan Becker	Technical Services Manager
Dale Oliver	Systems Analyst

1.4. Use of Agents (Clause 10.3)

Code reference

Clause 10.3

Code related audit information

A participant who uses a contractor

- *remains responsible for the contractor's fulfilment of the 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

Counties engages with ATHs to conduct certification activities, but there are no contractors used to perform MEP responsibilities.

Audit commentary

Counties have responsibility for AMI data collection, which is conducted by Intellihub and EDMI as agents to Counties. The scope of this audit includes the Intellihub data collection operation.

1.5. Hardware and Software

Counties MEP provided the following details about its systems and backup arrangements.

Counties utilises Microsoft Business Central as the platform for housing metering asset data and all MEP transactional data exchanged with the Electricity Registry.

Business Central is an ERP application with Microsoft SQL Server as the back end.

The primary SQL Server (SOMNUS) is a virtual server hosted on a Nutanix Virtual Environment.

The SOMNUS SQL Server is backed up incrementally as part of the Nutanix cloud backup using Rubrik VM Agent. This provides for rapid restore to multiple points in time in the event of a critical failure.

Data collection is conducted by Intellihub and EDMI as agents to Counties.

1.6. Breaches or Breach Allegations

There were no breach allegations recorded during the audit period.

The previous audit report contained details of a breach allegation regarding data collection clauses, where the metering installations were not AMI. In 2013, the Authority provided advice that this type of data collection was the responsibility of reconciliation participants not MEPs. When this issue was raised with the Authority, the advice was changed, making MEPs responsible for data collection.

1.7. ICP Data

Metering category	Number of ICPs
1	47,319
2	459
3	43
4	20
5	12
9	2

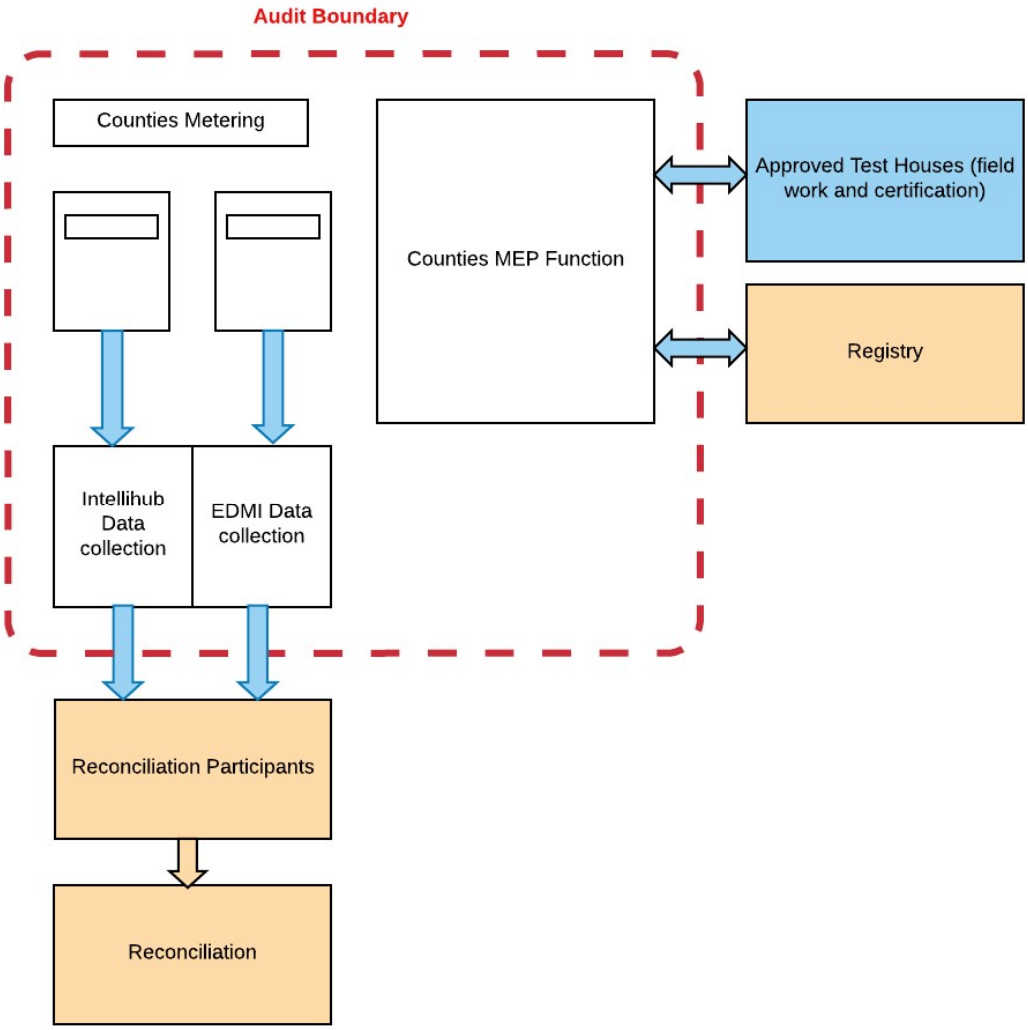
1.8. Authorisation Received

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 below for greater clarity.


Audit Boundary
Counties Metering
Counties MEP Function
Approved Test Houses (field work and certification)
Registry
Intellihub Data collection
EDMI Data collection
Reconciliation Participants
Reconciliation

1.10. Summary of previous audit

The previous audit was conducted in February 2023 by Steve Woods of Veritek Limited. The table below shows the status of the 14 areas of non-compliance identified.

Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
MEP responsibility for services access interface	2.1	10.9(2)	Each services access interface not identified for 26 metering installations.	Still existing
Provision of accurate information	2.5	11.2 and 10.6	Some information is incorrect, as recorded in Sections 5.1, 6.2 and 6.4	Still existing
Registry updates	3.2	2 of Schedule 11.4	6 registry updates later than 15 business days	Still existing
Design Reports for Metering Installations	4.1	2 of Schedule 10.7	Maximum interrogation cycle for each services access interface not recorded in design reports. Design report not recorded for three installations certified by VCOM	Still existing
Changes to Registry Records	4.10	3 of Schedule 11.4	Some records updated on the registry later than ten business days.	Still existing
Accurate and Complete Records	5.1	4(1)(a) and (b) of Schedule 10.6, and Table 1, Schedule 11.4	Some inaccurate certification records.	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
Certification cancellation	6.4	20 of Schedule 10.7	Certification not cancelled within ten business days on the registry for: - One metering installation where the inspection was not completed, - Two metering installations where low burden is present, and - One ICP with failed sum-check.	Still existing
Certification and Maintenance	7.1	10.38 (a), clause 1 and clause 15 of Schedule 10.7	Certification expired for: - 339 previously interim certified category 1 ICPs, - 120 category 1 ICPs, - Certification cancelled for four metering installations.	Still existing
Certification Tests	7.2	10.38(b)	Prevailing load test not conducted for one category 1 metering installation.	Cleared
Control device bridged out	7.11	35 of schedule 10.7	Reconciliation participant not notified of two bridged control devices.	Cleared
Interim certification	7.19	18 of Schedule 10.7	339 ICPs with expired interim certification.	Still existing
Cat 2 – 5 inspections	8.2	Clause 46(1) of Schedule 10.7	Inspection not conducted for one installation.	Still existing
Timeframe for correct defects and inaccuracies	9.4	10.46A	Remedial actions not undertaken within the required timeframe for three ICPs where sum-check failures occurred.	Cleared
Time Errors for Metering Installations	10.7	8(4) of Schedule 10.6	46 examples of clock errors outside the allowable thresholds in the 2 December 2022 report	Still existing

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Status
Certification Tests	7.2	10.38(b) and clause 9 of Schedule 10.6	Work with the Bluecurrent ATH to ensure the details and results of all testing completed are recorded in the metering installation certification reports provided.	Still existing
Meter certification	7.15	26(1) of Schedule 10.7	Work with the Bluecurrent ATH to ensure the details of meter calibration and certification are recorded in the metering installation certification reports provided.	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

I checked certification records for 42 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 was changed from 1st February 2021 to require the ATH to record each services access interface and the conditions under which each services access interface may be used. The code change was announced on 15th December 2020. Prior to this change the ATH was required to determine and record a single services access interface.

