



Date of Request for Comment:	December 2, 2020
Period of Comment:	December 2, 2020 through January 8, 2021

**Please provide your comments on the following:**

Item #		Stakeholder comments	AESO Replies
1	Whether you understand and agree with the objective or purpose of the proposed final draft of Section 502.10 and whether, in your view, the proposed final draft of Section 502.10 meets the objective or purpose, and if not, why.	<p><b><u>AltaLink Management Ltd. (“AltaLink”)</u></b> AltaLink understands and is in agreement with the purpose of the proposed final draft.</p>	The AESO acknowledges AltaLink’s comment.
		<p><b><u>ATCO Electric Ltd. (“ATCO”)</u></b> No comment</p>	
		<p><b><u>EPCOR Distribution &amp; Transmission Inc. (“EDTI”)</u></b> EDTI understands and agrees with the objective and purpose of the proposed final draft of Section 502.10.</p>	The AESO acknowledges EDTI’s comment.
		<p><b><u>FortisAlberta Inc. (“FortisAlberta”)</u></b> FortisAlberta understands and agrees.</p>	The AESO acknowledges FortisAlberta’s comment.
		<p><b><u>Rodan Energy Solutions (“Rodan”)</u></b> We understand and agree that the measurement standard must be updated as it expired in 2013. However, we also believe that we have taken a very well-written Measurement System Standard and simplified it too much. Revenue Metering is the financial register for the electricity industry and should be more prescriptive or leaving the meter open to potential errors, inefficiencies or tampering.</p>	<p>The final proposed Section 502.10 is drafted to meet the guiding principles for the project that were outlined in the December 10, 2019 Stakeholder Session presentation. These principles are as follows:</p> <ul style="list-style-type: none"> <li>• Set the minimum revenue metering equipment and process requirements that support and promote the safe and reliable operation of the Alberta interconnected electric system and</li> </ul>

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			<p>fair, economic and openly competitive market for electricity;</p> <ul style="list-style-type: none"> <li>• Be consistent with, but not duplicative of, other AESO Authoritative Documents and applicable legislation and regulations, including AUC Rule 021, <i>Electric and Gas Inspection Act</i> and regulations, Measurement Canada requirements and the <i>Alberta Electrical Utility Code</i>;</li> <li>• Maintain current practice from the Measurement System Standard, where appropriate;</li> <li>• Be authoritative and measurable;</li> <li>• Avoid overly prescriptive methodologies to the extent practicable; and</li> <li>• Consider stakeholder feedback, including cost considerations.</li> </ul> <p>Additionally, in support of the Government of Alberta's <i>Red Tape Reduction Initiative</i>, the AESO is committed to reducing regulatory requirements. In accordance with this initiative, the final proposed Section 502.10 reduces regulatory duplication, simplifies the language from the <i>AESO Measurement System Standard</i>, streamlines technical and regulatory requirements and ensures no undue burden while providing for the accuracy of data for the functioning of the electricity market.</p>
		<p><b><u>TransCanada Energy Ltd. ("TCE")</u></b></p> <p>To the extent that the intended purpose or objective was to replace the <i>AESO Measurement System Standard</i>, TCE agrees that the proposed rule meets that objective.</p>	<p>The AESO acknowledges TCE's comment.</p>

