

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

For

WEL NETWORKS LIMITED
NZBN: 9429039416926

Prepared by: Brett Piskulic – Veritek Limited

Date audit commenced: 27 July 2022

Date audit report completed: 31 October 2022

Audit report due date: 16-Nov-22

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EXECUTIVE SUMMARY

WEL Networks (WEL) is a Metering Equipment Provider (MEP) and is required to undergo an audit by 16 November 2022, in accordance with clause 1(1)(b) of schedule 10.5.

WEL has a proactive approach to compliance which has ensured a high level of compliance. The audit compliance report is used regularly alongside the registry validation process to ensure accurate registry records are maintained.

Eight non-compliances are recorded, a reduction of three from the last audit. The main non-compliance issues are as follows:

- some late registry updates,
- certification was not cancelled within 10 business days for a Category 3 ICP where inspection was not conducted during the last audit (appears in two sections), and
- some certification report fields are inaccurate or not present, including the results of certification tests (appears in two sections).

An issue is raised for clarification from the Electricity Authority regarding how certification, certification reports and the registry should be managed in the situation where WEL meters are installed in series with NGCM meters in metering installations.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The future risk rating provides some guidance on this matter and recommends an audit frequency of twelve months. I have considered this recommendation in conjunction with the responses from WEL and I recommend an audit period of 24 months.

The issues found are shown in the tables below.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Registry updates	3.2	2 of Schedule 11.4	38 registry updates later than 15 business days.	Strong	Low	1	Identified
Changes to registry records	4.10	3 of Schedule 11.4	Some records updated on the registry later than 10 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.	Moderate	Low	2	Identified
Response to switch request	6.1	1(1) of Schedule 11.4	One late MN file.	Strong	Low	1	Cleared

Cancellation of Certification.	6.4	7 (1), (2) and (3) of Schedule 11.4	Certification not cancelled within 10 business days for ICP 0000022125WE134 after missed inspection.	Moderate	Low	2	Cleared
Certification and Maintenance	7.1	10.38 (a), clause 1 and clause 15 of Schedule 10.7	Certification cancelled for ICP 0000022125WE134.	Strong	Low	1	Cleared
Some certification tests not recorded by ATHs.	7.2	10.38(b) and clause 9 of Schedule 10.6	Some certification tests not recorded by ATHs.	Moderate	Low	2	Identified
Time Errors for Metering Installations	10.7	8(4) of Schedule 10.6	Three examples of time errors outside the allowable thresholds.	Strong	Low	1	Identified
Future Risk Rating						12	
Indicative Audit Frequency						12 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	Recommendation	Description
Provision of Registry Information	6.2	Regarding Clause 7 (1), (2) and (3) of Schedule 11.4	WEL to investigate further to determine if there is a valid reason for the recording an exemption in the registry for all metering installations. If there is no valid reason WEL should remove the variation from the registry.

ISSUES

Subject	Section	Issue	Description
Complete and accurate records	5.1	Multiple MEOs on category 1 installations.	As mentioned in section 5.1, clarification is required regarding how certification, certification reporting, and the registry should be managed when both WEL and NGCM MEPs have meters in series in metering installations.

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

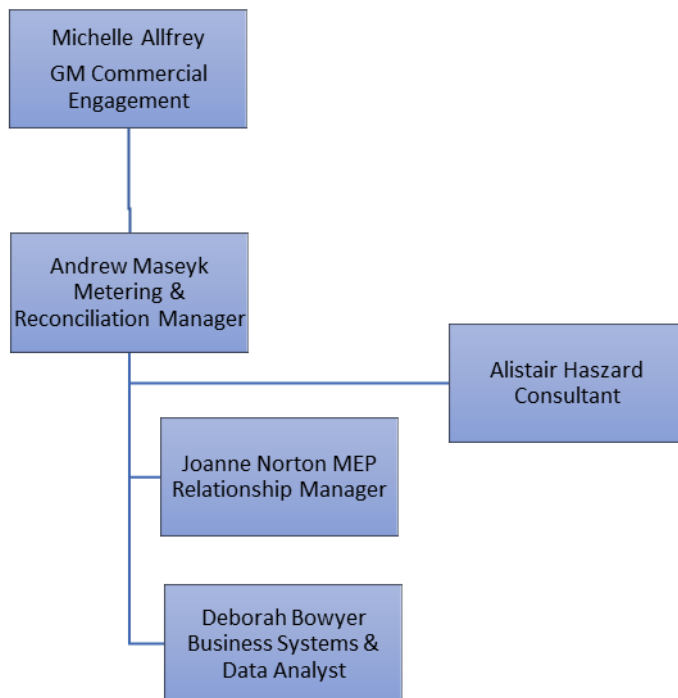
I checked the Electricity Authority website and I confirm there are no exemptions in place.

Audit commentary

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

1.2. Structure of Organisation

WEL Networks MEP Structure:



1.3. Persons involved in this audit

Auditor: Brett Piskulic

Veritek Limited

Electricity Authority Approved Auditor

WEL personnel assisting in this audit were:

Name	Title
Andrew Maseyk	Metering & Reconciliation Manager
Alastair Hazard	Consultant
Deborah Bowyer	Business Systems & Data Analyst
Craig Evans	Smart Metering Support

1.4. Use of Agents (Clause 10.3)

Code reference

Clause 10.3

Code related audit information

A participant who uses a contractor

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

Audit observation

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

Audit commentary

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

1.5. Hardware and Software

WEL MEP data is held in the Meter Data Warehouse and Meter Database Orion, which is subject to backup arrangements in accordance with standard industry protocols.

1.6. Breaches or Breach Allegations

WEL confirmed there have been no breach allegations during the audit period.

