

ELECTRICITY INDUSTRY PARTICIPATION CODE METERING EQUIPMENT PROVIDER AUDIT REPORT

For

POWERNET MEP

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TABLE OF CONTENTS

Executive summary	5
Audit summary	6
Non-compliances.....	6
1. Administrative.....	7
1.1. Exemptions from Obligations to Comply With Code (Section 11).....	7
1.2. Structure of Organisation.....	7
1.3. Persons involved in this audit	7
1.4. Use of Agents (Clause 10.3).....	7
1.5. Hardware and Software	8
1.6. Breaches or Breach Allegations	8
1.7. ICP Data.....	8
1.8. Authorisation Received.....	10
1.9. Scope of Audit.....	10
1.10. Summary of previous audit	10
2. Operational Infrastructure	11
2.1. MEP responsibility for services access interface (Clause 10.9(2)).....	11
2.2. Dispute Resolution (Clause 10.50(1) to (3)).....	11
2.3. MEP Identifier (Clause 7(1) of Schedule 10.6)	12
2.4. Communication Equipment Compatibility (Clause 40 Schedule 10.7).....	12
2.5. Participants to Provide Accurate Information (Clause 11.2 and Clause 10.6).....	12
3. Process for a Change of MEP	14
3.1. Change of metering equipment provider (Clause 10.22)	14
3.2. Registry Notification of Metering Records (Clause 2 of Schedule 11.4).....	14
3.3. Provision of Metering Records to Gaining MEP (Clause 5 of Schedule 10.6).....	15
3.4. Termination of MEP Responsibility (Clause 10.23).....	15
4. Installation and Modification of Metering Installations	17
4.1. Design Reports for Metering Installations (Clause 2 of Schedule 10.7)	17
4.2. Contracting with ATH (Clause 9 of Schedule 10.6).....	17
4.3. Metering Installation Design & Accuracy (Clause 4(1) of Schedule 10.7)	18
4.4. Subtractive Metering (Clause 4(2)(a) of Schedule 10.7)	19
4.5. HHR Metering (Clause 4(2)(b) of Schedule 10.7)	19
4.6. NSP Metering (Clause 4(3) of Schedule 10.7).....	20
4.7. Responsibility for Metering Installations (Clause 10.26(10))	20
4.8. Suitability of Metering Installations (Clause 4(4) of Schedule 10.7)	20
4.9. Installation & Modification of Metering Installations (Clauses 10.34(2), (2A) and (3))	21
4.10. Changes to Registry Records (Clause 3 of Schedule 11.4)	22
4.11. Metering Infrastructure (Clause 10.39(1)).....	22
4.12. Decommissioning of an ICP (Clause 10.23A).....	23
4.13. Measuring Transformer Burden and Compensation Requirements (Clause 31(4) and (5) of Schedule 10.7)	24
4.14. Changes to Software ROM or Firmware (Clause 39(1) and 39(2) of Schedule 10.7)	24
4.15. Temporary Electrical Connection (Clauses 10.29A)	25
4.16. Temporary Electrical Connection (Clause 10.30A)	26

4.17. Temporary Electrical Connection (Clause 10.31A)	27
5. Metering Records	28
5.1. Accurate and Complete Records (Clause 4(1)(a) and (b) of Schedule 10.6, and Table 1, Schedule 11.4)	28
5.2. Inspection Reports (Clause 4(2) of Schedule 10.6)	28
5.3. Retention of Metering Records (Clause 4(3) of Schedule 10.6)	29
5.4. Provision of Records to ATH (Clause 6 Schedule 10.6).....	29
6. Maintenance of Registry Information.....	31
6.1. MEP Response to Switch Notification (Clause 1(1) of Schedule 11.4).....	31
6.2. Provision of Registry Information (Clause 7 (1), (2) and (3) of Schedule 11.4)	31
6.3. Correction of Errors in Registry (Clause 6 of Schedule 11.4).....	32
6.4. Cancellation of Certification (Clause 20 of Schedule 10.7).....	32
6.5. Registry Metering Records (Clause 11.8A).....	33
7. Certification of Metering Installations	35
7.1. Certification and Maintenance (Clause 10.38 (a), clause 1 and clause 15 of Schedule 10.7)	35
7.2. Certification Tests (Clause 10.38(b) and clause 9 of Schedule 10.6)	36
7.3. Active and Reactive Capability (Clause 10.37(1) and 10.37(2)(a))	37
7.4. Local Service Metering (Clause 10.37(2)(b))	38
7.5. Measuring Transformer Burden (Clause 30(1) and 31(2) of Schedule 10.7).....	38
7.6. Certification as a Lower Category (Clauses 6(1)(b) and (d), and 6(2)(b) of Schedule 10.7)	39
7.7. Insufficient Load for Certification Tests (Clauses 14(3) and (4) of Schedule 10.7)....	40
7.8. Insufficient Load for Certification – Cancellation of Certification (Clause 14(6) of Schedule 10.7)	40
7.9. Alternative Certification Requirements (Clauses 32(2), (3) and (4) of Schedule 10.7)	41
7.10. Timekeeping Requirements (Clause 23 of Schedule 10.7)	42
7.11. Control Device Bridged Out (Clause 35 of Schedule 10.7).....	42
7.12. Control Device Reliability Requirements (Clause 34(5) of Schedule 10.7)	43
7.13. Statistical Sampling (Clauses 16(1) and (5) of Schedule 10.7)	43
7.14. Compensation Factors (Clause 24(3) of Schedule 10.7)	43
7.15. Metering Installations Incorporating a Meter (Clause 26(1) of Schedule 10.7).....	44
7.16. Metering Installations Incorporating a Measuring Transformer (Clause 28(1) of Schedule 10.7)	45
7.17. Metering Installations Incorporating a Data Storage Device (Clause 36(1) of Schedule 10.7)	47
7.18. Notification of ATH Approval (Clause 7 (3) Schedule 10.3).....	47
7.19. Interim Certification (Clause 18 of Schedule 10.7).....	47
8. Inspection of metering installations	49
8.1. Category 1 Inspections (Clause 45 of Schedule 10.7)	49
8.2. Category 2 to 5 Inspections (Clause 46(1) of Schedule 10.7).....	50
8.3. Inspection Reports (Clause 44(5) of Schedule 10.7)	51
8.4. Broken or removed seals (Clause 48(4) and (5) of Schedule 10.7)	52
9. Process for Handling Faulty Metering Installations.....	53
9.1. Investigation of Faulty Metering Installations (Clause 10.43(4) and (5)).....	53
9.2. Testing of Faulty Metering Installations (Clause 10.44)	53

