



28 September 2010

Lisa Du Fall  
Electricity Commission  
P O Box 10-041  
Wellington

Dear Lisa

**Part D Review – Proposed New Rules Consultation**

Energy Market Services (EMS) welcomes the opportunity to provide a submission on the Part D Review - Proposed New Rules Consultation being undertaken by the Commission.

EMS provides a range of metering and data services to the industry and has previous experience as both a metering equipment owner and a registered test house.

EMS believes metering and metering infrastructure is fundamental to the commercial operation of the electricity industry. As such the Part D review along with the consequential changes to Part A, E, and J needs to consider the current and future requirements for metering from the Grid all the way down to the domestic customer.

We would be pleased to discuss our submission in detail should you require clarification of any of the comments made.

Yours faithfully

Ian Martin  
Metering Services Manager

## Appendix 1 Format for submissions

Question No.	Question	Answer
	How long should the Commission allow between the date the rules are made and the date the rules would come into force?	A minimum of 12 months

1.	Do you agree with the proposed new part D of the rules? If not, please provide details.		
Rule No	Yes/No	Comments	Response
10.14	Partly agree	<b>10.14 Authority may require provision of metering data</b>	There should be a requirement for the Authority to act reasonably in making a request for data.
10.7, 10.17, 10.20, 10.21, 10.24, 10.36, 10.39, 10.46, 10.47 ....		There are numerous references to Part throughout this code.	Should references to Part be replaced by Code?
10.23 (b)	Partly agree	in the case of a <b>metering installation</b> at an <b>NSP</b> , the <b>distributor</b> for that <b>metering installation notifies</b> the <b>reconciliation manager</b> of the new <b>metering equipment provider</b> .	As worded the rule does not allow for changes at a grid level.  Suggest replacing "distributor" with "existing metering equipment provider".

10.25 (4) (g)	No	<p><b>notify the reconciliation manager of the certification expiry date of the metering installation by no later than 3 business days after certification of the metering installation.</b></p>	<p>3 business days to provide the certification details seems unreasonably short. The following activities need to be considered; the field staff needs to send the certification test results to the test house, the test house needs to validate the results and issue the new certification, the test house advises the participant/MEP, the participant/MEP advises the reconciliation manager.</p> <p>EMS suggest that 10 days would be more realistic time frame.</p>
10.25 (5)	No	<p>For each proposed new <b>point of connection to the grid</b>, if the <b>grid owner</b> considers, acting reasonably, that the proposed new <b>metering installation</b>, or a proposed change to an existing <b>metering installation</b>, or its configuration, requires any aggregation, summation, subtraction, <b>loss compensation</b> or <b>error compensation</b> process, to determine <b>submission information</b> for reconciliation, the <b>grid owner</b> must—</p>	<p>This rule means that the market administrator will need to approve the designs for all connections to the grid. This is because; with few exceptions all submission data for grid exit NSPs is derived from multiple metering installations and to achieve best accuracy at a grid exit NSP instrument transformer correction factors are applied to each metering installations.</p> <p>The propose rule goes beyond the original consultation when the Grid Owner was only required to notify the market administrator where it considers there to be anomalies due to grid configuration.</p> <p>Suggest the following change:</p> <p>“.....<b>metering installation</b>, or its configuration, requires any <u>complex or unusual</u> aggregation, summation, subtraction, <b>loss compensation</b> or <b>error compensation</b> process .....”</p> <p>The grid owner should only need to seek the market administrator involvement where there are unusual metering arrangements.</p>