1.7. ICP Data

Metering Category	Number of ICPs
1	4,720
2	1
3	2

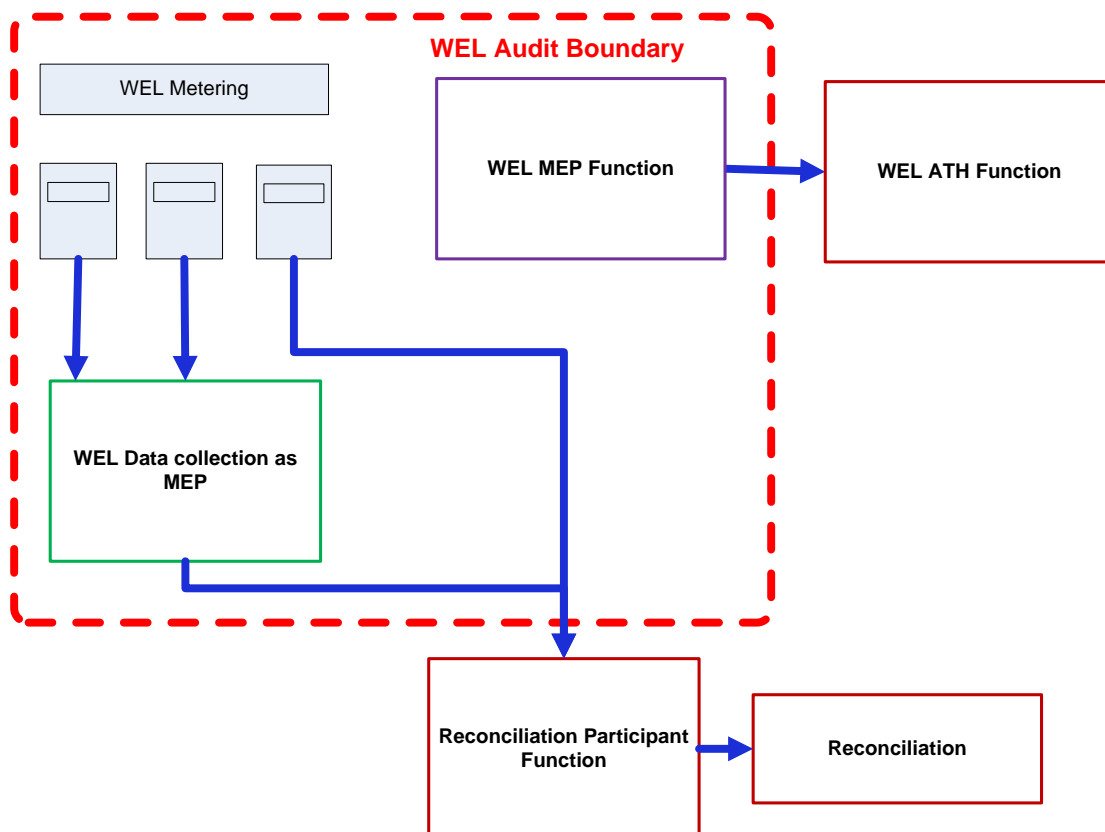
1.8. Authorisation Received

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.



1.10. Summary of previous audit

The previous audit was conducted in November 2021 by Steve Woods of Veritek Limited. The table below shows the status of the issues identified.

Table of Non-Compliance

Subject	Section	Clause	Non-compliance	Status
Registry updates	3.2	2 of Schedule 11.4	One registry update later than 15 business days.	Still existing
Changes to registry records	4.10	3 of Schedule 11.4	Some records updated on the registry later than 10 business days.	Still existing
Accurate and Complete Records	5.1	4(1)(a) and (b) of Schedule 10.6, and Table 1, Schedule 11.4	Some inaccurate certification records.	Still existing
Cancellation of Certification.	6.4	7 (1), (2) and (3) of Schedule 11.4	Inspection not conducted and certification not cancelled for ICP 0000022125WE134.	Still existing
Certification and Maintenance	7.1	10.38 (a), clause 1 and clause 15 of Schedule 10.7	Certification cancelled for ICP 0000022125WE134.	Still existing
Some certification tests not recorded by ATHs.	7.2	10.38(b) and clause 9 of Schedule 10.6	Some certification tests not recorded by ATHs.	Still existing
Category 2 to 5 Inspections	8.2	46(1) of Schedule 10.7	Inspection not conducted for ICP 0000022125WE134.	Cleared
Investigation of Faulty Metering Installations	9.1	10.43(4) and (5)	Faulty metering notification not provided within 20 business days for ICP 0080050190WEB67.	Cleared
Statement of Situation	9.3	10.46(2)	Trader not updated within three business days regarding a faulty meter at ICP 0080050190WEB67.	Cleared
Time Errors for Metering Installations	10.7	8(4) of Schedule 10.6	218 examples of clock errors outside the allowable thresholds.	Still existing

Subject	Section	Clause	Non-compliance	Status
Event Logs	10.8	8(7) of Schedule 10.6	Event logs not routinely reviewed by WEL.	Cleared

Table of Recommendations

Subject	Section	Clause	Recommendation for improvement	Status
Time Errors for Metering Installations	10.7	8(4) of Schedule 10.6	Review and change clock synchronisation reporting to ensure the old and new times are correctly reported.	Cleared
Comparison of HHR Data with Register Data	10.9	8(9) of Schedule 10.6	Develop a process to conduct sum-check over a longer period once all data is available.	Cleared
Comparison of HHR Data with Register Data	10.9	8(9) of Schedule 10.6	Develop reporting to show ICPs where a sum-check "fail" has occurred and is not resolved within three business days.	Cleared

Table of Issues

Subject	Section	Issue	Description	Status
Complete and accurate records	5.1	Multiple MEOs on category 1 installations.	As mentioned in section 5.1, clarification is required regarding how certification, certification reporting, and the registry should be managed when both WEL and NGCM MEPs have meters in series in metering installations.	Still existing, no response received from the Authority

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

The Code places responsibility for maintaining the services access interface on the MEP, and places responsibility for determining and recording it with ATHs. I checked the certification records for all relevant ATHs.

