

Whitlow & Associates Limited

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Dear Jenny

Advanced Metering Consultation

We have reviewed the information supplied relating to the above consultation paper and our responses to the questions (plus an addenda of an issue we believe may have been overlooked) as attached.

Kind regards



Trevor Whitlow

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Electricity Governance Rules Auditor*

Question 1	Do you agree with the metering strategy outlined in section 3? Please discuss reasons for agreeing or disagreeing.	The strategy of AMR/AMI is sound to the extent that the end user will understand or be able to react to pricing signals, and such reaction is to be benefit of the end-user. Not all users will want or be able to “participate” to a level that is beyond the present retailer tariff price signal model.
Question 2	Do you agree that competing demands for discretionary load could create a demand management issue for the industry? Please discuss reasons for agreeing or disagreeing. (<i>section 3: advanced metering and load management</i>)	Where demand is captured by parties other than the distributor, without the ability of the distributor to override the signals of other parties, network stability and transmission costs could be at risk. However, the present use of load control does not appear to offer the retailer sufficient options regarding load control for price benefit. A compromise allowing the sharing of benefits has been needed for some time.
Question 3	Do you agree that certain areas such as consumers on AUFLS feeders, and certain type of controlled load should remain under the centralised load management carried out by distributors? Please discuss reasons for agreeing or disagreeing. (<i>section 3: advanced metering and load management</i>)	Yes. Network and grid stability and security issues are inherent in AUFLS. Appropriate priority should be assigned.
Question 4	Do you consider that with the development of distributed load management within advanced meters distributors will have less incentive to maintain a centralised load management system? Please discuss reasons for agreeing or disagreeing. (<i>section 3: advanced metering and load management</i>)	There is the possibility that many good load control assets could be stranded, however this must also be considered in the context that some areas have less than ideal load control systems now. The rural areas that may have less than optimum load management now may be largely overlooked in any advanced meter roll-out due to the higher infrastructure costs on communications. Therefore the incentive may be less in the areas where existing systems are sound (dense urban areas), and where incentives currently have a low focus (rural/remote) there may be no benefit seen.
Question 5	Is there additional advanced metering or load management capabilities that should have been included or noted? If yes, please discuss these. (<i>section 3: advanced metering and load management</i>)	No

Question 6	Do you agree that consumers will react to the price signals that advanced metering systems can deliver? Please discuss reasons for agreeing or disagreeing. <i>(section 3: advanced metering and load management)</i>	Only a minor percentage will react in our view. Many are likely to take the view that their retailer should be managing the price risks rather than handing them on to the end user.
Question 7	Do you agree with the objectives outlined in section 4? Please expand with why or why not. <i>(section 4: objectives of advanced metering)</i>	4.2 a, b, e, f, g & h should occur to some degree. This is more likely to occur if the advanced metering is retailer agnostic. 4.2 c & d will only occur if the objectives of the entire industry align.
Question 8	Are there additional objectives of advanced metering that should be added? If yes, please discuss these. <i>(section 4: objectives of advanced metering)</i>	More may evolve but are unlikely to add economies not already considered.
Question 9	Do you consider that there is an issue to be addressed on ownership of discretionary load on a consumer's premise? Please discuss why you agree or disagree. <i>(section 7.2: load control)</i>	Provided that any existing "base" of controlled load that the distributor requires to be available for transmission cost minimisation and network stability is not eroded, we see no issues with ownership of other load.
Question 10	Do you consider that the beneficiaries of information from advanced meters should pay for access to the information outlined in section 7.3? Please discuss why you agree or disagree.	Distributors should be able to extract value from the information, therefore any cost for the data should be recoverable, but should not exceed the real value that can be obtained. The danger is that any distributor costs will simply be passed through (subject to the CPI-X) to the end user anyway. Who actually owns the data?
Question 11	Do you consider that remote disconnections for credit issues should not be carried out? Please discuss why you agree or disagree. <i>(section 7.4: credit control and vacant premises control)</i>	Provided appropriate guidelines are followed, disconnection for credit issue should not be excluded as a tangible benefit.
Question 12	Do you consider that remote connections may require the consumer accepting responsibility for the restoration? Please discuss why you agree or disagree.	Yes, in every case the consumer must be the sole party that completes the action of power restoration when the activity is enabled remotely. Basic safety regimes require this. We see that advanced metering systems would have the ability to offer fast response credit control ability provided appropriate guidelines were followed in its use. We would also highlight an