9.3. Statement of Situation (Clause 10.46(2)).....	54
10. Access to and Provision of Raw meter Data and Metering Installations	55
10.1. Access to Raw Meter Data (Clause 1 of Schedule 10.6)	55
10.2. Restrictions on Use of Raw Meter Data (Clause 2 of Schedule 10.6).....	55
10.3. Access to Metering Installations (Clause 3(1), (3) and (4) of Schedule 10.6).....	56
10.4. Urgent Access to Metering Installations (Clause 3(5) of Schedule 10.6)	56
10.5. Electronic Interrogation of Metering Installations (Clause 8(2), 8(3), 8(5) and 8(6) of Schedule 10.6)	57
10.6. Security of Metering Data (Clause 10.15(2)).....	58
10.7. Time Errors for Metering Installations (Clause 8(4) of Schedule 10.6)	58
10.8. Event Logs (Clause 8(7) of Schedule 10.6).....	59
10.9. Comparison of HHR Data with Register Data (Clause 8(9) of Schedule 10.6).....	59
10.10. Correction of Raw Meter Data (Clause 10.48(2),(3))	60
Conclusion	61
Participant response	61

EXECUTIVE SUMMARY

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

The relevant clauses were audited as required by the Guidelines for Metering Equipment Provider v.2.0 issued by the Electricity Authority.

PowerNet MEP (PWNT) provides the MEP services to PowerNet for one NSP (INV0331), six interconnection points between Electricity Invercargill and The Power Company, and four gate metering installations to embedded networks in Wanaka, Cromwell and Frankton. The interconnection points are recorded in the Network Supply Points table maintained by the Reconciliation Manager. The volumes recorded by the interconnection point metering installations are not traded.

PowerNet MEP does not provide MEP services to any other participants.

No non-compliances were identified during this audit hence the breach risk total is 0.

The date of the next audit is determined by the Electricity Authority, and it is dependent on the level of compliance during this audit. Based on Table 1 of the Guidelines for Reconciliation Participant audit, the next audit should happen within the next 36 months. Our recommendation is to conduct the next audit in 36 months

We thank PowerNet MEP staff for their complete and full cooperation in this audit.

The audit period was 1 October 2019 to 1 September 2022.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Nil	Nil	Nil	Nil	Nil	0	0	0
Future Risk Rating						0	

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

This was discussed with PowerNet MEP, and the Electricity website was checked.

Audit commentary

Exemption No 167 was granted to PowerNet on 09/04/13 and will expire on 31/03/23. The exemption is for the interconnection ELL0111TPCONP/ELL0111ELINNP, an emergency back-up supply to Southland Hospital.

1.2. Structure of Organisation



1.3. Persons involved in this audit

Name	Title	Company	Comment
Alex Herring	Metering Assets Manager	PowerNet	Contact Person
Allan Borcoski	Electricity Authority Approved Auditor	Borcoski Energy Services Ltd	

1.4. Use of Agents (Clause 10.3)

Code reference

Clause 10.3

Code related audit information

A participant who uses a contractor

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

Audit observation

This was discussed with PowerNet MEP, it does not use agents for the functions covered by this audit.

Audit commentary

All functions covered in this audit are performed in-house by PowerNet MEP staff.

1.5. Hardware and Software

There is no MEP specific software used by PowerNet MEP:

- Asset information is stored in the PowerNet distributor database.
- Metering installation information including compliance, maintenance and replacement activity is tracked and recorded in a MS workbook (version control recently implemented).
- Related documents (including scanned paper based metering information) are captured in the PowerNet document management system.

The metering information is stored and operated within the PowerNet I.T. environment and is therefore subject to the PowerNet security protocols such as password access, backup and virus/firewall protection.

1.6. Breaches or Breach Allegations

PowerNet MEP advise they are not aware of any code breach allegations lodged against the MEP during the audit period.

A check of the Electricity Authority Website confirmed there were no code breaches during this audit period.

1.7. ICP Data

Metering Category	Number of ICPs
1	0
2	0
3	4
4	0
5	0

PowerNet MEP provides gate metering services to the following embedded networks:

Gate Meter ICP	Network	Type	NSP	Parent Network	Parent POC	Balancing Area	Start Date
0000505609CE056	Northlake (LLNW)	E	NKL0111	DUNE	CML0331	NLK0111LLNWE	12/07/2017
0000510729CEBC6	Clearview (LLNW)	E	CLV0111	DUNE	CML0331	CLV0111LLNWE	17/05/2021
0000511495CE8C9	Woong Tree (LLNW)	E	WTR0111	DUNE	CML0331	WTR0111LLNWE	20/05/2021
0000510728CE783	Gorge Rd (LLNW)	E	NTU0111	DUNE	FKN0331	NTU0111LLNWE	27/06/2022

PowerNet MEP provides metering services for 6 interconnection points between Electricity Invercargill and The Power Company and 1 NSP(INV0331). The NSP and interconnection points do not have ICP identifiers assigned and accordingly are not populated in the registry. Each interconnection allows the current to flow interchangeably between and therefore the RM has assigned two names to each interconnection. The NSP and interconnection points are listed below:

NSP	Interconnection Point Name	Network Participant	POC	Metering Category	Comment	
INV0331	ELINGN	NA	ELIN	INV0331	5	Metering deemed to be part of GXP metering and Transpower MEP responsibility
INV0331	TPCOGN	NA	TPCO	NA	5	<ul style="list-style-type: none"> • Back up meters only • PowerNet use only.
	BLF0111ELINNP BLF0111TPCONP	ELIN TPCO	BLF0111		5	
	LEV0331ELINNP LEV0331TPCONP	ELIN TPCO	LEV0331		5	
	OCB0111ELINNP OCB0111TPCONP	ELIN TPCO	OCB0111		5	
	SOU0331ELINNP SOU0331TPCONP	ELIN TPCO	SOU0331		5	
	STD0111ELINNP STD0111TPCONP	ELIN TPCO	STD0111		3	

	ELL0111ELINNP ELL0111TPCONP	ELIN TPCO	ELL0111	3	Exempt from metering. <ul style="list-style-type: none"> • Exemption No 167 issued 09/04/13 expires 31/03/23. • Emergency backup supply to Southland Hospital.
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1.8. Authorisation Received

Authorisation to collect information from other parties was provided by PowerNet MEP.

1.9. Scope of Audit

This participant audit was performed at the request of PowerNet MEP to encompass the Authority's request for an audit as required by clause 16A.18 of Part 16A, of the Electricity Industry Participation Code. The audit was carried out between 11/10/2022 and 26/10/2022.

The audit was conducted by phone and email with PowerNet MEP Staff. The Audit findings were obtained by observation, discussion with PowerNet MEP Staff, review of systems, processes and records and analysis of information provided by PowerNet MEP Staff, the registry and Electricity Authority website.

The audit covered the following functions:

(a) The management and maintenance of each metering installation for which the MEP is responsible. This includes the maintenance of metering records, metering components, certification, inspections and investigations.

(b) Provision of metering records to the registry and reconciliation manager.

(c) Provision of access under Part 10 to raw meter data, metering records, and the metering installation.