Audit commentary

I checked 29 certification records and found the services access interface was recorded correctly by the ATH in all 29 certification records.

Audit outcome

Compliant

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

Code reference

Clause 10.50(1) to (3)

Code related audit information

Participants must in good faith use its best endeavours to resolve any disputes related to Part 10 of the Code.

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

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

Audit observation

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

Audit commentary

WEL 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

WEL uses the WASN 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

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

Audit outcome

Compliant

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

Code reference

Clause 11.2 and Clause 10.6

Code related audit information

The MEP must take all practicable steps to ensure that information that the MEP is required to provide to any person under Parts 10 and 11 is complete and accurate, not misleading or deceptive and not likely to mislead or deceive. If the MEP becomes aware that in providing information under Parts 10 and 11, the MEP has not complied with that obligation, the MEP must, as soon as practicable, provide such further information as is necessary to ensure that the MEP does comply.

Audit observation

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 WEL has taken all practicable steps to ensure that information is complete and accurate.

Audit outcome

Compliant

3. PROCESS FOR A CHANGE OF MEP

3.1. Change of metering equipment provider (Clause 10.22)

Code reference

Clause 10.22

Code related audit information

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

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

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

The gaining MEP is not required to pay costs if:

- *the losing MEP has agreed in writing that the gaining MEP is not required to pay costs, or the losing MEP has failed to provide notice within 40 business days.*
- *within 3 business days, the gaining MEP replaces, removes or recertifies the metering component or metering installation*
- *the losing MEP has failed to provide notice of the costs to the gaining MEP within 40 business days.*

Audit observation

I checked if WEL had sent or received any invoices.

Audit commentary

WEL has not sent or received any invoices. The table below shows that there is only one scenario where costs will be payable, and this is unlikely to occur.

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

Audit outcome

Compliant

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

Code reference

Clause 2 of Schedule 11.4

Code related audit information

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

Audit observation

I checked the audit compliance report for the period 1 December 2021 to 27 July 2022 for all records where WEL became the MEP to evaluate the timeliness of updates.

Audit commentary

There were 38 late updates identified by the audit compliance report. Analysis of all 38 found that 20 were due to late nomination by the trader and 17 were corrections of historical information backdated to the date of the original update. One update was not able to be processed due to an update by the previous MEP dated after the nomination date.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 3.2 With: Clause 2 of Schedule 11.4 From: 01-Dec-21 To: 27-Jul-22	38 registry updates later than 15 business days. Potential impact: Low Actual impact: Low Audit history: Twice 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. 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
All but one instance was outside WEL control using the correct effective date when processing prioritised accurate Registry records and participant/customer impact over file submission timeframe compliance.		21/10/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
WEL will continue with our weekly Audit Compliance checks to investigate reasons (identifying any potential systematic issues), ensure completion and ensure impact is minimal.		27/10/2022	

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

Code reference

Clause 5 of Schedule 10.6

Code related audit information

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

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

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

Audit observation

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

Audit commentary

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

Audit outcome

Not applicable

3.4. Termination of MEP Responsibility (Clause 10.23)

Code reference

Clause 10.23

Code related audit information

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

The MEP is responsible if it:

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

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

An MEPs obligations terminate only when:

- *the ICP changes under clause 10.22(1)(a):*
- *the NSP changes under clause 10.22(1)(b), in which case the MEPs obligations terminate from the date on which the gaining MEP assumes responsibility:*
- *the metering installation is no longer required for the purposes of Part 15; or*

- *the load associated with an ICP is converted to be used solely for unmetered load.*

Audit observation

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

Audit commentary

WEL 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. Eight ICPs were decommissioned during the audit period and the records are still available.

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

WEL has engaged the WEL and Accucal ATHs for certification activities. I have checked design reports for this work provided by both WEL and the ATHs.

Audit commentary

WEL has provided design reports which are used by WEL ATH. I checked the design reports and confirmed that they include all of the requirements noted above and they were prepared by a person with the appropriate level of skills, expertise, experience and qualifications. I checked the certification reports for 29 installations completed by the WEL ATH and confirmed that they referenced a design report.

Audit outcome

Compliant

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

Code reference

Clause 9 of Schedule 10.6

Code related audit information

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

Audit observation

I confirmed that WEL has used the WEL and Accucal ATHs.

Audit commentary

I have checked the Authority's website and confirm that the WEL and Accucal ATHs have current and appropriate scope of approvals.

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 WEL to ensure compliance with the design and with the error thresholds stipulated in Table 1. I also checked the certification records for 29 metering installations.

Audit commentary

The WEL and Accucal ATH processes require the design report to be recorded on the metering installation certification reports; the 29 reports I checked included a reference to the design report.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

If the metering installation contains multiple phases, the MEP may aggregate together the amounts of imported electricity recorded on different phases, or the amounts of exported electricity recorded on different phases. However, the MEP must not aggregate imported and exported electricity together. For metering installations for ICPs that are not also NSPs, the MEP must ensure that the metering installation does not use subtraction to determine submission information used for the purposes of Part 15.

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

Clause 4(2)(b) of Schedule 10.7

Code related audit information

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

Audit observation

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

Audit commentary

I checked WEL's list file, and I confirm that there are two category 3 metering installations which have HHR metering.

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 WEL is responsible for any NSP metering.

Audit commentary

WEL is not the MEP for any NSP metering.

Audit outcome

Not applicable

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

Code reference

Clause 10.26(10)

Code related audit information

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

Audit observation

WEL is not responsible for any grid metering.

Audit commentary

WEL is not responsible for any grid metering.

Audit outcome

Not applicable

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

Code reference

Clause 4(4) of Schedule 10.7

Code related audit information

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

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

Audit observation

WEL has provided copies of the design reports to all distributors and traders in order to achieve compliance with this requirement.

