

# "Schedule 10.1

cls 10.37 and 10.43

## "Tables

"Table 1: Metering installation characteristics and associated requirements

Associated Requirements of active energy metering											
Defining Characteristics				Metering installation certification type	Accuracy tolerances		Selected component metering installation minimum IEC class (more accurate components may be used)		Metering installation certification and inspection		
Metering installation category	Primary voltage (V)	Primary current (I)	Measuring transformers		Maximum permitted error	Maximum site uncertainty	Meter	Current Transformer	Maximum metering installation certification validity period	Maximum sample inspection and recertification period	Inspection period
1	V < 1kV	I ≤ 160A	None	NHH or HHR	± 2.5%	0.6%	2	N/A	180 months	84 months	120 months ± 6 months
2	V < 1kV	I ≤ 500A	CT	NHH or HHR	± 2.5%	0.6%	2	1	120 months	N/A	120 months ± 6 months
3	V < 1kV	500A < I ≤ 1200A	CT	HHR only	± 1.25%	0.3%	1	0.5	120 months	N/A	60 months ± 3 months
	1kV ≤ V ≤ 11kV	I ≤ 100A	N/A				N/A				
	11kV < V ≤ 22kV	I ≤ 50A	N/A				N/A				
4	V < 1kV	I > 1200A	CT	HHR only	± 1.25%	0.3%	N/A	N/A	60 months	N/A	30 months ± 3 months
	1kV ≤ V ≤ 6.6kV	100A < I ≤ 400A	VT & CT								
	6.6kV < V ≤ 11kV	100A < I ≤ 200A									
	11kV < V ≤ 22kV	50A < I ≤ 100A									
5	1kV ≤ V ≤ 6.6kV	I > 400A	VT & CT	HHR only	± 0.75%	0.2%	N/A	N/A	36 months	N/A	18 months ± 1 month
	6.6kV < V ≤ 11kV	I>200A									
	V > 11kV	I > 100A									
	V > 22kV	Any current									

Table 2: Maximum certification validity periods for the purposes of clause 1(2) of Schedule 10.8

Metering installation category	Class 0.2 meter (months)	Class 0.5 meter (months)	Class 1.0 meter (months)	Class 2.0 meter (months)
1	180	180	180	180
2	120	120	120	120
3 where $V < 1\text{kV}$	120	120	120	N/A
3 where $V \geq 1\text{kV}$	120	120	N/A	N/A
4	60	60	N/A	N/A
5	36	N/A	N/A	N/A

**"Table 3: Selected component certification and comparative recertification minimum test requirements**

Event	Design	Measuring transformer	Meter	Primary injection to meter	Prevailing load	Data storage device	Software security and communication equipment	Control device	Wiring check	Component certification check	Review of compensation factors	Raw meter data output	Supply polarity	Register advance	Installation or component configuration
Metering installation	Initial certification category 1						M		M	M	M	M	M	M	M
	Initial certification categories 2 and 3				M		M		M	M	M	M	M	M	M
	Recertification categories 1 to 3				M		M		M	M	M	M	M	M	M
	Recertification category 1 where meter is replaced with a certified meter						M		M	M	M	M	M	M	M
Component change or recertification	Meter change including internal data loggers		M		M	M	M		M		M	M	M	M	M
	Metrology change either on site or remote		M			M	M				M	M		M	M
	External data logger change					M	M		M		M	M		M	M
	Measuring transformer change or ratio change	M			M				M		M	M	M		
	Control device change					MI		M	M			M			M
	Additional equipment (eg wiring)	M			M				M			M	M	M	

Key: M = mandatory, MI = mandatory if the control device is integral with the meter.

**"Table 4: Fully calibrated certification minimum test requirements**

Event	Design	Measuring transformer	Meter	Primary injection to Meter	Prevailing load	Data storage device	Software security and communication equipment	Control device	Wiring check	Component certification check	Review of compensation factors	Raw meter data output	Supply polarity	Register advance	Installation or component configuration
Meter installation	Initial certification	M	M	T	M	M	M	M	M	M	M	M	M	M	M
	Recertification	M	M		M	M	M	M	M	M	M	M	M	M	M
Component change or recertification	Meter change including internal data storage device	M	M		M	M	M		M		M	M	M	M	M
	Metrology change either on site or remote	M	M			M	M				M	M		M	M
	External data storage device change	M				M	M		M		M	M		M	M
	Measuring transformer change or ratio change	M	M	T	M				M		M	M	M	M	
	Control device change	M				MI		M	M			M			M
	Additional equipment (eg wiring)	M		T	M				M			M	M	M	

Key: M = mandatory, T = mandatory if test method and test equipment permit, MI = mandatory if the control device is integral with the meter.

**"Table 5: Standards for metering components**

<b>Meter and data logger standards</b>		<b>Standards</b>
Electricity metering equipment (AC) – Part 1: General requirements, tests and test conditions (classes 0.5, 1 and 2)		EN 50470-1
Electricity metering equipment (AC) – Part 2: Particular requirements – Electromechanical meters for active energy (classes 1 and 2)		EN 50470-2
Electricity metering equipment (AC) – Part 3: Particular requirements – Static meters for active energy (classes 0.5, 1 and 2)		EN 50470-3
Electricity metering equipment (AC) – Particular requirements – Part 11: Electromechanical meters for active energy (classes 0.5, 1 and 2)		IEC 62053-11
Electricity metering equipment (AC) – Particular requirements – Part 21: Static meters for active energy (classes 1 and 2)		IEC 62053-21
Electricity metering equipment (AC) – Particular requirements – Part 22: Static meters for active energy (classes 0.2 S and 0.5 S)		IEC 62053-22
Electricity metering equipment (AC) – Particular requirements – Part 23: Static meters for reactive energy (classes 2 and 3)		IEC 62053-23
Electricity metering equipment (AC) – Particular requirements – Part 61: Power consumption and voltage requirements		IEC 62053-61
Electricity metering equipment (AC) – General requirements, tests and test conditions – Part 11: Metering equipment		IEC 62052-11
<b>Measuring transformer standards</b>		
Instrument transformers – Part 1: Current transformers		IEC 60044-1
Instrument transformers – Part 2: Inductive voltage transformers		IEC 60044-2
Instrument transformers – Part 3: Combined transformers		IEC 60044-3
Instrument transformers – Part 5: Capacitor voltage transformers		IEC 60044-5
Coupling capacitors and capacitor dividers		IEC 60358
Instrument transformers – Part 7: Electronic voltage transformers		IEC 60044-7
Instrument transformers – Part 8: Electronic current transformers		IEC 60044-8
<b>Other standards</b>		
Electricity metering equipment (AC) – Tariff and load control – Part 11: Particular requirements for electronic ripple control receivers		IEC 62054-11
Electricity metering equipment (AC) – Tariff and load control – Part 21: Particular requirements for time switches		IEC 62054-21