I checked the certification records for 42 metering installations and found that each services access interface was not recorded for all 20 category 1 metering installations certified by Bluecurrent ATH, and seven CT metered installations also did not have all of the services access interfaces recorded.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 2.1 With: Clause 10.9(2) From: 01-Jan-23 To: 04-May-24	Each services access interface is not identified for 27 metering installations. 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	I have recorded the controls as strong because the services access interface is still maintained in a compliant manner despite the incorrect recording in certification reports. 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
Confirming with the transition to operations under Ihub ATH in June, A new metering certification report has been implemented and this does now include all required / redundant statements concerning service access interfaces.	20/06/2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
The service access interface seems to serve a purpose only as a legal point of demarcation of responsibilities between participants in the code. These responsibilities, and who will provide the data is well understood by all participants via the contracts in place, and the need to include this superfluous information in certification reports appears unnecessary.	20/06/2024	

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 their best endeavours to resolve any disputes related to Part 10 of the Code.

Disputes that are unable to be resolved may be referred to the Authority for determination.

Complaints that are not resolved by the parties or the Authority may be referred to the Rulings Panel by the Authority or participant.

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 7(1) of Schedule 10.6

Code related audit information

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

Audit observation

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

Audit commentary

Counties use the COUP 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

Counties ensures all communication equipment is appropriately certified with the relevant telecommunications standards. This is recorded in type test certificates and other approval documents. I checked a folder containing type test reports to confirm that Counties has ensured that all components have appropriate approvals.

Audit outcome

Compliant

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

Code reference

Clause 11.2 and Clause 10.6

Code related audit information

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

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

Audit observation

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

Audit commentary

The content of this audit report indicates that Counties has taken all practicable steps to ensure that information is complete and accurate in most cases; however, in **sections 5.1, 6.2** and **6.4** the report records that some information was not updated as soon as practicable. The main issues are registry errors, certification report errors and 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-Jan-23 To: 04-May-24	Some information is incorrect, as recorded in **sections 5.1, 6.2** and **6.4**. 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	Controls are recorded as moderate because there is room to improve processes. 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
We will run the registry report AC020 at minimum quarterly and address any registry information anomalies this reporting raises.	August 2024	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
In most cases timeliness of registry updates significantly exceeds the allowable timeframes, and we will continue to strive towards continuous improvement here. The other participants ATH and Retailers do also impact this outcome.		

3. PROCESS FOR A CHANGE OF MEP

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

Code reference

Clause 10.22

Code related audit information

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

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

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

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

Audit observation

I checked if Counties had sent or received any invoices.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 2 of Schedule 11.4

Code related audit information

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

Audit observation

I checked the audit compliance report for the period 1 May 2023 to 8 April 2024 for all records where Counties became the MEP to evaluate the timeliness of updates.

Audit commentary

I examined the audit compliance report for 51 switches in relation to this clause and the findings are shown in the table below.

I checked a sample of seven late ICPs in detail, where the nomination was on time, and found that three were due to system issues, which are not resolved, and four were examples where the nomination was after the certification had occurred. When Counties has not been nominated at the time their Navision system is updated, the registry update will fail, and this results in manually re-sending the file once they

have been nominated. An automated email is sent to the retailer when metering is installed but a nomination has not been sent. In most cases the retailer is Contact Energy, and their system does not allow a nomination to be sent until after metering is installed.

Audit	Total ICPs	Total within 15 days	Total over 15 days	% compliant
Jan 2021	131	100	31	76.34%
Jan 2022	13	10	3	76.92%
Jan 2023	19	13	6	68.42%
April 2024	**51**	**27**	**24**	**52.73%**

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 3.2 With: Clause 2 of Schedule 11.4 From: 01-May-23 To: 08-Apr-24	24 registry updates later than 15 business days. Potential impact: Medium Actual impact: Low Audit history: Three 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 Counties are often prevented from updating the registry due to not being nominated at the time of the metering installation. 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
In most cases timeliness of registry updates completed significantly exceeds the allowable timeframes, and we will continue to strive towards continuous improvement here. The other participants ATH and Retailers do also impact this outcome.	26/06/2024	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Late ATH paperwork and or MEP nominations will be followed up with the relevant party as these arise.	26/06/2024	

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 ten business days to provide the gaining MEP with the metering records or the facilities to enable the gaining MEP to access the metering records.

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

Audit observation

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

Audit commentary

This has not occurred, and no examples are available to examine. Counties confirmed that 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 MEP's obligations terminate only when;

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

Audit observation

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

Audit commentary

Counties 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

I checked the design reports provided by Counties to relevant ATHs, and I checked that ATHs were correctly recording the design report in the certification records.

Audit commentary

The design reports include all relevant details required by the Code with the exception of the requirement to record the maximum interrogation cycle for each services access interface. This requirement was introduced with the Code changes effective 1 February 2021. Counties intend to commence operating under the Intellihub ATH umbrella from 1 June 2024 and will use Intellihub design reports.

My checks of 42 metering installation records confirmed that the ATHs had correctly recorded the design report reference in 41 cases, but the report for ICP 1099580644CNC1A by VCOM did not have design report references.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.1 With: 2 of Schedule 10.7 From: 01-Jan-22 To: 17-Feb-23	Maximum interrogation cycle for each services access interface not recorded in design reports. Design report not recorded for one installation certified by VCOM. Potential impact: Medium Actual impact: Low Audit history: Three times Controls: Strong Breach risk rating: 1
Audit risk rating	**Rationale for audit risk rating**
Low	Strong controls are in place because Counties are preparing to use compliant design reports from June 2024. There is little impact because the installations are compliant despite the incorrect design reports.

Actions taken to resolve the issue	Completion date	Remedial action status
Intellihub ATH ,metering design reports have been adopted, these incorporate the required service access interface statements etc.	30/06/2024	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Reminder of requirement to record the design report reference number sent to field staff and report checkers. Note regards the interrogation cycle, this information now appears to be superfluous with respect to other provisions and requirements within the code. Suggest review of the code with respect to this.	30/06/2024	

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

Code reference

Clause 9 of Schedule 10.6

Code related audit information

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

Audit observation

I confirmed that Counties has used the Accucal, Bluecurrent and Wells ATHs.

Audit commentary

I have checked the Authority's website and confirm that the Accucal, Bluecurrent and Wells ATHs have current and 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

I checked the processes used by Counties to ensure compliance with the design and with the error thresholds stipulated in Table 1. I also checked the certification records for 42 metering installations.

Audit commentary

The Counties process requires the design report to be recorded on the metering installation certification report, 41 of the 42 reports I checked included a reference to the design report. Non-compliance is recorded in Section 4.1 for this reference being missing.

All fully calibrated certifications are conducted by the Accucal ATH. Comparative recertifications were conducted by the Accucal and Wells ATHs. I checked the certification records for 22 installations using these methods and can confirm that the measured error and uncertainty were appropriately recorded.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

Audit observation

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

Audit commentary

Counties 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 also not NSPs, the MEP must ensure that all category 3 or higher metering installations must be half-hour metering installations.

Audit observation

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

Audit commentary

The audit compliance report confirmed that all metering installations at category 3 and above have HHR 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

I checked if Counties are responsible for any NSP metering.

Audit commentary

Counties is the MEP for metering at MTG0111 and the interconnection point at OPH0111. Subtraction does not occur.

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

Counties is not responsible for any grid metering.

Audit commentary

Counties 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

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

Audit commentary

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

Counties has issued a written instruction to installers regarding the suitability of enclosures and protection for metering installations. The physical and electrical requirements for metering installations are contained in the "Counties Power – Metering Requirements for Electrical Installations" which is published on the Counties Energy website.

Audit outcome

Compliant

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

Code reference

Clauses 10.34(2), (2A), 2(D) 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.

Audit observation

Counties is also the distributor in all cases where they are the MEP and therefore agreement is implicit in that relationship. Consultation with traders has occurred through the Use of System Agreement and the Distribution Code. The Use of System Agreement refers to the fact that metering will comply with the Code and with the Distribution Code. The Distribution Code states that metering requirements are those contained in the "Counties Power – Metering Requirements for Electrical Installations".