Audit commentary

WEL has sought agreement the traders that they provide MEP services to. WEL is the MEP and distributor in all instances and have therefore approved the design for metering installations.

Audit outcome

Compliant

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

Code reference

Clause 3 of Schedule 11.4

Code related audit information

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

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

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

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

Audit observation

I checked the audit compliance report for the period 1 December 2021 to 27 July 2022 to evaluate the timeliness of registry updates.

Audit commentary

The audit compliance report identified three late new connection updates which were all due to late nomination by the trader.

There were a total of 288 recertification updates of which 280 (97.22%) were made within 10 business days. Eight late updates after recertification were identified, these were all related to corrections of historical information backdated to the date of the original update.

It was found during the audit that the category 3 metering installation at ICP 0000022125WE134 had been recertified by the Accucal ATH on 22 July 2022, but the registry had not yet been updated. The certification of this metering installation had been identified in the last audit as being cancelled due to a missed inspection, but the registry had not been updated. Non-compliance is recorded in this section for the late

updating of the registry, non-compliance is also recorded in **section 6.4** for not cancelling the certification within 10 business days.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.10 With: Clause 3 of Schedule 11.4 From: 01-Dec-21 To: 27-Jul-22	Some records updated to the registry later than 10 business days. Potential impact: Low Actual impact: Low Audit history: Twice Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	I have recorded the controls as moderate in this area because there is room for improvement. The updates relate to corrections which have a minor impact on participants and settlement, therefore the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
The eight late updates correcting data relate to the initial metering event after an MEP nomination rather than re certifications of sites. 0000022125WE134 - Registry updated 31/10/22.		27/10/2022 31/10/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
WEL will continue with our weekly Audit Compliance checks to investigate reasons (identifying any potential systematic issues), ensure completion and ensure impact is minimal. 0000022125WE134 - See 6.4 below		27/10/2022	

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

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

Audit commentary

WEL has the Silverspring data collection system for Category 1 to 3 metering installations, and this is considered “metering infrastructure”. This system operates as intended and is compatible with all metering components it interrogates.

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*
- *the responsible trader must arrange for a final interrogation of the metering installation*

Audit observation

I checked whether WEL was the MEP at any decommissioned ICPs and whether notification had been provided to relevant traders.

Audit commentary

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

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

Audit observation

I asked WEL 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

WEL has not conducted any updates during the audit period.

Audit outcome

Compliant

4.15. Temporary Electrical Connection (Clauses 10.29A)

Code reference

Clause 10. 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

WEL is not responsible for any grid metering.

Audit commentary

WEL is not responsible for any grid metering.

Audit outcome

Not applicable

4.16. Temporary Electrical Connection (Clause 10.30A)

Code reference

Clause 10.30A

Code related audit information

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

Audit observation

WEL is not responsible for any NSP metering.

Audit commentary

WEL is not responsible for any NSP metering.

Audit outcome

Not applicable

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 the audit compliance report for the period 1 December 2021 to 27 July 2022 to see if there were any examples of metering installation certification occurring prior to initial electrical connection date.

Audit commentary

There were no examples of temporary electrical connection identified. WEL confirmed that metering is normally installed at the time of electrical connection.

Audit outcome

Compliant

5. METERING RECORDS

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

Code reference

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

Code related audit information

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

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

Audit observation

I checked certification records for 29 metering installations to evaluate compliance with this clause.

Audit commentary

I checked certification records for 29 metering installations to evaluate compliance with this clause. All certifications conducted during the audit period were conducted by the WASN ATH.

		Qty incorrect or missing
Clause	Field required	WASN (29)
10.9(3)(b) & Clause 10 of Schedule 10.4 & Clause 8(2)(c) of Schedule 10.7	All services access interfaces and conditions under which each may be used.	-
9(1)(c) of Schedule 10.7	Record of increment in register value or accumulation of pulses over a measured time. Record that the register has advanced.	29

2(1)(e) of Schedule 10.8	For CT certification reports, determine and record the range that the in-service burden must be within	N/A
31(7) of schedule 10.7	Ensure and record appropriate in-service burden	N/A
10.11 & 8(4) of Schedule 10.7	Metering installation category	-
6(4) of Schedule 10.7	Certification as a lower category detail	N/A
8(2) of Schedule 10.7	Whether the installation is HHR or NHH or both	-
11(5)(a) & 13(4) of Schedule 10.7	Confirmation ATH has checked the design report	-
11(5)(b) of Schedule 10.7	Confirmation that components have been calibrated and certified	Refer to issue raised in this section regarding NGCM meters in series with WEL meters
11(5)(c) of Schedule 10.7	Confirmation that table 3 tests have been conducted and passed	-
11(5)(d) of Schedule 10.7	Confirmation that wiring is correct	-
11(5)(e) of Schedule 10.7	Details of tests and checks to confirm the integrity of the installation	-
11(6) of Schedule 10.7	Details of compensation factors	-
12(5) of Schedule 10.7	Confirmation that components in comparative certified installations are fit for purpose	N/A
14(2) of Schedule 10.7	Additional integrity checks for insufficient load certification	N/A
17(1) of Schedule 10.7	Installation certification and expiry date	-
22(3) of Schedule 10.7	Percentage error and uncertainty	N/A
26(4) of Schedule 10.7	Maximum interrogation cycle	-
27(5) of Schedule 10.7	Meter certification expiry date	-
29(3) of Schedule 10.7	Measuring transformer expiry date	-
33(2)(b) of Schedule 10.7	Control device certification expiry date	7
33(2)(d) of Schedule 10.7	Confirmation that the control device is compliant and fit for purpose	-
37(1) of Schedule 10.7	Data storage device expiry date	-

1(1)(d) of Schedule 10.8	Validity period	-
9(1)(c)(i)(A) of Schedule 10.7	Raw meter data output test load greater than 5% for Cat 1	-
9(1)(c)(i)(B) of Schedule 10.7	Raw meter data output test load greater than 10A per phase for Cat 2	N/A
3 of schedule 10.8	Ensure CTs are calibrated prior to certification	N/A
Table 3	Prevailing load test conducted using a working standard for recertification without meter replacement. These were all cases where an MEP change from NGCM to WEL took place using a WEL meter that was already installed in series with the NGCM meter but was not recorded in the registry.	12
Total		48

The WEL meters are often a combined meter, data storage device and control device. Whilst the control device is integrated, it still needs to have certification details recorded. Since the last audit WEL has implemented a process to separately record the control device certification details, but this had not been populated for seven of the 14 records checked that contained control devices.

