Reference number(s)	**013 – Raw Meter Data Output Tests**
Relevant clause(s)	Clause 9(1)(c) of Schedule 10.7 – Certification tests
Problem definition	During the certification of metering installations, a number of tests are performed to ensure the installation is performing correctly. A raw meter data output test is one of these. It forms part of the suite of tests and checks used in the "selected component certification" of metering installations. The purpose of the test is to check the meter is recording an amount of electricity that is reasonably close to the amount of electricity observed to be flowing. A raw meter data test is not a meter accuracy test. Instead, it is an indication of whether the: a) metering installation is working; b) meter has failed or been damaged after it was calibrated. Some participants have advised the Authority that clause 9(1)(c) of Schedule 10.7 is insufficiently clear about how this test should be performed. They consider the clause does not say how much load should be used in order to have appropriate confidence in the test result. Some are using zero load as the initial reference point. They believe the clause is open to more than one interpretation, which can lead to inconsistencies in testing. When clause 9(1)(c) of Schedule 10.7 was originally drafted, Ferraris disc meters were the norm. These meters needed to be tested at two different loads to ensure: a) the meter measurement (disc speed) changed with the change in load b) the disc shaft or bearings had not been damaged. In 2018 electronic meters are the norm and Ferraris disc meters, although still in use, are relatively rare. There is not the same risk of physical damage to an electronic meter as there is for a Ferraris disc meter. Therefore, a test at two different loads is not needed for electronic meters, while it needs to be retained for Ferraris disc meters.
Proposal	The Authority proposes to amend the Code: (a) to require that the load used in a raw meter data output test must be greater than 5% of the meter's certified maximum load (b) to specify that the raw meter data output test must be carried out using either the working standard in clause 9(1)(a) of Schedule 10.7 or an ammeter in good working order and with an accuracy within +/- 5 % (c) to require that, when undertaking a raw meter data output test, the meter register must change by at least "1" in the least significant digit (which may require many pulses of the meter) (d) if a Ferraris disc meter is being tested, to require that a second raw meter data output test be undertaken at double the load of the first test.

Proposed Code amendment	**Schedule 10.7** … **9 Certification tests** (1) An **ATH**, when carrying out a test set out in Table 3 or 4 of Schedule 10.1,— … (c) to carry out a **raw meter data** output test for a **category 1 metering installation** or **category 2 metering installation**, must do so by– (ia) applying a measured increase in load ~~and measuring~~ that is greater than 5% of the **meter's** maximum rated current; and (ib) using either the **working standard** referred to in subclause (1)(a) or an ammeter in good working order with an accuracy range of +/- 5% to measure the load applied to the **metering installation**; and (A) recording the resulting increment of the **meter** register value over a measured period of time; or (B) recording the resulting accumulation of pulses from the load over a measured period of time; and (ic) ensuring that the change in the **meter** register that occurs under subclause (ib)(A) or subclause (ib)(B) is at least "1" in the least significant digit of the **meter** register; and (id) if the **meter** is a Ferraris disc **meter**, undertaking two **raw meter data** output tests where the second test must have a load applied to the **meter** that is double the load applied to the **meter** in the test carried out in accordance with subclause (c)(ia): (i) the increment of the sum of the **meter** registers; or (ii) the accumulation of pulses resulting from the increase in load: …
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. Clarifying how an ATH is to undertake a raw meter data output test would help ensure ATHs undertook the test appropriately, thereby better ensuring the accuracy of the metering installation being tested. There should also be a reduction in testing costs for some ATHs because the proposed Code amendment reduces the complexity of the test for electronic meters. 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 lack of clarity in the Code that is leading to market inefficiency. Accordingly, the proposed Code amendment will lead to an efficiency gain.
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 ambiguity in the Code requirements for undertaking a raw meter data output test, and to reduce confusion amongst participants.
Evaluation of the costs and benefits of the proposed amendment	The costs are nil as participants are already doing the tests. The benefit is reduction is costs for some ATHs as the change reduces the complexity of the test for electronic meters.
Evaluation of alternative means of achieving the objectives of the proposed amendment	The Authority has not identified any alternatives to the proposed Code amendment that would meet the objectives of the proposal.