Audit commentary

Counties is also the distributor in all cases where they are the MEP and therefore agreement is implicit in that relationship. Consultation with traders has occurred through the Use of System Agreement and the Distribution Code. The Use of System Agreement refers to the fact that metering will comply with the Code and with the Distribution Code. The Distribution Code states that metering requirements are those contained in the "Counties Power – Metering Requirements for Electrical Installations"; this document is published on the Counties Energy website.

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 ten 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 update the registry in accordance with 8(11)(b) of schedule 10.6, ten business days after the most recent unsuccessful interrogation.

If update the registry in accordance with clause 8(13) of schedule 10.6, 3 business days following the expiry of the time period or date from which the MEP determines it cannot restore communications.

Audit observation

I checked the audit compliance report for the period 1 May 2023 to 8 April 2024 to evaluate the timeliness of registry updates.

Audit commentary

The table below shows that there were registry updates for 1,088 new connections completed of which 192 were late, and 92.35% of updates were compliant. I checked a sample of ten late updates where the trader's nomination was on time, and I found that late updates were caused by:

- late field notification for six ICPs,
- nomination after certification for two ICPs, and
- incorrect certification date for two ICPs.

Late nomination caused 29 of the late updates.

There were 1,766 registry updates completed after recertification of which 604 were late, and 65.80% of updates were compliant. Many of the late updates appeared late because corrections were made to the original record, which was on time, so the actual percentage compliance will be much higher.

I checked a sample of ten late updates and found that late updates were caused by:

- late field notification for eight ICPs, and
- system issues for two ICPs.

Event	Year	Total ICPs	ICPs notified within ten days	ICPs notified greater than ten days	Percentage compliant
New connection	Jan 2019	578	516	62	89.3%
	Oct 2019	Not recorded	Not recorded	Not recorded	Not recorded
	Jan 2021	1,327	1,243	84	93.67%
	Jan 2022	1,504	1,442	52	96.52%
	Jan 2023	1,178	1,100	78	93.38%
	Apr 2024	**1,088**	**896**	**192**	**82.35**
Update	Jan 2019	38,945	38,692	253	99.4%
	Oct 2019	31,125	30,871	254	99.2%
	Jan 2021	2,206	2,039	167	92.43%
	Jan 2022	1,797	1,544	253	85.92%
	Jan 2023	1,856	1,485	371	80.01%
	Apr 2024	**1,766**	**1,162**	**604**	**65.80%**

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 4.10 With: Clause 3 of Schedule 11.4 From: 01-May-23 To: 08-Apr-24	Some records updated on the registry later than ten business days. Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2
Audit risk rating	**Rationale for audit risk rating**
Low	I have recorded the controls as moderate in this area because there is room to improve and shorten the notification process for 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
Noted, on review it has been difficult to reconcile why the registry update stats have dropped recently. Typically, Cat 1 metering records are updated swiftly; any subsequent file update can make this appear late. Other technical issues with systems and file transfers can delay registry updates requiring limited IT resource to resolve. Noting also sometimes there is insufficient contractor resource in the ATH space especially for high category ICP certification, hence ATHs cannot always provide the desired level of service to allow a 10 day registry update for the higher category ICPs.		Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
We will look to improvements in systems reliability with planned Dynamics 365 systems updates in October. We will also look towards undertaking category 2 metering installation certification with our own in-house field staff within the next 12 months.	October 2024	

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

Counties uses Intellihub as an agent for the collection of AMI data, and EDMI for the collection of C&I data. The Intellihub and EDMI data collection systems are considered "metering infrastructure". Operation of the Intellihub and EDMI systems were checked in **section 10** of this audit and confirm that the systems operate as intended.

Audit commentary

There were no obvious issues with the operation of the data collection systems. All components operate as intended in an integrated manner.

Audit outcome

Compliant

4.12. Decommissioning of an ICP (Clause 10.23A)

Code reference

Clause 10.23A

Code related audit information

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

- *if the MEP is responsible for interrogating the metering installation, arrange for a final interrogation to take place before the metering installation is decommissioned, and provide the raw meter data from the interrogation to the responsible trader,*
- *if another participant is responsible for interrogating the metering installation, advise the other participant not less than three 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, and*
- *the responsible trader must arrange for a final interrogation of the metering installation.*

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

Audit observation

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

Audit commentary

There have not been any examples of this occurring during the audit period.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

- *carry out the change in accordance with the methodology and conditions identified by the approved test laboratory under clause 39(1)(b),*

- *keep a list of the data storage devices that were changed,*
- *update the metering records for each installation affected with the details of the change and the methodology used.*

Audit observation

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

Audit commentary

Counties has not conducted any updates during the audit period.

Audit outcome

Compliant

4.15. Temporary Electrical Connection (Clause 10.29A)

Code reference

Clause 10.29A

Code related audit information

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

Audit observation

Counties is not responsible for any grid metering.

Audit commentary

Counties 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

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

Audit commentary

There were no temporary electrical connections of NSPs where Counties are the MEP during the audit period.

Audit outcome

Compliant

4.17. Temporary Electrical Connection (Clause 10.31A)

Code reference

Clause 10.31A

Code related audit information

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

Audit observation

I checked 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 purpose of testing and certification.

Audit commentary

There were no temporary connections of ICPs where COUP was the MEP during the audit period.

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, and*
- *m) the signed inspection report confirming that the metering installation complies with the requirements of Part 10.*

Audit observation

I checked certification records for 42 metering installations, and I also checked the inspection record template and 15 inspection reports to evaluate compliance with this clause.

Audit commentary

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

Quantity Apr 2024	Quantity Jan 2023	Issue
1	9	CT burden range not recorded in certification reports by Accucal ATH.
0	2	CT burden range incorrectly recorded in Wells ATH certification reports.
7	2	All services access interfaces and maximum interrogation cycles not recorded by ACCL ATH
6	0	No CT validity period in Wells category 2 certification reports
3		Meters not recorded as certified in certified installations
20	29	Maximum interrogation cycle not recorded in Bluecurrent ATH category 1 certification reports.
20	29	Each services access interface not recorded in Bluecurrent ATH category 1 certification reports.
0	24	NHH meters incorrectly recorded as HHR in Bluecurrent ATH category 1 certification reports.
20	29	Test results not recorded in Bluecurrent ATH category 1 certification reports.
2	0	Incorrect certification dates in two Wells category 2 certification reports for ICPs 0069016303CN40E and 0003404652CN0C6.

The Wells certification reports are very difficult to read and understand because they are a combined report for Health and Safety, workflow and certification. It has been recommended in the Wells ATH audit report and in many MEP audit reports for a significant number of years that Wells change their reports to include all the relevant items clearly on the front page. This recommendation has not been adopted and in this report, I have recorded non-compliance. Apart from the difficulty in locating relevant information, it's not clear what the error and uncertainty figures are for comparative certified category 2 installations. I have pasted an extract below, where I believe it would be difficult for most participants to identify the error and uncertainty. I checked with Counties during the audit, and they also had some difficulty confirming which field recorded measured error and which field recorded uncertainty.

Task Results	
Multiplier	100
Hioki Asset No	Set 7 - 500A
Hioki Cert Temp	22
Hioki Cert Error	0.14
Hioki Cert Uncertainty	0.0220
Hioki Cert Error and Uncertainty	0.1423
Hioki Cert Min Test Temp	6.74333333333333
Hioki Connected Photo	
Pre Test Read	0.5
Pre Test Photo	
Temperature	20.2
Corrected Error and Uncertainty Test	0.14284
Corrected Error Validation	0.6
Post Test Read	0.6
Post Test Photo	
Registered KWh	10
Register Advance Test	-10
Register Advance Test	0
Seconds	964
Measured KWh	10.020
Corrected Measured KWh	10.0254108
Error %	-0.254107999999995
Accuracy Test	0.396947999999995

Accuracy Test Validation	2.5
Meter Class	0.5
CT Class	0.5
Class Accuracy Test Value	-0.603052000000005
Class Accuracy Test Validation	0

This clause requires the MEP to keep accurate and complete records. Clause 10.6 requires information, which includes certification records, to be complete and accurate and not misleading or deceptive. In order for the Wells metering installation and component certification reports to be compliant with these clauses, the information on the front page of the certification report should include the following.