**"Table 6: Standards of accuracy and overall uncertainty for active and reactive meter calibration and testing**

Value of Current %	Power Factor	Maximum Overall Uncertainty %	Percentage Error Limits of Meter, Including Uncertainty
<b>Class of meter 2.0 and 2.0S</b>			
5 to 120	1	±0.4	±1.9
10 to 120	0.5 lagging	±0.6	±1.9
10 to 120	0.8 leading	±0.6	±1.9
<b>Class of meter 1.0 and 1.0S</b>			
5 to 120	1	±0.2	±0.9
10 to 120	0.5 lagging	±0.25	±0.9
10 to 120	0.8 leading	±0.25	±0.9
<b>Class of meter 0.5 and 0.5S</b>			
5 to 120	1	±0.1	±0.5
10 to 120	0.5 lagging	±0.12	±0.6
10 to 120	0.8 leading	±0.12	±0.6
<b>Class of meter 0.2S</b>			
5 to 120	1	±0.06	±0.2
10 to 120	0.5 lagging	±0.09	±0.3
10 to 120	0.8 leading	±0.09	±0.3
<b>Class of meter 3.0 reactive</b>			
20 to 120	Zero	±1.0	±3.0
20 to 120	0.8 leading	±1.5	±3.5
20 to 120	0.8 lagging	±1.5	±3.5
<b>Class of meter 2.0 reactive</b>			
20 to 120	Zero	±0.5	±2.0
20 to 120	0.8 leading	±1.0	±2.5
20 to 120	0.8 lagging	±1.0	±2.5

"Table 7: Voltage, current, and phase displacement parameters for polyphase meters

Polyphase meters	Class of meter			
	0.2 and 0.5	1.0	2.0	3.0
Each of the voltages between line and neutral or between any 2 lines will not differ from the average corresponding voltage by more than:	±0.1%	±1.0%	±1.0%	±1.0%
Each of the currents in the conductors will not differ from the average current by more than:	±1.0%	±2.0%	±2.0%	±2.0%
The phase displacements of each of these currents from the corresponding line-to-neutral voltage, irrespective of the power factor, will not differ from each other by more than:	2°	2°	2°	2°

**"Table 8: Required minimum sample size for category 1 metering installation inspections required under clause 45(2)(c) of Schedule 10.7**

Number of metering installations identified	Minimum sample size
1	1
2-8	2
9-15	3
16-25	5
26-50	8
51-90	13
91-150	20
151-280	32
281-500	50
501-1200	80
1201-3200	125
3201-10,000	200
10,001-35,000	315
35,001-150,000	500
150,001+	800

## "Schedule 10.2

cl 10.17

### "Audits

#### "1 Auditors

- "(1) The **Authority** may approve a person to act as, and to perform the functions of, an **auditor**, for a specified type of **audit**, in accordance with this Schedule.
- "(2) Approval lasts for 24 months from the date of the approval unless it is cancelled under subclause (8).
- "(3) An **auditor** must be approved, under this clause, when it carries out an **audit**, and must not have received notice from the **Authority** of the cancellation of its approval.
- "(4) A person applying to the **Authority** for approval, or for renewal of an existing approval, as an **auditor** must—
  - "(a) use the **prescribed form**; and
  - "(b) respond to the **Authority**, as quickly as practicable, providing any clarification, further data, or information that the **Authority** may request.
- "(5) The **Authority** has not more than 2 calendar months from the date on which it receives a completed application, to assess and, if in the **Authority's** view it is appropriate, to approve the application.
- "(6) The **Authority** may require an applicant to attend an interview or undertake an examination, or both.
- "(7) The **Authority** must **publish**, and keep updated, a list of **auditors** approved for specific types of **audits**.
- "(8) The **Authority** may, at any time with immediate effect by giving written notice to the **auditor**, cancel an **auditor's** approval and if it does this, must remove the **auditor** from the list of approved **auditors**.
- "(9) The cancellation of an **auditor's** approval does not invalidate an **audit** previously completed by the **auditor**. However, an **audit** in progress or completed after the date on which the **auditor's** approval is cancelled is not a valid **audit** for the purposes of this Code.

#### "2 Audits

A **relevant participant** must ensure that an **auditor** undertaking an **audit** under this Part complies with the following requirements:

- "(a) the **audit** report must be in the **prescribed form**;
- "(b) the **auditor** must send a draft of the **audit** report setting out the provisional findings of the **audit** to the **relevant participant** to whom the **audit** relates;
- "(c) the **auditor** must give the **relevant participant** a reasonable opportunity to comment on the draft **audit**

report:

- "(d) the **auditor** must consider any comments it receives from the **relevant participant** about the draft **audit** report:
- "(e) the **auditor** must produce a final **audit** report and provide that report to the **relevant participant** within 10 **business days** of receiving any comments under paragraph (d):
- "(f) the final **audit** report must—
  - "(i) specify conditions (if any) that the **auditor** considers the **relevant participant** must satisfy for the **relevant participant** to comply with this Part, and any action that the **relevant participant** has taken in respect of those conditions; and
  - "(ii) include the **relevant participant's** comments, if any, on the draft **audit** report; and
  - "(iii) include a summary that specifies—
    - "(A) the date of the **audit** report; and
    - "(B) the name of the **audited relevant participant**; and
    - "(C) the scope of the **audit**; and
    - "(D) whether or not the **audit** established that the **relevant participant's** processes and procedures have complied with this Part; and
    - "(E) the name of the **auditor**.

### "3 Authority and participant requested audits

- "(1) The **Authority** may, in its discretion, carry out an **audit**, or appoint an **auditor** to carry out an **audit**, to determine whether a **relevant participant** has complied with this Part.
- "(2) If a **participant** reasonably considers that a **relevant participant** may not have complied with this Part, the **participant** may request in writing to the **Authority** that the **Authority** carry out an **audit** of the **relevant participant** or that the **Authority** appoints an **auditor** to carry out an **audit**.
- "(3) Nothing in this Schedule affects the **Authority's** rights under the **Act** or the **regulations**.

### "4 Scope of audits

An **audit** must address such matters as the **Authority** reasonably requires, having regard to the reasons for which the **Authority** considers that the **audit** is required, and any matters that arise during the **audit**.

**"5 Authority or auditor may request information, carry out inspections and audit participant's facilities, processes, procedures, and other items**

The **Authority** or the **auditor** may, in accordance with the **Act**, to enable it to carry out an **audit**,—

- "(a) require the **relevant participant** being **audited** to provide additional information:
- "(b) carry out inspections of the **relevant participant's** facilities, processes, and any other items used by the **relevant participant** being **audited**:
- "(c) **audit** the **relevant participant's** facilities, processes, procedures, and any other items used by the **relevant participant**, that the **Authority** or the **auditor** considers necessary.

**"6 Participants to provide access**

- "(1) A **relevant participant** must provide, at no charge, to the **Authority** or an **auditor** appointed by the **Authority** for this purpose, full access to all relevant facilities, processes, procedures, and other relevant items, personnel, records, and manuals at any time within normal working hours.
- "(2) The **relevant participant** must provide information at no charge and within 20 **business days** after receiving a request from the **Authority** or the **auditor**, as the case may be.

**"7 Production of audit report**

The **Authority**, or the **relevant participant**, must ensure that an **auditor** produces an **audit** report that—

- "(a) addresses the matters required of it; and
- "(b) identifies, if the **Authority** so requires, the extent to which the **relevant participant** failed to comply with this Part, both at the time of the **audit** and historically; and
- "(c) identifies any areas for improvement.