In the last audit it was recorded that the WEL ATH did not record of increment in register value or accumulation of pulses over a measured time when conducting raw meter data tests on category 1 metering installations. As recorded in **section 7.2** WEL has added fields to record the number of pulses and time taken but the 29 certification records checked all contained the same values so did not record the actual measured values in each record.

As mentioned in the table above, there were some installations that also contained an NGCM meter in series with the WEL meter. I have repeated the issue raised in the last audit regarding this matter where guidance is required from the Authority to clarify how certification, certification reports and the registry should be managed in this situation. The table below details the scenarios and the questions requiring clarification.

Scenario	Questions
NGCM is the MEP NGCM meter was installed in 2015 Certification date is 30/06/15 and expiry date is 30/06/30 WEL installs their meter on 12/11/21 NGCM remains as the MEP	<ol style="list-style-type: none"> 1. Is the WEL meter considered part of the metering installation for certification purposes? 2. Assuming the answer to question 1 is yes, does the metering installation certification expiry date stay as 30/06/30? 3. Does the ATH need to provide the 12/11/21 certification report to NGCM as the MEP? 4. Which components should be in the registry?
NGCM is the MEP NGCM meter was installed in 2015 Certification date is 30/06/15 and expiry date is 30/06/30 WEL installs their meter on 12/11/21 WEL becomes the MEP	<ol style="list-style-type: none"> 1. Is the NGCM meter considered part of the metering installation for certification purposes? 2. Assuming the answer to question 1 is yes, does the metering installation certification expiry date stay as 30/06/30? 3. Which components should be in the registry?

As recorded in **section 7.2** there were 12 examples where certification took place during an MEP change from NGCM to WEL with a prevailing load test not conducted. The WEL meter was already installed in series with the NGCM meter but was not recorded in the registry. WEL has deemed that the WEL meter was installed on the day that it is recorded in the registry so have treated this as a meter change with no requirement for a prevailing load test to be conducted.

Issue	Description	Remedial action
Multiple MEOs on category 1 installations.	As mentioned in section 5.1, clarification is required regarding how certification, certification reporting, and the registry should be managed when both WEL and NGCM MEPs have meters in series in metering installations.	Authority to provide guidance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 5.1 With: Clause 4(1)(a) and (b) of Schedule 10.6, and Table 1, Schedule 11.4 From: 01-Feb-21 To: 20-Oct-22	Some inaccurate certification records. Potential impact: Low Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement. The impact on settlement and participants is minor; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
Changes will be undertaken to the certification recording to ensure correct pulse count recording time and load control expiry dates are recorded.		31/12/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
We await EA thoughts on issues raised on sites where existing certified metering is on sites and Registry records are simply updated to reflected current MEP.		Dependent on EA response	

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

Code reference

Clause 4(2) of Schedule 10.6

Code related audit information

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

Audit observation

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

Audit commentary

WEL 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 WEL record keeping processes to confirm compliance

Audit commentary

WEL keeps records indefinitely.

Audit outcome

Compliant

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

Code reference

Clause 6 Schedule 10.6

Code related audit information

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

6. MAINTENANCE OF REGISTRY INFORMATION

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

Code reference

Clause 1(1) of Schedule 11.4

Code related audit information

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

Audit observation

I checked the switch breach history report for the period 1 December 2021 to 27 July 2022 to confirm whether all responses were within 10 business days.

Audit commentary

There was one late MN response identified which was initially not able to be processed due to an update by the previous MEP dated after the nomination date.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 6.1 With: 1(1) of Schedule 11.4 From: 16-Mar-22 To: 31-Mar-22	One late MN file. Potential impact: Low Actual impact: Low Audit history: None Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as strong as the WEL process ensures that nominations are normally accepted within 10 business days. The impact is low; therefore, the audit risk rating is low.		
Actions taken to resolve the issue		Completion date	Remedial action status
The single instance was driven by time to determine cause of the initial file's rejection. No further action required on this instance.		27/10/2022	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Since this occurrence we have instigated tighter file error notification to ensure any issues are resolved within timeframes. In addition we have a 2 weekly Registry discrepancy check which includes a check that would identify this situation if unresolved.		27/10/2022	

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 to identify discrepancies.

Audit commentary

Analysis of the audit compliance report for the period 1 December 2021 to 27 July 2022 for all WEL ICPs found that all registry records were accurate.

I found that all WEL metering installations have the "Certification Variations" field populated with an "X" and the "Certification Variations Expiry Date" field populated with a date equivalent to the certification expiry date, indicating that there is an exemption in place. As recorded in **section 1.1**, I checked the Electricity Authority website and found there are no exemptions in place. WEL advised that this is an historical practice but were not able confirm the reason it is applied. I recommend that WEL investigate further to determine if there is a valid reason for the recording in the registry of a variation for all metering installations. If there is no valid reason WEL should remove the variation from the registry.

Recommendation	Description	Audited party comment	Remedial action
Regarding Clause 7 (1), (2) and (3) of Schedule 11.4	WEL to investigate further to determine if there is a valid reason for the recording an exemption in the registry for all metering installations. If there is no valid reason WEL should remove the variation from the registry.	On first glance this appears a remnant of the historical situation from when WASN first began as an MEP. We will confirm current situation and make any required updates to records.	Investigating

Audit outcome

Compliant

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

Code reference

Clause 6 of Schedule 11.4

Code related audit information

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

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

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

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

Audit observation

I conducted a walkthrough of the validation processes to confirm compliance. I checked all records in the event detail report to confirm whether the timeliness requirements were being met.

