

Appendix C Issues that we propose to resolve without a Code amendment

Reference number(s)	034 – Certification of Metering Installations and Trading
Relevant clause(s)	<p>Clause 10.7 – Access to premises in which metering installation located</p> <p>Clause 10.24 – Responsibility for ensuring there is a metering installation for ICP that is not also NSP</p> <p>Clause 10.38 – Certification of metering installations</p>
Problem definition	<p>Uncertified metering installations can be inaccurate, which increases the amount of unaccounted for electricity. In turn, this affects the accuracy of wholesale market settlement and consumer billing.</p> <p>The following three clauses require traders and metering equipment providers (MEPs) to cooperate to ensure metering installations are certified:</p> <ul style="list-style-type: none"> a) clause 10.7(2) requires reconciliation participants to arrange access for an MEP (among other parties) to a metering installation the reconciliation participant is responsible for. b) clause 10.24 includes the requirement for a trader to ensure there is one or more metering installations at each installation control point (ICP) (that is not an network supply point) the trader is recorded in the registry as being responsible for. c) clause 10.38 requires an MEP to obtain and maintain certification for each metering component and metering installation the MEP is responsible for. <p>Traders typically assist an MEP during the metering recertification process because:</p> <ul style="list-style-type: none"> a) the MEP usually does not have a direct relationship with the metered party b) the trader must arrange for the MEP to have access to a metering installation (refer to clause 10.7(2)). <p>The trader is also able to use its contractual relationship with an MEP to ensure metering installations are appropriately certified, even though the trader has no direct control over the MEP’s operations.</p> <p>Some MEPs are not recertifying all installations as required, either:</p> <ul style="list-style-type: none"> a) as part of a business decision; or b) because of unusual access issues outside the trader’s control. <p>Although the trader could report an MEP for breaching the Code, or use contractual pressure to ensure installations are certified, the trader may be reluctant to do either of these things and risk damaging its relationship with the MEP.</p>
Proposal	<p>The Authority considered amending the Code to prohibit traders from trading at ICPs with uncertified metering installations to eliminate the risk of using inaccurate metering data for market settlement and consumer invoicing. We have rejected this proposal because we believe the costs outweigh the benefits.</p> <p>If traders were prohibited from trading on an uncertified metering</p>

installation, traders would be forced to electrically disconnect the metering installation. This would not be an acceptable result for the customer or the embedded generator at the ICP. However, it would be difficult for the customer or embedded generator to argue against the outcome if they were preventing access to the metering installation.

After considering the matter, the Authority proposes to:

- a) leave the Code unchanged
- b) pursue MEPs and traders, respectively, for:
 - i) Code breaches in relation to uncertified metering installations
 - ii) failing to arrange access to a metering installation
- c) educate participants on their responsibilities under the Code in relation to metering certification, including:
 - i) educating traders that they must report an alleged breach against MEPs that do not certify metering installations and metering components in accordance with clause 10.38 of the Code
 - ii) educating MEPs that they must report an alleged breach against traders that do not arrange access to a metering installation in accordance with clause 10.7 of the Code.

Reference number(s)	035 – Designating and Metering Network Interconnection Points
Relevant clause(s)	Clause 10.25 – Responsibility for ensuring there is metering installation for ICP that is not point of connection to grid
Problem definition	<p>Part 1 of the Code defines an interconnection point to mean a point of connection between—</p> <ul style="list-style-type: none"> a) a local network and any other local network; or b) an embedded network that is not a gateway network supply point (NSP) and a local network; or c) an embedded network that is not a gateway NSP and any other embedded network. <p>If a network has only one NSP, that NSP is known as a “gateway NSP”. Gateway NSPs are only seen on embedded networks.</p> <p>The distributor responsible for an NSP that is not a point of connection to the grid, must:</p> <ul style="list-style-type: none"> a) Under clause 10.25(1), ensure that: <ul style="list-style-type: none"> i) there is one or more metering installations; and ii) all electricity conveyed is quantified in accordance with the Code. b) Under clause 10.25(2), for each metering installation at the NSP, either: <ul style="list-style-type: none"> i) assume responsibility for being the MEP; or ii) contract with someone to assume responsibility as the MEP. c) Under clause 10.25(2), advise the reconciliation manager of: <ul style="list-style-type: none"> i) the reconciliation participant for the NSP; and ii) the participant identifier of the MEP for the metering installation; and iii) the certification expiry date of the metering installation. <p>The Authority is aware some distributors are not designating interconnection points as an NSP. In turn, these distributors are not:</p> <ul style="list-style-type: none"> a) ensuring appropriate metering is installed at interconnection points b) notifying the reconciliation manager of the existence of interconnection points c) in instances where the distributor is the reconciliation participant for the interconnection point, providing NSP metering information to the reconciliation manager. <p>This causes inaccuracies in the reconciliation process, with traders being over-charged or under-charged for electricity.</p>