**"8 Authority to make determination**

- "(1) This clause applies to an **audit** carried out under clause 3.
- "(2) The **Authority** must, after considering the **audit** report and any other matters as appropriate,—
  - "(a) determine any instances of non-compliance; and
  - "(b) if it determines that there has been 1 or more instances of non-compliance, report those instances to the non-compliant **relevant participant**.
- "(3) The **relevant participant** must, by no later than 10 **business days** after it receives a report referred to in subclause (2)(b), submit to the **Authority** details of action that the **relevant**

**participant** has taken to correct each instance of non-compliance.

**"9 Authority to publish summary of audit report**

The **Authority** must **publish** a summary of the **audit** report, including any responses from the **relevant participant**.

**"10 Payment of auditor's costs**

"(1) If an **audit** establishes, to the **Authority's** reasonable satisfaction, that the **relevant participant** alleged to be in breach has complied with this Part, or the non-compliance is minor—

"(a) for an **audit** carried out under clause 3(1), the **Authority** must pay the **auditor's** costs; and

"(b) for an **audit** carried out under clause 3(2), the **participant** who requested the **audit** must pay the **auditor's** costs within 10 **business days** of being advised of them.

"(2) If an **audit** establishes, to the **Authority's** reasonable satisfaction, that the **relevant participant** alleged to be in breach has not complied with this Part, and the non-compliance is not minor,—

"(a) for an **audit** carried out under clause 3(1), the **relevant participant** and the **Authority** must pay the **auditor's** costs, in proportions determined by the **Authority**; and

"(b) for an **audit** carried out under clause 3(2), the **relevant participant** and the **participant** who requested the **audit** must pay the **auditor's** costs, in proportions determined by the **Authority**, within 10 **business days** of being advised of them.

### "Schedule 10.3

cl 10.40

## "ATHs – approval, expiry, cancellation, and renewal of approval

### "1 Applications for approval and renewal of approval

- "(1) A person wishing to be approved as an **ATH**, or an **ATH** wishing to renew its approval, must apply, in the **prescribed form**, to the **Authority** at least 2 months before the intended effective date of the approval or renewal.
- "(2) An applicant must—
  - "(a) include in its application—
    - "(i) the final **audit** report obtained under clause 2, together with its responses to the report; and
    - "(ii) a copy of any quality management certificates it holds; and
    - "(iii) a copy of its most recent quality management audit report; and
    - "(iv) the class of **ATH** for which it is seeking approval; and
    - "(v) the functions under clauses 3(2) and 4(2) for which it is seeking approval; and
    - "(vi) the **calibration** expiry date of each of its **working standards** and **reference standards**; and
  - "(b) provide promptly any other information or documentation the **Authority** may reasonably request.
- "(3) The **Authority** must, within 2 months of receiving an application, advise the applicant of—
  - "(a) the approval of the application, if the applicant satisfies the **Authority** that it has met the requirements set out in clause 10.40; or
  - "(b) the declination of the application, providing reasons, if the **Authority** considers that—
    - "(i) the information supplied by the applicant is incomplete or unsatisfactory; or
    - "(ii) the applicant otherwise fails to demonstrate that it would be, and would remain for the period and functions for which the application is made, compliant with the requirements set out in clause 10.40.
- "(4) If an application is approved, the **Authority** must issue a certificate of approval specifying the—
  - "(a) period of the term of approval, which must not exceed 12 calendar months from the date of approval; and
  - "(b) functions that the applicant has been approved to carry

out; and

"(c) date of the next scheduled **audit**, which must be at least 3 months, and no more than 36 months, from the date of approval; and

"(d) date of approval.

## "2 Audits

"(1) An applicant under clause 1(1) must ensure that an **audit** is carried out in accordance with Schedule 10.2, with all necessary amendments.

"(2) An applicant applying for renewal of approval must ensure that the final **audit** report includes—

"(a) a list of all contractors that the applicant has engaged for any purpose under this Part since the applicant's last **audit**; and

"(b) details of the activities that each contractor has performed for the applicant since the applicant's last **audit**.

"(3) An applicant applying for approval, or renewal of approval, as a **class B ATH** to **calibrate metering components**, must ensure that the final **audit** report includes a list of all relevant requirements of NZ/AS ISO 17025 for **calibration**, and all relevant methodologies, for which the applicant has been **audited**.

## "3 Approval of class A ATHs

"(1) An applicant applying for approval, or renewal of approval, as a **class A ATH** must, as part of its application, confirm that—

"(a) it holds and complies with AS/NZS ISO 17025 accreditation, for at least the requested term of the approval; and

"(b) the scope of its AS/NZS ISO 17025 accreditation covers the activities that the **ATH** undertakes, or proposes to undertake; and

"(c) it complies, and will be likely to continue to comply during the requested term of the approval, with any requirements of its ISO accreditation; and

"(d) if it proposes to carry out field work—

"(i) it is certified to the relevant AS/NZS ISO 9001:2000 and will remain certified during the requested term of the approval; and

"(ii) the scope of its AS/NZS ISO 17025 accreditation has been extended to cover the carrying out of the field work.

"(2) The **Authority** may approve an applicant to be, or renew an

applicant's approval as, a **class A ATH** to carry out 1 or more of the following functions:

- "(a) **calibration** of—
    - "(i) **working standards**:
    - "(ii) **metering components** (other than a **calibration** referred to in paragraph (c)):
    - "(iii) **metering installations**:
  - "(b) issuing **calibration reports**:
  - "(c) **calibration** of **metering components** on site:
  - "(d) installation and modification of **metering installations**:
  - "(e) installation and modification of **metering components**:
  - "(f) **certification** of all categories of **metering installations** under this Code, and issuing of **certification reports**:
  - "(g) testing of **metering installations** under clause 10.44 and production of statements of situation under clause 10.46:
  - "(h) inspection of **metering installations**.
- "(3) A **class A ATH** may only carry out 1 or more of the functions listed in subclause (2), subject to—
- "(a) the current scope of its approval under subclause (2); and
  - "(b) any limitations that may be specified in the **class A ATH's** AS/NZS ISO 17025 accreditation or the relevant AS/NZS ISO 9001:2000 certification.
- "(4) The **Authority** may decline an application for approval as a **class A ATH** even if the applicant—
- "(a) has obtained the necessary ISO accreditation or certification; or
  - "(b) has obtained or satisfied any other pre-requisite to approval.

#### "4 **Approval of class B ATHs**

- "(1) An applicant applying for approval, or renewal of approval, as a **class B ATH** must, as part of its application to the **Authority**, confirm that—
- "(a) it holds and complies with AS/NZS ISO 9001:2000 certification for at least the requested term of the approval; and
  - "(b) the scope of its AS/NZS ISO 9001:2000 certification covers the activities that the **ATH** undertakes, or proposes to undertake; and
  - "(c) it will develop and at all times during the requested term of the approval maintain a conflict of interest

policy in compliance with AS/NZS ISO 17025.