(d) The security of each meter installation, back office system and communication between the metering installation and back office system that the MEP is responsible for.

1.10. Summary of previous audit

PowerNet MEP provided a copy of the previous PowerNet MEP audit report conducted in October 2019 by Ewa Glowacka of TEG & Associates. No non-compliances were noted.

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

This was discussed with PowerNet MEP.

Audit commentary

PowerNet MEP provides gate metering services to four embedded networks (operated by PowerNet), six interconnection points between Electricity Invercargill and The Power Company and one NSP (INV0331).

The meters are read by EMS.

The service access interfaces are checked at inspection and recertification. If there were any issues with the service access interfaces EMS would notify PowerNet MEP and PowerNet MEP would resolve the issue. There have been no service access interface problems recorded during this audit period.

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

This was discussed with PowerNet MEP.

Audit commentary

PowerNet (including PowerNet MEP) operates Electricity Invercargill, The Power Company and Lakeland Network assets. PowerNet has procedures in place specifying how disputes between participants will be resolved if the need arises.

There have been no disputes with other participants during this audit period.

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

This was discussed with PowerNet MEP the Network Supply Points table on the Authority website was checked.

Audit commentary

Checks confirmed the PWNT code was used for all metering installations at ICPs and interconnection points PowerNet MEP were responsible for during the audit period.

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

This was discussed with PowerNet MEP, and two metering certification reports were checked.

Audit commentary

The metering installations for which PowerNet MEP are responsible for MEP services are read remotely by EMS.

Communications (including modems) were tested at installation and also when the metering installations were re-certified. Checks confirmed the certification/commissioning reports recorded the successful tests. No incompatibility issues have been observed during the audit period.

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

This was discussed with PowerNet MEP two metering certification reports, and the Network Supply Points table on the Authority website were checked. Metering installation information was also checked.

Audit commentary

PowerNet MEP provided reports detailing equipment, maintenance and compliance/recertification information for all metering installations at ICPs and interconnection points PowerNet MEP were responsible for during the audit period.

Checks confirmed that information recorded was accurate and up to date.

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

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

Audit observation

This was discussed with PowerNet MEP.

Audit commentary

The MEP code PWNT is not recorded in the registry for either the embedded network gate metering installation ICPs or the interconnection point metering installations. PowerNet MEP are aware of their obligations with respect to this code requirement.

The PowerNet MEP operating model is to be the MEP for only the interconnection and gate metering installations owned and operated by Electricity Invercargill, The Power Company and Lakeland Network. PowerNet MEP does not offer MEP services to other participants.

PowerNet MEP state a change of MEP has not occurred during this audit period.

Audit outcome

Compliant

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

Code reference

Clause 2 of Schedule 11.4

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP. The registry was checked.

Audit commentary

The MEP code PWNT is not recorded in the registry for either the embedded network gate metering installation ICPs or the interconnection point metering installations PowerNet MEP are responsible for. Consequently, there are no metering records in the Registry for these metering installations. PowerNet MEP are aware of their obligations with respect to this code requirement.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

This was discussed with PowerNet MEP.

Audit commentary

The PowerNet MEP operating model is to be the MEP for only the interconnection and gate metering installations owned and operated by Electricity Invercargill, The Power Company and Lakeland Network. PowerNet MEP does not offer MEP services to other participants.

The MEP code PWNT is not recorded in the registry for either the embedded network gate meter ICPs or the interconnection point metering. PowerNet MEP are aware of their obligations with respect to this code requirement.

PowerNet MEP state a change of MEP has not occurred during this audit period.

Audit outcome

Compliant

3.4. Termination of MEP Responsibility (Clause 10.23)

Code reference

Clause 10.23

Code related audit information

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

The MEP is responsible if it:

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

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

An MEPs obligations terminate only when;

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

Audit observation

This was discussed with PowerNet MEP. The metering data and information systems used by PowerNet MEP were observed.

Audit commentary

The MEP code PWNT is not recorded in the registry for either the embedded network gate meter ICPs or the interconnection point metering. PowerNet MEP are aware of their obligations with respect to this code requirement.

PowerNet MEP state a change of MEP has not occurred during this audit period.

PowerNet MEP stores all metering installation information including compliance, maintenance and replacement activity in a MS workbook. Related documents (including scanned paper based metering information) are captured in and can be retrieved from a connected document management system. PowerNet MEP intent is to retain metering records indefinitely.

Audit outcome

Compliant

4. INSTALLATION AND MODIFICATION OF METERING INSTALLATIONS

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

Code reference

Clause 2 of Schedule 10.7

Code related audit information

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

Clause 2(2) and (3)—The design report must be prepared by a person with the appropriate level of skills, expertise, experience and qualifications and must include a schematic drawing, details of the configuration scheme that programmable metering components are to include, confirmation that the configuration scheme has been approved by an approved test laboratory, maximum interrogation cycle, 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

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP engage AccuCal to prepare metering design reports and subsequent installation and certification work.

Three new gate metering installations at ICPs 0000511495CE8C9 Wooing Tree, 0000510729CEBC6 Clearview, and 0000510728CE783 Gorge Rd embedded networks were designed and installed during the audit period.

Checks confirmed all information required by this clause were contained in the certification documentation and therefore code requirements were met.

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

This was discussed with PowerNet MEP four metering certification reports, and the Electricity Authority website were checked.

Audit commentary

PowerNet MEP engage AccuCal to prepare metering design reports and subsequent installation and certification work.

Approved Test House	Metering Installation Category	Approved Certification Scope
AccuCal (class A)	<ul style="list-style-type: none">• Cat 3 HV• Cat 4 HV• Cat 5 HV	Y Y Y

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

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and two additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP engage AccuCal to prepare metering design reports and subsequent installation and certification work.

Three new gate metering installations at ICPs 0000511495CE8C9 Wooing Tree, 0000510729CEBC6 Clearview, and 0000510728CE783 Gorge Rd embedded networks were designed and installed during the audit period.

PowerNet MEP stated metering designs are reviewed prior to acceptance and certification reports were checked to verify compliance with the design before accepting them and put into the document storage system.

Checks confirmed all information required by this clause were contained in the certification documentation and therefore code requirements were met.

Audit outcome

Compliant

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

Code reference

Clause 4(2)(a) of Schedule 10.7

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and two additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

Checks confirm subtraction was not used to determine submission information for metering installations PowerNet MEP are responsible for.

PowerNet MEP is not responsible for any metering installations that are not also NSPs or interconnection points.

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

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and two additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP provides gate metering services to four embedded networks (operated by PowerNet), six interconnection points between Electricity Invercargill and The Power Company and one NSP (INV0331). The gate metering installations are category 3 and the interconnection points and NSP are category 5.

Checks confirm the interconnection metering installations have half hour metering installed.

PowerNet MEP is not responsible for any category 3 metering installations that are not also NSPs or interconnection points.

