

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

For

NORTHPOWER

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EXECUTIVE SUMMARY

This participant audit was performed at the request of Northpower 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.

At the time of this audit the number of ICPs for which Northpower is recorded as being the MEP, was 8,952. Since the last audit Northpower lost 1,458 ICPs because their meters are being steadily replaced by meter assets managed by other MEPs on the request of traders.

As of 01/04/19 Northpower Contracting Division will cease to provide metering services. Northpower MEP is in the process of making alternative arrangements.

Previously missing information had been uploaded and the compliance of the quality of data in the registry has improved.

The audit found 6 non-compliances. The level of compliance has improved in the following areas:

- Monthly comparison of Northpower's records with the registry – clause 6 of Schedule 11
- Previously missing VTs and CTs were uploaded to the registry

The main issues identified during this audit are:

- Increased number of category 2 metering installations with expired certification
- No improvement in the compliance of conducting inspections
- No updates of registry records of installations with cancelled certification

The date of the next audit is determined by the Electricity Authority and is dependent on the level of compliance during this audit. Table 1 of the Guidelines for Reconciliation Participant audit provides some guidance on this matter. The Future Risk Rating score is 27 which results in an indicative audit frequency of 3 months. Our recommendation is 6 months to give Northpower enough time to address the non-compliance of uncertified installations .

We thank Northpower's staff for their full and complete cooperation in this audit. Their response to any request for information or clarification was answered in a timely manner.

AUDIT SUMMARY

NON-COMPLIANCES

Subject	Section	Clause	Non-Compliance	Controls	Audit Risk Rating	Breach Risk Rating	Remedial Action
Changes to registry records	4.10	3 of Schedule 11.4	39.5% of update entries in registry are uploaded later than 10BD	Moderate	Low	2	Identified
Cancellation of certification	6.4	20(2) of Schedule 10.7	Registry records were not updated to reflect cancelled certification for some installations	Weak	Low	4	Identified
Certification of installations	7.1	10.38(a)	Certification expired for 1,066 installations	Weak	Medium	6	Identified
Interim certification	7.19	10 of Schedule 10.7	548 ICPs (status "active") and 145 ICPs (status "inactive") with expired interim certification	Weak	Medium	6	Identified
Category 2 to 5 inspections	8.2	46(1) of Schedule 10.7	No inspection conducted for 7 category 3 metering installations and 112 category 2 metering installations	Weak	Medium	6	Identified
Broken or removed seals	8.4	48(5) of Schedule 10.7	No remedy work was undertaken after installations with removed seals identified	Weak	Low	3	Identified
Future Risk Rating						27	

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

RECOMMENDATIONS

Subject	Section	Description	Recommendation
			Nil

ISSUES

Subject	Section	Description	Issue
			Nil

1. ADMINISTRATIVE

1.1. Exemptions from obligations to comply with Code (Section 11)

Code reference

Section 11 of Electricity Industry Act 2010.

Code related audit information

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

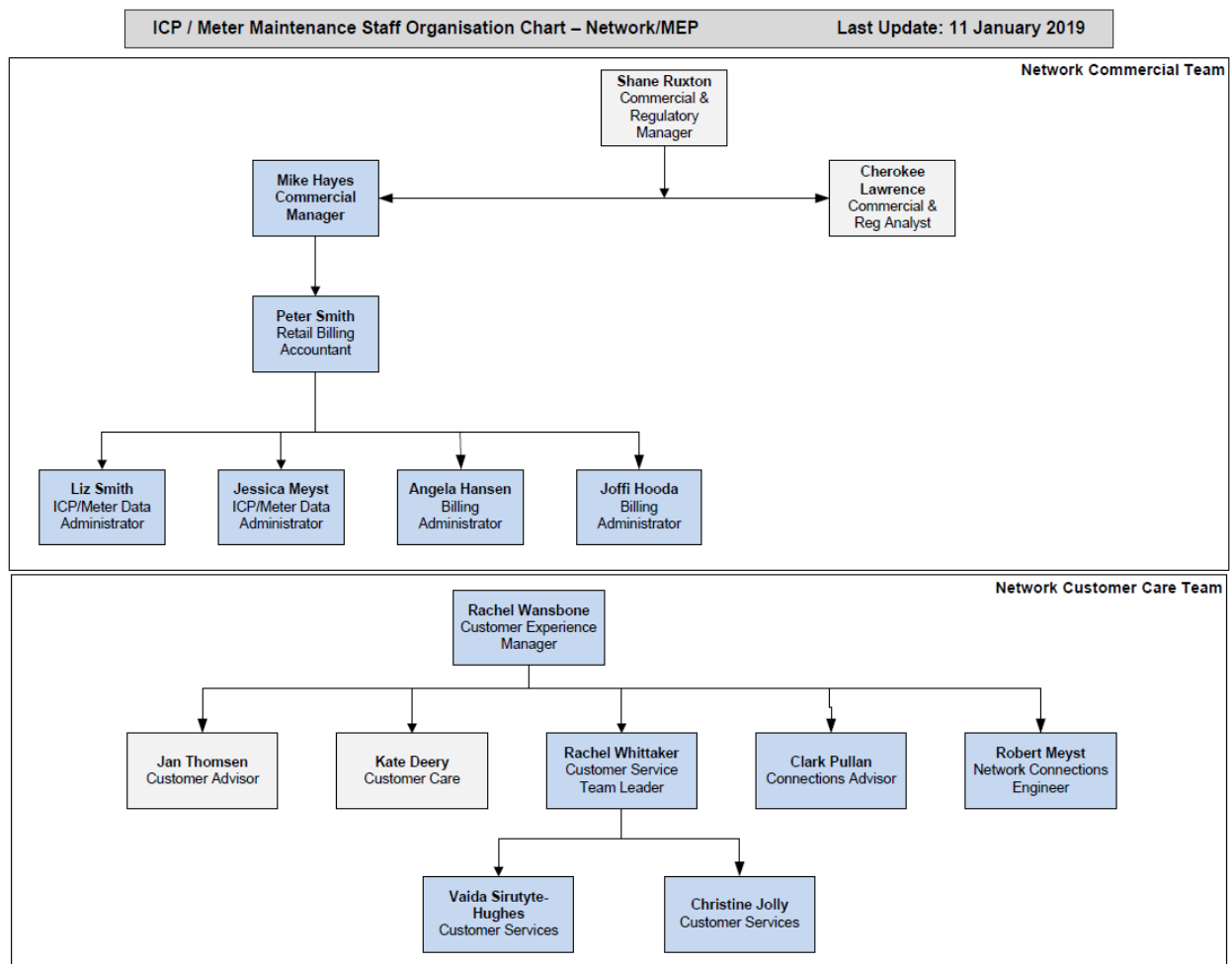
Audit observation

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

Audit commentary

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

1.2. Structure of Organisation



1.3. Persons involved in this audit

Name	Title	Company
Peter Smith	Retail Billing Accountant	Northpower Ltd
Elisabeth Smith	ICP/Meter Data Administrator	Northpower Ltd
Joffi Hooda	Billing Administrator	Northpower Ltd
Shane Ruxton	Commercial & Regulatory Manager	Northpower Ltd
Mike Hayes	Network Commercial and Operations Manager	Northpower Ltd
Ewa Glowacka	Electricity Authority Approved Auditor	TEG & Associates Ltd

1.4. Use of Agents (Clause 10.3)

Code reference

Clause 10.3

Code related audit information

A participant who uses a contractor

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

Audit observation

Northpower does not use agents for the functions covered by this audit.

Audit commentary

All functions are conducted by Northpower's staff.

1.5. Hardware and Software

Gentrack Velocity is still the main software application used for the MEP functions (ICP and meter asset management). Gentrack handles the registry interface and the updating of ICP information in the registry. There are also a number of databases (Access 2010) used for the registry data discrepancy management.

1.6. Breaches or Breach Allegations

No breaches or alleged breaches were lodged since the last audit.

1.7. ICP Data

Metering Category	Number of ICPs (16/01/19)	Number of ICPs (16/03/18)
1	8,783	10,213
2	166	169

3	22	22
4	1	1
5	6	6

1.8. Authorisation Received

A letter of authorisation was received from Northpower for the purposes of gathering information for this audit.

1.9. Scope of Audit

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

The audit was carried out on the Northpower premises at 28 Mount Pleasant Road, in Whangarei, on the 21/22 January 2019.

The audit covered the following functions:

- Process for changing a MEP
- Installation and modification of metering installations
- Metering records
- Maintenance of registry information
- Certification of metering installations
- Inspection of metering installations
- Process of handling faulty metering installations
- Access to and provision of raw meter data and metering installations

Northpower adopted the four-letter code of NPOW for a participant as a MEP. In this document Northpower and NPOW will be used interchangeably. Northpower is both a Distributor and MEP under the Code with the participant code NPOW being used for both functions.