- "(2) The **Authority** may approve an applicant to be, or renew an applicant's approval as, a **class B ATH** to carry out 1 or more of the following functions:
- "(a) **calibration** of class 0.5 **meters**, class 1 **meters** and class 2 **meters**, and class 0.5 current transformers and class 1.0 current transformers, provided that the **calibrations** are carried out under their approved quality certification and in accordance with this Part, and included within the **ATH audit** for approval:
  - "(b) installation and modification of **metering installations**:
  - "(c) installation and modification of **metering components**:
  - "(d) **calibration** of **metering components** on site:
  - "(e) **certification**, using the **selected component certification** method, of—
    - "(i) **category 1 metering installations**:
    - "(ii) **category 2 metering installations**:
    - "(iii) category 3 **metering installations** with a primary voltage of less than 1kV:
  - "(f) **certification**, using the **fully calibrated certification** method, of—
    - "(i) **category 1 metering installations**:
    - "(ii) **category 2 metering installations**:
    - "(iii) category 3 **metering installations** with a primary voltage of less than 1kV:
  - "(g) **certification**, using the **comparative recertification** method, of **category 2 metering installations**:
  - "(h) issuing of **certification reports** in respect of **certifications** of **metering installations** under paragraphs (e) to (g):
  - "(i) inspection of—
    - "(i) **category 1 metering installations**:
    - "(ii) **category 2 metering installations**:
    - "(iii) category 3 **metering installations** with a primary voltage of less than 1kV.
- "(3) A **class B ATH** may only carry out 1 or more of the functions listed in subclause (2), subject to—
- "(a) the current scope of its approval under subclause (2); and
  - "(b) any limitations that may be specified in the relevant AS/NZS 9001:2000 certification.
- "(4) The **Authority** may decline an application for approval as a **class B ATH** even if the applicant—
- "(a) has obtained the necessary ISO certification; or

"(b) has obtained or satisfied any other pre-requisite to approval.

**"5 Expiry and cancellation of approval**

- "(1) If the **Authority** believes that an **ATH** is or was in breach of this Part the **Authority** may cancel the approval of the **ATH** with immediate effect by advising the **ATH**.
- "(2) An **ATH** must not, at any time after the expiry or cancellation of its approval, display or use its certificate of approval.

**"6 Changes that affect approval**

- "(1) If an **ATH** intends to make a material change to any of its facilities, processes, or procedures, or the scope of the **ATH's** ISO accreditation is reduced during the term of its approval, the **ATH** must, at least 5 **business days** before the change is to take place or reduction in scope is effected,—
- "(a) advise the **Authority** of all relevant details of the change or reduction in scope; and
- "(b) in the case of a material change, submit to the **Authority** an **audit** report confirming that, after the change has come into effect, the **ATH** will continue to meet the requirements under clause 10.40(2)(a).
- "(2) An **ATH's** approval is automatically cancelled from the date of the change or reduction in scope under subclause (1), if the **ATH** fails to advise the **Authority** under subclause (1)(a).
- "(3) The **Authority** may, if it is advised by an **ATH** under subclause (1), either—
- "(a) cancel an **ATH's** approval from the date that the **Authority** advises the **ATH** that the **Authority** is not satisfied that the **ATH** will continue to meet the requirements under clause 10.40(2)(a) after the change or reduction in scope has come into effect; or
- "(b) revise the scope of the **ATH's** approval.

**"7 Notification of cancellation, expiry, or revision of scope of ATH approval**

- "(1) The **Authority** must **notify** all **metering equipment providers** if—
- "(a) an **ATH's** approval expires and the **Authority** does not renew it;
- "(b) the **Authority** cancels an **ATH's** approval under clause 5:
- "(c) an **ATH's** approval is cancelled under clause 6(2) or 6(3)(a):

- "(d) the scope of an **ATH's** approval has been revised under clause 6(3)(b).
- "(2) The **Authority** must include with the **notification** under subclause (1) the date on which the approval expired or was cancelled, or the scope of the approval was revised.
- "(3) A **metering equipment provider notified** under subclause (1) must treat all **metering installations certified** by the **ATH** during the period during which it was not validly approved, or was performing activities outside its scope of approval, as being defective from the date **notified** under subclause (2) and follow the procedures set out in clauses 10.43 to 10.48.
- "(4) Despite subclause (3), the **Authority** may **notify a metering equipment provider** that the **metering equipment provider** must treat a **metering installation certified** by the **ATH** as being defective and follow the procedures set out in clauses 10.43 to 10.48.

**"8 Register of ATHs**

- "(1) The **Authority** must, keep, maintain, and **publish** a register of approved **ATHs**.
- "(2) The **Authority** must remove an **ATH's** details from the register if the **ATH's** approval—
  - "(a) expires and the **Authority** does not renew it; or
  - "(b) is cancelled.

"ATH ongoing functions and obligations

"1 Accommodation and environment

An **ATH** must, for each **approved test house** that it operates,—

- "(a) maintain a list of personnel who are authorised to access and use its laboratory and storage facilities; and
- "(b) restrict access to its laboratory and storage facilities to—
  - "(i) the personnel specified under paragraph (a); and
  - "(ii) the **Authority**; and
  - "(iii) an **auditor** conducting an **audit**; and
  - "(iv) any other person who is, at all times, directly supervised by a member of personnel specified under paragraph (a); and
- "(c) restrict access to its **metering records** to—
  - "(i) the relevant **metering equipment provider**;
  - "(ii) the **Authority**;
  - "(iii) an **auditor** conducting an **audit**;
  - "(iv) the relevant **metering equipment owner**; and
- "(d) ensure that the environment in which its activities are undertaken does not, or could not reasonably be expected to, invalidate test results or adversely affect the required accuracy of measurement; and
- "(e) monitor and record the environmental conditions within its **approved test house's** laboratory and storage facilities; and
- "(f) comply with the specific requirements of the applicable standard listed in Table 5 of Schedule 10.1 for the **calibrations** or tests being carried out.

"2 Equipment

"(1) An **ATH** must, at all times, ensure that—

- "(a) it has access to all items of equipment required for the performance of the **calibrations** and tests it is approved to undertake under this Part; and
- "(b) each item of equipment it uses is maintained in accordance with the manufacturer's recommendations and this Code (but if there is any inconsistency or contradiction between the manufacturer's recommendations and this Code, this Code takes precedence); and
- "(c) it maintains records about each item of its equipment, including—
  - "(i) details of—

- "(A) maintenance history; and
  - "(B) the **ATH's** maintenance programme; and
  - "(ii) **calibration reports**, including before and after **adjustment** results; and
  - "(iii) in-service checks; and
  - "(iv) a history of any damage, malfunction, modification, or repair.
- "(2) A **class B ATH** must have and maintain procedures for the purchase of test equipment and associated consumables.

### "3 Reference standards and working standards

- "(1) An **ATH** must not use a **reference standard** or **working standard** for any activity regulated under this Part unless—
- "(a) in the case of—
    - "(i) a **reference standard**, the **reference standard** has been **calibrated** by an **approved calibration laboratory**; or
    - "(ii) a **working standard**, the **working standard** has been **calibrated** by an **approved calibration laboratory** or a **class A ATH**; and
  - "(b) the current **calibration report** for the **reference standard** or **working standard** confirms that it—
    - "(i) performs within the manufacturer's accuracy specifications; and
    - "(ii) has been **calibrated** under subclause (2) at an interval not exceeding the **calibration** intervals set out in the following table.