- ICP,
- metering installation certification date,
- metering installation certification expiry date,
- metering category,
- certification type (selected component, comparative, fully calibrated, alternative, insufficient load, lower category),
- HHR or NHH,
- compensation factor, and
- electrical connection date (if known and if the ATH is also the agent).

The test result section for category 2 comparative certification should record the following:

- error percentage,
- uncertainty percentage, and
- error range as a percentage (the uncertainty percentage is a plus or minus).

The Wells certification reports used to be clear that they were a "metering installation certification report" as shown below.

Metering Installation Certification Report

Detailed Job information showing all field results collected including photos and images for related tasks and GPS results where collected and available.

The most recent version is called a "general job detail report" which does not clarify that it is a metering installation certification report.

General Job Detail Report

Detailed Job information showing all field results collected including photos and images for related tasks and GPS results where collected and available.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 5.1 With: Clause 4(1) of Schedule 10.6 From: 01-Jan-23 To: 08-Apr-24	Some inaccurate certification records. Wells certification reports do not clearly record the error and uncertainty for category 2 comparative certification. Potential impact: Medium Actual impact: Low Audit history: Three times previously 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
The format of certification reports is the prerogative of the ATH. Counties Energy has fulfilled its obligations by utilising registered Test Houses listed as Approved by the Electricity Authority and also holding current ISO 9001 and or ISO 17025 quality certification. These organisations must have passed the corresponding audit and certification processes associated with above, the intention of which is to ensure that the formal certification documentation issued by these certification bodies can be relied on to be true and correct. Responsibility needs to sit in the appropriate place. We do not believe it is the intention of code that the above responsibilities should all under MEP role, nor should require the level of technical expertise and understanding to scrutinise certification documentation in such minute detail, as is the Approved Test House responsibility.		Disputed
Preventative actions taken to ensure no further issues will occur	Completion date	
However, we have raised the matters with the contracted ATHs we rely on, noting however they are independent companies and there is little to no alternative providers of these services. More resource and competition is desperately needed in the ATH space, and care needs to be taken to ensure participation in this industry is encouraged in the same way new Traders are supported when they don't know the rules / and are not discouraged.		

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 ten business days of receiving a request from a participant for a signed inspection report prepared under clause 44 of schedule 10.7, make a copy of the report available to the participant.

Audit observation

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

Audit commentary

Counties has not been requested to supply any inspection reports.

Audit outcome

Compliant

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

Code reference

Clause 4(3) of Schedule 10.6

Code related audit information

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

Audit observation

I checked the Counties processes to confirm compliance.

Audit commentary

The Counties processes ensure that records are kept 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 ten business days after the contract comes into effect.

Audit observation

I checked the details of the information supplied to ATHs prior to recertification when the ATHs hadn't completed the original certification.

Audit commentary

There were examples where this has occurred when category 2 installations previously certified by Bluecurrent were recertified by Accucal or Wells. In these cases, the relevant records were supplied with the initial job request.

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

Audit observation

I checked the Switch Breach History Detail Report (PR040) for the period 1 May 2023 to 8 April 2024 to confirm whether all responses were within ten business days.

Audit commentary

All responses were within ten business days.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

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

Audit observation

I checked the audit compliance report and list file for 100% of records to identify discrepancies.

Audit commentary

Analysis of the list file and audit compliance report for all Counties ICPs found the following issues:

Quantity of ICPs Apr 2024	Quantity of ICPs Jan 2023	Quantity of ICPs Jan 2022	Quantity of ICPs Jan 2021	Quantity of ICPs Oct 2019	Quantity of ICPs Jan 2019	Issue	Resolved?
0	3	2	4	0	0	Blank records on the registry.	
0	5	5	10	162	-	Active with no metering.	
0	0	0	0	0	0	Fully certified installations since 29 August 2013 with a multiplier of 3.	
5	0	0	3	0	0	Incorrect metering category.	
7	4	2	3	6	1	Incorrect certification, expiry or event dates.	
0		0	0	0	0	CTs on category 1 installation.	n/a
0		0	0	0	0	Category 2 or above without CTs.	n/a
28	5	2	4	-	7	Incorrect ATH identifier recorded. One Wells not VCOM. 27 VEMS after 28 September 2018.	
1	2	0	2	0	-	HHR profile and submission type and meter or installation type is not HHR. ICP 1099568873CN05E.	
0	0	0	13	3	-	Metering installation type incorrectly recorded as NHH for Cat 3+ HHR installations.	
0	3	5	8	14	-	CN only.	
1,417	684	852	1,048	1,670	-	No control device recorded. Older installations where ripple relays were not included in certification information.	
0	78	81	84	101	-	Night without day.	
4	3	0	26	6	-	UN only with a control device.	

0	1					Two installations on site, only one in the registry.	N/A
74						CN used after 1 April 2018 for control at fixed times. Including ICP 0009725050CNA38 with SRD8 WRD8 CN6 and CN10.	

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.2 With: Clause 7 (1), (2) and (3) of Schedule 11.4 From: 01-May-23 To: 08-Apr-24	Some registry records are incomplete or incorrect. 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 because there are still a small number of areas where improvement can be made. Very few of the discrepancies have an impact on participants, customers or settlement. The audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
We are aware of minor errors in some registry data sets, however somtimes the actual process to correct these can be complex by the virtue of the way the registry works and how our IT systems interfaces with it.		Investigating
Preventative actions taken to ensure no further issues will occur	Completion date	
The company is implementing a new version of our ERP system we hope will allow easier Registry updates from the general user level	October 2024	

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

Code reference

Clause 6 of Schedule 11.4

Code related audit information

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

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

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

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

Audit observation

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

Audit commentary

Counties have in place a MEP Registry Reconciliation process. This is an automated process which runs daily within Navision. An EDA file is downloaded from the registry and a comparison is made with the Navision master data. A report is provided detailing any differences found. I confirmed that the process is being run daily by checking the contents of a network folder which contained the daily reports. The reports are reviewed at least weekly, and any issues are addressed when found. I did not find any examples of updates which were not completed within five business days.

I recommend the audit compliance reports are checked periodically as a double check of registry accuracy.

Description	Recommendation	Audited party comment	Remedial action
Audit compliance reports	Run and check the audit compliance reports on a regular basis.	Agreed the standard audit compliance reports will be run and reviewed at minimum quarterly.	Identified

Audit outcome

Compliant

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

Code reference

Clause 20 of Schedule 10.7

Code related audit information

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

- *a) the metering installation is modified otherwise than under sub clause 19(3), 19(3A) or 19(3C),*
- *b) the metering installation is classed as outside the applicable accuracy tolerances set out in Table 1 of Schedule 10.1, defective or not fit for purpose under this Part or any audit,*
- *c) an ATH advises the metering equipment provider responsible for the metering installation of a reference standard or working standard used to certify the metering installation not being compliant with this Part at the time it was used to certify the metering installation, or the failure of a group of meters in the statistical sampling recertification process for the metering installation, or the failure of a certification test for the metering installation,*
- *d) the manufacturer of a metering component in the metering installation determines that the metering component does not comply with the standards to which the metering component was tested,*
- *e) an inspection of the metering installation, that is required under this Part, is not carried out in accordance with the relevant clauses of this Part,*
- *f) if the metering installation has been determined to be a lower category under clause 6 and:*
  - *a. the MEP has not received the report under 6(2A)(a) or 6(2A)(b); or*
  - *b. the report demonstrates the maximum current is higher than permitted; or*
  - *c. the report demonstrates the electricity conveyed exceeds the amount permitted*
- *g) the metering installation is certified under clause 14 and sufficient load is available for full certification testing and has not been retested under clause 14(4),*
- *h) a control device in the metering installation certification is, and remains for a period of at least ten 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 ten business days) within ten business days of becoming aware that one of the events above has occurred in relation to a metering installation for which it is responsible, update the metering installation's certification expiry date in the registry.

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

Audit observation

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

Audit commentary

Inspection

I identified 15 category 3 and above metering installations which were due for inspection based on the certification details recorded in the registry. I checked the inspection reports for 13 completed inspections and confirmed they had been completed within the required timeframe. There are two installations at ICPs 1099578322CNFFC and 1099578323CN3B9 where inspections were required by 27 November 2023, and they have not been conducted. Certification was not cancelled in the registry within 10 business days, however both installations have now been recertified.