1.10. Summary of previous audit

The previous audit was conducted in May 2018 by Ewa Glowacka of TEG & Associates Ltd. The table below shows non-compliances identified during this audit:

Subject	Section	Clause	Non-Compliance	Comment
Changes to metering records	4.10	3 of Schedule 11.4	12.8% of update entries in registry are uploaded later than 10BD	Still exists
Provision of registry information	6.2	7(1) of Schedule 11.4	CTs for 0000100001NR87B are not recorded in the registry nor is VT information for 10 ICPs	Cleared
Cancellation of certification	6.4	20(2) of Schedule 10.7	Registry records were not updated to reflect cancelled certification for nine installations cat 3 and one category 5 for	Still exists

			which no inspections were conducted	
Registry Metering Records	6.5	11.18A	Not all metering records are loaded into the registry per Table 1 of Schedule 11.4.	Cleared
Certification of installations	7.1	10.38(a)	Certification expired for 651 installations, 629 installations category 1 and 22 higher categories	Still exists
Interim Certification	7.19	18 of Schedule 10.7	842 ICPs with expired interim certification	Still exists
Category 2 to 5 inspections	8.2	46(1) of Schedule 10.7	No inspection conducted for 12 category 2 installations, one category 5 installation and nine category 3 installations	Still exists

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

Northpower provide the MEP services for metering installations of category 1 to 5. All category 1 and 2 installations are manually read (register reads) by meter reading companies employed by traders.

Category 3, 4, and 5 metering installations and category 2 ICPs with TOU meters are read remotely by third parties via landline or cellular network. Northpower owns TOU meters at some ICPs, which are read via MV90 by them. HHR data downloaded is only used for Northpower's internal purposes.

Audit commentary

Northpower reads some HHR meters themselves therefore it allows them to identify any communication problems. If reported, any malfunctioning of this communication channel with the meters is investigated promptly and appropriate action taken.

The communication problems are usually caused by modem issues or poor cell phone coverage. Landlines used for reading meters are owned either by customers or the trader. A Metering Installation Certification Report issued by AccuCal specifies strength of signal at the time of installation certification, which allows them to take appropriate action if a signal is not strong enough.

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

Northpower has a process in place for dispute resolution because it is also a distributor. If the need arises the same process is adopted for MEP related disputes.

Audit commentary

Since the last audit, there were a number of "disputes" between participants related to the population of meter data in the registry. All of them were resolved in good faith between parties.

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

The registry LIS file dated 16/01/19 was analysed and we confirm the 4-letter code of NPOW is used as a participant identifier for those ICPs for which Northpower provides MEP services. It is the same 4-letter code which is used by them as a distributor.

Audit commentary

Compliance confirmed by a review of the registry file.

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

Northpower provides the MEP services for a number of HHR metering installations. They are read via GSM module or via landlines by third parties employed by traders. If any incompatibility was discovered between a communication network operator and equipment installed on site, it would be addressed promptly.

Audit commentary

Since the last audit, there were no installations for which any issues were discovered due to a lack of compatibility between equipment installed by Northpower and the communication network operator.

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

During this audit we reviewed activities conducted by Northpower to determine whether all practicable steps had been taken to provide accurate information.

Audit commentary

Northpower put stringent processes in place to assure that information provided to the registry is complete and accurate. Every day the registry ACK files are checked for error messages and when identified they are fixed. Also, every day, meter data from prior to Part 10 which is sent to the registry by Gentrack is reversed. The uploaded meter information is technically correct, but it does not have any value, therefore it is removed. It is an on-going project to keep the registry data correct. It is described in detail in **section 4.10**.

Another issue is to deal with the replacement of Northpower meter assets by other MEPs who use Northpower Contracting for this work. When the Northpower meter is replaced, Gentrack is updated for the change in meter assets which creates an automated upload of the new meter assets to the registry. If Northpower is no longer to be the MEP this registry update must consequently be reversed to allow a new MEP nomination and their upload of metering information.

There is an on-going project to compare data in Gentrack against data in the registry as described in **section 6.3**. Northpower strives to have the registry data as accurate as possible.

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

Northpower's policy is to be the MEP only for those ICPs where Northpower owned metering assets are installed.

Audit commentary

Northpower stated that this clause was not exercised.

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

Northpower provided the Event Listing file (EDA) for the period covering 01/03/18 – 15/01/19 and the PR-255 file for 16/01/19. We checked all records where Northpower became the MEP to evaluate timeliness of updates.

Audit commentary

The only traders, who nominated Northpower as the MEP were CTCT (replacement of pre-paid meters), MEEN, and PUNZ. In total, Northpower received 13 MEP nominations which were accepted.

We examined the EDA file for all nominations in relation to this clause. We confirm that in all instances metering records were downloaded within 15 BD. In most cases metering data is uploaded the same or the following day.

Audit outcome

Compliant

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

It was discussed during the audit. Northpower's metering assets are being replaced by smart meters owned by other MEPs. Northpower does not displace other MEPs assets.

Audit commentary

No MEPs have asked Northpower for metering records since the last audit.

Compliance confirmed based on a verbal statement from Northpower.

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

Metering records are kept either in Gentrack or electronically in the Document Management System. The records are kept indefinitely and are not purged after any set period.

Audit commentary

The way in which Northpower stores records allows for quick access to all documents. It is convenient for the purposes of audit as it is so easy to follow chosen ICPs. Compliance confirmed based on observation.

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

Northpower is an approved Class B Test House. There is a set of wiring diagrams for typical NHH installations published on the Northpower website. These drawings are updated, when the need arises, by the Northpower ATH. AccuCal is used for certification and inspections of installations category 3 HV and above.

Audit commentary

Once a decision is made to modify an existing category 3 HV or higher installation, a conceptual design is prepared by Northpower's staff, which is forwarded to AccuCal for consultation. The company stated that there were no modifications to any installations, cat 2 and above.

The Metering Installation Certification Report used for category 1 installations has a field for the reference to the appropriate ATH wiring drawing. We sighted 15 reports and we confirm that a relevant meter diagram was referenced.

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

Northpower uses two Test Houses: Northpower (Class B) for metering installations of category 1, 2 and 3 LV, for installations of category 3 HV and higher, AccuCal.

AccuCal is an approved Test House, Class A as listed on the Electricity Authority website.

Audit commentary

Compliance confirmed based on information provided on the Electricity Authority's website.

Audit outcome

Compliant

4.3. Metering Installation Design & Accuracy (Clause 4(1) of Schedule 10.7)

Code reference

Clause 4(1) of Schedule 10.7

Code related audit information

The MEP must ensure:

- *that the sum of the measured error and uncertainty does not exceed the maximum permitted error set out in Table 1 of Schedule 10.1 for the category of the metering installation*
- *the design of the metering installation (including data storage device and interrogation system) will ensure the sum of the measured error and the smallest possible increment of the energy value of the raw meter data does not exceed the maximum permitted error set out in Table 1 of Schedule 10.1 for the category of installation*
- *the metering installation complies with the design report and the requirements of Part 10.*

Audit observation

All installations for which Northpower provides the MEP functions are certified by approved test houses – NPOW and ACCL.

Part of the certification for metering installations of category 3 HV and higher is to ensure that the maximum permitted error and uncertainty set out in Table 1 of Schedule 10.1 is not exceeded. The tests are conducted by AccuCal. The Certification of Compliance specifies testing and results for each installation. The certifications are reviewed by Northpower after being provided by AccuCal.

Audit commentary

Northpower uses the selective component metering method to certify metering installations of category 1, 2 and 3 LV. The accuracy tolerance of category 1 installations is determined by the meter, the only metering component installed. This means that if the installed meter is class 2 or higher, an installation will meet the accuracy tolerance as specified in Table 1 of Schedule 10.1. Northpower installs meters class 1 as 1PH or class 1 or 2 as 3PH and CTs class 0.5S. The category 2 LV installation requirements under this method require meters to be class 2 or higher therefore class 1 meters meet this clause obligation.

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

We verified with Northpower whether they provide MEP services for installations where subtraction is used to determine submission information.

Audit commentary

No installations for which Northpower is responsible use subtraction to determine submission information.

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

The LIS file dated 16/01/19 was analysed to assess compliance.

Audit commentary

The LIS file was checked, and we confirm that all category 3 and higher installations have half-hour metering installed (29 ICPs).

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

Northpower is not responsible for any metering installation for a NSP. There are no plans to provide MEP services for such installations.

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

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

Code reference

Clause 10.26(10)

Code related audit information

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

Audit observation

Northpower is not responsible for any metering installation for a point of connection to the grid. There are no plans to provide MEP services for such installations.

Audit commentary

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

Northpower provides MEP services mainly for category 1 metering installations, 98.2% of ICPs on the Northpower network. For these installations there are wiring diagrams covering each of the typical installation types. Any installations for which a standard wiring drawing can't be used are discussed with staff from Northpower's ATH.

All half-hour metered installations are individually designed taking into consideration the physical and electrical characteristics of the proposed installation.

Audit commentary

Northpower is a distributor and employs people with a lot of engineering expertise. The company is also a certified class B Test House, which is audited regularly by the Authority's approved auditor. Any meter replacements or installation recertification is always like for like.

After 1/04/19 Northpower MEP will use other contractors as their Contracting Division will cease metering work. The company is looking for an alternative arrangement,

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

Northpower is a distributor and an MEP.

Audit commentary

Staff from all Northpower divisions are located on the same premises in Whangarei therefore a consultation and coordination process between MEP and a distributor is easily achieved. Northpower provide MEP services only on its own network.

Audit outcome

Compliant

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

Code reference

Clause 3 of Schedule 11.4

Code related audit information

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

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

Audit observation

The EDA file for the period 01/03/18 to 15/01/19 was analysed to assess compliance.