"Table 1: Calibration intervals

Standard		Initial calibration interval (months beginning from the date of the first calibration)	Maximum calibration interval (months beginning from the date of the current calibration report)
Reference standard or working standard (other	Measuring transformers	36	60
	Comparator bridges	36	60
	Meters	12	24

than a working standard used for on-site calibration)	Power factor, voltage and current meters	12	24
Working standard used for on-site calibration	All	2	12

- "(2) An **ATH** must ensure that a **reference standard** or **working standard** is **calibrated**—
- "(a) for the first time, within the applicable initial **calibration** interval set out in Table 1 of subclause (1); and
- "(b) for each subsequent **calibration**, within the applicable maximum **calibration** interval set out in Table 1 of subclause (1).
- "(3) A **class A ATH** must ensure that—
- "(a) in all cases of **calibration** of its **reference standards**, the **uncertainties** given in the **reference standard calibration report** are sufficiently small so that the overall **uncertainty** in the measurements used to test a **metering installation** does not exceed one third of the maximum permitted error set out in Table 1 of Schedule 10.1 for the category of **metering installation** that the **reference standard** will be used to **calibrate**; and
- "(b) it does not use a **working standard** on a system operating at a voltage of 33kV or above between active conductors, unless the **working standard** has been **calibrated** by an **approved calibration laboratory**; and
- "(c) it does not use a **reference standard**, other than a standard **measuring transformer**, unless it is maintained at the appropriate reference conditions set out in the **reference standard's** current **calibration report**.
- "(4) If appropriate reference conditions under subclause (3)(c) cannot be achieved, the **class A ATH** must calculate and apply adjustments in accordance with the processes and procedures under subclause (5) so that the **reference standard** achieves the errors and uncertainties set out in the **reference standard's** current **calibration report**.
- "(5) An **ATH** must develop and maintain processes and

procedures for calculating and applying adjustments to a **reference standard's** errors and uncertainties to compensate for deviations from the reference conditions contained in the **reference standard's** current **calibration report**.

- "(6) An **ATH** must retain a copy of the current **calibration report** for each of its **reference standards** and **working standards**.

**"4 Metering component testing systems**

An **ATH** may use a complete **calibrated metering component** testing system (also known as a test bench) as an alternative to a separately **calibrated working standard** only if—

"(a) the **ATH** **calibrates** the complete **calibrated metering component** testing system under clause 3 as if it was a **working standard**; and

"(b) before completing the **calibration report**, the **ATH** carries out a testing system accuracy test, using approved **reference standards**.

**"5 Calibration errors**

- "(1) For the purposes of this clause, a **reference standard** or **working standard** has a **calibration** error if it is performing outside of the manufacturer's accuracy specifications.

- "(2) An **ATH** must not use a **reference standard** or **working standard** for **calibration**, if it believes, or should reasonably be expected in the circumstances to believe, that the **reference standard** or **working standard** has a **calibration** error.

- "(3) An **ATH** must, as soon as reasonably practicable, but no more than 3 months after becoming aware of a **calibration** error—

"(a) investigate the error; and

"(b) ensure the cause of the error is recorded in a **calibration report**; and

"(c) if the investigation indicates that the **reference standard** or **working standard** performs outside the manufacturer's accuracy specifications, advise each **ATH** that has used any equipment that was **calibrated** using the **reference standard** or **working standard** since the previous **calibration**, of the error.

- "(4) An **ATH** must, if a **reference standard** or a **working standard** has a **calibration** error,—

"(a) treat each **metering installation** that it has **calibrated** using the **reference standard** or **working standard** as outside the applicable accuracy tolerances set out in

Table 1 of Schedule 10.1; and

"(b) comply with clause 10.43.

- "(5) For the purposes of this clause, a **working standard** includes a complete **calibrated metering component** testing system referred to in clause 4.

**"6 Measurement traceability**

An **ATH** must document, maintain, and comply with, a system that ensures, whenever it undertakes a **calibration** test or measurement,—

"(a) it keeps sufficient records to enable the **ATH** to replicate the test or measurement in every respect should the need arise; and

"(b) the results of the measurements are **traceable**.

*"Requirements for calibration of metering components*

**"7 Calibration methods**

- "(1) An **ATH** must, before it **certifies** a **metering installation** or **metering component**, ensure that 1 of the following persons has **calibrated** the **metering components** under this Part:

"(a) an **approved calibration laboratory**; or

"(b) an **ATH** with the appropriate approval under Schedule 10.3.

- "(2) An **ATH** must, before it **certifies** a **metering component**, ensure that the **metering component** is **calibrated** or **adjusted** under—

"(a) the appropriate physical and electrical reference conditions detailed in the standard listed in Table 5 of Schedule 10.1; or

"(b) conditions which permit the **ATH** to calculate the results and their **uncertainty** at the reference conditions detailed in the standard listed in Table 5 of Schedule 10.1.

- "(3) A **class B ATH** must, when **calibrating** a **metering component**,—

"(a) follow all relevant requirements of NZ/AS ISO 17025 for **calibration**; and

"(b) only use the relevant methodologies that have been **audited** in the **class B ATH's** most recent **audit** for approval.

- "(4) If an **ATH** **calibrates** a **metering component**, it must ensure that the individual test points that it uses are—

"(a) no less than the minimum set out in the standards listed in Table 5 of Schedule 10.1; or

"(b) sufficient and appropriate in the circumstances to

ensure that the **calibration** allows calculation of the **metering installation** error as set out in clause 22 of Schedule 10.7.

- "(5) An **ATH** must, when **calibrating a metering component**,—
- "(a) if necessary, **adjust** and document the **error compensation**; and
  - "(b) ensure that any **adjustment** carried out under paragraph (a) is appropriate to achieve an error as close as practicable to zero; and
  - "(c) ensure that the **uncertainty** of measurement during the **calibration** of the **metering component** does not exceed one third of the maximum permitted error in the relevant standard listed in Table 5 of Schedule 10.1; and
  - "(d) if the **metering component** is intended for a **metering installation** which is to be **certified** using the **selected component certification** method, ensure that the **ATH** records the errors of a current transformer from 5% to 120% of rated primary current.
- "(6) An **ATH** must ensure that—
- "(a) it has documented instructions on the use and operation of all relevant equipment it uses for **calibration**; and
  - "(b) it has documented **calibration** procedures that it must make available to, and ensure are followed by, its staff carrying out the **calibration**; and
  - "(c) its **calibration** procedures are aligned with the standards listed in Table 5 of Schedule 10.1.
- "(7) An **ATH**—
- "(a) may select a test point other than those specified in the relevant standard listed in Table 5 of Schedule 10.1, or at a lower burden than specified in the standard; but
  - "(b) must, if it does this, document its reasons for the selection of these test points in the **calibration report**.

**"8 Compensation factors**

An **ATH** must, if it is approved to **certify metering installations**, have a documented process for determining **compensation factors**.

**"9 Seals**

An **ATH** must have a documented system for applying seals to a **metering installation**, that—

- "(a) meets the requirements of clause 47 of Schedule 10.7; and
- "(b) is appropriate in the circumstances to ensure—

- "(i) the **ATH's** ability to monitor the **metering installation's** continued integrity; and
- "(ii) the relevant **metering equipment provider** is alerted as soon as practicable to any unauthorised access to the **metering installation**.