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

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and four additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP provides gate metering services to four embedded networks (operated by PowerNet). The gate metering installations are category 3.

Checks of all four gate metering installation certificates confirmed subtraction was not used to determine submission information.

Audit outcome

Compliant

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

Code reference

Clause 10.26(10)

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP, and the Network Supply Points table on the Authority website was checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP is not responsible for or provide MEP services for any point of connection to the grid.

This clause is not applicable. Compliance was not assessed.

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

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and four additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP provides gate metering services to four embedded networks (operated by PowerNet), six interconnection points between Electricity Invercargill and The Power Company and one NSP (INV0331). The gate metering installations are category 3 and the interconnection points and GXP are category. All metering installations have half hour metering installed.

The interconnection point metering installations between Electricity Invercargill and The Power Company have been in place for many years, and were originally designed collaboratively between Transpower, AccuCal and PowerNet. Designs are also reviewed when metering installations are recertified.

PowerNet engages AccuCal to provide metering installation design and installation. The more recent gate metering installation designs and installation were also completed by AccuCal in conjunction with Aurora Network and PowerNet (for Lakeland Network).

Checks confirmed the metering installations were appropriate for the physical and electrical characteristics of the POC.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

Audit observation

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and four additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet operates both the participant networks the interconnection metering is in place to service and was directly involved in the original designs. Designs are also reviewed when metering installations are recertified. By default, the participants have reached agreement design and functionality of the metering installations.

Checks confirmed that the gate metering installations for the four embedded networks operated by PowerNet (for Lakeland Network) were designed and agreed in conjunction with Aurora Energy.

Audit outcome

Compliant

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

Code reference

Clause 3 of Schedule 11.4

Code related audit information

The MEP must advise the registry manager of the registry metering records, or any change to the registry metering records, for 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*

Audit observation

This was discussed with PowerNet MEP. The registry was checked.

Audit commentary

The MEP code PWNT is not recorded in the registry for either the embedded network gate meters ICPs or the interconnection point metering PowerNet MEP are responsible for. Consequently, there are no metering records in the Registry for these metering installations.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and four additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP engage AccuCal to prepare metering design reports and subsequent installation and certification work.

PowerNet MEP provides gate metering services to four embedded networks (operated by PowerNet), six interconnection points between Electricity Invercargill and The Power Company and one NSP (INV0331). The gate metering installations are category 3 and the interconnection points and GXP are category. All metering installations have half hour metering installed.

The interconnection point metering installations between Electricity Invercargill and The Power Company have been in place for many years, and were originally designed collaboratively between Transpower, AccuCal and PowerNet. Designs are also reviewed when metering installations are recertified.

Three new gate metering installations at ICPs 0000511495CE8C9 Wooing Tree, 0000510729CEBC6 Clearview, and 0000510728CE783 Gorge Rd embedded networks were designed and installed during the audit period.

Examination of the design report and certification/commissioning reports confirmed the metering installations met the requirements of this clause.

Audit outcome

Compliant

4.12. Decommissioning of an ICP (Clause 10.23A)

Code reference

Clause 10.23A

Code related audit information

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

- *if the MEP is responsible for interrogating the metering installation, arrange for a final interrogation to take place before the metering installation is decommissioned, and provide the raw meter data from the interrogation to the responsible trader*
- *if another participant is responsible for interrogating the metering installation, advise the other participant not less than 3 business days before the decommissioning of the time and date of the decommissioning, and that the participant must carry out a final interrogation.*

To avoid doubt, if a metering installation at an ICP is to be decommissioned because the ICP is being decommissioned:

- *the trader, not the MEP, is responsible for arranging a final interrogation of the metering installation*
- *the responsible trader must arrange for a final interrogation of the metering installation*

Audit observation

This was discussed with PowerNet MEP the Registry and the Network Supply Points table on the Authority website was checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP states it has not decommissioned any ICPs during this audit period. A check of the Registry, Network Supply Points table confirmed this. PowerNet MEP are aware of their obligations with respect to this clause.

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

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and four additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP engage AccuCal to prepare metering design reports and subsequent installation and certification work. AccuCal used the fully calibrated certification method for all PowerNet metering installations so the requirement for burdening of VTs or CTs would be identified. If a requirement for burdening was identified AccuCal would advise and consult with PowerNet MEP. AccuCal would produce a design for the burden or compensation to be applied for approval by PowerNet MEP and the work would be completed.

PowerNet MEP state that no burdening or compensation factors had been installed or changed during the audit period. PowerNet MEP are aware of their obligations with respect to this clause.

Examination of the certification documents for four gate metering installations and one interconnection point demonstrated the PowerNet MEP approach and compliance with this clause.

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

This was discussed with PowerNet MEP, and the Metering installation records were also checked.

Audit commentary

PowerNet MEP engage AccuCal to prepare metering design reports and subsequent installation and certification work. AccuCal used the fully calibrated certification method for all PowerNet MEP metering installations.

PowerNet MEP install meters with integrated data storage. If there is a need to change the software, ROM or firmware of a data storage device the meter will be replaced and the installation re certified. PowerNet MEP are aware of their obligations with respect to this clause.

PowerNet MEP state there has been no requirement to change the software, ROM or firmware of a data storage device installed in a metering installation during this audit period.

Checks confirm compliance with this clause.

Audit outcome

Compliant

4.15. Temporary Electrical Connection (Clauses 10.29A)

Code reference

Clause 10.29A

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP.

Audit commentary

The PowerNet MEP operating model is to be the MEP for only the interconnection and gate metering installations owned and operated by Electricity Invercargill, The Power Company and Lakeland Network. PowerNet MEP does not offer MEP services to other participants.

This clause is not applicable. Compliance was not assessed.

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

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and two additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

Checks confirmed that the gate metering installations for three new embedded networks operated by PowerNet (for Lakeland Network) were designed and agreed in conjunction with Aurora Energy during the audit period. The three new gate metering installations were ICPs 0000511495CE8C9 Wooing Tree, 0000510729CEBC6 Clearview, and 0000510728CE783 Gorge Rd.

PowerNet MEP engage AccuCal to prepare metering design reports and subsequent installation work.

New Gate Metering Installation calibration test dates and eventual livening dates:

Gate Meter ICP	Network	Type	NSP	Parent Network	Parent POC	Metering Calibration test Date	Livening Date
0000510729CEBC6	Clearview (LLNW)	E	CLV0111	DUNE	CML0331	14/04/2021	08/07/2021
0000511495CE8C9	Wooing Tree (LLNW)	E	WTR0111	DUNE	CML0331	04/05/2021	04/06/2021
0000510728CE783	Gorge Rd (LLNW)	E	NTU0111	DUNE	FKN0331	18/05/2022	27/06/2022

The three new gate metering installations for the three embedded networks are operated by PowerNet (for Lakeland Network) whom PowerNet MEP have an inherent arrangement to provide MEP services and so authority to temporarily electrically connect for testing purposes was authorised appropriately. The design and installation work completed by AccuCal in conjunction with Aurora Network and PowerNet (for Lakeland Network) was also authorised by all parties.