Current transformer in-service burden

The ATH must ensure that the in-service burden is within the burden range of the measuring transformers when certifying metering installations. I checked a sample of 22 category 2 and above certifications to confirm compliance. All 22 installations had appropriate burden.

During previous audits it was found that some metering installations were certified with in-service burden lower than the burden range of the current transformers, meaning certification was cancelled. Both installations have been re-visited and the burden issues addressed, and recertification has occurred, but the certification reports do not contain the new certification date, and the registry does not contain the new certification date. The certification reports also contain the same certification number. The ICPs are detailed below, and non-compliance is recorded in **sections 5.1** and **6.2**. For ICP 0003404652CN0C6 there is conflicting burden information with one of the CTs having an "uncorrected" burden of 3.75 and a "corrected" burden of 1.21. I recommend Counties requires Wells to produce two new certification reports, with new certification dates, certification numbers and correct content.

Description	Recommendation	Audited party comment	Remedial action
Low burden	Require Wells to produce two new certification reports for ICPs 0003404652CN0C6 and 0069016303CN40E, with new certification dates, certification numbers and correct content.	Requested 17/06/2024 awaiting report issue.	Identified

ICP	ATH	Date certified	CT make/ model	Ratio	Rated burden	Lowest in-service burden	Comment
0003404652CN0C6	Wells	26 October 2021	TWS SEW90B	200/5	5VA	0.99VA	Lowest burden unclear, recommend corrected certification report is provided.
0069016303CN40E	Wells	6 July 2020	Atco 2.5B	300/5	10VA	1.46VA	Lowest burden now 2.76. Recommend corrected certification report is provided.

In both cases, burden resistors have been added, but it appears the burden added was insufficient, or there may be an issue with the accuracy of the burden measurements.

Insufficient load certification

Three metering installations were identified in my checks of 22 category 2+ certification records which were certified in accordance with the insufficient load clause and required monitoring. I checked and confirmed that two had been added to the list maintained by Counties of installations requiring monitoring and confirmed that monitoring had taken place each month. ICP 1099584667CNB0F was certified for insufficient load on 18 December 2023 but does not appear on the monitoring report. It was only set up for monitoring on 5 June 2024.

Certification at a lower category

One metering installation was identified in my checks of 22 category 2+ certification records which was certified at a lower category and required monitoring to ensure that the load does not exceed the category limit. I checked and confirmed that this installation had been added to the list maintained by Counties of installations requiring monitoring and confirmed that monitoring had taken place each month. Compliance is confirmed.

Bridged meters in category 1 metering installations.

No bridged meters were identified during the audit period.

Maximum interrogation cycle

I checked weekly reports from Intellihub for January to March 2024 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** there were seven ICPs not interrogated within the maximum interrogation cycle. In all cases, the AMI flag was still "Y". The details of the seven ICPs are listed in section 10.5.

Comparison of HHR Data with Register Data (sum-check)

I checked for examples where certification was not cancelled after meters had failed a sum-check, or a sum-check was not performed within 30 days or 25% of the maximum interrogation cycle and the AMI flag is still "Y". As recorded in **section 10.9** there were three ICPs identified with sum-check failures which were not resolved within three business days and certification was not cancelled within ten business days.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.4 With: Clause 20 of Schedule 10.7 From: 01-May-23 To: 05-May-24	Certification not cancelled within ten business days on the registry for: • two metering installation where the inspections were not completed, • one metering installation certified for insufficient load where monitoring was not conducted between January and May 2024, • seven metering installations not read within the maximum interrogation cycle where the AMI flag is still Y, and • three ICP with failed sum-check, which have now been recertified. 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 as there is room for improvement. The responsibility for Counties 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
Noting The two ICPs with missed inspections were fully recertified in leu of the scheduled inspection. Insufficient load ICP monitoring is now in place on the ICP in question, but load is still insufficient for full certification. In this scenario it is unclear to us what benefit cancelling the insufficient load certification now achieves when we are actually struggling to get ATH resource for other compliance work at high category ICPs.	26/06/2024	Identified
Preventative actions taken to ensure no further issues will occur	Completion date	
Sum check: This is a semi manual process involving receiving emails and validating that the sumcheck issue is real and uploading the required registry update. Blanket cancellation of the metering device certification assumes fault with the meter, when it can fail sumcheck due to some missing HHR intervals in the data collection, which is due to temporary communications difficulties. There can be no fault with the meter. Counties strongly believes this is inconveniencing our customers unnecessarily with unnecessary meter changes and this rule needs some review.		

6.5. Registry Metering Records (Clause 11.8A)

Code reference

Clause 11.8A

Code related audit information

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

7. CERTIFICATION OF METERING INSTALLATIONS

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

Code reference

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

Code related audit information

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

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

Audit observation

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

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

Audit commentary

I analysed the registry information from April 2024, which identified 94 ICPs with expired full certification, and 250 with expired interim certification. This is an improvement on 120 and 339 respectively from the last audit.

Counties provided a breakdown of reasons for the inability to complete certification for both groups of ICPs. The tables below show the results.

Reason	Quantity
Board substandard or contains asbestos	17
Customer refusal	41
locate ICP	1
No Load	3
Room on switchboard	14
Substandard Wiring	152
Unable to arrange appointment, customer issue	48
No access to metering, customer issue	34
Unsafe	34

As recorded in **section 6.4** there are 24 metering installations where certification is automatically cancelled but the registry has not been updated with the new expiry date.

All category 2 metering installations have current certification.

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-Jan-23 To: 05-May-24	Certification expired for: - 250 previously interim certified category 1 ICPs, - 94 category 1 ICPs, Certification cancelled for 24 metering installations. 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 a number of years for some ICPs and because some of the expired installations were fully certified at one point. 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
We continue to work to resolve these uncertified ICPs, noting it appears Counties Energy has the smallest outstanding list in the industry. The miscellaneous difficulties involved with certifying residential metering does not appear to be well appreciated or understood within the regulations. If Traders were not allowed to bill on uncertified metering installations, it would provide some financial incentive for them to actively assist the MEP with these matters, or electrical disconnection of such ICPs was mandated then these would be resolved. It recently appears through eagerness of the rules within the code to require cancelation metering certification for simple administrative oversights that the purpose of certification has also perhaps lost its technical significance.	Unknown	Disputed
Preventative actions taken to ensure no further issues will occur	Completion date	

A downward trend in total uncertified meter/ICP population is still clearly evident from month to month. ICPs with outstanding recertification work all sit with associated Traders to follow up with their customers on miscellaneous matters. All Trader service requests for recertification are actioned promptly when the notified prerequisite issues preventing metering recertification has been addressed by the Trader and or customer. By the way the code now works with all the requirements to cancel certifications, it is possible there may always be a small % of ICPs with a status of cancelled certification.	Unknown	

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, and*
- *the ATH has the appropriate scope of approval to certify and recertify the metering installation.*

Audit observation

I checked the certification records for 42 metering installations to confirm compliance.

Audit commentary

The certification reports for all 22 category 2 and above metering installations included test results which confirmed that all required testing had been completed.

The 20 certification reports for category 1 metering installations certified by the Bluecurrent ATH did not contain the details or results of the certification tests conducted. I recommend Counties work with the Bluecurrent ATH to ensure the details and results of all testing completed are recorded in the metering installation certification reports provided.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 10.38(b)	Work with the Bluecurrent ATH to ensure the details and results of all testing completed are recorded in the metering installation certification reports provided.	All prescribed certification tests are routinely completed, and evidence can be seen in site photos, however we note it is Counties Energy that has failed to comply with Blue Currents procedures in relation to these omissions of the test records in the document. COUP is now operating under MTRX ATH and the field computing tool has been extensively reworked to capture and deliver the missing fields into the report document.	Cleared

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

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

All other installations must measure and separately record:

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

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

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

Audit observation

All relevant metering is compliant with this clause.

Audit commentary

Counties has metering installations at, and above category 2 and they record energy in accordance with this clause.

Audit outcome

Compliant

7.4. Local Service Metering (Clause 10.37(2)(b))

Code reference

Clause 10.37(2)(b)

Code related audit information

The accuracy of each local service metering installation in grid substations must be within the tolerances set out in Table 1 of Schedule 10.1.

Audit observation

This clause relates to Transpower as an MEP.