Audit commentary

Northpower uploaded 2,420 metering files to the registry, 878 were of the status "active", 353 uploads were replacements and 1,189 uploads were reversals. Out of 878 "active" updates, 347 (39.5%) transactions were later than 10 BD. Out of 878 "active", 339 were data fixes to achieve compliance with clause 11.2.

The way in which the Northpower Gentrack is setup leads to many data reversals. When Northpower owned meters are replaced by meter assets owned by another MEP, the meter replacement is recorded in Gentrack. As a result of this meter change occurring, Gentrack will often create a registry meter event for the Northpower meter asset being removed which is updated to the registry effective the day prior to the new MEP's metering event. Once a new MEP is nominated, the Northpower entry must be reversed to allow a new MEP to upload metering information.

Another “feature” of Gentrack is that as soon as it “sees” any updates to data, it creates a file which is sent to the registry. Entries where Gentrack sends meter data information, going back to 2013 (Part 10 go-live), have not been flagged by Gentrack as having previously been sent to the registry. This group of entries is occurring due to the manual (outside Gentrack) process used to populate the registry from when Part 10 went live. Every day Northpower screens data uploaded to the registry and reverses non relevant entries. This is the explanation for why there are so many reversed entries in the registry.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 4.10 With: 3 of Schedule 11.4 From: 01-Mar-18 To: 15-Jan-19	39.5% of update entries in registry are uploaded later than 10BD Potential impact: Low Actual impact: Low Audit history: Multiple times Controls: Moderate Breach risk rating: 2		
Audit risk rating	Rationale for audit risk rating		
Low	Controls are recorded as moderate. The results that Northpower want to achieve lead to backdated entries. The Gentrack design used by Northpower requires extra vigilance from Northpower to remove not relevant entries prior to part 10. Audit risk rating is recorded as low because there is a minor, practically no, impact on settlement outcomes.		
Actions taken to resolve the issue		Completion date	Remedial action status
Refer to Northpower’s explanation on why these backdated Registry entries can, and will continue to, occur in the <i>Conclusion: Participants Comments</i> section at the end of this audit report. Where AccuCal is used for metering installation inspections or recertification there is often a delay in AccuCal providing the inspection and certification reports. Therefore, the update of registry metering data can occur outside the 10 business day Code requirement.		On-going	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Refer to Northpower’s explanation on why these backdated Registry entries can, and will continue to, occur in the <i>Conclusion: Participants Comments</i> section at the end of this audit report.		On-going	

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

Northpower MEP only installs non-AMI meters at installations for which it provides the MEP services. Northpower does not have any changes which effect the integrity of the metering infrastructure because any changes to metering installation are always like for like. The number of installations for which Northpower provides MEP services is steadily decreasing.

Audit commentary

Each installation is tested by an inspector and the results recorded on the Meter Installation Certification Report by the technician. If necessary, any faulty components are replaced. There were no complaints from customers or traders about components installed since the last audit.

Compliance was confirmed based on a review of the Metering Installation Certification report and the fact that there were no complaints from traders and customers.

Audit outcome

Compliant

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

Code reference

Clause 11.18B (3)

Code related audit information

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

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

Audit observation

The decommissioning process was reviewed to assess compliance. Sampling of 10 randomly chosen decommissioning installations was conducted.

Audit commentary

The request for decommissioning an installation usually comes from a customer or a trader.

Northpower provided 12 examples of decommissioned installations. Whenever possible, Northpower records the final reading by recovering a meter and this reading is sent to the trader, but there are cases where it is not possible to obtain a removal reading.

ICP	Date of decommissioning	Final read
0000569518NREC5	10/04/18	8729
0000528585NR44C	25/05/18	27665/23840
0000541222NR063	25/06/18	084143/044748/026771
0000533496NRC24	31/07/18	17395
0000526776NRA5C	17/08/18	34434/42898/40074
0000536363NR95E	30/09/18	destroyed by fire
0000532081NR6E2	01/10/18	2
0000519012NR3E8	-08/10/18	791154
0000520570NR414	18/10/18	007147/00002
0000527655NR36D	25/10/18	10010
0000515810NR8E0	19/11/18	0
0000506639NR7EE	03/12/18	000051/000364

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

CTs installed within installations for which Northpower provides MEP services are used for metering purposes only.

Audit commentary

Northpower stated that there have been no changes made to a CTs burden or compensation factor in the period covered by this audit.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

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

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

Audit observation

The meters used in metering installations of category 3 and higher have data storage devices integrated with the meter therefore, if there is a need to change a data storage device software, ROM or firmware, an existing meter will be removed. A new meter will be installed, and the installation recertified.

Audit commentary

Northpower stated that, as a principle, apart from changes to the baud rate, if communications change from landline to cell phone, half-hour meters are never reprogrammed in-situ but are replaced by newly certified meters by an authorised ATH.

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

Northpower is not responsible for such installations. There are no plans to provide MEP services for such installations.

Audit commentary

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

Northpower is not responsible for such installations. There are no plans to provide MEP services for such installations. There is no process in place.

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

4.17. Temporary Electrical Connection (Clause 10.31A)

Code reference

Clause 10.31A

Code related audit information

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

Audit observation

The electrical connection of any installation on the Northpower network is always done by Northpower Contracting staff.

Audit commentary

In the period covered by this audit Northpower MEP never asked Northpower as a distributor to temporarily electrically connect an ICP.

Audit outcome

Compliant

5. METERING RECORDS

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

Code reference

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

Code related audit information

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

Please note in bold font we specify the location of each record kept by Northpower as the MEP. The location of records and how they are stored has not changed since the previous audit.

- i. the certification expiry date of each metering installation – **Gentrack**
- ii. all equipment used in relation to the metering installation, including serial numbers – **Gentrack**
all equipment is owned by Northpower (meters, load control relays, CTs, some VTs) where Northpower is the MEP. If a meter does not belong to Northpower but the CTs are owned by Northpower, a new MEP is asked to install their own. Northpower's policy as a distributor is to request that their Load Control Devices are always left on a metering installation regardless of which MEP has responsibility for the metering installation.
- iii. the manufacturer's or (if different) most recent test certificate for each metering component in the metering installation - **Northpower ATH**
- iv. the metering installation category and any metering installations certified at a lower category – **Gentrack (Northpower MEP) (1 ICP certified at a lower category, section 7.6)**
- v. all certification reports and calibration reports showing dates tested, tests carried out, and test results for all metering components in the metering installation – **records are held by Northpower ATH**
- vi. the contractor who installed each metering component in the metering installation – **Metering Reports (Northpower Document Management System)**
- vii. the certification sticker, or equivalent details, for each metering component that is certified under Schedule 10.8 in the metering installation: **Gentrack - only the metering installation certification details and some details such as the serial number of meter for cat 1, for cat2 and higher also CT's details**
- viii. any variations or use of the 'alternate certification' process – **alternate certification process is not used**
- ix. seal identification information – use pliers, each installer has own number - **Northpower Test House (scanned)**
- x. any applicable compensation factors – **Gentrack**
- xi. the owner of each metering component within the metering installation – **Gentrack**
- xii. any applications installed within each metering component -
- xiii. the signed inspection report confirming that the metering installation complies with the requirements of Part 10. – **scanned copies accessible via Document Management System**

Audit observation

Audit commentary

The location of information in relation to each metering installations has not changed since the last audit.

Gentrack is Northpower's ICP and metering equipment database and this holds the data on which meters are installed at ICPs. Northpower holds scanned copies of paperwork and information conveyed electronically (emails, site visit photos, new connection application forms, physical disconnection/reconnection site visits, and metering related site visits) relating to an ICP and its metering on a separate server as this document store is not part of Gentrack. Meter information relating to meter tests and calibration is also held by the Northpower Class B ATH.

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

It was discussed during the audit whether any requests had been made for copies of inspection reports.

Audit commentary

If Northpower is requested to provide a signed inspection report it will provide this to a participant as a scanned copy of the field report prepared by the Northpower inspector. Since last year's audit, no trader has asked for an inspection report.

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

Northpower holds historic metering records in an electronic format by scanning the original paper records. For any new installations or recertification all documents are scanned. All scanned records will be kept indefinitely.

Audit commentary

Compliance confirmed on observation during the audit when checking historic information.

Audit outcome

Compliant

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

Code reference

Clause 6 Schedule 10.6

Code related audit information

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

Audit observation

For metering installations of category 3 HV and above, AccuCal is used as the ATH and there is no plan to change it.

Audit commentary

At the time of the last audit, Northpower was working with the EA auditor to finalise an ATH audit. The audit report was due May 2018. Northpower ATH certification will expire on 29 October 2019 with the next audit due on 10 May 2019.

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

The company's policy is to provide the MEP function only for installations where their own metering assets are installed. Any nominations for installations where third party owned meter assets are installed are rejected.

The Event Listing file (EDA) dated for the period 01/03/18 to 15/01/19 was analysed to assess compliance with the above clause.

Audit commentary

Overall Northpower accepted 13 nominations from PUNZ, MEEN, and CTCT (replacement of pre-paid meters). The last nomination was in May'18.

We checked all MEP nominations and confirm that the MEP nominations were accepted by Northpower the same or following business day after being received from the registry. It is a daily process to check the notifications from the registry. Any MEP nominations for ICPs where third party assets are on site are formally rejected via a MN rejection file to the Registry.