Checks confirmed code requirements were met.

Audit outcome

Compliant

4.17. Temporary Electrical Connection (Clause 10.31A)

Code reference

Clause 10.31A

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP.

Audit commentary

The PowerNet MEP operating model is to be the MEP for only the interconnection and gate metering installations owned and operated by Electricity Invercargill, The Power Company and Lakeland Network. PowerNet does not offer MEP services to other participants.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

5. METERING RECORDS

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

Code reference

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

Code related audit information

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

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

Audit observation

This was discussed with PowerNet MEP. The metering data and information systems used by PowerNet MEP were observed. Four metering installation certification/commissioning reports were checked along with four inspection reports.

Audit commentary

PowerNet MEP stores all metering installation information including compliance, maintenance and replacement activity in a MS workbook. Related documents such as metering installation certification/commissioning reports and inspection reports (including scanned paper based metering information) are stored in and can be retrieved from a connected document management system. AccuCal Metering installation certification/commissioning reports contain all the information required by the code. PowerNet MEP intent is to retain metering records indefinitely.

PowerNet MEP engages AccuCal to carry out inspections as per code requirement. The inspection reports checked confirmed compliance with the requirements of part 10.

Checks confirmed that accurate and complete records are kept, meeting the code requirement.

Audit outcome

Compliant

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

Code reference

Clause 4(2) of Schedule 10.6

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP, and four inspection reports were checked.

Audit commentary

PowerNet MEP advised that during this audit period there were no requests for inspection reports made during the audit period. If a participant were to request an inspection report an appropriate report would be made available.

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

This was discussed with PowerNet MEP. The metering data and information systems used by PowerNet MEP were observed. Four metering installation certification/commissioning reports were checked along with four inspection reports.

Audit commentary

Metering data and information has been retained since the metering installations were commissioned. PowerNet MEP keeps data records indefinitely in a document management system that is backed up regularly.

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

This was discussed with PowerNet MEP. The metering data and information systems used by PowerNet MEP were observed.

Audit commentary

PowerNet MEP has engaged AccuCal to carry out certification, inspection and maintenance work on their metering installations for a number of years. There are no plans to change these arrangements in the near future. If a change of ATH were to be made PowerNet MEP are aware of their obligations with respect to this clause.

Audit outcome

Compliant

6. MAINTENANCE OF REGISTRY INFORMATION

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

Code reference

Clause 1(1) of Schedule 11.4

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP. The registry was checked.

Audit commentary

The MEP code PWNT is not recorded in the registry for either the embedded network gate metering installation ICPs or the interconnection point metering installations PowerNet MEP are responsible for. Consequently, there are no metering records in the Registry for these metering installations.

PowerNet MEP state a change of MEP has not occurred during this audit period. PowerNet MEP are aware of their obligations with respect to this code requirement.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

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

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

Audit observation

This was discussed with PowerNet MEP. The registry was checked.

Audit commentary

The MEP code PWNT is not recorded in the registry for either the embedded network gate metering installation ICPs or the interconnection point metering installations PowerNet MEP are responsible for. Registry functionality does not allow metering information to be populated into

the Registry for these metering installations, consequently there are no metering records in the Registry for these metering installations.

PowerNet MEP are aware of their obligations with respect to this code requirement.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 6 of Schedule 11.4

Code related audit information

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

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

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

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

Audit observation

This was discussed with PowerNet MEP. The registry was checked.

Audit commentary

The MEP code PWNT is not recorded in the registry for either the embedded network gate metering installation ICPs or the interconnection point metering installations PowerNet MEP are responsible for. Registry functionality does not allow metering information to be populated into the Registry for these metering installations, consequently there are no metering records in the Registry for these metering installations.

PowerNet MEP are aware of their obligations with respect to this code requirement.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 20 of Schedule 10.7

Code related audit information

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

- a) *the metering installation is modified otherwise than under sub clause 19(3) or 19(6)*
- b) *the metering installation is classed as outside the applicable accuracy tolerances set out in Table 1 of Schedule 10.1, defective or not fit for purpose under this Part or any audit*

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

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

Audit observation

This was discussed with PowerNet MEP. The registry was checked.

Audit commentary

The MEP code PWNT is not recorded in the registry for either the embedded network gate metering installation ICPs or the interconnection point metering installations PowerNet MEP are responsible for. Registry functionality does not allow metering information to be populated into the Registry for these metering installations, consequently there are no metering records in the Registry for these metering installations.

PowerNet MEP are aware of their obligations with respect to this code requirement.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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 was discussed with PowerNet MEP. The registry was checked.

Audit commentary

The MEP code PWNT is not recorded in the registry for either the embedded network gate metering installation ICPs or the interconnection point metering installations PowerNet MEP are responsible for. Registry functionality does not allow metering information to be populated into the Registry for these metering installations, consequently there are no metering records in the Registry for these metering installations.

PowerNet MEP are aware of their obligations with respect to this code requirement.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

7. CERTIFICATION OF METERING INSTALLATIONS

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

Code reference

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

Code related audit information

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

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

Audit observation

This was discussed with PowerNet MEP. The metering data and information systems used by PowerNet MEP were observed. Four metering installation certification/commissioning reports were checked along with four inspection reports.

Audit commentary

PowerNet MEP stores all metering installation information including compliance, maintenance and replacement activity in a MS workbook. Related documents such as metering installation certification/commissioning reports and inspection reports (including scanned paper based metering information) are stored in and can be retrieved from a connected document management system.

The metering installations compliance, maintenance and certification is managed by the Metering Assets Manager. The MS workbook schedules when compliance and/or maintenance is due and records the new compliance information.

Review of the metering certification and inspection reports outlined confirmed code requirements were met during the audit period.

NSP	Participant	Meter Cat	Metering Installation Certification Date	Certification Expiry Date
INV0331ELINGN	ELIN	5	CB2732 05/07/2022 CB2772 05/07/2022 CB2792 05/07/2022 CB2862 05/07/2022 CB2872 05/07/2022	05/07/2025 05/07/2025 05/07/2025 05/07/2025 05/07/2025
BLF0111ELINNP BLF0111TPCONP	ELIN TPCO	5	CB 4 07/07/2022 CB 5 07/07/2022	07/07/2025 07/07/2025
LEV0331ELINNP LEV0331TPCONP	ELIN TPCO	5	27/05/2020	27/05/2023
OCB0111ELINNP OCB0111TPCONP	ELIN TPCO	5	CB 5 07/07/2022 CB 13 07/07/2022	07/07/2025 07/07/2025

SOU0331ELINNP SOU0331TPCONP	ELIN TPCO	5	13/09/2021	13/09/2024
STD0111ELINNP STD0111TPCONP	ELIN TPCO	3	25/07/2018	25/07/2028 (Planning to be relocated)
ELL0111ELIN ELL0111TPCO	ELIN TPCO	NA	Exempt from metering No 167	Expires 31/03/2023
NLK011 Northlake Wanaka ICP 0000505609CE056	LLNW	3	27/07/2018 (initially insufficient load)	27/07/2027
CLV0111 Clearview Wanaka ICP 0000510729CEBC6	LLNW	3	8/07/2021 (Insufficient load)	8/07/2031
WTR0111 Wooing Tree Cromwell ICP 0000511495CE8C9	LLNW	3	4/06/2021 (Insufficient load)	4/06/2031
NTU0111 Gorge Rd Queenstown ICP 0000510728CE783	LLNW	3	27/06/2022 (Insufficient load)	27/06/2032

Audit outcome

Compliant

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

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP engage AccuCal to prepare metering design reports and subsequent installation and certification work.