Proposal	<p>The Authority proposes to make no changes to the Code to address this problem.</p> <p>We consider the Code clearly:</p> <ul style="list-style-type: none">a) defines an interconnection pointb) sets out the obligations on distributors in respect of interconnection points. <p>We believe the best way of addressing this problem is through participant education.</p>
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Reference number(s)	036 - Alternative Load Checks After Component Recertification
Relevant clause(s)	Table 4 of Schedule 10.1
Problem definition	<p>Clause 14 of Schedule 10.7 sets out a process to be followed if there is insufficient electricity conveyed through a point of connection to allow an ATH to complete a prevailing load test for a metering installation that is being certified as a half-hour metering installation.</p> <p>However, the Code does not set out an analogous process for a metering installation that is being certified as a NHH metering installation.</p>
Proposal	<p>The Authority considers there is no need for an analogous process to that set out in clause 14 of Schedule 10.7 for NHH metering installations.</p> <p>The prevalence of AMI means there are very few NHH metering installations being certified in New Zealand.¹ For these NHH metering installations, an ATH should be able to use dummy loads to successfully complete a prevailing load test.</p>

¹ Most NHH metering installations in New Zealand are uncertified. These are generally being replaced by certified AMI metering installations. The number of metering installations being certified as NHH each year is measured in the hundreds.

Reference number(s)	037 – Regulating Metering Used for Non-Reconciliation Purposes
Relevant clause(s)	<p>New clause – Scope of application of Part 10, and amendments to other clauses as necessary</p> <p>Clause 8(5) of Schedule 10.6 – Electronic interrogation of metering installations</p>
Problem definition	<p>The Code currently regulates only metering that is used for reconciling the wholesale electricity market.</p> <p>The Code does not regulate metering used for non-reconciliation purposes. Examples of metering not regulated by the Code include:</p> <ul style="list-style-type: none"> • check meters used to bill consumers on customer networks • maximum demand meters used for distributor billing • meters used to self-monitor energy efficiency. <p>Metering used for reconciliation purposes always uses the code required methodology and facilities for interrogation. Metering that is not regulated by the Code does not and, for that reason, may not be as accurate as metering used for reconciliation purposes.</p> <p>Some industry participants and consumers believe all metering that forms the basis for customer billing should be held to the same accuracy standards as metering regulated by the Code.</p> <p>Options for regulating metering installations that are currently not regulated by the Code range from:</p> <ol style="list-style-type: none"> a) regulating accuracy requirements only, to b) requiring full certification of the metering installation and the provision and maintenance of the installation’s metering information in the registry. <p>If these meters were to be regulated by the Code, then depending on the scope of the regulation, mechanisms may be required in the submission processes to reduce the likelihood of participants double billing/submitting.</p> <p>Before these detail questions can be resolved, there is the policy question of whether the Code should be expanded.</p>
Proposal	<p>The Authority considers that a decision to regulate metering used for non-reconciliation purposes would have a significant effect on consumers and the electricity industry.</p> <p>We believe any consideration of such a change merits its own project. Therefore, the Authority has not considered this matter here. Instead, we will look to incorporate work in this area into our work programme.</p>