Audit commentary

WEL conducts a complete validation on the 13th and 26th of each month in accordance with this clause and any errors are updated within five business days. I viewed a discrepancy report from 13 October 2022 to confirm this.

Audit outcome

Compliant

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

Code reference

Clause 20 of Schedule 10.7

Code related audit information

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

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

- b. *the report demonstrates the maximum current is higher than permitted; or*
- c. *the report demonstrates the electricity conveyed exceeds the amount permitted*
- g) *the metering installation is certified under clause 14 and sufficient load is available for full certification testing and has not been retested under clause 14(4)*
- h) *a control device in the metering installation certification is, and remains for a period of at least 10 business days, bridged out under clause 35(1)*
- i) *the metering equipment provider responsible for the metering installation is advised by an ATH under clause 48(6)(b) that a seal has been removed or broken and the accuracy and continued integrity of the metering installation has been affected.*
- j) *the installation is an HHR AMI installation certified after 29 August 2013 and*
 - a. *the metering installation is not interrogated within the maximum interrogation cycle; or*
 - b. *the HHR and NHH register comparison is not performed; or*
 - c. *the HHR and NHH register comparison for the same period finds a difference of greater than 1 kWh and the issue is not remediated within 3 business days*

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

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

Audit observation

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

Audit commentary

The last audit identified that the certification at ICP 0000022125WE134 was not cancelled after an inspection was not conducted within the inspection window. At the time of my analysis the registry had not been updated with the cancellation or recertification of the metering installation certification. During the site audit it was found that the metering installation had been recertified by the Accucal ATH on 22 July 2022, but the registry had not yet been updated. I have recorded non-compliance as the certification of the metering installation was not cancelled within 10 business days, non-compliance is also recorded in **section 4.10** for the late updating of the registry.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.4 With: Clause 20 of Schedule 10.7 From: 26-Nov-20 To: 22-Jul-22	Certification not cancelled within 10 business days for ICP 0000022125WE134 after missed inspection. Potential impact: Medium Actual impact: Unknown Audit history: Twice Controls: Moderate Breach risk rating: 2

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as moderate because they mitigate risk most of the time but there is room for improvement.</p> <p>The impact on settlement and participants is minor; therefore, the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
Registry updated 31/10/2022		31/10/2022	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
Initial cause of this occurrence was a gap in hand over from a retiring staff member. Since then implemented we have tighter controls on higher category metering certification and inspections.		27/10/2022	

6.5. Registry Metering Records (Clause 11.8A)

Code reference

Clause 11.8A

Code related audit information

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

Audit observation

This clause refers to schedule 11.4 which is discussed in **section 6.2**, apart from the requirement to provide information in the “prescribed form”. I checked for examples of WEL 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 WEL 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 for the period 1 December 2021 to 27 July 2022 was checked to identify ICPs with expired certification, and
- the new connections process was checked by using the event detail report, PR255 and the list file to identify ICPs where the certification was not conducted within five business days of energisation.

Audit commentary

The audit compliance report confirmed that there were no ICPs with expired certification.

WEL has a database which includes certification expiry dates. This database confirmed that all metering installations had current certification at the time of the audit. WEL does not have any interim certified metering installations.

As recorded in **section 6.4**, the certification of the metering installation at ICP 0000022125WE134 was cancelled due to a missed inspection identified in the last audit. The registry had not been updated with the cancellation at the time of my analysis. The metering installation was recertified on 22 July 2022, though the registry had not been updated with the new certification. I have recorded non-compliance as the certification was cancelled between 26 November and 22 July 2022.

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: 26-Nov-20 To: 22-Jul-22	Certification cancelled for ICP 0000022125WE134. Potential impact: Medium Actual impact: Unknown Audit history: Once Controls: Strong Breach risk rating: 1

Audit risk rating	Rationale for audit risk rating		
Low	<p>The controls are recorded as strong because they mitigate risk to an acceptable level.</p> <p>The impact on settlement and participants is minor; therefore, the audit risk rating is low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
See 6.4 above.		27/10/2022	Cleared
Preventative actions taken to ensure no further issues will occur		Completion date	
See 6.4 above.		27/10/2022	

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

Code reference

Clause 10.38(b) and clause 9 of Schedule 10.6

Code related audit information

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

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

Audit observation

I checked the certification records for 29 metering installations to confirm compliance.

Audit commentary

In the last audit it was recorded that the WEL ATH did not record of increment in register value or accumulation of pulses over a measured time when conducting raw meter data tests on category 1 metering installations. The WEL ATH has added fields to record the number of pulses and time taken but the 29 certification records checked all contained the same values of "Pulse Count: 10" and "Measured seconds 17.96". It appears that the certification report is recording a default or expected time rather than the actual measured values in each record. I have recorded non-compliance as the test results are not accurately recorded in the certification records.

There were 12 examples where certification took place during an MEP change from NGCM to WEL with a prevailing load test not conducted. The WEL meter was already installed in series with the NGCM meter but was not recorded in the registry. WEL has deemed that the WEL meter was installed on the day that it is recorded in the registry so have treated this as a meter change with no requirement for a prevailing load test to be conducted. I have recorded non-compliance as prevailing load tests were not conducted in accordance with table 3 of Schedule 10.1 but have raised an issue in **section 5.1** regarding the certification of these metering installations.

Audit outcome

Non-compliant

Non-compliance	Description
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Audit Ref: 7.2 With: Clause 10.38(b) and clause 9 of Schedule 10.6 From: 01-Feb-21 To: 06-Nov-21	Some certification tests not recorded by ATHs. Potential impact: Medium Actual impact: Low Audit history: Once Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	The controls are recorded as moderate as ATH processes ensure that testing requirements are met in most scenarios 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
See 5.1 above		31/12/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
See 5.1 above		Dependent on EA response.	