Audit outcome

Compliant

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

The LIS and PR255 files dated 16/01/19 provided by Northpower were analysed to assess compliance. For this analysis we used the Registry Data Analysis database provided by the Authority to assist the auditors in the assessment of compliance with clause 7 of Schedule 11.4.

Audit commentary

The results from the Registry Data Analysis database and previous audit are shown below:

Query	2017	2018	2019
Cat 2 with multiplier over 100	1 ICP (0000523418NR214) – Category 3 ICP certified as category 2 as noted elsewhere in section Error! Reference source not found.	The same	The same
Cat 3 and above without HHR profile or HHR meter or HHR installation	no ICPs	no ICPs	no ICPs
Cat 1 over 15 years Cat 2 over 10 years or over 15 if cert before 29/8/2013 Cat 3 over 10 years Cat 4 over 5 years Cat 5 over 3 years	ICP 0000511295NRC6F certified on 20/01/17, certification expires on 20/01/31. Incorrect information was input into Gentrack which then updated the Registry. Paperwork says that installation was certified for 14 years No ICPs Ditto ditto	no ICPs	no ICPs
Invalid certification date	no ICPs	no ICPs	no ICPs
Cert Expiry date > Today	706 installations with expired certification. The breakdown is below: Cat 1 – 697 ICPs Cat 2 - 2 ICP Cat 3 – 5 ICPs Cat 4 – 1 ICP Cat 5 – 1 ICPs (291 ICPs reported in the last MEP audit report)	1,501 installations with expired certification. The breakdown is below: Cat 1 – 1,479 ICPs Cat 2 - 12 ICP Cat 3 – 7 ICPs Cat 4 – 1 ICP Cat 5 – 2 ICPs	1,066 installations with expired certification. The breakdown is below: Cat 1 – 1,027 ICPs Cat 2 - 31 ICP Cat 3 – 8 ICPs

<p>Compensation factor on Cat 1 Installation</p>	<p>44 ICPs. Correct as Northpower has a number of installations with a single-phase meter on a 3PH supply so a multiplier of 3 applies. Some of these installations will be upgraded when an advanced meter is installed where the services main configuration allows but the remaining installations cannot be changed to a conventional metering configuration.</p> <p>(47 ICPs reported in the last MEP audit report)</p>	<p>36 ICPs. There are installations with a single-phase meter on a 3PH supply so a multiplier of 3 applies. This is a result of historical practice used more than 20 years ago affecting some farm pumps that occurred due to several factors:</p> <ul style="list-style-type: none"> • 3PH meters originally cost significantly more than equivalent 1PH meter • The pump load was very evenly balanced across the 3PH supply • In general, the usage by the pump ICP was low compared with other ICPs on the network • The location of the pump shed, and switchboard usually was quite remote, could be several overhead line spans, from the network feeder line making meter reader access difficult <p>As a result of the above factors it was common practice to take a single-phase feed down the network connection pole, or nearest customer service line pole, to the meter box then continue the 3-phase supply to the pump location. This allowed the use of a relatively cheap meter for a low usage load which was placed in a more accessible position than the actual pump and fuse board.</p>	<p>37 ICPs, the same setup as last year</p>
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CT on Cat 1 Check component type of "C" on Cat 1	No ICPs	No ICPs	No ICPs
Export ICPs (load type of generation or both) Check that the registry has an "I" channel	4 ICPs	4 ICPs	2 ICPs
HHR profile and submission type and meter or installation type is not HHR	no ICPs	no ICPs	no ICPs
ICP in LIS File but not in PR255	no ICPs	no ICPs	no ICPs
Any compensation factor that is not: 20,30,40,50,60,80,100,120,160,200,240,400	76 ICPs. A single-phase meter on a three-phase supply at a Category 1 installation will have a multiplier of "3". Category 4 and 5 metering installations will generally have compensation factors exceeding 400.	67 ICPs. A single-phase meter on a three-phase supply at a Category 1 installation will have a multiplier of "3". Category 4 and 5 metering installations will generally have compensation factors exceeding 400.	61 ICPs
Over Cat 1 with No CTs	1 ICP (0000100001NR87B) Wairua Power Station. When Northpower tried to add the CT information for this ICP into the Registry it was discovered that the CT serial numbers matched those of another ICP. Gentrack will not allow duplicated serial numbers, and this is unlikely to occur in the "real world" so a site check will need to be made to confirm the correct CT serial numbers.	The same	no ICPs
Control device not populated. All CN, NC, D, N should have control device unless they are AMI	196 ICPs. By definition, an installation with a "loaded pilot" does not have a control device at the ICP because the pilot-wire supplies the entire load on the controlled supply. Loaded pilots are being progressively eliminated in conjunction with meter upgrades (217 ICPs reported in the last MEP audit report).	114 ICPs	98 ICPs

Profile analysis Check period of availability and register content: CN without any other tariff	92 ICPs. It is quite possible within Northpower's price plan options to have a controlled load meter with no uncontrolled meter. This is commonly used for non-urgent supplies such as irrigation or flood pumps.	39 ICPs	32 ICPs 9 ICPs are pumps, Northpower allows CN only 23 ICPs metered lighting
Profile analysis Check period of availability and register content: Day and night = 24	61 ICPs. Valid. ICPs on price plan ND5 (Controlled Day/Night) where the total availability in any 24-hour period is 22 hours – Northpower can control up to 2 hours in any 24-hour period. (69 ICPs reported in the last MEP audit report)	59 ICPs	7 ICPs Interim certified ICP. Not changed from D/N to DC/NC as would need to be backdated (pumps)
Profile analysis Check period of availability and register content: Day without Night	no ICPs	no ICPs	no ICPs
Profile analysis Check period of availability and register content: IN Register cannot be 24 or 0	no ICPs	no ICPs	no ICPs
Control device not populated - All "IN" register content should have control device	The only ICPs with an "IN" register content is on the "closed" DM4 price plan. Many of these ICPs use a "loaded pilot" for hot water control. By definition, an installation with a "loaded pilot" does not have a control device at the ICP because the pilot-wire supplies the entire load on the controlled supply. Loaded pilots are being progressively eliminated in conjunction with meter upgrades.		39 ICPs

Audit outcome

Compliant

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

Code reference

Clause 6 of Schedule 11.4

Code related audit information

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

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

No later than 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

Northpower uses the database written by John Candy Consulting which allows them to meet the obligation described in this clause. The checks are done using the PR-255 and the LIS files downloaded from the registry on the 13th business day. Information is compared against records kept in Gentrack.

Audit commentary

A monthly comparison is done, as per this clause requirement. Northpower showed us the output from the JCC database. It is a very comprehensive comparison. The number of discrepancies are constantly decreasing since the comparison was first done in March'18.

In addition to a monthly comparison, daily checks are done by Northpower. Every single day, Northpower reverses entries uploaded to the registry by Gentrack, where, as soon as any metering information is "touched", it sends a notification to the registry. Some of these updates are not necessary and some of them relate to events prior to the introduction of Part 10 (17/8/2013) but it is how Gentrack is designed.

Audit outcome

Compliant

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

Code reference

Clause 20 of Schedule 10.7

Code related audit information

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

- a) *the metering installation is modified otherwise than under sub clause 19(3) 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

We asked Northpower to show us examples of all the points listed above.

- (a) Installation modification – this was discussed with the Commercial Manager and is covered in **section 4.1** – no installations were modified to his knowledge
- (b) Accuracy tolerance – this is covered in **section 4.3**
- (e) Lack of inspection - This was identified and described in detail in **section 8.2**. The registry records were not updated
- (f) Certification to a lower category – one ICP is discussed in **section 7.6**
- (g) Insufficient load for full certification – this is discussed in **section 7.8**
- (h) Bridged out load control device – the process is described in **section 7.11**
- (i) Seal broken – the process is discussed in **section 8.4**.

Audit commentary

Non-compliance identified because 9 metering installations of category 3 were not inspected and the registry records not updated to reflect it. It was identified as non-compliance in the previous audit.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 6.4 With: 20(2) of Schedule 10.7 From: 01-Mar-18 To: 15-Jan-19	Registry records were not updated to reflect cancelled certification for some installations Potential impact: Medium Actual impact: Low Audit history: Twice previously Controls: Weak Breach risk rating: 4
Audit risk rating	Rationale for audit risk rating

Low	Controls are recorded as weak for this clause. This non-compliance is linked to section 8.2 . The impact on settlement outcomes is recorded as minor and audit risk rating as low. It is a concern that this non-compliance has been identified before and no action was taken to address it.		
Actions taken to resolve the issue		Completion date	Remedial action status
Refer to comments for non-compliance 8.2 in this document			Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Refer to comments for non-compliance 8.2 in this document			

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

Non-compliance was identified by the last audit.

Audit commentary

We checked the PRR-255 and confirm that all information is loaded, including previously not recorded VTs and CT.

Audit outcome

Compliant

7. CERTIFICATION OF METERING INSTALLATIONS

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

Code reference

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

Code related audit information

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

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

Audit observation

We analysed PR-255 dated 16/01/19 to identify ICPs with expired certification. We checked ICPs where certification was cancelled to confirm that the registry was updated.

