Reference number(s)	**018 – Certification Validity Periods**
Relevant clause(s)	Table 1 of Schedule 10.1 Table 2 of Schedule 10.1 Clause 16 of Schedule 10.7 – Recertification of group of category 1 metering installations by statistical sampling expiry date Clause 27 of Schedule 10.7 – Meter certification expiry date Clause 45 of Schedule 10.7 – Category 1 metering installation inspection requirements Clause 1 of Schedule 10.8 – Meter certification requirements
Problem definition	The Authority has identified several problems with the Code requirements relating to the validity period of a metering component or installation, as follows: <u>Problem 1</u> Clause 27 of Schedule 10.7 specifies how a meter's certification expiry date must be calculated. This clause also specifies that, if an electromechanical meter has not been installed in a metering installation within 24 months of the date of the meter's certification report, the meter must be recertified before it is installed. This effectively creates a "shelf life" for electromechanical meters. There is no basis for differentiating electromechanical meters from any other type of meter in this regard. The chief metrologist at the Measurement Standards Laboratory of New Zealand has advised the Authority that other meter types (eg, electronic) may also fail over time, and so the 24 month restriction could apply equally to them. <u>Problem 2</u> Clause 1(d)(ii) of Schedule 10.8 specifies that a meter certification report must include the certification validity period for the meter for each category of metering installation the meter may be used in. Certifying a meter for less than the maximum validity period shown in Table 1 of Schedule 10.1 (for a category of metering installation the meter may be used in) could indicate the meter is not fit for certification. However, it is only an indication, since a certification report contains no information on why there is a shorter validity period. Under clause 1(2) of Schedule 10.8, an ATH has the discretion to set a certification validity period for a meter that is less than the maximum validity period. However, should an ATH do so, it should have to note in the certification report the reason for the shorter validity period, to avoid participants believing the meter is not fit for purpose. <u>Problem 3</u> In Table 1 of Schedule 10.1, the requirements in the column with the heading "Maximum sample inspection and recertification period", relates solely to: a) category 1 metering installations that are certified under the statistical sampling provisions of clause 16 of Schedule 10.7, and

	b) category 1 metering installations that are inspected under the statistical sampling provisions of clause 45 of Schedule 10.7. Although not specified in Table 1 of Schedule 10.1, the statistical sampling recertification process contains certification validity periods that are shorter than the maximum validity period of 84 months. The length of these shorter certification validity periods depends on the test results of the sample meters used. The standard AS/NZS 1284[1] specifies the range of test results and associated certification validity periods. The Code would be more readable if this information was part of clauses 16 and 45 of Schedule 10.7 respectively. Someone reading either clause would see at a glance the timeframe to which the obligation relates, rather than needing to refer to Table 1 of Schedule 10.1. <u>Problem 4</u> Table 2 of Schedule 10.1 specifies the maximum certification validity period for the classes of meter[2] permitted to be used in each category of metering installation. We believe the readability of the Code would be improved by including in Table 1 of Schedule 10.1 the requirements set out in Table 2 of Schedule 10.1. For example, clause 27(2) refers to Table 1 of Schedule 10.1 for the maximum certification period for the relevant category and Table 2 of Schedule 10.1 for the maximum certification period for the relevant meter class. This is unnecessary when the requirements in Table 2 could be easily accommodated by inserting an additional column in Table 1.
Proposal	The Authority proposes to address each of the problems described above as follows. <u>Problem 1</u> Remove the reference to "electromechanical" from clause 27(4) of Schedule 10.7, so that the clause applies equally to all meter types. <u>Problem 2</u> If an ATH determines that a shorter certification validity period for a meter than the maximum validity period shown in Table 1 of Schedule 10.1, the ATH must note in the meter certification report: a) the shorter validity period for the meter b) the reason for the shorter validity period. <u>Problem 3</u> In Table 1 of Schedule 10.1 remove the column headed "Maximum sample inspection and recertification period". In clause 16(2) of Schedule 10.7, add a new paragraph (ab) stating that the ATH must use the appropriate maximum validity period from Table 5 of the Australian/New Zealand standard "AS/NZS 1284". In clause 45 (1)(b) of Schedule 10.7, replace the reference to Table 1 of

1 "Electricity metering – Part 13: In-service compliance testing".