Audit commentary

This clause relates to Transpower as an MEP.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

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

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

Audit observation

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

Audit commentary

There are no examples of burden changes having occurred or the addition of non-metering equipment being connected to metering CTs.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

If a meter is certified in this manner:

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

Audit observation

I checked the audit compliance report for examples where the CT ratio was above the metering category threshold to confirm that protection was appropriate or that monitoring was in place.

Audit commentary

There are 17 metering installations where the CT ratio is above the metering category threshold. The certification records were checked for all 17, which confirmed that the ATH has recorded that a protection device has been installed which limits the maximum current of the installation to be within the certified category for 15 ICPs. This meets the requirements of clause 6(1)(a) of schedule 10.7.

There are two metering installations, ICPs 0005011760CN758 and 0005001600CN94D, where monitoring occurs. I checked and confirmed that both were the list maintained by Counties of installations requiring monitoring, and also confirmed that monitoring had taken place each month.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

Audit observation

I checked if there were any examples of Insufficient load certifications and if monitoring was conducted as required.

Audit commentary

There are three examples of insufficient load certification. Two ICPs are monitored, but ICP 1099584667CNB0F does not appear on the list. It was certified for insufficient load on 18 December 2023, but it was only set up for monitoring on 5 June 2024.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 7.7 With: Clauses 14(3) and (4) of Schedule 10.7 From: 18-Dec-23 To: 05-Jun-24	ICP 1099584667CNB0F certified for insufficient load not monitored between 18 December 2023 to 5 June 2024. Potential impact: Low Actual impact: Low Audit history: None 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. There is no evidence the installation is recording incorrectly; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
The load monitoring and automatic notification function is now configured in Clariti. Noting whilst the automated monitoring was not set up - for most of the period we knew the factory was in fact not in operation, and in fact it is still not operating at this time.	5/06/2024	Cleared

Preventative actions taken to ensure no further issues will occur	Completion date	
Monitoring should and will be set up at the same time as loading the low load certification information to the system and Registry and this instance was an administrative oversight.	5/06/2024	

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

Code reference

Clause 14(6) of Schedule 10.7

Code related audit information

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

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

Audit observation

I checked if there were any examples of Insufficient load certifications and if monitoring was conducted as required.

Audit commentary

There are three examples of insufficient load certification. Two ICPs are monitored, but ICP 1099584667CNB0F does not appear on the list. It was certified for insufficient load on 18 Dember 2023, but it was only set up for monitoring on 5 June 2024.

There are no examples where installations have been inaccurate following full certification.

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 ten 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, and*
- *take all steps to ensure that the metering installation is certified before the certification expiry date.*

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

Audit observation

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

Audit commentary

Alternative certification has not been applied to any metering installations.

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 two seconds per day over a period of 12 months,
b) is monitored and corrected at least once every 12 months.

Audit observation

I asked Counties whether there were any metering installations with time switches.

Audit commentary

Counties confirmed there are no installations with time switches.

Audit outcome

Compliant

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

Code reference

Clause 35 of Schedule 10.7

Code related audit information

The participant must, within ten 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

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

Audit commentary

Counties has a process for the management of bridged control devices. There were six examples identified where control devices were bridged during the audit period. In all cases, the relevant reconciliation participant was notified within the allowable timeframe.

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

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

Audit commentary

Counties have not received notification from ATHs in accordance with this clause. Counties is the distributor and MEP in their region, and they confirm there are no signal propagation issues on their network.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

7.14. Compensation Factors (Clause 24(3) of Schedule 10.7)

Code reference

Clause 24(3) of Schedule 10.7

Code related audit information

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

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

Audit observation

I checked the records for 22 category 2 and above metering installations to confirm that compensation factors were correctly recorded on the registry.

Audit commentary

Compensation factors have been updated accurately on the registry. Checking the records for 22 ICPs confirmed this.

Audit outcome

Compliant

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

Code reference

Clause 26(1) of Schedule 10.7

Code related audit information

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

Audit observation

I checked the certification records for 42 metering installations to confirm compliance.

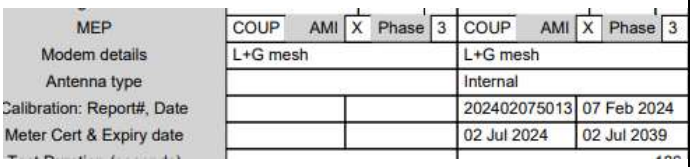
Audit commentary

Meters were certified for 24 of 42 installations.

The certification reports for ICPs 0002663300CN517, 0005901770CNA09 and 0008604380CNEC1 state that the meters are not certified. ICP 0002663300CN517 has "No" in the meter certification field, but has a certification date, certification expiry day and states it was certified by the Wells ATH. The meter certification fields are all blank for ICPs 0005901770CNA09 and 0008604380CNEC1.

None of the category 1 installations where meters should have been certified were recorded as certified.

I recommend that Counties work with the Bluecurrent ATH to ensure the details of meter calibration and certification are recorded in the metering installation certification reports provided.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 26(1) of Schedule 10.7	Work with the Bluecurrent ATH to ensure the details of meter calibration and certification are recorded in the metering installation certification reports provided.	Going forward from June 2024 the installed meter certification details and dates are now recorded in the category 1 certification documentation under the Ihub ATH per the example below:  In the case of some of the above category 2 ICPs we agree Wells has either not populated the meter certified field, or has not recorded this correctly, however that said the meter in each case clearly is certified, and we have raised this with them to reissue the reports with meter certified field recorded: Yes.	Cleared

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 7.15 With: Clause 26(1) of Schedule 10.7 From: 01-May-23 To: 05-Jun-24	18 metering installation certification reports without meter certification details recorded. Potential impact: Low Actual impact: Low Audit history: None 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. There is no evidence the meters are not recording correctly; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
Specification of the meter certification date was a deficiency in the old field computing application, and significant work has now been completed to ensure this is input and reported on the certification document.	20/06/2024	Identified

Preventative actions taken to ensure no further issues will occur	Completion date	
The meter certification date details fields are now available are now mandatory fields for input and reporting.	20/06/2024	

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

Code reference

Clause 28(1) of Schedule 10.7

Code related audit information

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

Audit observation

I checked the certification records for 12 category 2 and above metering installations certified using the fully calibrated and selected component methods to confirm compliance.

Audit commentary

Measuring transformers were certified for the 12 metering installations. New CTs are supplied pre-certified by TWS. Existing VT's and CTs are calibrated and re-certified by Accucal in higher category installations.

Audit outcome

Compliant

7.17. Metering Installations Incorporating a Data Storage Device (Clause 36(1) of Schedule 10.7)

Code reference

Clause 36(1) of Schedule 10.7

Code related audit information

The MEP must ensure that each data storage device in a metering installation it is responsible for is certified.

Audit observation

I checked the certification records for 42 metering installations to confirm compliance.

Audit commentary

Data storage devices were certified for 24 of 42 installations.

The certification reports for ICPs 0002663300CN517, 0005901770CNA09 and 0008604380CNEC1 state that the meters are not certified. ICP 0002663300CN517 has "No" in the meter certification field, but has a certification date, certification expiry day and states it was certified by the Wells ATH. The meter certification fields are all blank for ICPs 0005901770CNA09 and 0008604380CNEC1.

None of the category 1 installations where meters should have been certified were recorded as certified.

I have made a recommendation in **section 7.15** to record meter certification details in category 1 metering

Audit outcome

Compliant

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

Code reference

Clause 7 (3) Schedule 10.3

Code related audit information

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

Audit observation

I checked the ATH register to confirm compliance.

Audit commentary

The Accucal, Bluecurrent and Wells ATHs have appropriate approval.

Audit outcome

Compliant

7.19. Interim Certification (Clause 18 of Schedule 10.7)

Code reference

Clause 18 of Schedule 10.7

Code related audit information

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

Audit observation

I checked the audit compliance report to identify any ICPs with interim certification recorded.