**"10 Services access interface**

An **ATH** must, when preparing a **metering installation certification report**, determine, and record in the **certification report**, the **services access interface**.

**"11 Certification and calibration reports**

- "(1) An **ATH** must, for each **metering installation** that it **certifies**, produce a **certification report** in accordance with Schedule 10.7.
- "(2) An **ATH** must, for each **metering component**—
  - "(a) that it **calibrates**, produce a **calibration report** in accordance with Schedule 10.8; and
  - "(b) that it **certifies**, produce a **certification report** in accordance with Schedule 10.8.

**"12 ATH record keeping and documentation**

- "(1) An **ATH** must ensure it documents and maintains a record system for all records, certificates, and reports for any activity regulated under this Part.
- "(2) An **ATH** must ensure that—
  - "(a) all its records, certificates, and reports are stored securely; and
  - "(b) each of its test records for a **metering installation** is identified by a unique identifier; and
  - "(c) all of its records, certificates, and reports are sufficiently detailed to enable verification of all aspects of all tests it carries out, including the following:
    - "(i) test conditions; and
    - "(ii) specific test equipment used; and
    - "(iii) personnel carrying out the tests.

**"13 Retention of ATH records**

An **ATH** must, for each activity regulated under this Part in relation to a **metering installation** and **metering component** that it **certifies** and a **metering component** that it **calibrates**, retain, for at least 48 months after the date of **decommissioning the metering installation** or **removal of a metering component**,—

- "(a) all of its records, certificates, and reports; and
- "(b) all **certification reports** produced by the **ATH**.

**"14 Making available of ATH records**

An **ATH** must, within 5 **business days** of creating a record, certificate, or report for a **metering installation** that it **certifies**,—

- "(a) send, in electronic form or such other form as may be agreed between the parties, a copy of the record, certificate, or report to the **metering equipment provider** responsible for the **metering installation**; and
- "(b) ensure that the **metering equipment provider** receives the record, certificate, or report.

**"15 ATH organisation and management**

"(1) An **ATH** must ensure that—

- "(a) it has managerial staff who, unless otherwise permitted in the relevant approval, all have the authority and resources needed to discharge their duties; and
- "(b) the responsibilities, authority, and functional relationships of all its personnel are fully and accurately specified and recorded in the **ATH's** records.

"(2) An **ATH** must appoint—

- "(a) a technical manager (however named) with overall responsibility for technical operations, who must have appropriate engineering qualifications and experience in the operation of an **approved test house**; and
- "(b) a quality manager (however named), with responsibility for the quality management certification and the implementation of the quality management system.

"(3) An **ATH** must ensure that all staff who perform or supervise work or activities regulated under this Part are technically competent, experienced, qualified, and trained for the functions they perform.

**"16 Quality management system**

An **ATH** must establish, document, implement, maintain, and comply with a quality management system which records its processes and procedures to ensure compliance with this Part.

**"17 Field work**

A **class A ATH** must, if it arranges for another person to carry out field work, ensure that person is certified to the relevant AS/NZS ISO 9001:2000 at all times while the person carries out the work.

**"Metering equipment provider audits**

- "1 Metering equipment provider must ensure audits are carried out**
- "(1) A metering equipment provider must—**
- "(a) ensure that an initial audit by an auditor under subclause (2) is completed—**
    - "(i) in the case of a participant who becomes a metering equipment provider on or after 6 June 2013, within 3 calendar months after the date on which the metering equipment provider first becomes a metering equipment provider; or**
    - "(ii) despite anything else in this Code, in the case of a participant who becomes the metering equipment provider under clause 10.19(1), by no later than 6 December 2013; and**
  - "(b) ensure that an audit of its compliance with this Part and Part 11 under subclause (2) is carried out within a period specified by the Authority, which period must be at least 3 months, but no more than 36 months, after the date of the audit report for the metering equipment provider's previous audit; and**
  - "(c) ensure that an audit under paragraph (a) or (b) is carried out in accordance with Schedule 10.2, with all necessary amendments; and**
  - "(d) ensure that the auditor includes in the audit report a recommendation on the date by which the metering equipment provider must have completed its next audit and audit report; and**
  - "(e) provide the finalised audit report to the Authority within 1 month of the audit being completed, or within such other timeframe determined and published by the Authority; and**
  - "(f) pay the costs of an audit required under this clause in accordance with the terms of the applicable arrangement with the auditor.**
- "(2) A metering equipment provider must ensure an auditor carrying out an audit under subclause (1) audits the following processes and procedures:**
- "(a) the appropriate management and maintenance of each metering installation for which the metering equipment provider is responsible, including—**
    - "(i) maintenance of metering records; and**
    - "(ii) maintenance of metering components; and**

- "(iii) **certification of metering components and metering installations**; and
- "(iv) **metering installations** that have been **certified** at a lower category under clause 6 of Schedule 10.7; and
- "(v) inspections in accordance with this Code; and
- "(vi) investigations under clause 10.43(4); and
- "(b) the **metering equipment provider's** provision of **metering records** to—
  - "(i) the **registry**; and
  - "(ii) the **reconciliation manager**; and
- "(c) the **metering equipment provider's** provision of access under this Part to—
  - "(i) **raw meter data**;
  - "(ii) **metering records**;
  - "(iii) the **metering installation**; and
- "(d) the security of—
  - "(i) each **metering installation** for which the **metering equipment provider** is responsible; and
  - "(ii) if relevant, the **metering equipment provider's back office**; and
  - "(iii) if relevant, the **communication** between the **metering equipment provider's back office** and the **metering installation**.

**"2 Metering equipment provider audit reports**

Despite anything in Schedule 10.2, a **metering equipment provider** must also ensure that the **auditor** includes in the final **audit** report under clause 1—

- "(a) any conditions that the **auditor** considers the **metering equipment provider** would need to satisfy for the **metering equipment provider** to comply with this Code, and any action the **metering equipment provider** has taken in respect of satisfying those conditions; and
- "(b) a list of all contractors engaged by the **metering equipment provider** to perform the **metering equipment provider's** activities under this Part, and details of the obligations that each of those contractors perform.

**"3 Changes to metering equipment provider's facilities, systems, and processes**

If a **metering equipment provider** intends to materially change any of its facilities, processes, or procedures, the

**metering equipment provider** must, at least 10 **business days** before the change is to take effect,—

- "(a) advise the **Authority** of all relevant details of the change; and
- "(b) ensure that an **audit** of its facilities, processes, and procedures has been undertaken; and
- "(c) submit to the **Authority** an **audit** report confirming that the **metering equipment provider** will continue to meet its requirements under this Code after the change has been made.