PowerNet MEP stated metering designs are reviewed prior to acceptance and certification reports were checked to verify compliance with the design before accepting them and input to the document storage system.

Approved Test House	Metering Installation Category	Approved Certification Scope
AccuCal (class A)	<ul style="list-style-type: none"> • Cat 3 HV • Cat 4 HV • Cat 5 HV 	Y Y Y

Review of the metering certification and inspection reports confirmed the ATH performed the appropriate certification and recertification tests required by the code during the audit period.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

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

All other installations must measure and separately record:

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

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

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

Audit observation

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP engage AccuCal to prepare metering design reports and subsequent installation and certification work.

Review of the metering installation certification/commissioning reports confirmed that metering installations that PowerNet MEP are responsible for have appropriate active and reactive measuring and recording capability.

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 was discussed with PowerNet MEP.

Audit commentary

PowerNet MEP does not provide MEP services to local services metering in grid substations.

This clause is not applicable. Compliance was not assessed.

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

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

Metering installation certification/commissioning reports checked confirmed CTs installed as part of metering installations are used only for metering purposes. The VTs for the four gate metering installations are all integrated within dedicated HV metering units.

The VTs for the interconnection point metering installations are Transpower owned and shared with Transpower protection equipment. Provision is made for this in the Code under Clause 30(1) of Schedule 10.7.

At metering installation recertification and inspection measuring transformer burden is checked and recalculated.

A review of the certification and inspection documentation confirmed the CT and VT burdens are within code required tolerances and no changes have been made during the audit period.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

If a meter is certified in this manner:

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

Audit observation

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP do not have any metering installations certified at a lower category.

Checks of the metering installation records, and certification/commissioning reports confirmed code requirements were met.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

Audit observation

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three additional certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

Three new gate metering installations at ICPs 0000511495CE8C9 Wooing Tree, 0000510729CEBC6 Clearview, and 0000510728CE783 Gorge Rd embedded networks were designed and installed during the audit period.

Review of all three metering installation certification/commissioning reports identified that there was insufficient to complete a prevailing load test and a condition of the certification was to monitor the half hour load data and notify AccuCal when sufficient load was present to complete a prevailing load test. The gate metering supply residential subdivisions and previous PowerNet MEP experience suggests it may take twelve months or more before sufficient load is present to carry out prevailing load checks.

AccuCal used the fully calibrated certification method for all PowerNet MEP metering installations, therefore the accuracy of the metering installations was verified by those tests. Prevailing load checks will be carried out by AccuCal to validate the metering installation certificates once sufficient load is available.

Checks confirmed the Northlake gate metering installation initially had a conditional metering installation certificate issued by AccuCal in 2017 and following prevailing load checks being carried out a new metering installation certificate was issued by AccuCal in 2018.

Audit outcome

Compliant

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

Code reference

Clause 14(6) of Schedule 10.7

Code related audit information

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

- *the metering installation certification is automatically revoked:*

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

Audit observation

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP stated there were no metering installations where certification tests demonstrated that the metering installation was not within the relevant maximum permitted error during. A check of the certification reports confirmed this.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

Audit observation

This was discussed with PowerNet MEP. Four certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

The interconnection point metering installations are all situated within substations with access to the VTs and CTs for certification testing.

The four gate metering installations use dedicated HV metering units with access available for certification testing.

PowerNet MEP stated no alternative certification provisions have been required during this audit period.

Checks of recent certification information confirmed this.

Audit outcome

Compliant

7.10. Timekeeping Requirements (Clause 23 of Schedule 10.7)

Code reference

Clause 23 of Schedule 10.7

Code related audit information

If a time keeping device that is not remotely monitored and corrected controls the switching of a meter register in a metering installation, the MEP must ensure that the time keeping device:

- a) has a time keeping error of not greater than an average of 2 seconds per day over a period of 12 months*
- b) is monitored and corrected at least once every 12 months.*

Audit observation

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP does not have any time keeping devices that have the functionality to switch a meter register.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 35 of Schedule 10.7

Code related audit information

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

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

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

Audit observation

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP does not have any control devices or have any responsibility for metering installations that include control devices.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 34(5) of Schedule 10.7

Code related audit information

If the MEP is advised by an ATH that the likelihood of a control device not receiving signals would affect the accuracy or completeness of the information for the purposes of Part 15, the MEP must, within 3 business days inform the following parties of the ATH's determination (including all relevant details):

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

Audit observation

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP does not have any control devices or have any responsibility for metering installations that include control devices.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

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

Audit observation

This was discussed with PowerNet MEP. Metering installation records were also checked.

Audit commentary

PowerNet MEP does not provide MEP services to category 1 metering installations.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 24(3) of Schedule 10.7

Code related audit information

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

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

Audit observation

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

PowerNet MEP stated that interconnection point metering installations and the gate metering installations do not have compensation factors which need to be applied to volumes.

Checks of recent certification documents confirmed this.

Audit outcome

Compliant

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

Code reference

Clause 26(1) of Schedule 10.7

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

Metering installation records and certification/commissioning reports provided the following certification information:

NSP	Participant	Meter Cat	Meter Certification Expiry Date	Metering Installation Certification Expiry Date
INV0331ELINGN	ELIN	5	CB2732 05/07/2025	05/07/2025
			CB2772 05/07/2025	05/07/2025
			CB2792 05/07/2025	05/07/2025
			CB2862 05/07/2025	05/07/2025
			CB2872 05/07/2025	05/07/2025
BLF0111ELINNP	ELIN	5	CB 4 07/07/2025	07/07/2025
BLF0111TPCONP	TPCO		CB 5 07/07/2025	07/07/2025

LEV0331ELINNP LEV0331TPCONP	ELIN TPCO	5	27/05/2023	27/05/2023
OCB0111ELINNP OCB0111TPCONP	ELIN TPCO	5	CB 5 07/07/2025 CB 13 07/07/2025	07/07/2025 07/07/2025
SOU0331ELINNP SOU0331TPCONP	ELIN TPCO	5	13/09/2024	13/09/2024
STD0111ELINNP STD0111TPCONP	ELIN TPCO	3	25/07/2028	25/07/2028 (Planning to be relocated)
ELL0111ELIN ELL0111TPCO	ELIN TPCO	NA	Exempt from metering No 167	Expires 31/03/2023
NLK011 Northlake Wanaka ICP 0000505609CE056	LLNW	3	27/07/2027	27/07/2027
CLV0111 Clearview Wanaka ICP 0000510729CEBC6	LLNW	3	8/07/2031	8/07/2031
WTR0111 Wooing Tree Cromwell ICP 0000511495CE8C9	LLNW	3	4/06/2031	4/06/2031
NTU0111 Gorge Rd Queenstown ICP 0000510728CE783	LLNW	3	27/06/2032	27/06/2032

Checks confirmed that all meters that PowerNet MEP are responsible for are certified.