		emerging issue where the Electricity Regulations (1997) may have an expectation that meters are de-energised by the “main switch”, such issues if literally applied may limit the usefulness of advanced metering for vacant premises reconnection or reading as communication with the meter may not be available.
Question 13	Do you agree with the discussion on costs outlined in section 7.5? Please discuss why you agree or disagree.	<p>We agree with the discussion points.</p> <p>The issue of wiring safety will occur irrespective of any implementation of advanced metering, under normal compliance plans that will require meter replacement irrespective of the use of advanced metering.</p> <p>Remote sites will need manual reading in some cases, though this does not preclude interval or multi-register capability, using the washup cycle for accuracy. It may introduce the need for billing creativity however.</p>
Question 14	Do you consider that costs should be allocated to the beneficiaries of advanced meter functionality? Please discuss why you agree or disagree. (<i>section 7.5: costs</i>)	<p>Wherever the costs are initially “allocated” they may tend to be reflected to one entity, the customer.</p> <p>Unless there is some regulatory oversight on the matter, the costs to the customer may not always equal the benefits or savings derived.</p>
Question 15	Do you agree with the discussion on safety issues? Are there any other safety issues that should be considered? Please note and discuss these in your submission. (<i>section 7.6: safety</i>)	<p>Safety is paramount, as the equipment is being installed in a customer’s premises.</p> <p>History has shown that single screw whole current terminals are unsuited to New Zealand. While disconnection of the Neutral at the same time as disconnection of the phase occurs is not illegal, it removes the “social interaction” of the installation earth from the overall MEN system. This is not to be encouraged; therefore neutral switching should be actively discouraged.</p>
Question 16	Do you agree with the discussion on switching? Please discuss any issues in your submission.	We agree with the issues raised in switching.
Question 17	Are there any other switching issues that should be discussed? Please discuss these in your submission. (<i>section 7.7: switching issues</i>)	We note that if an advanced meter returns an actual meter register as a reading (rather than a pseudo register created by pulse information) that the actual electronic register should be recognised as a real reading for switching purposes.

Question 18	Do you agree that there is a potential for advanced meters to create barriers to trade? Please discuss why you agree or disagree. (<i>section 7.8: barriers to competition</i>)	Direct end-user contracts for meter rental may be a barrier, where the functionality or features do not align with the retailer expectations of the advanced meter type that the retailer otherwise universally uses.
Question 19	Do you agree with the solutions to barriers to competition outlined in section 7.8.2? Please discuss why you agree or disagree.	Standardisation of meter protocols (ANSI C.12 or DLMS) is only a partial solution. Most advanced meter back office software is meter type specific. Simply standardising protocols may not lower barriers.
Appendix B, Question 1	Do you agree with changing the metering installation definition in part A of the Rules? Please discuss why you agree or disagree.	Agreed. The present definition does not include the intent of advanced metering.
Appendix B, Question 2	Do you agree with not having any changes to rules 3 and 6 of part D of the Rules? Please discuss why you agree or disagree. (<i>paragraph 7</i>)	Agreed. Only by having a single responsible party can the rules function, but this needs to have clarity and alignment with Question 18. If a retailer is to have responsibility end-user agreements with meter owners should be by agreement of the retailer only.
Appendix B, Question 3	Do you agree to changing rule 3.8 of code of practice D3 of part D of the Rules? Please discuss why you agree or disagree.	Agree. If consumer reaction to pricing signals is an intended outcome, the consumer is the ultimately affected party.
Appendix B, Question 4	Do you agree that appropriate controls be placed within advanced metering installations and that it is reasonable to extend the inspection period beyond one year? Please discuss why you agree or disagree.	The annual inspection is a rare event now. The lifespan of an advanced meter will likely require a 10-year visit; therefore no changes should be required.
Appendix B, Question 5	Do you agree with not changing rule 3 of code of practice D4 of part D of the Rules? Please discuss why you agree or disagree.	Agree. Any firmware update should have to meet the existing rules; the manner in which the update is performed is not relevant.
Appendix B, Question 6	Do you agree with the definitions in paragraph 18 being incorporated in the advanced metering guidelines?	Agreed
Appendix B, Question 7	Do you agree with the proposed changes to rule 5.1.7 of code of practice G1 of schedule G8 of the Rules? Please discuss why you agree or disagree. (<i>paragraphs 18, 19, and 20</i>)	This rule needs revision. The average materiality of a time error is low; the ability to gain time synchronisation to the present accuracy requirements presents a huge barrier. We would suggest 90 – 120 seconds as a typical accuracy for category 1 and 2 advanced metering.

Appendix B, Question 8	Are there any other rules that you consider constrains the introduction of advanced metering infrastructure or technology that require changes? Please discuss any other rule changes you see as necessary.	We have concerns that advanced meter owners may impose their equipment by end-use agreements with the customer, without the consent of the retailer who has responsibilities. We would prefer to see a rule that controls such future activity.
Appendix E, Question 1	Do you agree with the minimum attributes listed in the advanced metering attributes table? Please discuss why you agree or disagree.	Agree
Appendix E, Question 2	Are there any other attributes that you consider should be included within any of the columns of the advanced metering attributes table? Please give reasons and discuss why you consider they should be included.	None noted
Supplementary Issue Not covered by questions above	Section 6: Functionality and dependencies.	<p>Layer two is dependent on more than just layer one (or layer one is inadequately described).</p> <p>It depends both on layer one and of some regular and on-going sampling or verification between the layer one total physical meter register and the sum of any derived remote (non-integral with the meter) registers, on a regular basis.</p> <p>Such verification should be hardware family based.</p>