Audit commentary

There are 250 previously interim certified installations with expired certification. Further detail regarding expired certifications is included in **section 7.1**.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 7.19 With: Clause 18 of Schedule 10.7 From: 01-Apr-15 To: 05-May-24	250 ICPs with 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 a number of 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**
All ICPs with expired certification are mainly due to technical and predominantly electrical safety matters. All have been escalated to the Retailers / customers associated. These are being addressed on a case-by-case basis by the Retailer concerned and service orders are issued to Counties Energy as appropriate when the site is ready for new metering.	Undefined	Disputed
Preventative actions taken to ensure no further issues will occur	Completion date	
We cannot allow these metering compliance requirements to override health and safety and WorkSafe regulations. When customers have undertaken the necessary repairs, we promptly undertake the metering work. Counties Energy now disputes that we have not undertaken our responsibilities under the code in relation to the matter.	Undefined	

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 two months prior to first date on which the inspections are to be carried out, for approval (and promptly provide any other information the Authority may request).

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

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

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

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

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

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

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

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

Audit observation

I checked to determine whether Counties was required to conduct any inspections during the audit period.

Audit commentary

Counties has conducted sample inspections for category 1 metering installations. The process was approved by the Authority and all inspections were completed within the required timeframe. Reporting

has been prepared and supplied to the Authority. Out of the 440 ICPs inspected the following issues were found:

Count of ICPs	Description of Non-compliance:
20	Seal or seals broken
2	Faulty meters, now replaced
1	Incorrect expiry now remedied

All missing or broken seals were replaced at the time of inspection.

All other matters were remedied immediately.

Audit outcome

Compliant

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

Code reference

Clause 46(1) of Schedule 10.7

Code related audit information

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

- *120 months for category 2,*
- *60 months for category 3,*
- *30 months for category 4,*
- *18 months for category 5.*

Audit observation

I checked the registry information to confirm which ICPs were due for inspection. There were 15 category 2+ installations due for inspection.

Audit commentary

I identified 15 category 2 and above metering installations which were due for inspection based on the certification details recorded in the registry. I checked the inspection reports for 13 completed inspections and confirmed they had been completed within the required timeframe. There were two installations which were not inspected within the timeframe, and they are both now recertified. The ICPs are 1099578322CNFFC and 1099578323CN3B9.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 8.2 With: Clause 46(1) of Schedule 10.7 From: 27-Nov-23 To: 05-May-24	Inspections not conducted for two category 5 metering installations. Potential impact: Medium Actual impact: Low 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 is no impact on settlement because both installations have been recertified; therefore, the audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
The 2 x cat 5 ICPs with missed inspections have been fully recertified 14/03/2024.	14/03/2024	Cleared
Preventative actions taken to ensure no further issues will occur	**Completion date**	
Review systems and job notification period to allow additional time for the ATH to adequately coordinate this work within their work schedule.	21/06/2024	

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, and*
- *update the metering records in the registry.*

Audit observation

I checked the process and results from inspection regimes to ensure any incorrect records were updated.

Audit commentary

The Counties inspection process includes a comparison with registry records; discrepancies are corrected within the required timeframe.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

The MEP must make the above arrangements within

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

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

Audit observation

I checked if there were any examples of notification of missing seals.

Audit commentary

During the category 1 inspections 20 examples of broken seals were identified. In all cases the installation was re-sealed by the ATH following confirmation that the integrity of the installation was not compromised.

Counties have a documented process in place for the management of seals and any subsequent investigation and reporting.

Audit outcome

Compliant

9. PROCESS FOR HANDLING FAULTY METERING INSTALLATIONS

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

Code reference

Clause 10.43(4) and (5)

Code related audit information

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

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

Audit observation

I asked Counties to provide examples where they had become aware of a faulty metering installation.

Audit commentary

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

Counties provided seven examples of faulty metering installations. In all cases, meters were replaced, and notification was provided to the trader within the required timeframe.

Audit outcome

Compliant

9.2. Testing of Faulty Metering Installations (Clause 10.44)

Code reference

Clause 10.44

Code related audit information

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

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

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

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

Audit observation

I asked Counties to provide examples where they had become aware of a faulty metering installation.

Audit commentary

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

Counties provided seven examples of faulty metering installations. In all cases, meters were replaced, and notification was provided to the trader within the required timeframe. The notification included sufficient information to be compliant with the statement of situation requirements.

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 market administrator (for all category 3 and above metering installations and any category 1 and category 2 metering installations) on request.*

Audit observation

I asked Counties to provide examples where they had become aware of a faulty metering installation.

Audit commentary

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

Counties provided seven examples of faulty metering installations. In all cases, meters were replaced, and notification was provided to the trader within the required timeframe. The notification included sufficient information to be compliant with the statement of situation requirements.

Audit outcome

Compliant

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

Code reference

Clause10.46A

Code related audit information

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

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

Audit observation

I asked Counties to provide examples where they had become aware of a faulty metering installation.

Audit commentary

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

Counties provided seven examples of faulty metering installations. In all cases, meters were replaced, and notification was provided to the trader within the required timeframe. The notification included sufficient information to be compliant with the statement of situation requirements.

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 ten business days of receiving the authorised party making a request.

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

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

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

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

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

Audit observation

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

Audit commentary

No requests have been received, but Counties 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

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

Audit commentary

No requests have been received, but Counties 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 ten business days of receiving a request from one of the following parties, arrange physical access to each component in a metering installation:

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

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

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

Audit observation

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

Audit commentary

No requests have been received, but Counties 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

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

Audit commentary

No requests have been received, but Counties 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 an events that may affect the integrity or operation of the metering installation, such as malfunctioning or tampering.

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

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

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

Audit observation

Counties uses Intellihub and EDMI as agents for data collection. Counties provided details of the processes used by Intellihub and performance related information in the form of reports provided to Counties by Intellihub.

Interrogation cycle

I checked reporting of meters not read during the maximum interrogation cycle.

Clock synchronisation

Clock synchronisation is discussed in **section 10.7**.

Event logs

Event logs are discussed in **section 10.8**.

Security of raw meter data

I checked the security and storage of data by looking at examples of data and by checking security protocols.

Audit commentary

Interrogation cycle

Counties provided reporting from Intellihub of ICPs where interrogation had not occurred within the maximum interrogation cycle of the meter. The report identified seven ICPs where the AMI flag was still "Y" and where interrogation had not occurred within the maximum interrogation cycle. The details are shown below, indicating recertification or cancellation did not occur within 10 business days, which is recorded as non-compliance in section 6.4.

ICP	Date of last interrogation	Expected certification cancellation date	Comment
1099565551CN2A6	7/09/2023	6/12/2023	Recertified 28/05/24
1099582135CN940	12/10/2023	10/01/2024	Recertified 01/05/24
1099574497CN483	29/07/2023	27/10/2023	Recertified 28/05/24
1099569201CNE2C	19/02/2024	19/05/2024	Recertified 31/05/24
0009521842CNE45	14/05/2022	12/08/2022	Two meters on site, one is isolated awaiting electrical repairs by the customer and not providing reads, the other has consistent reads.
0001284246CN450	31/05/2022	22/01/2023	Certification was cancelled on 18/06/24 effective from 31/05/23
1099579770CNAD0	1/10/2023	30/12/2023	Certification was cancelled on 01/05/24 effective from 30/12/23

Security of raw meter data

All users have login and password to access working data and only certain IT experts can access raw data. There are no business processes that allow data to be edited. Event data is archived along with consumption data.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 10.5 With: Clause 8 of Schedule 10.6 From: 01-Mar-23 To: 31-May-24	Seven ICPs not read within the maximum interrogation cycle, where the AMI flag was still "Y". Potential impact: Low Actual impact: Low Audit history: None 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
In some cases, we fully know why the data isn't being delivered, know it is a temporary situation perhaps the connection status, have advised the Trader, so the concerned party is aware and perhaps they do not wish to set up a manual read for a temporary period. The data is within the meters technical interrogation cycle which is typically not exceeded but only the new 30 day read data collection requirement.	N/A	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
The process is now bedded in much more effectively. The process of maintaining the AMI flag is currently semi manual requiring running of files etc. The rules don't cater well for clubs churches, halls, rural situations - irrigation pumps etc where the customers choose to isolate the electricity supply pre meter. We will discuss further with the retailers to encourage different customer behaviour.	N/A	

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

Counties uses Intellihub and EDMI as agents for data collection.

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

Audit commentary

Data is transmitted securely by SFTP and is only accessible to authorised persons with appropriate passwords. There are no business processes that allow data to be edited. Event data is archived along with consumption data.