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

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

Metering installation records and certification/commissioning reports provided the following certification information:

NSP	Participant	Meter Cat	CT Certification Expiry Date	VT Certification Expiry Date
INV0331ELINGN	ELIN	5	CB2732 14/11/2027 CB2772 16/11/2027 CB2792 13/11/2027 CB2862 24/01/2028 CB2872 21/12/2027	T3 VT 17/12/2025 T5 VT 13/10/2027 (VTs Transpower Owned)
BLF0111ELINNP BLF0111TPCONP	ELIN TPCO	5	CB 4 15/11/2027 CB 5 09/09/2026	11 kV 15/11/2027 11 kV 09/09/2026
LEV0331ELINNP LEV0331TPCONP	ELIN TPCO	5	13/09/2028	33kV 13/09/2028
OCB0111ELINNP OCB0111TPCONP	ELIN TPCO	5	CB 5 26/07/2028 CB 13 04/02/2024	T1 VT 26/07/2028 T2 VT 04/02/2024
SOU0331ELINNP SOU0331TPCONP	ELIN TPCO	5	13/09/2031	33kV 13/09/2031
STD0111ELINNP STD0111TPCONP	ELIN TPCO	3	25/07/2028	11 kV 25/07/2028 (Planning to be relocated)
ELL0111ELIN ELL0111TPCO	ELIN TPCO	NA	Exempt from metering No 167	Expires 31/03/2023
NLK011 Northlake Wanaka ICP 0000505609CE056	LLNW	3	27/07/2027	27/07/2027 11kV integrated metering unit
CLV0111 Clearview Wanaka ICP 0000510729CEBC6	LLNW	3	8/07/2031	8/07/2031 11kV integrated metering unit
WTR0111 Wooing Tree Cromwell ICP 0000511495CE8C9	LLNW	3	4/06/2031	4/06/2031 11kV integrated metering unit
NTU0111 Gorge Rd Queenstown ICP 0000510728CE783	LLNW	3	27/06/2032	27/06/2032 11kV integrated metering unit

Checks confirmed that all CTs and VTs that PowerNet MEP are responsible for are certified.

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

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

Checks of the metering installation records and recent certification documents and confirmed the logger components of the metering installations are integrated within the meters and are appropriately certified.

Audit outcome

Compliant

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

Code reference

Clause 7 (3) Schedule 10.3

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP.

Audit commentary

PowerNet MEP advised they were aware of this clause and if this occurred would take the appropriate action.

Audit outcome

Compliant

7.19. Interim Certification (Clause 18 of Schedule 10.7)

Code reference

Clause 18 of Schedule 10.7

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP. Metering installation records were also checked.

Audit commentary

PowerNet MEP does not provide MEP services to any interim certified metering installations.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

8. INSPECTION OF METERING INSTALLATIONS

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

Code reference

Clause 45 of Schedule 10.7

Code related audit information

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

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

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

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

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

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

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

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

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

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

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

Audit observation

This was discussed with PowerNet MEP. Metering installation records and Registry were checked.

Audit commentary

PowerNet MEP does not provide the MEP services for category 1 metering installations.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 46(1) of Schedule 10.7

Code related audit information

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

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

Audit observation

This was discussed with PowerNet MEP. Metering installation records and four inspection reports were also checked.

Audit commentary

The metering installation records provided the following summary. It was noted that some inspections were not carried out during 2020 and part of 2021 due to Covid restrictions. However, those sites impacted were fully recertified within a short time after the inspections were due and the inspection cycle was reset.

NSP	Participant	Meter Cat	Inspection Last completed	Next Inspection Due	Metering Installation Certification Date
INV0331ELINGN	ELIN	5	CB2732 02/05/2019 CB2772 02/05/2019 CB2792 02/05/2019 CB2862 19/08/2015 CB2872 19/08/2015	05/01/2024 05/01/2024 05/01/2024 05/01/2024 05/01/2024	05/07/2022 05/07/2022 05/07/2022 05/07/2022 05/07/2022
BLF0111ELINNP BLF0111TPCONP	ELIN TPCO	5	CB 4 01/05/2019 CB 5 01/05/2019	07/01/2024 07/01/2024	07/07/2022 07/07/2022
LEV0331ELINNP LEV0331TPCONP	ELIN TPCO	5	27/05/2020	27/11/2022	27/05/2020
OCB0111ELINNP OCB0111TPCONP	ELIN TPCO	5	CB 5 28/01/2021 CB 13 28/01/2021	07/01/2024 07/01/2024	07/07/2022 07/07/2022
SOU0331ELINNP SOU0331TPCONP	ELIN TPCO	5	13/09/2021	13/04/2023	13/09/2021

STD0111ELINNP STD0111TPCONP	ELIN TPCO	3	25/07/2018	25/07/2023	25/07/2018
ELL0111ELIN ELL0111TPCO	ELIN TPCO	NA	Exempt from metering No 167	NA	Expires 31/03/2023
NLK011 Northlake Wanaka ICP 0000505609CE056	LLNW	3	27/07/2018	27/07/2023	27/07/2018
CLV0111 Clearview Wanaka ICP 0000510729CEBC6	LLNW	3	8/07/2021	8/07/2026	8/07/2021
WTR0111 Wooing Tree Cromwell ICP 0000511495CE8C9	LLNW	3	4/06/2021	4/06/2026	4/06/2021
NTU0111 Gorge Rd Queenstown ICP 0000510728CE783	LLNW	3	27/06/2022	27/06/2027	27/06/2022

Checks confirmed best endeavours were made by PowerNet MEP to complete inspections as scheduled during the audit period. Where this was not possible metering installation recertification was completed on time, a short time after inspections were due.

It is suggested that the reset inspection schedule is followed and achieved whilst Covid disruption is not an issue.

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

This was discussed with PowerNet MEP. Metering installation records and four inspection reports were also checked.

Audit commentary

PowerNet MEP engages AccuCal to carry out inspections as per code requirement. The inspection reports checked confirmed compliance with the requirements of part 10.