Audit commentary

At the time of the audit Northpower has 518 previously certified ICPs with expired certification and 548 previously interim certified installations that have now expired. The breakdown of 518 previously certified ICPs with expired certifications is:

- Cat 1- 479
- Cat2 – 31
- Cat 3 - 8

The table shows the details of category 3 installations. Six of these were present in the last audit

ICP	Property name	Category	Cert Exp date	Certification Type
0000520682NR785	Ruakaka Plant 206545 Water Pump	3	05/08/2017	F
0000530364NR154	Otaika Quarry; Old Crusher Unit	3	27/01/2016	F
0000541335NRE00	Sewer Pump	3	09/09/2018	F
0000541377NRC20	Homeworld Stadium; Field Lighting	3	19/08/2018	F
0000545317NR550	Walton Plaza	3	31/05/2017	F
0000549009NR4E5	Northport; Deep Water Port	3	28/06/2015	F
0000553602NRA96	Bottling Plant	3	31/07/2017	F
0000557278NR7DB	Kiwi Timber Treatment	3	04/09/2017	F

Over this last year Northpower has been working with Metrix to use their meters to certify the uncertified/expired/expiring installations. The implementation of the project is not going as smoothly as Northpower had hoped for. The progress of addressing non-compliance is slow as installations with currently expired certification are recertified, certification for additional installations are due to expire.

In 2019, certification for 385 fully certified installations will expire, in 2020 – 2,028 installations.

Northpower, as the MEP, uses its certified Class B Test House to maintain certification of metering installations (category 1,2, and 3 LV). After certification of an installation is finalised, metering records are updated into Gentrack and the Registry. Metering installations of categories 3 HV to 5 are certified by AccuCal.

Maintenance is carried out as required for battery replacement or communications faults on half-hourly metered ICP meter installations.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 7.1 With: From: 01-Mar-18 To: 15-Jan-19	Certification expired for 1,066 installations Potential impact: Medium Actual impact: Low Audit history: Multiple times Controls: Weak Breach risk rating: 6		
Audit risk rating	Rationale for audit risk rating		
Medium	Controls are recorded as weak because there is a plan in place, but the implementation is very slow. We assigned audit risk rating as medium because the number of category 2 and 3 metering installations is steadily increasing, which could have an impact on settlement outcomes.		
Actions taken to resolve the issue		Completion date	Remedial action status
After last year's MEP audit Northpower entered into an arrangement with Metrix whereby those category 1 ICPs with interim certification or expired certification would have the existing Northpower legacy meters replaced with Metrix advanced meters. After the meter change the now certified ICP would pass to Metrix as the new MEP. Although this arrangement has not worked as envisaged Northpower has managed to reduce the number of ICPs with either interim or expired certification from 1,501 to 1,066 (from the Alert File counts) over the past year. All category 4 and 5 ICPs with expired certification had also been completed by the date of this MEP audit.		On-going	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

<p>The new management in the Northpower MEP team have made the reduction of this backlog of expired ICPs a priority task. Refer further comments in the <i>Conclusion: Participants Comments</i> section at the end of this audit report.</p> <p>A weekly analysis of the Registry Alert File is completed to help monitor the progress of the meter deployment. Regular conference calls with Metrix, and/or the contractors, will possibly be introduced in the next couple of months depending on progress with the meter replacements.</p>	On-going	
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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

We checked certification records for three category 3 installations recertified by AccuCal. There were no category 2 and 3 LV installations recertified by Northpower ATH. We reviewed certification records for 15 category 1 metering installations.

Audit commentary

Northpower uses AccuCal as the ATH for installations of category 3 HV and above. AccuCal, according to the Electricity Authority's website, holds the certification of Test House, class A, which is sufficient to certify metering installations of category 3 and higher. Northpower itself holds the accreditation of Test House class B for installations of category 1, 2 and 3 LV. Compliance confirmed based on a review of the Authority website.

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

We analysed the PR-255 to assess compliance.

Audit commentary

All relevant metering is compliant with this clause.

Audit outcome

Compliant

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

Code reference

Clause 10.37(2)(b)

Code related audit information

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

Audit observation

Northpower does not provide the MEP functionality to local services metering installations in grid substations. There are no plans to provide such a service in the future.

The clause relates to Transpower as an MEP.

Audit commentary

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

Current transformers (CTs) used for revenue metering at ICP's, for which Northpower provides the MEP services, are used only for metering. Voltage transformers are commonly shared in big installations between metering and protection circuits as it is not practical to use separate VTs for metering and protection purposes. Clause 30(1) of Schedule 10.7 makes provision for this multi-use of VTs therefore Northpower is compliant.

During the audit we asked Northpower if there were any examples of burden changes or the addition of non-metering equipment being connected to metering CTs.

Audit commentary

According to the process adopted by Northpower, if the need arises to change a protection relay, it is done by Northpower's staff, who will consult with the ATH who certified the metering installation. The change is always like for like; so, the impact is negligible. At the time of the next recertification of the metering installation, the measuring of the transformer burden is recalculated by the ATH.

Northpower confirmed that since the last audit there were no examples of burden changes having occurred.

There are 10 installations in which VT's are used for metering (Cat 3 HV, 4, and 5). In some cases, the VT's are part of the switchgear and it is not practical to have separate VT's solely for metering. In other cases, the VT's are exclusively for metering. The following table shows more details, including the list which was included in last years audit report, there are no changes.

Site	ICP	Type of VT's	Comments
BRB0331 (Oil Refinery and Carter Holt LVL Plant)	0000546127NRA4F	Substation VT's	The substation VT's are used for metering and protection. An ATH is involved when changes are made to the revenue metering.
MPE1101 (Golden Bay Cement)	0000546038NR638	Separate Metering Units containing CT's and VT's	Metering units were installed 10 years ago to remove the revenue metering from the station VT's.
Wairua Power Station	0000100001NR87B	Separate Metering Unit containing CT's and VT's	Metering units were installed 10 years ago.

Fonterra Kauri	0000546037NR9E6	Substation VT's in indoor 33kV switchgear	Customer-owned switchgear so no control over what the site-owner does; installation is certified by ATH
Fonterra Maungaturoto	0000545312NR81F	VT's in indoor 11kV switchgear	Customer-owned switchgear so no control over what the site-owner does; installation is certified by ATH
Balance Agri-Nutrients Fertiliser works - 2 ICP's	0000500092NR2E3	VT's in indoor 3.3kV and 11kV switchgear	Customer-owned switchgear so no control over what the site-owner does; installation is certified by ATH
Northland Polytech	0000545360NRDC7	VT's in indoor 11kV switchgear	Exclusive to metering.
CHH Sawmill HV	0000553396NR17E	VT's in indoor 11kV switchgear	Exclusive to metering.
Marusumi Wood Chip Mill	0000546039NRA7D	VT's in indoor 11kV switchgear	Customer-owned switchgear so no control over what the site-owner does but unlikely that more equipment would be added; installation is certified by ATH
Northport Deep Water Port	0000549009NR4E5	VT's in indoor 11kV switchgear	Customer-owned switchgear so no control over what the site-owner does but unlikely that more equipment would be added. Currently uncertified by ATH due to problems arranging a shutdown as mentioned elsewhere in the report

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

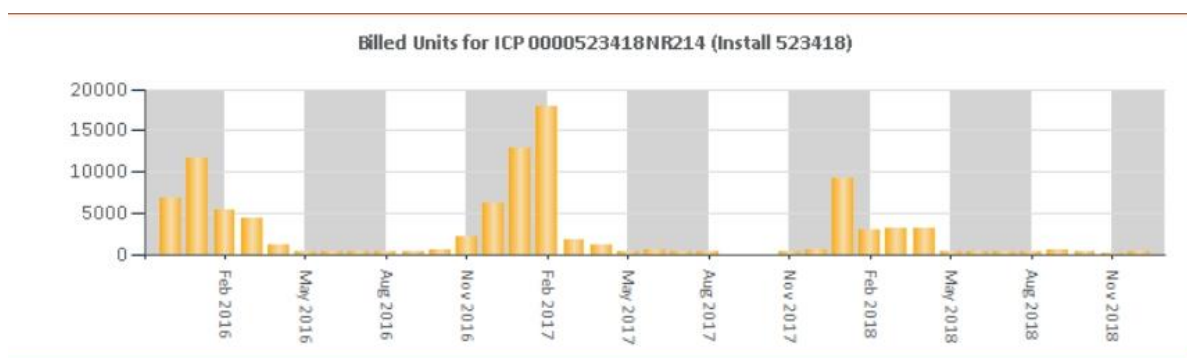
There is still one metering installation of category 3, where legacy metering is installed which is certified as category 2. This ICP is an irrigation pump used occasionally (ICP 0000523418NR214). In the registry this ICP is listed as category 2 with a 160-compensation factor (800/5 CT)