## "Schedule 10.6

cl 10.20

### "Metering equipment provider ongoing obligations and functions

- "1 **Metering equipment provider must provide access to raw meter data**
- "(1) A **metering equipment provider** must, within 10 **business days** of receiving a request from a **trader** with whom it has an arrangement to access **raw meter data** from a **metering installation** for which the **metering equipment provider** is responsible, give remote or on site access at the **services access interface** to the **trader** to collect, obtain, and use **raw meter data** from the **metering installation**.
- "(2) A **metering equipment provider** may, if it receives a request from a person with whom it has an arrangement, other than a **trader** under subclause (1), to access **raw meter data** from a **metering installation** for which the **metering equipment provider** is responsible, give remote or onsite access at the **services access interface** to the person to collect, obtain, and use **raw meter data** from the **metering installation**.
- "(3) A **metering equipment provider** must only give access to a **trader** under subclause (1), or a person under subclause (2), if the **trader** or person has entered into a contract to collect, obtain, and use the **raw meter data**, with the **consumer** whose **electricity** is measured or estimated, or whose load is controlled at the **metering installation**.
- "(4) A **metering equipment provider** must, within 10 **business days** of receiving a request from 1 of the following parties, give the party access to **raw meter data** from a **metering installation** for which it is responsible:
- "(a) a relevant **reconciliation participant** with whom it has an arrangement, other than a **trader**:
  - "(b) the **Authority**:
  - "(c) an **ATH**:
  - "(d) an **auditor**.
- "(5) A party listed in subclause (4) may only request access to **raw meter data** for the purposes of exercising the party's rights and performing the party's obligations under this Code or any relevant **regulations** in connection with 1 or more of the following:
- "(a) the party's **audit** functions:
  - "(b) the party's administration functions:
  - "(c) the party's testing functions:
  - "(d) the provision of **submission information** to the

**reconciliation manager.**

- "(6) The **metering equipment provider** must provide a **trader** under subclause (1) or a party under subclause (4) with—
  - "(a) the **raw meter data**; or
  - "(b) any necessary facilities, codes, keys, or other means to enable the **trader** or party to access the **raw meter data** by the most practicable means.
- "(7) The **metering equipment provider** must, when complying with subclause (6), or when providing access to a person under subclause (2), use appropriate procedures to ensure that—
  - "(a) the **raw meter data** is received only by—
    - "(i) the **trader**, person, or party; or
    - "(ii) a contractor to a **trader**, person, or party; and
  - "(b) the security of the **raw meter data** and the **metering installation** is maintained; and
  - "(c) access to **raw meter data** under subclauses (1) to (6) is limited to only the specific **raw meter data**—
    - "(i) authorised by a contract described in subclause (3), in the case of a **trader** under subclause (1) or a person under subclause (2); or
    - "(ii) required for the purposes of exercising the party's rights and performing the party's obligations under this Code, any relevant **regulations**, or the **Act** in connection with the party's **audit**, administration, and testing functions, in the case of a party referred to in subclause (4).
- "(8) Nothing in this Part affects proprietary interests in **metering data**.

**"2 Restrictions on use of raw meter data**

- "(1) A **metering equipment provider** must not give a **trader** under clause 1(1), a person under clause 1(2), or a party under clause 1(3), access to **raw meter data** from a **metering installation** for which it is responsible, if to do so would, or would reasonably be expected to,—
  - "(a) breach any regulatory or legal requirement; or
  - "(b) prejudice the maintenance and monitoring of this Code, including the prevention, investigation, and detection of Code breaches and the right to a fair hearing before the **Authority** or the **Rulings Panel**; or
  - "(c) result in the **metering equipment provider** breaching an obligation of confidentiality; or
  - "(d) interfere with the privacy of a natural person; or
  - "(e) create an improper gain or improper advantage for any

- "(f) commercially disadvantage the **metering equipment provider** or any other **participant** or person, in a material manner; or
- "(g) prejudice the future supply of **raw meter data** that is required by a **market operation service provider** to perform an obligation under this Code.
- "(2) A **metering equipment provider** must not limit or restrict a person's or party's right to access information from a **metering installation** for which the **metering equipment provider** is responsible, if the right of access is provided for in this Part.
- "3 **Metering equipment provider must provide access to metering installation**
- "(1) A **metering equipment provider** must, within 10 **business days** of receiving a request from 1 of the following parties, arrange physical access to each **metering component** in a **metering installation** for which it is responsible:
- "(a) a relevant **reconciliation participant** with whom it has an arrangement, other than a **trader**;
- "(b) the **Authority**;
- "(c) an **ATH**;
- "(d) an **auditor**;
- "(e) a **gaining metering equipment provider**.
- "(2) A party listed in subclause (1) may only request physical access to a **metering component** in the **metering installation** for the purposes of exercising the party's rights and performing the party's obligations under this Code or any relevant **regulations** in connection with 1 or more of the following:
- "(a) the party's **audit** functions;
- "(b) the party's administration functions;
- "(c) the party's testing functions;
- "(d) the provision of **metering components**.
- "(3) The **metering equipment provider** must arrange for a party under subclause (1) to be provided with any necessary facilities, codes, keys, or other means to enable the party to obtain physical access to all **metering components** in the **metering installation** by the most practicable means.
- "(4) In complying with subclause (3), the **metering equipment provider** must use appropriate procedures to ensure that—
- "(a) the security of the **metering installation** is maintained; and
- "(b) physical access to the **metering installation** under subclause (1) is limited to only the physical access

required for the purposes of exercising the party's rights and performing the party's obligations under this Code or any relevant **regulations** in connection with the party's **audit**, administration, and testing functions.

- "(5) If a party referred to in subclause (1) requires urgent physical access to a **metering installation**, it must advise the relevant **metering equipment provider**, giving all relevant particulars of the physical access required and the reason for the urgency, and the **metering equipment provider** must use its best endeavours to arrange physical access in accordance with the requested urgency.

**"4 Metering equipment provider record keeping and documentation**

- "(1) A **metering equipment provider** must—

- "(a) for each **metering installation** for which it is responsible, keep accurate and complete records as specified in Table 1 of Schedule 11.4; and
- "(b) for each **metering installation** for which it is responsible other than an **interim certified metering installation**, keep accurate and complete records of—
  - "(i) the **certification** expiry date of each **metering component** in the **metering installation**; and
  - "(ii) all equipment used in relation to the **metering installation**, including serial numbers and details of the equipment's manufacturer; and
  - "(iii) the manufacturer's, or if different the most recent, test certificate for each **metering component** in the **metering installation**; and
  - "(iv) the **metering installation** category for the **metering installation**; and
  - "(v) all **certification reports** and **calibration reports** showing dates tested, tests carried out, and test results for all **metering components** in the **metering installation**; and
  - "(vi) the contractor who installed each **metering component** in the **metering installation**; and
  - "(vii) the **certification sticker**, or equivalent details, for each **metering component** that is **certified** under Schedule 10.8 in the **metering installation**; and
  - "(viii) seal identification information under clause 47 of Schedule 10.7 relating to the **metering installation**; and
  - "(ix) any applicable **compensation factors**; and

- "(x) the owner of each **metering component** within the **metering installation**; and
  - "(xi) any applications installed within each **metering component** within the **metering installation**; and
  - "(xii) the signed inspection report under clause 44 of Schedule 10.7, confirming that the **metering installation** continues to comply with the requirements of this Part.
- "(2) A **metering equipment provider** 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**.
- "(3) A **metering equipment provider** must keep **metering records** relating to—
- "(a) a **metering component** in a **metering installation** for which it is responsible, for at least 48 months after the **metering component** is removed from the **metering installation**; and
  - "(b) a **metering installation** for which it is responsible, for at least 48 months after the date on which the **metering installation** is **decommissioned**.
- "5 Metering equipment provider to provide access to metering records**
- "(1) A **gaining metering equipment provider** may request that a **losing metering equipment provider** provide it with access to **metering records** required for the **gaining metering equipment provider** to exercise its rights and perform its obligations under this Code or any relevant **regulations** in connection with its respective **auditing**, administration, and testing functions.
- "(2) The **losing metering equipment provider** must, within 10 **business days** of receiving a request under subclause (1), provide the **gaining metering equipment provider** with—
- "(a) the **metering records**; or
  - "(b) any necessary facilities, codes, keys, or other means to enable the **gaining metering equipment provider** to obtain access to the **metering records** by the most practicable means.
- "(3) In complying with subclause (2), the **losing metering equipment provider** must use appropriate procedures to ensure that—
- "(a) the **metering records** are received only by the **gaining metering equipment provider** or its contractor; and

- "(b) the security of the **metering records** is maintained; and
- "(c) it only provides access to the specific **metering records** required for the purposes of the **gaining metering equipment provider** exercising its rights and performing its obligations under this Code or any relevant **regulations** in connection with its **auditing**, administration, and testing functions.