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

Counties uses Intellihub and EDMI as agents for data collection. I checked the time synchronisation reports for April 2024 to check compliance.

Audit commentary

For Intellihub, time synchronisation occurs as follows: The clock setting is ten seconds to 20 minutes. For errors over 20 minutes a user must manually set the time. This list is run weekly and sent to Silverspring for them to adjust the clock.

Intellihub advises affected reconciliation participants of time error adjustments or any potential effect on raw meter data. Intellihub monitors devices with multiple clock errors to ensure the meters are replaced.

For EDMI, during each interrogation, the data storage device internal clock is compared with the data collection system clock. Review of a diverse sample of email notifications covering different MEPs, reconciliation participants and periods confirmed that MEPs are advised of time differences. The notification includes which ICPs, and meters are affected, the MEP, the reconciliation participant, the time difference, and date.

This clause is slightly different to the clause in Part 15 for reconciliation participants. This clause requires MEPs to ensure the time is not outside the allowable thresholds, therefore non-compliance exists for those examples where time has drifted outside the allowable threshold. I checked the April 2024 reports, which identified the following discrepancies, all of which were corrected.

	Number of meters
Cat 1 HHR time error > 30 seconds	45
Cat 2 HHR time error > 10 seconds	6

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 10.7 With: Clause 8(4) of Schedule 10.6 From: 01-Apr-24 To: 30-Apr-24	51 examples of clock errors outside the allowable thresholds for April 2024. 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 because clocks are synchronised during every successful interrogation. The impact is considered minor because most clock errors are small and are corrected within one half hour. The audit risk rating is low.

Actions taken to resolve the issue	Completion date	Remedial action status
This is an extremely minor matter. For category 1 meters the time can be out by 30 seconds on first install prior to the initial communication and time synchronization, this is typically not an issue as is corrected promptly on joining the network.	None	Disputed
Preventative actions taken to ensure no further issues will occur	Completion date	
The end-to-end AMI metering technology used is commonplace and meets industry standards, and clock synchronisation processes are in place and active, 51 meters from a meter fleet exceeding 60,000 devices = 0.09% devices outside the threshold. it is unclear what more we can request to done by our data administrator now with respect to this. Perhaps this just represents the current state of meter technology in service in 2024.	None	

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

Counties uses Intellihub and EDMI as agents for data collection. I checked the processes for identifying and sending event information.

Audit commentary

Intellihub and EDMI provide a weekly report to Counties of all critical meter events. Counties reviews the reports and advises the reconciliation participants and appropriate action is taken including site visits as required. I reviewed the report from 23 April 2024, it included battery failure and memory errors. I examined the process for filtering and managing events and I confirm that this is complete and robust.

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

Counties uses Intellihub and EDMI as agents for data collection. EDMI collects data from metering installations where the certification process includes a HHR load check, therefore sum-check validation is not required.

Counties provided details of the processes used by Intellihub and performance related information in the form of sum-check reports provided to Counties by Intellihub.

Audit commentary

Sum-check validation occurs daily and is based on midnight-to-midnight NZST. The "fail" setting is 1 kWh, and all trading periods must be present for a pass to occur.

The Code requires additional practices and reporting from 1 February 2021, specifically: If an electronic interrogation is incomplete (missing register or missing intervals), clause 8(11) of schedule 10.6 applies, which is the requirement to complete an interrogation within the lesser of 30 days or 25% of the maximum interrogation cycle. If the interrogation is successful before 30 days or 25% of the maximum interrogation cycle, sum-check can be performed for the period the data had been incomplete. For example, if there is a successful interrogation on day 1 but the next successful interrogation (100% complete data including the register reading), is on day 5, sum-check can occur for a 5-day period. It also seems that if a sum-check is not performed for 30 days or 25% of the maximum interrogation cycle, the AMI flag must be changed to "N". With the flag set to "N", certification is not cancelled, because the services access interface changes from remote to local once the flag changes from "Y" to "N", and this clause only relates to installations where the services access interface is remote.

Intellihub has reporting to meet the code requirements with regard to managing the AMI flag within the lesser of 30 days or 25% of the maximum interrogation cycle and investigating interrogation failures. Intellihub provided reporting for the audit period which identified three meters which had failed sum-checks which were not resolved within three business days and where certification was not cancelled within ten business days. All three ICPs are now recertified.

Non-compliance is recorded in **section 6.4** as certification was not cancelled within ten business days. Compliance is recorded in this section because the sum-check is conducted.

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 ten 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

I checked whether correction of raw meter data occurs.

Audit commentary

Data correction of raw meter data does not occur, but Intellihub has an estimation capability which can provide information to reconciliation participants as requested. There were no specific examples to examine.

Audit outcome

Compliant

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

Code reference

Clause 8(10) of Schedule 10.6

Code related audit information

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

Audit observation

I checked whether Intellihub was applying compensation factors to raw meter data on behalf of Counties.

Audit commentary

Intellihub is not applying compensation factors to raw meter data.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

If the MEP choses 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

I checked whether reporting was in place for installations not interrogated within 30 days or 25% of the maximum interrogation cycle.

Audit commentary

I checked the process implemented by Intellihub to meet the new code requirements which require that a successful interrogation must occur within the lesser of 30 days or 25% of the maximum interrogation cycle. A "missing data export" report identifies meters where there are gaps in either the interval or register data. These are followed up to attempt to retrieve the missing data from the meter or Counties is advised to update the AMI flag to "N" on the registry or cancel certification.

I examined reporting for the audit period to identify ICPs where the AMI flag had not been changed to "N" where Intellihub had advised that interrogation had not been successful. The report contained 11 ICPs.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 10.12 With: Clause 8(11), 8(12) and 8(13) of Schedule 10.6 From: 01-Mar-23 To: 31-May-24	AMI flag not changed to "N" for 11 ICPs where interrogation was not successful within 30 days or 25% of the interrogation cycle. Potential impact: Low Actual impact: Low Audit history: None 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
The new flag update process is being consistently applied now.	July 2024	Identified
Preventative actions taken to ensure no further issues will occur	**Completion date**	
There has been disagreement on the application of this new rule. It is currently being applied to inactive and vacant electrically disconnected ICPs and also applied at ICP level not meter level, meaning the replacement meters on failed communications ICPs are being switched to AMI No when they are working perfectly. We believe this is a misinterpretation of the code and it has been pointed out to our data administrator and we hope to reach mutual agreement on this at our next meeting.	July 2024	

CONCLUSION

Counties are recorded as the MEP for 47,855 ICPs on the Counties Energy network at the time of the audit. Counties use Intellihub and EDMI as agents for the collection and provision of data.

The number of uncertified category 1 metering installations is now only 344, and the majority of issues present are not ones that Counties can resolve, because they require customers and/or traders to resolve such issues as customer refusal, unsafe wiring or metering enclosure upgrades. EDMI is now included in the audit scope as a data collection agent, and their compliance is of a high standard.

The audit records 16 non-compliances and makes four recommendations, the main issues are as follows:

- some inaccuracies and late updating of registry information,
- certification reports are missing several fields,
- certification is cancelled for 24 metering installations, and
- expired or cancelled metering installation certification for 368 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 indicates an audit frequency of three months. I have considered the Counties responses to the areas of non-compliance and recommend an audit frequency of 12 months to reflect the following remedial actions already implemented:

- Counties has commenced operating under a different ATH, which will resolve three of the non-compliances.
- Data collection process improvements have been established.
- Most ICPs with cancelled certification have been recertified.

As mentioned in the last audit report, almost all of the uncertified metering installations need assistance from other parties to progress further.

PARTICIPANT RESPONSE

Counties Energy again believes how scoring matrix is applied can paint a bleak storey on the basis of some very minor non compliances. We believe Counties Energy's metering operation is undertaken in a competent professional manner and we strive to provide excellent service to the Traders and customers of our metering services.

We would like to comment regarding new rules some of which are requiring unnecessary cancellation of metering installation certification for non-technical reasons, where there is no fault with the metering in place. i.e. where cancellation is called for due to some failure to adhere to the arbitrary but prescribed timelines for completing administrative tasks. Cancelling certification then requires unnecessary on-site metering work at customers premises causing disruption to them and loss of confidence in the technology installed.

If the code is interpreted in a black and white manner it can sometimes prevent sensible asset management practices.