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

WEL has some metering installations above Category 1, 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 WEL 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.

Audit outcome

Not applicable

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

There are no examples of certification at a lower category.

Audit commentary

There are no examples of certification at a lower category.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

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

Audit observation

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

Audit commentary

There are no examples of insufficient load certifications.

Audit outcome

Not applicable

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

Code reference

Clause 14(6) of Schedule 10.7

Code related audit information

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

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

Audit observation

There are no examples of insufficient load certifications.

Audit commentary

There are no examples of insufficient load certifications.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

- *advise the market administrator, by no later than 10 business days after the date of certification of the metering installation, of the details in clause 32(2)(a) of Schedule 10.7*

- *respond, within 5 business days, to any requests from the market administrator for additional information*
- *ensure that all of the details are recorded in the metering installation certification report*
- *take all steps to ensure that the metering installation is certified before the certification expiry date.*

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

Audit observation

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

Audit commentary

Alternative certification has not been applied to any metering installations.

Audit outcome

Not applicable

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:

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

Audit observation

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

Audit commentary

WEL confirmed there are no metering installations which have 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 10 business days of bridging out a control device or becoming aware of a control device being bridged out, notify the following parties:

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

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

Audit observation

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

Audit commentary

WEL has a process in place for the management of bridged control devices. There were no examples of bridged control devices available from the audit period.

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 WEL had taken to identify regions with signal propagation issues.

Audit commentary

WEL has not received notification from ATHs in accordance with this clause. WEL is also a distributor and is not aware of any areas with poor propagation of control signals.

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

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

Audit outcome

Compliant

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

Code reference

Clause 24(3) of Schedule 10.7

Code related audit information

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

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

Audit observation

I checked the records for all Category 2 and 3 metering installations to confirm that compensation factors were correctly recorded on the registry.

Audit commentary

Compensation factors have been updated accurately on the registry.

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 29 metering installations to confirm compliance.

Audit commentary

There were 13 metering installations where an NGCM meter was also present. There was no certification date recorded for the NGCM meters, but there is no indication the meters were not certified. All WEL meters were certified. I have raised an issue in **section 5.1** regarding the certification of metering installations with both NGCM and WEL meters.

Audit outcome

Compliant

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

Code reference

Clause 28(1) of Schedule 10.7

Code related audit information

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

Audit observation

I checked if any category 2 and above metering installations were certified during the audit period.

Audit commentary

No category 2 and above metering installations were certified during the audit period. WEL is responsible for one category 2 and two category 3 metering installations, previous audits have confirmed that the CTs were certified as required by this clause.

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 29 metering installations to confirm compliance.

Audit commentary

The 29 certification records that I checked confirmed that the data storage devices are being correctly certified as part of the meter certification.

Audit outcome

Compliant

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

Code reference

Clause 7 (3) Schedule 10.3

Code related audit information

If the MEP is 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 WEL and Accucal ATHs have appropriate approval.

Audit outcome

Compliant

7.19. Interim Certification (Clause 18 of Schedule 10.7)

Code reference

Clause 18 of Schedule 10.7

Code related audit information

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

Audit observation

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

Audit commentary

WEL did not have any interim certified metering installations.

Audit outcome

Compliant

8. INSPECTION OF METERING INSTALLATIONS

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

Code reference

Clause 45 of Schedule 10.7

Code related audit information

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

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

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

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

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

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

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

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

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

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

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

Audit observation

I checked the process and the reporting for the 2021 and 2022 calendar years.

Audit commentary

WEL conducted Category 1 inspections by sample of 98 ICPs in accordance with this clause in 2021. I viewed the report which was sent to the Authority on 27 January 2022. The process and reporting of results is compliant.

Category 1 inspections by sample are in progress for 2022. I checked the process and confirmed that the selection was made correctly with a minimum of 80 ICPs requiring inspection.

Audit outcome

Compliant

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

Code reference

Clause 46(1) of Schedule 10.7

Code related audit information

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

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

Audit observation

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

Audit commentary

There were no category 2 and above ICPs due for inspection during the audit period.

Audit outcome

Compliant

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

Code reference

Clause 44(5) of Schedule 10.7

Code related audit information

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

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

Audit observation

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

Audit commentary

WEL completed sample inspection of category 1 metering installations in 2021, and the 2022 sample inspections are in progress. I checked a sample of 12 completed inspection forms and confirmed that the WEL process included a comparison with the metering records which was completed within 20 days.

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

Six examples of broken seals were identified during the category 1 inspections completed in 2021. The missing seals were replaced by the ATH at the time of inspection.

WEL has 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 checked an example where WEL had become aware of a faulty metering installation.

Audit commentary

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

I checked an example of a meter that was reported as faulty by WEL to the trader on 28 July 2022. The meter was replaced, and the metering installation recertified on 30 July 2022. The requirement to notify the trader within 20 business days was met.

Audit outcome

Compliant

9.2. Testing of Faulty Metering Installations (Clause 10.44)

Code reference

Clause 10.44

Code related audit information

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

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

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

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

Audit observation

I checked for examples where WEL had become aware of faulty metering installations which required testing.

Audit commentary

I checked an example of a meter that was reported as faulty by WEL to the trader on 28 July 2022. The meter was replaced, and the metering installation recertified on 30 July 2022. The certification records meet the requirement for provision of a “statement of situation”.

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

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 checked an example where WEL had become aware of faulty metering installation.

Audit commentary

I checked an example of a meter that was reported as faulty by WEL to the trader on 28 July 2022. The meter was replaced, and the metering installation recertified on 30 July 2022. The certification records meet the requirement for provision of a “statement of situation” and this was provided to the trader within three business days

Audit outcome

Compliant

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

Code reference

Clause10.46A

Code related audit information

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

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

Audit observation

I checked an example where WEL had become aware of faulty metering installation.