10.28 (3) and (4)	No	A <b>metering equipment provider</b> must, within 2 <b>business days</b> of a new <b>point of connection</b> under subclause (2)(a)(ii) being livened, ensure that the <b>network</b> owner responsible for livening the <b>point of connection</b> receives <b>notification of certification</b> of the <b>metering installation</b> .	Refer to the comment above for 10.25 (4) (g). For grid connections 2 business days is not sufficient time to validate the testing and issue certification. As above 10 days would be more appropriate.
10.29 (b) and (c)	No	<b>Livening point of connection to grid</b>	Where has the requirement for the market administrator to approve livening of new grid connections come from and what metering issue is being addressed?  10.25 should be sufficient to ensure suitable metering arrangements are in place. Adding the market administrator's approval into the already complex commissioning processes for grid connections seems unnecessary.
10.32 (1)	Partly agree	<b>Installation of metering installations</b>	The wording is not appropriate for connections to the grid. Suggest the following changes:  A <b>metering equipment provider</b> must, for a <b>metering installation</b> <u>that is not a point of connection to the grid</u> for which it is to become responsible, if a <b>metering installation</b> has not previously been present at a proposed <b>point of connection-</b>
10.33 (b)	Partly agree	(b) if a calculation is carried out under paragraph (a), must record in the <b>metering installation certification report—</b>	It would be more appropriate to have the loss compensation details (i-iii) on the metering installation design report. The certification report only needs to note that they are present.

10.35 (2) (b)	No	the category of each local service <b>metering installation</b> for <b>grid</b> substation <b>electricity</b> used in and by the substation must be determined in accordance with Table 1 of Schedule 10.1.	This subclause should exclude the local service metering installation from the requirement of 10.35 (2) (a). There is no need for local service metering to record import and export energy.
10.45 (2)	Partly agree	If this clause applies, the <b>approved test house</b> must <b>notify the metering equipment provider</b> under clause 10.41(2) and the procedure in clauses 10.41 to 10.44 will apply.	<p>This subclause assumes that the installation has become inaccurate and this may not be the case. There are valid reasons why the compensation may need to change, for instance a change in burden, but the overall accuracy of the installation remains within the required limits.</p> <p>Suggest the following change:</p> <p>If this clause applies, the <b>approved test house</b> must <b>notify the metering equipment provider</b> under clause 10.41(2) and <u>where the metering installation does not meet accuracy requirements of these codes</u> the procedure in clauses 10.41 to 10.44 will apply.</p>
Sch 10.4 1	Partly agree	restrict access to its laboratory and storage facilities to—	The access restrictions are unrealistic. There needs to be a provision for visitors to enter the laboratory and storage facilities provided there is suitable supervision in place.
Sch 10.4 2 (2)	No	If an <b>approved test house</b> replaces, in whole or in part, an item of equipment required for the correct carrying out of the <b>calibrations</b> or tests or both, it must	<p>This subclause is unnecessary. Sch 10.3 7, <b>Changes that affect approval</b> should be sufficient.</p> <p>Delete this requirement.</p>

Sch 10.4 3 (5)	Partly agree	An <b>approved test house</b> must not use a <b>reference standard</b> or <b>working standard</b> that has been transported, unless it has evidence that the transport has not affected its <b>calibration</b> . The evidence must be a comparison against another <b>reference standard</b> or <b>working standard</b> with adequate short-term stability to confirm that any transport induced changes are within the permitted <b>calibration uncertainty</b> .	Including working standards in this subclause will make the on-site calibration and certification processes more difficult. Working standards should be removed from this subclause.
Sch 10.6 1 (1) – (6)	No	A <b>metering equipment provider</b> must, within 3 <b>business days</b> of receiving a request from a user of a <b>metering installation</b> with whom it has contracted, give remote or on site access to for the user to collect, obtain and use <b>metering data</b> from the <b>metering installation</b> , only if the user is authorised by the <b>customer</b> at the <b>point of connection</b> to do so through a contract	This subclause seems to be written for customer ICPs and it is unclear if or how it will apply at an NSP as there is no customer (as defined in Part A) to provide authorisation. Clarification is required.  There are a number of subsequent subclauses that reference this subclause and they will also need to be reviewed.
Sch 10.6 4 (1) (b)	Partly agree	give to, and maintain in, the <b>registry</b> , the <b>registry metering records</b> for each of its <b>metering installations</b> , in accordance with Schedule [E3] of Part [E]; and	Not applicable to metering installation on the grid. Suggest the following change:  give to, and maintain in the <b>registry</b> , <u>for all metering installations at an ICP</u> , the <b>registry metering records</b> for each of its <b>metering installations</b> , in accordance with Schedule [E3] of Part [E]; and