2 Being class 0.2, class 0.5, class 1.0, and class 2.0.

	Schedule 10.1 with the threshold of 84 months before the statistical sample inspection regime is required. Moving the maximum sample inspection and recertification period requirements from Table 1 of Schedule 10.1 to clause 16 of Schedule 10.7 is appropriate because these requirements only apply to category 1 metering installations in the unique circumstance when the metering installation is being recertified using statistical sampling. In this instance, the entire Table 5 from AS/NZS 1284 applies, not just the 84 months required by Table 1 of Schedule 10.1. <u>Problem 4</u> In Table 1 of Schedule 10.1, insert a new column to the right of column 5 ("Metering installation certification type") headed "Maximum meter class for installation category" and include the meter class appropriate to each metering installation category, as shown in Table 2 of Schedule 10.1. Revoke Table 2 of Schedule 10.1 and change each reference to this table to be a reference to Table 1 of Schedule 10.1.
Proposed Code amendment	Refer to attached Table 1 of Schedule 10.1 and Table 2 of Schedule 10.1. **Schedule 10.7** … **16 Recertification of group of category 1 metering installations by statistical sampling** (1) A **metering equipment provider** may arrange for an **ATH** to **recertify** a group of **category 1 metering installations** for which the **metering equipment provider** is responsible using a statistical sampling process set out in subclause (2). (2) To **recertify** a group of **category 1 metering installations**, an **ATH** must— (a) select a sample from the group, using a statistical sampling process— (i) prescribed in AS/NZS 1284; or (ii) that is approved and **published** by the **Authority**; and (aa) use the pass/fail criteria in AS/NZS 1284 to evaluate whether the group meets the **recertification** requirements of this Part; and <u>(ab) use the appropriate maximum validity period set out in Table 5 of AS/NZS 1284; and</u> … **27 Meter certification expiry date** … (2) The **meter certification** expiry date must be the earliest end date of the following periods, calculated from the date of **commissioning** of the **metering installation**:

(a) the maximum **metering installation certification** validity period set out in Table 1 of Schedule 10.1 for the relevant category of **metering installation**; or

(b) the maximum **meter certification** validity period set out in Table 1~~2~~ of Schedule 10.1 for the relevant class of **meter** for the **metering installation**; or

(c) the **certification** period specified in the **meter certification report**.

(3) Despite subclause (2), the **meter certification** expiry date for a **meter** that has been **certified** and subsequently installed in, but then removed from, a **category 1 metering installation**, remains the **meter certification** expiry date determined for that **meter** when it was installed in the **category 1 metering installation**.

(4) Despite subclauses (2) and (3), if a~~n electromechanical~~ **meter** is not installed in a **metering installation** within 24 months of the date of the **meter's certification report**, the **meter** must be **recertified** before it is installed.

…

45 Category 1 metering installation inspection requirements

(1) A **metering equipment provider** must ensure that—

(a) each **category 1 metering installation** for which it is responsible, other than an **interim certified metering installation**, has been inspected by an **ATH** within the period set out in Table 1 of Schedule 10.1 starting from the date of the **metering installation's** most recent **certification**; or

(b) for each 12 month period commencing 1 January and ending 31 December, a sample, selected under subclause (2), of the **category 1 metering installations** for which it is responsible has been inspected by an **ATH** ~~within the period set out in Table 1 of Schedule 10.1~~ starting from the date of the earliest **certification** date of a **metering installation** in the group that is at least 84 months old.