Audit commentary

The remedial actions were undertaken within three days.

Audit outcome

Compliant

9.5. Meter bridging (Clause 10.33C)

Code reference

Clause 10.33(C)

Code related audit information

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

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

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

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

Audit observation

I checked for examples of bridged meters.

Audit commentary

There were no examples of bridged meters.

Audit outcome

Not applicable

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

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

Code reference

Clause 1 of Schedule 10.6

Code related audit information

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

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

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

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

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

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

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

Audit observation

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

Audit commentary

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

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

I requested reporting on interrogation cycle to confirm compliance.

Audit commentary

Interval data is collected every six hours. Register data is collected daily and the devices have a storage capacity of more than 365 days.

WEL has an automated process to update the AMI flags in the registry for meters based on the meter communication status. When a meter has failed to communicate for 20 days the ICP is changed to AMI non communicating in the registry. When communications are restored the ICP is returned to AMI communicating. This process ensures that the maximum interrogation cycle of the meter is not exceeded.

Audit outcome

Compliant

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

Code reference

Clause 10.15(2)

Code related audit information

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

Audit observation

I checked the WEL processes in relation to the security and storage of metering data.

Audit commentary

All data is provided to reconciliation participants via secure FTP, and password security is in place to prevent unauthorised access.

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

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

Audit commentary

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

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

During interrogation the system time is compared to the meter time. Any clock errors between 10 seconds and 20 minutes are automatically synchronised and a report is sent to retailers with the details. If a clock error over 20 minutes occurs, the matter is referred to Silverspring for their action, which may involve a manual time synchronisation. This normally only occurs with some new meters which may have time drift while sitting in stock. WEL provided examples of clock synchronisation and other events which were sent to retailers for July 2022.

The reporting included the details of 343 time synchronisation events, further analysis of these identified three events where the time drift had exceeded the allowable threshold of 30 seconds for category 1 HHR meters. The event reporting to the traders included details of the time synchronisation including the time of the correction and the amount of time correction. Non-compliance is recorded for the three events in excess of 30 seconds.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 10.7 With: Clause 8(4) of Schedule 10.6 From: 06-Jul-22 To: 30-Jul-22	Three examples of time errors outside the allowable thresholds. Potential impact: Medium Actual impact: Low Audit history: Twice Controls: Strong Breach risk rating: 1		
Audit risk rating	Rationale for audit risk rating		
Low	I have recorded the controls as strong because meter time is synchronised during every successful interrogation. 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
All 3 instances had associated power up/power down events which were advised to Trader at time.		27/10/2022	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Any time synchronisation all the events relating to the time sync (old time, new time, drift and surrounding events) are sent to the trader.		27/10/2022	

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

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

Audit commentary

WEL provided copies of event reports provided to traders and the results of their review of the events which confirmed that all relevant events are sent as required by this clause. Since the last audit WEL has added a process whereby all events are reviewed, and actions are taken for critical events requiring field work.

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

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

Audit commentary

WEL has a process where the midnight reads are compared with HHR data. If there is a difference, then a report is generated. The threshold was previously set at 0 kWh which caused a high number of false fails being reported which were due to rounding. The threshold has now been changed to 0.001 kWh to reduce the number of false failures. There were six ICPs identified in the reporting provided. All six were the result of rounding and were resolved during the next interrogation on the following day. Whilst there were no sum-check failures which were not resolved the following day WEL monitors failures and will take action if any failures are not resolved within three days.

Audit outcome

Compliant

10.10. Correction of Raw Meter Data (Clause 10.48(2),(3))

Code reference

Clause 10.48(2),(3)

Code related audit information

If the MEP is notified of a question or request for clarification in accordance with clause 10.48(1), the MEP must, within 10 business days:

- *respond in detail to the questions or requests for clarification*
- *advise the reconciliation participant responsible for providing submission information for the POC of the correction factors to apply and period the factors should apply to.*

Audit observation

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

Audit commentary

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

Audit outcome

Not applicable

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

Code reference

Clause 8(10) of Schedule 10.6

Code related audit information

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

Audit observation

I checked whether compensation factors were applied by WEL.

Audit commentary

Compensation factors are not applied by WEL.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

Audit observation

I checked process for ensuring the AMI flag is changed where data is incomplete.

Audit commentary

The AMI flag is changed to “N” if data is incomplete at 20 business days.

Audit outcome

Compliant

CONCLUSION

WEL has a proactive approach to compliance which has ensured a high level of compliance. The audit compliance report is used regularly alongside the registry validation process to ensure accurate registry records are maintained.

Eight non-compliances are recorded, a reduction of three from the last audit. The main non-compliance issues are as follows:

- some late registry updates,
- certification was not cancelled within 10 business days for a Category 3 ICP where inspection was not conducted during the last audit (appears in two sections), and
- some certification report fields are inaccurate or not present, including the results of certification tests (appears in two sections).

An issue is raised for clarification from the Electricity Authority regarding how certification, certification reports and the registry should be managed in the situation where WEL meters are installed in series with NGCM meters in metering installations.

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. The future risk rating provides some guidance on this matter and recommends an audit frequency of twelve months. I have considered this recommendation in conjunction with the responses from WEL and I recommend an audit period of 24 months.

PARTICIPANT RESPONSE

Given that of the main non-compliance issues;

- certification not cancelled has been cleared, with controls put in place to prevent reoccurrence over underlying cause,
- work has been instigated to correct inaccurate reporting of certification records, and
- we have strong controls on Registry updates within our control. Whenever there is backdating of events (either by traders which flow to us as MEP or our own corrections), we will always prioritise accurate Registry data and alignment with customer requirements over file submission timeframe requirements.

We believe consideration of a longer than 12 month audit period is warranted.