Sch 10.6 7		<b>Electronic interrogation of a metering installation</b>	<p>A new subclause needs to be added to the beginning of Clause 7 that makes it clear that following subclauses (1-9) only apply were the metering equipment provide is responsible for the interrogation.</p> <p>What happens when the metering equipment provider does not interrogate the data storage device?</p> <p>If clause 7 is intended to cover the participant who is responsible for collecting reconciliation data then the wording needs to be corrected to make this clear.</p>
Sch 10.6 7 (3)	No	(3) A <b>metering equipment provider</b> must ensure that its <b>interrogation</b> and processing system records, in the <b>interrogation</b> and processing system logs, the time, date and extent of any change in the internal clock setting.	If the interrogation system relies on system or server time it is unlikely these logs will be available in the interrogation system. Other time setting arrangements need to be considered. It is the maintenance of a time setting log that is important not where/how they are produced.
Sch 10.6 7 (5) (c)	Party agree	if the time error determined under paragraph (a) is greater than the applicable time error set out in Table 1, must synchronise the clock of the <b>data storage device</b> with the <b>interrogation</b> and processing system clock, and notify the trader for that ICP of any affected <b>raw meter data</b> ; and	<p>The wording does not consider devices installed at an NSP. Suggest the following change:</p> <p>must synchronise the clock of the <b>data storage device</b> with the <b>interrogation</b> and processing system clock, and notify the <del>trader for that</del> <u>ICP recipient</u> of any affected <b>raw meter data</b>; and</p>
Sch 10.6 (8) (b)	No	pass relevant <b>event log</b> entries to the <b>trader</b> for the <b>ICP</b> .	<p>The wording does not consider devices installed at an NSP. Suggest the following change:</p> <p>pass relevant <b>event log</b> entries to the <b>trader</b> <u>participant responsible</u> for the <b>ICP-metering installation</b>.</p>

Sch 10.7 4 (3) (b)		the <b>metering installation certification report</b> must include the all information under subclause (1).	the <b>metering installation certification report</b> must include the all information under subclause (1).
Sch 10.7 13 (3)		An <b>approved test house</b> must, before it <b>certifies a metering installation</b> , confirm, for each <b>metering component</b> in the <b>metering installation</b> other than the following, that the <b>metering component certification</b> expiry date is no later than the <b>metering installation certification</b> expiry date:	Should this be earlier?
Sch 10.7 25 (1) (e)	No	if the <b>metering installation</b> is of category 2, 3, 4, or 5, ensure that—  (i) current transformers are connected only to the <b>meter</b> with no connections to other systems; and  (ii) voltage transformers have no connections to other systems; and	This requirement is unacceptable for metering installations at point of connection to the grid.  There are existing metering installations where there are no suitable metering class CT cores available for instrumentation, check metering or the where auxiliary CTs are required for output matching.  Metering class VTs are used for multiple purposes including control, instrumentation and protection. This requirement would force the installation of duplicate VTs at considerable cost.  Suggest the following change:  if the <b>metering installation</b> , <u>other than a metering installation at a point of connection to the grid,</u> is of category 2, 3, 4, or 5, ensure that—

Sch 10.7 25 (7)	No	No <b>participant</b> other than the <b>approved test house</b> under subclause (6) may add or change any burden or <b>compensation factor</b> .	<p>This requirement is unacceptable for metering installations at point of connection to the grid where VTs are used for multiple purposes. Ref Sch 10.7 25 (1) (e) comments above.</p> <p>Work carried out on non-metering circuits may be done by parties other than the approved test house. The grid owner has documented processes for identifying and managing non metering connections to shared VTs.</p> <p>Suggest the following change:</p> <p><u>(7) Changes to Voltage transfer burden or <b>compensation factor</b>.</u></p> <p><u>(a) For a metering installation that is not at a point of connection to the grid, no <b>participant</b> other than the <b>approved test house</b> under subclause (6) may add or change any burden or <b>compensation factor</b> or</u></p> <p><u>(b) For a metering installation at a point of connection to the grid, changes to the burden or <b>compensation factor</b> may only be made with the approval of both the metering equipment owner and the approved test house.</u></p>
Sch 10.7 25 (8)	Partly agree	If the <b>metering equipment provider notifies</b> its approval to the addition or change of the burden or <b>compensation factor</b> of a measuring transformer, it must ensure that the <b>metering installation is recertified</b> by an <b>approved test house</b> for the change in burden or <b>compensation factor</b> before the addition or change becomes effective.	<p>Suggest the following change:</p> <p>If the <b>metering equipment provider notifies</b> its approval to the addition or change of the burden or <b>compensation factor</b> of a measuring transformer, it must ensure that the <b>metering installation is recertified</b> by an <b>approved test house</b> for the change in burden or <b>compensation factor</b> before <u>at the time</u> the addition or change becomes effective.</p>