**"6 Provision of metering records when ATH recertifying metering installation**

"(1) This clause applies if—

- "(a) a **metering equipment provider** contracts with an **ATH** to **recertify a metering installation** for which the **metering equipment provider** is responsible; and
- "(b) the **ATH** did not perform the previous **certification** of the **metering installation**.

"(2) If this clause applies, the **metering equipment provider** must, no later than 10 **business days** after the effective date of the contract, provide the **ATH** with a copy of all relevant **metering records**.

**"7 Metering equipment provider must use participant identifier**

"(1) A **metering equipment provider** must—

- "(a) ensure that it has a unique **participant identifier** for its activities as **metering equipment provider** under this Code; and
- "(b) use its **participant identifier**, if required under this Code, to correctly identify its information.

"(2) A **metering equipment provider** must apply to the **Authority** in the **prescribed form** for a **participant identifier** at least 5 **business days** before the **metering equipment provider** requires the **participant identifier**.

"(3) The **Authority** may change a **metering equipment provider's participant identifier**.

"(4) If the **Authority** changes a **metering equipment provider's participant identifier**—

- "(a) it must advise the **metering equipment provider** of the date on which the change takes effect at least 3 months before the date; and
- "(b) the new **participant identifier** becomes effective from the date advised under paragraph (a).

**"8 Electronic interrogation of metering installation**

"(1) This clause applies when **raw meter data** can only be

obtained from a **metering equipment provider's back office**.

- "(2) A **metering equipment provider** must—
  - "(a) ensure that the **interrogation** cycle for each **metering installation** that it electronically **interrogates** does not exceed the maximum **interrogation** cycle in the **registry**; and
  - "(b) **interrogate** a **metering installation** for which it is responsible at least once in each maximum **interrogation** cycle in the **registry**; and
  - "(c) when electronically **interrogating** a **metering installation**, ensure that the **interrogation** and processing system electronically monitors and corrects its internal clocks against a time source with a verifiable standard, at a frequency sufficient, and no longer than 1 week, to ensure the internal clock is accurate, when carrying out an **interrogation**, to within  $\pm 5$  seconds of—
    - "(i) **New Zealand standard time**; or
    - "(ii) **New Zealand daylight time**.
- "(3) A **metering equipment provider** must, for each **metering installation** for which it is responsible, 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**.
- "(4) A **metering equipment provider** must ensure that a **data storage device** in a **metering installation** for which it is responsible for **interrogating** does not exceed the maximum time error set out in Table 1 of subclause (5).
- "(5) A **metering equipment provider** must, when **interrogating** a **metering installation**,—
  - "(a) compare the time on the internal clock of the **data storage device** with the time on the **interrogation** and processing system clock; and
  - "(b) calculate the time error for the **data storage device**; and
  - "(c) if the time error calculated under paragraph (b) is equal to or less than the applicable time error set out in Table 1, correct the clock of the **data storage device**; and
  - "(d) if the time error calculated under paragraph (b) is greater than the applicable time error set out in Table 1,—
    - "(i) correct the clock of the **data storage device**; and
    - "(ii) compare the time of the clock with the time of

- the **interrogation** and processing system clock;  
and
- "(iii) advise the affected **reconciliation participant** for the **point of connection**, within 5 **business days** of correcting the clock, of any affected **raw meter data**; and
- "(iv) comply with the requirements of clause 10.43;  
and
- "(e) download the **event log**; and
- "(f) check the **event log** for evidence of malfunctioning or tampering and if this is detected, carry out the appropriate requirements of this Part.

**"Table 1: Maximum permitted time errors**

<b>Metering installation category</b>	<b>Half-hour metering installations (seconds)</b>	<b>Non half-hour metering installations (seconds)</b>
1	±30	±60
2	±10	±60
3	±10	NA
4	±10	NA
5	±5	NA

- "(6) The **metering equipment provider** must, when **interrogating a metering installation**, ensure that all **raw meter data** downloaded as part of the **interrogation**, and used for submitting information for the purposes of Part 15, is archived—
- "(a) for no less than 48 months after the **interrogation** date; and
- "(b) in a form that cannot be modified without an **audit** trail being created; and
- "(c) in a form that is secure and prevents access by any unauthorised person; and
- "(d) in a form that is accessible to authorised personnel.
- "(7) A **metering equipment provider** must, when **interrogating a metering installation**,—
- "(a) ensure that for all **metering information**, an **interrogation** log is generated by the **interrogation software** to record details of each **interrogation**; and

- "(b) review the **event log** either manually or by an automated **software** function which flags exceptions and—
  - "(i) take appropriate action where problems are apparent; and
  - "(ii) pass relevant **event log** entries to the **reconciliation participant** for the **metering installation**; and
- "(c) ensure that the **interrogation** log forms part of the **interrogation audit** trail and contains the following as a minimum:
  - "(i) the date of **interrogation**; and
  - "(ii) the time of commencement of **interrogation**; and
  - "(iii) the operator of the **interrogation** system identification (where available); and
  - "(iv) the unique identifier of the **data storage device** being **interrogated**; and
  - "(v) any clock errors outside the range specified in Table 1 of subclause (5); and
  - "(vi) the method of **interrogation**; and
  - "(vii) the identifier of the reading device used for **interrogation** (if applicable).
- "(8) Subclause (9) applies when—
  - "(a) a **metering equipment provider** interrogates a **half-hour metering installation** which is a **category 1 metering installation** or a **category 2 metering installation**; and
  - "(b) the **certifying ATH** confirmed, as a part of the **metering installation's** most recent **certification**, that the **metering equipment provider's back office** processes include, for each **interrogation** cycle, a comparison of the difference in the increment of the **meter** registers to the **half-hour metering raw meter data**.
- "(9) When this subclause applies, the **metering equipment provider** must ensure that each electronic **interrogation** of the **metering installation** that retrieves **half hour metering information** compares that information against the increment of the **metering installation's** accumulating **meter** registers.
- "9 **Contracting with ATH**

A **metering equipment provider** must, when contracting with an **ATH** in relation to the required activities for the **certification** of a **metering installation** for which it is

responsible, ensure that an **ATH** contracted to perform work under this Part has the appropriate scope of approval for such work.