…

Schedule 10.8

…

1 Meter certification requirements

(1) An **ATH** must, before it **certifies** a **meter**, ensure that—

…

(d) it produces a **meter calibration report** that includes—

(i) the date on which it **certified** the **meter**; and

(ii) the **certification** validity period for the **meter** for each category of **metering installation** that the **meter** may be used in; and

(iia) if the **certification** validity period referred to in

	subparagraph (ii) is less than the maximum **certification** validity period permitted under Table 1 of Schedule 10.1, the reasons for the shorter **certification** validity period; and (iii) the maintenance requirements for the **meter**; and (iv) the **meter calibration report**; and (v) whether the **certification** was based on batch test certificates; and (vi) if the **certification** was based on batch test certificates, confirmation that the manufacturer's batch testing facility is, in the **ATH's** opinion, of an acceptable standard; and … (2) The **certification** validity period referred to in subclause (1)(d)(ii) must not be greater than the maximum **certification** validity period set out in Table 12 of Schedule 10.1 for the relevant class of **meter**.
Assessment of proposed Code amendment against section 32(1) of the Act	The proposed Code amendment is consistent with the Authority's objective, and section 32(1)(c) of the Act, because it would contribute to the efficient operation of the electricity industry. It would do this by: a) reducing the possibility of an electronic meter failing because of there being an extended period of time between when the meter was certified and when it was installed b) reducing participants' compliance costs by making the Code easier to understand and comply with. The proposed Code amendment is expected to have no effect on competition or reliability of supply.
Assessment against Code amendment principles	The Authority is satisfied the proposed Code amendment is consistent with the Code amendment principles, to the extent they are relevant.
Principle 1: Lawfulness.	The proposed Code amendment is consistent with the Act, as discussed above in relation to the Authority's statutory objective and the requirements set out in section 32(1) of the Act.
Principle 2: Clearly Identified Efficiency Gain or Market or Regulatory Failure	The proposed Code amendment is consistent with principle 2 because it addresses a regulatory failure that is leading to a market inefficiency, and which requires a Code amendment to resolve.
Principle 3: Quantitative Assessment	Please refer to the assessment of costs and benefits in section 3 of the consultation paper.
Regulatory statement	
Objectives of the proposed amendment	The objective of the proposal is to reduce: a) the possibility of an electronic meter failing because of there being

	an extended period of time between when the meter was certified and when it was installed b) participants' compliance costs by making the Code easier to understand and comply with.
Evaluation of the costs and benefits of the proposed amendment	Please refer to the assessment of costs and benefits in section 3 of the consultation paper.
Evaluation of alternative means of achieving the objectives of the proposed amendment	The Authority has not identified an alternative means of achieving the objectives of the proposed Code amendment.

Schedule 10.1: Table 1: Metering installation characteristics and associated requirements

Defining Characteristics				Associated Requirements of active energy metering								
Metering installation category	Primary voltage (V)	Primary current (I)	Measuring transformers	Metering installation certification type	Maximum meter class for installation category	Accuracy tolerances		Selected component metering installation minimum IEC class (more accurate components may be used)		Metering installation certification and inspection		
						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	Class 2.0	± 2.5%	0.6%	2	N/A	180 months	~~84 months~~	120 months ± 6 months
2	V < 1kV	I ≤ 500A	CT	NHH or HHR	Class 2.0	± 2.5%	0.6%	2	1	120 months	~~N/A~~	120 months ± 6 months
3	V < 1kV	500A < I ≤ 1200A	CT	HHR only	Class 1.0	± 1.25%	0.3%	1	0.5	120 months	~~N/A~~	60 months ± 3 months
	1kV ≤ V ≤ 11kV	I ≤ 100A	VT & CT		Class 0.5			N/A	N/A			
	11kV < V ≤ 22kV	I ≤ 50A						N/A	N/A			
4	V < 1kV	I > 1200A	CT	HHR only	Class 0.5	± 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	Class 0.2	± 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										

Schedule 10.1: ~~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<1kV~~	~~120~~	~~120~~	~~120~~	~~N/A~~
~~3 where V≥1kV~~	~~120~~	~~120~~	~~N/A~~	~~N/A~~
~~4~~	~~60~~	~~60~~	~~N/A~~	~~N/A~~
~~5~~	~~36~~	~~N/A~~	~~N/A~~	~~N/A~~