Reference number(s)	038 - Daylight Savings and Time Clocks
Relevant clause(s)	Clause 23 of Schedule 10.7
Problem definition	<p>Clause 23 of Schedule 10.7 applies to time keeping devices that control the switching of a meter register in a metering installation, but which are not remotely monitored and corrected. This clause requires an MEP to ensure the time keeping device:</p> <ul style="list-style-type: none"> a) has a time keeping error of no more than an average of two seconds per day over a period of 12 months b) is monitored and corrected at least once every 12 months. <p>The Authority is concerned the Code is not sufficiently clear on how these devices must handle daylight savings transitions. Not correcting for daylight savings is likely to result in electricity consumption or generation being recorded on the wrong register for one hour. This has two main effects.</p> <p>Firstly, customers pay for their electricity consumption at the wrong price. For some customers this can be a material cost (eg, a dairy farmer paying the daytime electricity price instead of the cheaper night rate during the morning milking).</p> <p>Secondly, reconciliation is inaccurate if the consumption is being profiled into time blocked profiles. The electricity volumes submitted to the reconciliation manager will be incorrect for the two trading periods when the wrong meter register is recording consumption or generation.</p> <p>If an MEP does not correct a meter register for daylight savings, the next day the clock will be inaccurate by 3,600 seconds (one hour). This is an average of almost 10 seconds per day over 12 months (3,600 divided by 365 days). However, the inaccuracy could range between 7.8 seconds and 11.8 seconds if the clock was already inaccurate prior to the daylight savings event, but within the time keeping error limit permitted by the Code. The clock will remain inaccurate until daylight savings reverts.</p> <p>This means the MEP is in breach of clause 23(a) of Schedule 10.7, even though clause 23(b) only requires the MEP to monitor and correct the time keeping device at least once every 12 months.</p>
Proposal	<p>The Authority does not propose to make a Code amendment.</p> <p>The Authority considers that the current wording of clause 23(a) of Schedule 10.7 is sufficient and does not give rise to the problem identified above. Sub-paragraph (b) does not limit or cap an MEP's obligations under sub-paragraph (a). As the effect of a change for daylight savings would be to create an error greater than the error permitted by sub-paragraph (a), and MEP's would know this, each MEP will need to correct each time-keeping device subject to clause 23 in order to meet their obligations under sub-paragraph (a) or ensure the time keeping device is set up to account for daylight saving changes.</p> <p>The requirement in clause 23(b) of Schedule 10.7 does not permit the MEP to correct the time keeping device for a meter register only once a year, even if the MEP is in breach of clause 23(a) of Schedule 10.7. The use of the words "at least" in clause 23(b) is deliberate — the intent is to</p>

	<p>ensure an MEP corrects the time keeping device as often as is necessary for the MEP to comply with clause 23(a).</p>
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	<p>As an aside, we note our understanding that MEPs face commercial incentives through the retailers (and their customers) to ensure meter readings are accurate.</p>
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Reference number(s)	039 - Metering Records
Relevant clause(s)	<p>Clause 4 of Schedule 10.6 – Metering equipment provider record keeping and documentation</p> <p>Clause 6 of Schedule 11.4 – Correction of errors in registry</p>
Problem definition	<p>Clause 4 of Schedule 10.6 requires MEPs to keep accurate and complete records of information relating to each metering installation for which the MEP is responsible.</p> <p>Clause 6 of Schedule 11.4 requires MEPs to:</p> <ul style="list-style-type: none"> a) compare their metering records with the equivalent metering records in the registry, on a monthly basis; and b) make corrections to either the registry metering records or their metering records, as appropriate. <p>Clause 6 of Schedule 11.4 facilitates accurate registry metering records, because an MEP must investigate any discrepancies between its records and those in the registry, to determine which records are correct. Discrepancies can arise in various ways, including:</p> <ul style="list-style-type: none"> a) data entry errors b) accidental changes being made to the registry c) physical work being performed but not entered into the registry. <p>The Authority has been queried as to whether an MEP could use the registry to fulfil the MEP’s obligations under clause 4 of Schedule 10.6 (ie, to use the registry as the MEP’s metering records database). The Code does not explicitly prohibit this.</p> <p>If an MEP were to use the registry to fulfil its obligations under clause 4 of Schedule 10.6, this would appear to make it difficult to fulfil the purpose of clause 6 of Schedule 11.4.</p>
Proposal	<p>The Authority considers a Code amendment is unnecessary to prohibit an MEP using the registry’s metering records as the sole source of the MEP’s “own records”.</p> <p>If an MEP were to use the registry’s metering records in this way, the MEP would have no records of its own against which to compare “the information obtained from the registry”. Therefore, the MEP would be unable to comply with clause 6 of Schedule 11.4.</p> <p>If an MEP does not have its own database of metering records, the MEP must do one of the following options to comply with clause 6 of Schedule 11.4:</p> <ul style="list-style-type: none"> a) The MEP could, for each metering installation it is responsible for: <ul style="list-style-type: none"> i) refer to the original metering records the MEP referred to in order to enter metering records for the installation into the registry¹; and

¹ These records could include:

- a) the metering certification report the ATH provided when the metering installation was certified
- b) the purchase records from the previous MEP
- c) any other records the MEP has that reflect the current state of the metering installation and which can be used to identify whether the registry metering records for the metering installation have been changed.