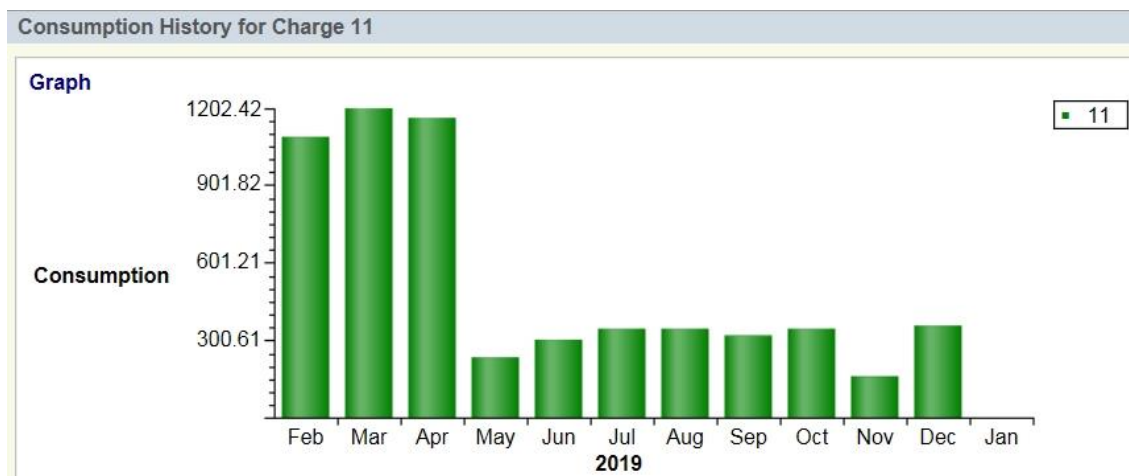
Audit commentary

Northpower does not allow paper downgrades according to their policy. Customers who request downgrades for the purpose of seeking lower line and electricity charges are required to have existing CT's replaced by CT's in the appropriate range (e.g. 500/5 or lower for cat 2) or conversion to whole-current metering by removal of the CTs for less than a 100A load requirement. At the same time, a customer's supply fuses are downgraded to 100A or lower.

This particular customer does not wish to have half-hour metering because of the cost.

Northpower does not receive a special report from Nova Energy for the ICP but the consumption data supplied to Northpower as a distributor for line charge billing purposes can be used for the purposes of this section. The graph for this ICP is shown below.





Consumption continues to be very low and well below 0.5 GWh pa with only 13,468 kWh used in the past 12 months.

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

It was discussed during the audit.

For installations of category 1 and 2, installers use a portable load to certify the installation if no actual load is present therefore there is always sufficient load for testing.

Audit commentary

There is one installation 0000553396NR17E (CCH Sawmill; Super Mill) certified on the 28/12/2018 through until 28/12/2023, however no load test could be done at the time of the certification visit due to the plant being on reduced load for the Christmas break. It was scheduled for Waitangi week and we were advised that this load test was completed on the 4th February 2019. A load is monitored from the Northpower office via MV90, so it can be reviewed regularly and there is also a reminder set-up in Gentrack.

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

If the test conducted under clause 14(4) demonstrates that the metering installation is not within the relevant maximum permitted error, the cause of the problem will be investigated. Northpower's policy is not to allow such sites to be certified until the problem is resolved.

Audit commentary

There are no examples of tests conducted showing that the metering installation is not within the relevant maximum permitted error.

Audit outcome

Not applicable

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

Code reference

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

Code related audit information

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

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

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

Audit observation

There is one ICP for which re-certification is delayed because of an access issue by the customer who will not allow the site to be shut down. It is the same ICP which was noted in the previous audit.

ICP	Owner	Name of property	Expire date
0000549009NR4E5	Northport Ltd	Deep Water Port at Marsden Point (11kV)	28/06/13

Audit commentary

During the last audit, Northpower presented a letter dated 5/3/18 from Northport in which the company assures that they are actively working towards a business based solution with regards to managing the required power outage. The shutdown was scheduled for July 2018 however this was subsequently cancelled by Northport very late in June 2018 due to business constraints.

Northpower advised that a meeting is scheduled with Northport management on 5 February 2019 to discuss the requirement for a complete shutdown of the electricity supply to their site to allow Northpower to proceed with line maintenance work, maintenance of HV switchgear and the metering recertification.

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 clause is not applicable because Northpower does not have any meters which have the functionality to switch a meter register.

Audit commentary

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

The process used by Northpower was examined. The process is as follows:

- The office is notified that a ripple relay was bridged out due to an after-hours fault callout
- An internal Service Request is issued for the faulty relay to be replaced

The after-hours faultman and all day faultman carry spare relays in their vehicles. It is therefore only on rare occasions, ripple relays are bridged out by a faultman after hours when a customer has no hot water.

Audit commentary

Northpower commented that, since the last audit, there was only one instance where a bridged out ripple receiver was replaced for installations for which Northpower provides MEP services.

Audit outcome

Compliant

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

Code reference

Clause 34(5) of Schedule 10.7

Code related audit information

If the MEP is advised by an ATH that the likelihood of a control device not receiving signals would affect the accuracy or completeness of the information for the purposes of Part 15, the MEP must, within 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

The PR-255 file was analysed to assess compliance.

Audit commentary

All control devices installed within metering installations for which Northpower is responsible are certified.

No traders notified Northpower of any installations where a control device could affect the accuracy or completeness of volumes for the purpose of Part 15.

Audit outcome

Compliant

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

Code reference

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

Code related audit information

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

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

Audit observation

In October 2015, Northpower completed its statistical sampling programme of meter models at Category 1 metering installations which were previously interim certified.

Audit commentary

Northpower has not conducted any statistical sampling during the period covered by this audit.

Audit outcome

Compliant

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

Code reference

Clause 24(3) of Schedule 10.7

Code related audit information

If 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

Northpower does not have such installations

Audit commentary

Compliance confirmed based on a verbal assurance by Northpower.

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

All NHH meters installed at installations are meters returned from the field. They were removed by other MEPs on traders' request. No new meters were purchased by Northpower since the last audit.

Audit commentary

Certificates of meters installed as a part of metering on installations of category 1 and 2 are held by Northpower ATH. Meters for category 3 and above are individually tested by AccuCal as a part of certification.

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

Each measuring transformer installed on installations for which Northpower provides MEP services are certified. CTs for category 3 and above are individually tested by AccuCal as a part of installation certification.

Audit commentary

We sighted CT's certification for two installations.

Audit outcome

Compliant

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

Code reference

Clause 36(1) of Schedule 10.7

Code related audit information

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

Audit observation

There was a PSI logger installed at ICP 0000545550NRC39. When the installation was recertified on 14/05/18 both the PSI logger and existing meter were removed with a replacement meter installed as part of the certification process.

Audit commentary

Compliance confirmed based on a verbal statement from the company.

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

Northpower understands clause 7 and, if it occurs, will take appropriate action.

Audit commentary

We checked the ATH (AccuCal) register to confirm compliance.

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

We checked the LIS file dated 16/01/19 to see if there are any ICPs with interim certification recorded.

Audit commentary

We identified 548 ICPs (status "active"), 145 ICPs (status "inactive") and previously interim certified metering installations with expired certification.

541 ICPs were visited at least once. Northpower keeps detailed records of reasons of failed certification. As an example 92 ICPs had asbestos switchboards, 40 ICPs had a problem with access, 34 ICPs had an unsafe installation, 19 ICPs where customers refuse to have a smart meter installed etc.

25 ICPs already have non-Northpower assets installed, new MEPs need to update the registry records.

Audit outcome

Non-compliant

Non-compliance	Description
Audit Ref: 7.19 With: 18 of Schedule 10.7 From: 01-Mar-18 To: 15-Jan-19	548 ICPs (status "active") and 145 ICPs (status "inactive") with expired interim certification Potential impact: Medium Actual impact: Medium Audit history: Multiple times Controls: Weak Breach risk rating: 6
Audit risk rating	Rationale for audit risk rating

Medium	Controls are recorded as weak because certification has been expired for a number of years for 693 installations. The impact on settlement outcomes is recorded as medium because of the increased likelihood of inaccuracy of metering installations.		
Actions taken to resolve the issue		Completion date	Remedial action status
Refer to the comments for non-compliance 7.1 earlier in this audit report along with the further comments in the <i>Conclusion: Participants Comments</i> section at the end of this audit report.		On-going	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	
Refer to the comments for non-compliance 7.1 earlier in this audit report along with the further comments in the <i>Conclusion: Participants Comments</i> section at the end of this audit report.		On-going	

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

Northpower has in place a statistical sampling inspection regime for category 1 metering installations as per the Code requirements.

Audit commentary

In the year 2018, 150 ICPs were selected and 125 of them were inspected (the required sample size was 125 ICPs). After inspections are finished, Northpower MEP analyses the results of the inspections in accordance with the requirements of clauses 45(8)(ii) and clause 45(8)(b)(ii) of Schedule 10.7.

The report of inspection category 1 metering installations for the calendar year 2018 was sent to the Electricity Authority on 13th September 2018, receipt of this report was acknowledged by the Electricity Authority on 25th September 2018.

Audit outcome

Compliant

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

Code reference

Clause 46(1) of Schedule 10.7

Code related audit information

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

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

Audit observation

PR-255 dated 16/01/19 was analysed to assess compliance. According to the process adopted by Northpower, installations of category 2 are not inspected; instead they are re-certified every 120 months.

Audit commentary

Analysis of PR-255 showed that that the inspections for 7 category 3 metering installations were not conducted and for 31 category 2 metering installations the certification had expired and inspections/re-certifications were not conducted.