<p>Sch 10.7 25 (10)</p>	<p>No</p>	<p>If the <b>metering equipment provider notifies</b> its approval to the addition or change of the burden or <b>compensation factor</b> of a measuring transformer, it must ensure that the <b>metering installation is recertified</b> by an <b>approved test house</b> for the change in burden or <b>compensation factor</b> before the addition or change becomes effective.</p>	<p>This clause is seen as overly restrictive. Where an instrument transformer has been tested and certified as being within its class the expectation is that the device will remain accurate over its full burden range. A 10% change in burden would be a more realistic value.</p> <p>There is no provision for minor changes in CT burden. If for instance a meter change is not like for like there is a potential change in burden that would require the CT to be recertified. As with VT there should be a provision for burden changes up to 10%.</p> <p>Despite the comments above, different provisions should apply to metering installations at points of connection to the grid where instrument error corrections are applied. Testing has shown that where instrument transformer corrections are applied burden changes will have little impact on the overall installation accuracy.</p> <p>It is suggested that burden changes up to 80% of maximum burden should be permitted where error correction are applied. This should apply to both CTs and VTs.</p>
<p>Sch 10.7 34 (2) (c)</p>		<p>(c) any actions taken to remedy with a breach of this Part; and</p>	<p>Should this be:  (c) any actions taken to remedy with a breach of this Part; and</p>

Sch 10.8 2 (1) (c)	Partly agree	<p>(c) if a burden is lower than a test point specified in a nominated standard, either—</p> <p>(i) seek confirmation of accuracies from measuring transformer manufacturers; or</p> <p>(ii) ensure that burden resistors are used to correct measuring transformers; and</p>	<p>An approved test house should be able to perform a test to establish the accuracy. Suggest the following:</p> <p>(iii) arrange for sufficient testing by a qualified approved test house to confirm the accuracy.</p>
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2.	<b>Do you agree with the consequential changes to the definitions in part A? If not, please provide details.</b>		
Definition	Yes/ No	Comments	Response
All changes	Yes		

3.	<b>Do you agree with the consequential changes to the rules in part E? If not, please provide details.</b>		
Rule No	Yes/ No	Comments	Response
All changes	Yes		

Question No.	Question	Answer
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4.	<b>Do you agree with the proposal to change the services access interface to include meter reading software?</b>	No. The service interface is the handover point between Parts 10 and J and is specified by the certifying test house. It is not practical for the technician who is certifying an installation to take responsibility for collection systems and processes.
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Question No.	Question	Answer
6.	<b>Do you agree with reducing the maximum time error of data storage devices for non half hour metering installations from <math>\pm 90</math> seconds to <math>\pm 30</math> seconds? [Part J Schedule J2 Rule 2.4 &amp; Part 10 Schedule (5) 10.6 clause 7(5) table 1]</b>	Yes

7.	<b>Do you agree with the proposal to add rules around the reasonable cost of supplying metering data by the metering equipment provider [clause 2 of schedule 10.6], and the disputes provision regarding costs? [Part 10 Schedule 10.6 clause 2(40 to 2(6))]</b>		
Rule No	Yes/ No	Comments	Response
	Yes	Agree to proposal to add rules to recover reasonable cost and the proposed dispute resolution process.	