	<ul style="list-style-type: none">ii) compare these original metering records with the registry's metering records on a monthly basis.b) The MEP could contract with an ATH to hold metering records for the metering installations for which the MEP is responsible. However, the obligation under clause 6 of Schedule 11.4, to compare these metering records with the equivalent records in the registry, on a monthly basis, would remain with the MEP.
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Reference number(s)	040 - In-Situ Recertification
Relevant clause(s)	<p>Clause 11 of Schedule 10.7 – Selected component certification of metering installation</p> <p>Clause 12 of Schedule 10.7 – Comparative recertification</p> <p>Cause 13 of Schedule 10.7 – Fully calibrated metering installation certification</p>
Problem definition	<p>Clauses 11 and 13 of Schedule 10.7 describe how an ATH must certify a metering installation using, respectively:</p> <ul style="list-style-type: none"> a) the selected component method b) the fully calibrated method. <p>Some participants have informed the Authority that these clauses do not explicitly state whether, for a category 2 or higher metering installation:</p> <ul style="list-style-type: none"> a) the metering installation can be recertified as a whole, without the need to recertify individual metering components b) the ATH— <ul style="list-style-type: none"> i) must replace any current transformers that form part of a metering installation; or ii) may recalibrate the current transformers onsite / in-situ.
Proposal	<p>The Authority considers that the identified problem can be addressed via participant education. We propose to publish an explanatory note on the meaning of clauses 11 to 13 of Schedule 10.7.</p> <p>Clauses 11 and 13 of Schedule 10.7 cannot be used to certify a metering installation without certifying individual components of the installation. Clauses 11(5)(b) and 13(3)(b) of Schedule 10.7 require the components of the metering installation to be certified as part of the certification of the installation.</p> <p>Clause 12 of Schedule 10.7 permits the certification of a metering installation without the need to certify components of the metering installation. This is known as comparative recertification. It is permitted only for the recertification of category 2 metering installations.</p> <p>The Code is deliberately silent on whether a metering component can be recalibrated onsite / in-situ or whether the component must be replaced. This is to allow ATHs to develop appropriate procedures that:</p> <ul style="list-style-type: none"> a) suit their business b) suit the types of metering installations they recertify. <p>The Code simply requires that an ATH must ensure:</p> <ul style="list-style-type: none"> a) the overall accuracy requirements for the metering installation stipulated in the Code are met b) any specific requirements in the Code that relate to the certification of the metering installation are met.

Appendix D Format for submissions

D.1 Please complete the table below for each proposed Code amendment requiring a regulatory statement. Only include those you wish to submit on.

Note: Please use table D2 to submit on technical and non-controversial proposals.

Operational Review of Metering and Related Registry Processes	
Submitter	
Proposal Reference	
Question 1: Do you agree with the Authority's problem definition? If not, why not?	
Question 2: Do you agree with the Authority's proposed solution? If not, why not?	
Question 3: Do you have any comments on the Authority's proposed Code drafting?	
Question 4: Do you agree with the objectives of the proposed amendment? If not, why not?	

<p>Question 5: Do you agree the proposed amendment is preferable to any other alternatives that meet the objectives of the proposed amendment? If not, please explain your preferred option in terms consistent with the Authority's statutory objective in section 15 of the Electricity Industry Act 2010.</p>

D.2 Please complete the table below if you wish to submit on the technical and non-controversial Code proposals in Appendix B.

<p>Question 6: Do you have any comments on any of the technical/non-controversial changes? If so, please note which change and your comments.</p>

D.3 Please complete the table below if you wish to submit on the CBA for the proposals that require a regulatory statement.

<p>Question 7: Do you agree the costs and benefits identified are appropriately categorised? If you disagree, please provide reasons.</p>
<p>Question 8: Do you agree the benefits of the proposals in aggregate outweigh their costs? If you disagree, please provide reasons.</p>

D.4 Please complete the table below if you wish to submit on the issues that we propose to resolve without a Code amendment.

Question 6: Do you require further clarification of any of the issues presented here? If so, please note which issues below and your questions.

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