Not all metering installations of category 3 and higher were inspected as per the Code requirement. The table below shows a summary:

ICP	Category	Certification date	Certification expire	Inspection due	Site
0000527385NRB2A	3	27/02/12	7/04/21	27/02/17	Kaihu Valley Sawmill
0000545341NRCD7	3	14/02/12	6/07/21	14/02/17	Cutforths Spring Water Pump; Waimea Lane
0000548351NRC5A	3	03/02/12	7/02/22	03/02/17	Altas Quarries; Supply No2
0000548751NR05B	3	01/03/12	22/06/20	01/03/17	CHH Sawmill; Supply 3
0000549265NR20C	3	07/05/12	7/02/22	07/05/17	Crusher Plant; Winstones Quarry
0000557260NRF62	3	20/09/09	20/02/19	20/09/14	Whangarei Police Station
0000557601NR0D6	3	18/02/09	25/11/19	18/02/14	Whangarei District Courthouse; Supply 2

There are 81 category 2 metering installations which were certified for 15 years, their certification is still valid. Due to resources being concentrated on category 1 recertification Northpower has not completed the inspections at these installations, which is non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
<p>Audit Ref: 8.2</p> <p>With: 46(1) of Schedule 10.7</p> <p>From: 08-Mar-18</p> <p>To: 15-Jan-19</p>	<p>No inspection conducted for 7 category 3 metering installations and 112 category 2 metering installations</p> <p>Potential impact: Medium</p> <p>Actual impact: Low</p> <p>Audit history: Multiple times</p> <p>Controls: Weak</p> <p>Breach risk rating: 6</p>		
Audit risk rating	Rationale for audit risk rating		
Medium	<p>Controls are recorded as weak because this non-compliance was identified a few times already. Northpower does not follow its process for metering installations category 2. The impact on settlement outcomes is minor but it can potentially increase. Audit risk rating is recorded as medium as it should be addresses within the next 6-12 months. Since the last audit the number of non-compliant cat 3 installations decreased from 11 to 7 and a cat 5 metering installation was certified but the number of cat 2 installations has increased. The impact on settlement outcomes is minor but it can potentially increase. Audit risk rating is recorded as low.</p>		
Actions taken to resolve the issue		Completion date	Remedial action status
<p>In the past Northpower had concentrated limited field resources on the recertification of category 1 metering installations to reduce this large non-compliance issue. The new Northpower MEP management has recognised that those category 2 to 5 ICPs also require resolution.</p> <p>The category 4 and 5 ICPs that previously had expired certification were resolved using AccuCal. A list of category 3 (HV) to 5 ICPs where certification is due to expire in the coming 12 months along with those ICPs which will require mid-life inspections has been supplied to AccuCal so that the necessary site visits can be planned.</p> <p>In many cases the inspections or recertification of these metering installations has to be co-ordinated with planned shutdowns at the ICPs for off-season maintenance.</p>		On-going	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

<p>A rolling 12 monthly window report will be implemented for the category 3 (HV) to 5 ICPs so that regular follow-up with AccuCal can be made. Although the annual “forward looking recertification and inspections” report provided to AccuCal will be used for planning the coming year’s work schedule, the new rolling 12 monthly report will be used to ensure no ICPs are missed for inspections or recertification.</p> <p>Refer to further comments in the <i>Conclusion: Participants Comments</i> section at the end of this audit report.</p>	On-going	
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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

The process was reviewed, and it has not changed since the last audit.

Audit commentary

When the inspections are conducted by AccuCal for installations of category 3 HV and higher, Northpower compares the information on the report supplied with its own records and the registry is updated as required.

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

According to the process adopted by Northpower, if inspectors find broken seals at category 1 or 2 metering installations they will check the installation for signs of tampering and if none are identified the missing seals are replaced. This task is completed under the authority of the Northpower ATH.

Audit commentary

The company was not able to provide any examples of installations where broken or removed seals were identified. It is a rare occurrence because the number of installations for which MEP services are provided is steadily decreasing.

During the audit we reviewed category 1 inspections as per **section 8.1**. The inspections identified a small number of installations where missing seals were found. No action was taken after completion of inspection which is noted as non-compliance.

Audit outcome

Non-compliant

Non-compliance	Description		
Audit Ref: 8.4 With: 48(5) of Schedule 10.7 From: 08-Mar-18 To: 15-Jan-19	No remedy work was undertaken after installations with removed seals identified Potential impact: Low Actual impact: Low Audit history: None Controls: Weak Breach risk rating: 3		
Audit risk rating	Rationale for audit risk rating		
Medium	Controls are recorded as weak. There is no process in place for a situation where missing seals are noted during annual inspections of metering installations category 1. Audit risk rating is recorded as low.		
Actions taken to resolve the issue		Completion date	Remedial action status
In the past Northpower Contracting Division has taken responsibility for management of broken seals found during either the annual category 1 inspection project or while completing the day-to-day BAU metering work for Northpower MEP. With the impending quite major changes in the work being carried out by Northpower Contracting for Northpower MEP it appears that the process for managing broken seals has been dropped.		30/04/2019	Identified
Preventative actions taken to ensure no further issues will occur		Completion date	

<p>Northpower MEP has identified this as an issue for which we will need to take control. We will document a new process whereby any identified cases of broken meter seals (at any Northpower Network ICP) will be reported to the Northpower MEP staff.</p> <p>In those cases where the broken seals are at an ICP managed by another MEP, the retailer and MEP will be advised so they can take corrective action. If the broken seals are at an ICP managed by Northpower MEP then the appropriate action as required by the Code will be taken.</p> <p>The aim of the new documented process is for it to be seamlessly transferrable between Northpower Contracting or any third party contractors that may become warranted to work on metering at ICPs on the Northpower Network.</p>	<p>30/04/2019</p>	
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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

Northpower's Contracting Division is advised by customers or by traders of all types of faulty installation complaints.

The process adopted by Northpower is described below, it has not changed since the last audit. Traders send through a service request (SR) to Northpower Contracting asking for a site visit. Once the SR is received, an inspector or a faultman makes a site visit to investigate and remedy any issues he may find. Once the SR is closed, the information is to a trader which will include any information relevant to the fault that the inspector discovered.

Audit commentary

Any changes to the meter installation are updated into Gentrack and uploaded to the registry overnight. Compliance confirmed based on a review of the process.

As already mentioned previously Northpower is planning to make changes to the relationship between the Contracting Division and NPOW MEP. The plan is that NPOW MEP will take over the management of installations from the Contracting Division.

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

As described in **section 9.2**, once Northpower receives the SR from the trader, an inspector makes a site visit to investigate and remedy, if possible, any issues, he may find. A trader receives the Inspection Report (electronically) which includes any information relevant to the fault that the inspector discovered plus photos.

If an installation of category 3 HV and higher is reported faulty, Northpower asks AccuCal to investigate. Once their investigation is complete Northpower is advised of their findings and the Commercial Manager completes a “statement of situation” in cooperation with AccuCal.

Audit commentary

We found the process used by Northpower compliant. Northpower did not have any faulty installations of category 3 and higher.

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

Northpower confirmed that there were no instances, since the last audit, where an installation was faulty and inaccuracies in raw data were discovered as a result.

Audit commentary

In a situation where any installation of category 3 HV and higher is reported being faulty, AccuCal is asked to investigate and provide a statement of situation. A statement of situation will be provided to the trader and the Authority.

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

Northpower owns the TOU meters at a number of ICPs. Any meter reads made by Northpower are only for the distributor's internal purposes of reconciliation, network management, or direct billing of network charges to six end use customers.

The traders have a contract with meter reading companies such as AMCI and EMS for the provision of HHR data from these meters. For these HHR installations Northpower provides the meter set-up details and access passwords required to read the meter.

NHH meters (legacy) are read manually by meter reading companies appointed by the traders. Northpower does not have access to NHH raw meter data.

Audit commentary

Northpower have raw data for HHR meters but it is only used for internal processes. The raw meter data is never disclosed to any trader or a customer. Northpower does not have access to the raw meter data of NHH ICPs.

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

Northpower, as the MEP, does not have access to raw NHH meter data, only traders have access to it or their agents. Northpower reads HHR meters owned by Northpower for their own internal use.

Audit commentary

Northpower do not have access to NHH raw meter data. Meter data for HHR ICPs is used only internally and never disclosed to third parties.

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

Since the last audit, Northpower was not asked by parties listed in this clause to have access to components in metering installations.

Audit commentary

Northpower will use its best endeavours to arrange access to a metering installation if requested. It will be solely dependent on the customer's availability or health and safety concerns due to the nature of the customer's business that determines if access is granted and within what time frame.

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

As described in **section 10.3**, Northpower confirmed that it will use its best endeavours to provide physical access to an installation if requested. Northpower will provide any codes, keys, or other means to enable another party to obtain physical access to all metering components in a metering installation if it is necessary and Northpower is in a position to do so.

Audit commentary

The company was not approached with any requests for urgent access to any metering installation during the period covered by the audit.

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

Northpower does not read meters via their back office.

Audit commentary

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

Northpower does not read meters via their back office.

Audit commentary

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

Northpower does not read meters via their back office.

Audit commentary

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

Northpower does not read meters via their back office.

Audit commentary

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

Northpower does not read meters via their back office.

Audit commentary

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

Northpower does not read meters via their back office.

Audit commentary

This clause is not applicable. Compliance was not assessed.