PowerNet MEP advised that inspection reports are reviewed and checked against their own records when received from AccuCal. There were no anomalies noted during this audit period and PowerNet MEP are aware of their obligations with respect to this clause.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

The MEP must make the above arrangements within

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

Audit observation

This was discussed with PowerNet MEP. Metering installation records and four inspection reports were also checked.

Audit commentary

PowerNet MEP advised the metering installations are located within HV substation areas with access restricted to authorised personnel. If any seals were found broken (or needed to be broken for a technical reason) PowerNet MEP would log the event in their metering records and engage AccuCal to inspect the situation and remediate the seals as appropriate.

Checks confirmed that no broken seals were found during the audit period.

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

This was discussed with PowerNet MEP.

Audit commentary

If PowerNet MEP were to be made aware of a metering installation that was inaccurate, defective or not fit for purpose a job would be raised with AccuCal to investigate and recommend remedial action. AccuCal would be instructed to carry out any remedial work required.

If such a situation were to occur the participant advised would be PowerNet as the operator of the Electricity Invercargill, The Power Company for the interconnection points, and Lakeland Network (Northlake, Clearview, Wooing Tree and Gorge Rd embedded networks) for the gate metering. The interconnections volumes are not traded, they are used by the reconciliation manager for internal calculations only.

PowerNet MEP stated no events or circumstances which would lead PowerNet MEP to believe that any metering installations they are responsible for were inaccurate, defective or not fit for purpose were identified during the audit period.

Audit outcome

Compliant

9.2. Testing of Faulty Metering Installations (Clause 10.44)

Code reference

Clause 10.44

Code related audit information

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

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

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

d) *reaching an agreement with the participant.*

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

Audit observation

This was discussed with PowerNet MEP.

Audit commentary

If PowerNet MEP were to be made aware of a metering installation that was inaccurate, defective or not fit for purpose, a job would be raised with AccuCal to investigate and recommend remedial actions (statement of situation). AccuCal would be instructed to carry out any remedial work required.

PowerNet MEP stated no events or circumstances which would lead PowerNet MEP to believe that any metering installations they are responsible for were inaccurate, defective or not fit for purpose were identified during the audit period.

Audit outcome

Compliant

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

Code reference

Clause10.46(2)

Code related audit information

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

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

Audit observation

This was discussed with PowerNet MEP.

Audit commentary

If PowerNet MEP were to be made aware of a metering installation that was inaccurate, defective or not fit for purpose a job would be raised with AccuCal to investigate and recommend remedial actions (statement of situation). AccuCal would be instructed to carry out any remedial work required.

If such a situation were to occur the participant advised would be PowerNet as the operator of the Electricity Invercargill, The Power Company for the interconnection points, and Lakeland Network (Northlake, Clearview, Wooing Tree and Gorge Rd embedded networks) for the gate metering. The statement of situation (and recommended remedial actions) would be provided to PowerNet and the Electricity Authority.

PowerNet MEP stated no events or circumstances which would lead PowerNet MEP to believe that any metering installations they are responsible for were inaccurate, defective or not fit for purpose were identified during the audit period.

Audit outcome

Compliant

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

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

Code reference

Clause 1 of Schedule 10.6

Code related audit information

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

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

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

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

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

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

Audit observation

This was discussed with PowerNet MEP. One metering design report and corresponding certification/commissioning reports and three certification/commissioning reports were checked. Metering installation records were also checked.

Audit commentary

The services access interface for is at the meter (as per the certification documents) for metering PowerNet MEP are responsible for. Metering data is collected and stored by EMS. EMS is provided with all metering information needed such as configuration and passwords and provided access by modem to the meters to enable data to be collected.

The interconnection point volumes are not traded.

The only party that the PowerNet MEP provides access to raw data is PowerNet (as operator of Electricity Invercargill, The Power Company and Lakeland network).

PowerNet MEP stated there were no requests for access to raw data received during this audit period.

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

This was discussed with PowerNet MEP.

Audit commentary

The interconnection point volumes are not traded.

The only party that the PowerNet MEP provides access to raw data is PowerNet (as operator of Electricity Invercargill, The Power Company and Lakeland network).

PowerNet MEP stated there were no requests for access to raw data received during this audit period.

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

This was discussed with PowerNet MEP.

Audit commentary

PowerNet MEP advised they had no requests for physical access to metering installations under this clause during this audit period and would use best endeavours to provide physical access to a metering installation subject to health and safety requirements and Transpower substation access protocols for some interconnection points.

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

This was discussed with PowerNet MEP.

Audit commentary

PowerNet MEP advised they had no requests for physical access to metering installations under this clause during this audit period and would use best endeavours to provide physical access to a metering installation subject to health and safety requirements and Transpower substation access protocols for some interconnection points.

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 malfunctioning or tampering, and if this is detected, carry out the appropriate requirements of Part 10.

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

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

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

Audit observation

This was discussed with PowerNet MEP.

Audit commentary

Metering data is collected and stored by EMS. PowerNet MEP advised it does not offer data collection services and does not read meters from their “back office”.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 10.15(2)

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP.

Audit commentary

Metering data is collected and stored by EMS. PowerNet MEP advised it does not offer data collection services and does not read meters from their “back office”.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 8(4) of Schedule 10.6

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP.

Audit commentary

Metering data is collected and stored by EMS. PowerNet MEP advised it does not offer data collection services and does not read meters from their “back office”.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 8(7) of Schedule 10.6

Code related audit information

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

- a) *ensure an interrogation log is generated*
- b) *review the event log and:*
 - i. *take appropriate action*
 - ii. *pass the relevant entries to the reconciliation participant.*
- c) *ensure the log forms part of an audit trail which includes:*
 - i. *the date and*
 - ii. *time of the interrogation*
 - iii. *operator (where available)*
 - iv. *unique ID of the data storage device*
 - v. *any clock errors outside specified limits*
 - vi. *method of interrogation*
 - vii. *identifier of the reading device used (if applicable).*

Audit observation

This was discussed with PowerNet MEP.

Audit commentary

Metering data is collected and stored by EMS. PowerNet MEP advised it does not offer data collection services and does not read meters from their "back office".

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 8(9) of Schedule 10.6

Code related audit information

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

Audit observation

This was discussed with PowerNet MEP.

Audit commentary

Metering data is collected and stored by EMS. PowerNet MEP advised it does not offer data collection services and does not read meters from their "back office".

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 10.48(2),(3)

Code related audit information

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

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

Audit observation

This was discussed with PowerNet MEP.

Audit commentary

Metering data is collected and stored by EMS. PowerNet MEP advised it does not offer data collection services and does not read meters from their “back office”.

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

CONCLUSION

See Executive Summary

PARTICIPANT RESPONSE

PowerNet strive for full compliance. We are pleased to see the efforts put in are shown in the results of this audit. We will continue to work hard to maintain full compliance.