Audit outcome

Not applicable

CONCLUSION

PARTICIPANT RESPONSE

Section 4.10 Non-compliance (Registry Entries Outside 10 Business Days:

There are multiple reasons for this issue occurring, some are related to how the Gentrack software triggers metering events to be sent to the Registry while others are related to on-going data clean-up activities by Northpower.

- A. Gentrack is the ICP and Meter “master database” at Northpower; this software also manages the interface with the Registry for updating changes to data made by Northpower along with the downloading and processing of the Registry Notification Files. Where any Registry related data (ICP or Meter) is changed in Gentrack an update to the Registry will be automatically triggered – these update processes were thoroughly tested during the Gentrack software implementation prior to and during the revised Part 10 introduction.

Any change to the metering data held in Gentrack which is also held in the Registry, for instance recording a meter reading taken during a disconnection or reconnection, will automatically trigger an update to the Registry. We have introduced an additional task into our daily “MM-010 File Investigation” process whereby any of these Registry updates that we identify as not adding value or being required under the Code will be reversed from the Registry.

In addition, a change to a Gentrack meter data field which automatically triggers a Registry update will also cause Gentrack to search through previous metering data for the ICP to identify any meter data entries that have not previously been sent to the Registry. In many cases there are entries from pre-Part 10 or the period around the Part 10 implementation, where the Registry was populated outside the Gentrack normal processes, which are flagged as not yet sent to the Registry. These meter data updates, which can be dated from several years back, are then sent to the Registry. As these data updates add little value to the Registry in most cases they will be reversed as part of our daily “MM-010 File Investigation” process.

- B. When the revised Part 10 of the Code was implemented in August 2013 Northpower owned the majority of meter assets installed at ICPs on our network and became the MEP by default. Over the past few years the Northpower owned meter assets at ICPs on our network have been steadily replaced with meter assets owned by other MEPs. Note that Northpower does not wish to retain the MEP responsibility at those ICPs where the new or replacement meter assets are not Northpower owned.

These third party meter asset replacements have been completed by a mix of Northpower Contracting and third party contractors working for various Test Houses.

Northpower remains the MEP at an ICP in the Registry until the new MEP updates their meter data into the Registry. As Northpower holds meter data against all ICPs in Gentrack, no matter who owns the meter assets, for line charge billing purposes any meter data changes will be automatically updated into the Registry for ICPs where Northpower is recorded in the Registry as the MEP. This Registry update will include those ICPs with third party owned meter assets if Northpower still shows as the MEP in the Registry.

Due to a design flaw with the Registry MEP functionality it is not possible for a trader to nominate a new MEP effective on the same date that the current MEP has a metering event in the Registry. In addition, a new MEP who has previously accepted a nomination, cannot update their meter data into the Registry if the current MEP’s latest metering event has the same effective date in the Registry.

Due to this Registry design flaw Northpower has implemented a daily process where all Registry meter event updates (MM-010 File) are investigated and any entries relating to meter assets owned by a party other than Northpower are reversed. This clears the meter data from the Registry to allow a trader to nominate a new MEP, or a new MEP to update their meter asset data where they have previously accepted a nomination, with an event date matching the meter asset installation date.

Unfortunately, this process has three adverse outcomes: -

- 1) The Registry meter data for the affected ICPs does not match the physical meter assets currently installed at the ICP until the new MEP has updated their meter data into the Registry.
- 2) Northpower is in breach of Part 11 Schedule 11.4 Clause 3:

Metering equipment provider to advise registry manager of changes to registry metering records

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

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

This breach is due to Northpower still showing as the MEP in the registry, but we have not updated the meter change into the Registry by virtue of the daily “reversal” process.

- 3) The comparison of meter data between Gentrack and the Registry is made more complex and time-consuming as the reversal of meter entries in the Registry to allow the MEP nomination/switch process creates multiple data matching “exceptions”.

To help reduce the amount of time the meter records in the Registry are incorrect (don’t match the physical metering installed at the ICP), the Northpower process includes a fortnightly email to the new MEP(s) with a list of ICPs that need meter data updated into the Registry.

- C. The functionality for sending “historical” dated metering events was incorporated into the Gentrack Part 10 software to manage the requirements of Part 11 Clause 11.2:

Requirement to provide complete and accurate information

(1) A participant must take all practicable steps to ensure that information that the participant is required to provide to any person under this Part is—

- (a) complete and accurate; and***
- (b) not misleading or deceptive; and***
- (c) not likely to mislead or deceive.***

(2) If a participant becomes aware that the information the participant provided under this Part does not comply with subclause (1)(a) to (c), even if the participant has taken all practicable steps to ensure that the information complies, the participant must, as soon as practicable, provide such further information as is necessary to ensure that the information complies with subclause (1)(a) to (c).

Part of the MEP audit seeks assurance that Northpower has processes in place to compare the Registry data with our in-house databases with a resulting investigation and correction of any data differences. By its very nature this comparison process will result in backdated entries to the Registry, either new active entries or reversal/replacement entries.

Section 6.4 Cancellation of Certification:

This non-compliance is covered more fully in the explanation for non-compliance 8.2 below.

Section 7.1 Certification and Maintenance / Section 7.19 Interim Certification:

To advance the metering installation certification project, Northpower MEP has engaged with Metrix to install Metrix-owned advanced meters at mass market (NHH) ICP's with expired certification or with certifications expiring in 2019 and beyond. This solution is subject to those retailers with ICPs where the metering installation certification has expired agreeing to nominate Metrix as MEP, due to Northpower not wanting to retain MEP responsibilities at ICPs where Northpower does not own the meter assets. Unfortunately, some retailers have indicated that they do not want Metrix advanced meters installed at uncertified ICPs they supply so this issue will need to be addressed at some stage in the future.

As Metrix wanted to retain control of the metering installation recertification project with regards to the initial selection of ICPs to be placed with their contractors, and arranging contact with the customer, progress towards reducing the number of expired certification ICPs has been slower than Northpower had hoped. Northpower will discuss these concerns with Metrix to (hopefully) remove some of the barriers that are delaying the meter replacements.

In addition, a number of customers have refused the installation of advanced meters when the contractor has called to install the new meters and re-certify the ICP. As Metrix did not provide the option for installing legacy meters under their agreement with Northpower, Northpower has decided to purchase new or use recovered (and re-tested) legacy meters at those ICPs where customers refuse advanced meters.

At the date of the MEP audit there were 185 ICPs with expired or interim certified meters which had been visited, where the replacement meters could not be installed and the ICP certified. The reasons and ICP counts for these 185 ICPs were: -

- Asbestos Meter Board – 92
- No Access to Meter Station – 40
- Safety Issues (Faulty Wiring, etc.) – 34
- Customer Refusal - 19

For those category 3 (HV) and above ICPs where the metering installation certification has expired, or is due to expire, Northpower has engaged with AccuCal to start the planning for the necessary access and shutdown of the ICP to enable the metering installation recertification to proceed. In some cases, the retailer may be required to contact their customer to ensure that Northpower and AccuCal are provided with access to complete this work especially where the customer runs a 24/7 business.

Section 8.2 Category 2 to 5 Inspections:

With the concentration of limited field staff resources on the annual inspections of category 1 ICPs along with attempting to reduce the number of interim and expired certification ICPs, the inspections of the higher category ICPs was left. Northpower can read the meters at the half hourly metered category 2 and above ICPs so used this check to ensure that the metering was operating as expected.

The new Northpower MEP management is committed to meeting the Code requirements for the annual inspections of both category 1 ICPs (which has been met in the past) as well as the annual inspections of the category 2 to 5 ICPs. AccuCal will be used for both the inspection and recertification of the category 3 (HV) and above ICPs while other contractors will be used for category 2 and 3 LV work.

A list of category 3 (HV) and above ICPs which require inspections or recertification in the coming 12 months has been provided to AccuCal. AccuCal has been requested to provide their timetable for completing this work so that any required shutdowns can be arranged with the customer, using the retailer to obtain access where necessary.

A new “rolling 12-month window” report of category 2 and above ICPs covering both future inspections and recertification requirements will be implemented so that Northpower MEP management can ensure that ICPs are not missed. Inspections of category 2 metering installations will only be required for those originally certified for 15 years as new category 2 metering installations can only be certified for 10 years, which is the same as the inspection period.

Section 8.4 Broken or Removed Meter Seals:

With the changes to the level of support that Northpower Contracting will be providing to Northpower MEP it is planned that management of several functions, including broken meter seals, will now be fully managed by the Northpower MEP staff rather than the Northpower Contracting staff.

In the past there evolved a direct communication relationship between the trader and Northpower Contracting as the trader did not see the divisional split that existed in the Northpower company structure; this arrangement had worked very efficiently. “Outside” contractors are being warranted to work on the Northpower network, and these contractors will likely take over a large portion of the Northpower MEP metering work. The electricity traders supplying ICPs on the Northpower network will be requested to communicate any metering related issues directly to Northpower MEP staff rather than to the various contractors.

As part of this communication relationship change Northpower MEP will be formally documenting processes including that surrounding reported broken meter seals. The aim of these documented processes is to allow their use seamlessly by either Northpower Contracting or any third parties warranted to carry out metering work on Northpower’s Network. These new processes should allow better management and reporting of several of these areas covered by the Code than has been possible in the past.