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2	Whether you agree that the proposed final draft of Section 502.10 is not technically deficient, and if not, why.	<p><b><u>AltaLink</u></b></p> <p>AltaLink does not agree. AltaLink is concerned that the proposed final draft might be technically deficient. AltaLink notes that there is no accountability to the Metering Data Provider (MDP) as defined in the AESO Measurement System Standard. In the event the roles of the legal owner (or Metering System Provider) and the MDP are managed by different parties, the legal owner may have no control on the metering data. AltaLink suggests including the responsibility of the MDP in the proposed Section 502.10.</p> <p><b><u>ATCO</u></b></p> <p>1. “<b>apparent power</b>” should be removed from <b>4(2)(b)</b>. The metered data for the <b>measurement point definition record</b> are published to the market place in the daily system measurement transaction (DSM). Only MWh and MVARh are required in DSM. Also, section 5 for the revenue meter does not specify the requirement for apparent power.</p> <p><b>4(2)(b)</b> allows for the proper measurement of <b>metered energy, metered demand</b>, and metered</p>	<p>As noted in the AESO’s letter of notice dated December 2, 2020, Stakeholders indicated through feedback that the party responsible for performing the work associated with the various requirements in final proposed Section 502.10 depends on their particular circumstances. As a result, the AESO determined that accountability for meeting the requirements of final proposed Section 502.10 should remain with the entity that has legal ownership of the revenue meter. If the legal owner does not wish, or does not have the ability, to perform the work to fulfill a particular requirement, it may contract with a third-party service provider.</p> <p>Additionally, the AESO notes that the applicability of final proposed Section 502.10 aligns with subsection 10.1(2) of AUC Rule 021, <i>Settlement System Code Rules</i> (“AUC Rule 021”).</p> <p>In the AESO’s view, the applicability of final proposed Section 502.10 does not render it technically deficient.</p> <p>The AESO does not agree with the recommendation to remove “apparent power” from subsection 4(2)(b) as “metered energy”, “metered demand” and “apparent power” are billing determinants in the ISO tariff.</p> <p>However, the AESO acknowledges that a revenue meter does not “measure” apparent power. A revenue meter measures “real power” and “reactive power” which are the constituting components of</p>

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		<p><b>apparent power</b> in accordance with <b>ISO rules</b> and the <b>ISO tariff</b>, as applicable; and</p>	<p>“apparent power”. As such, the AESO has revised subsection 4(2)(b) as follows:</p> <p><b>4(2)(b)</b> allows for the proper measurement of <b>metered energy, metered demand, and metered calculation of apparent power</b> in accordance with <b>ISO rules</b> and the <b>ISO tariff</b>, as applicable; and</p> <p>The AESO has reviewed the wording in subsection 5 and is of the view that it does specify the requirement for “apparent power” because the accuracy class of the two components of “apparent power”, “real power” and “reactive power” are defined in subsections 5(1) and 5(2), respectively.</p>
		<p>2. “<b>revenue meter</b>” in <b>6(1)(b)</b> should be replaced with “measurement transformer”.</p> <p><b>6(1)(b)</b> the <b>revenue meter measurement transformer</b> is not the subject of a dispensation under the Electricity and Gas Inspection Act, RSC 1985 c E-4, as amended.</p>	<p>The AESO has reviewed the wording in subsection 6(1)(b) and agrees with ATCO’s recommendation to revise revenue meter to measurement transformer. This revision provides clarity that there may be instances when the measurement transformer is specifically the subject of a dispensation.</p>
		<p>3. The AESO removed the reference to AUC Rule 21 and kept the 8 years in the “Section-502.10-Draft-2020-12-02.pdf”. ATCO suggests reverting to the original wording but removing the 8 year requirement. If the period is changed in Rule 21, this section of the ISO rule does not need to change.</p> <p><b>7(1)</b> The <b>legal owner</b> of a <b>revenue meter</b> must retain metering data from the <b>revenue metering system</b>, including a record of final estimates and adjustments, and the method used to perform the estimates or adjustments for <b>a period of at least 8 years</b>.</p>	<p>The original wording of subsection 7(1) required a legal owner of a revenue meter to retain metering data from the revenue metering system in the electronic format specified by AUC Rule 021. The AESO removed the reference to AUC Rule 021 in final proposed Section 502.10 because, in its view, it was not necessary to reference the format of metering data when it is already covered by AUC Rule 021.</p> <p>Under subsection 5.2.5(3)(a)(ii) of AUC Rule 021, credit post financial adjustments for retailer specific adjustment transactions can extend eight years into the past. Subsection 7(1) requires a legal owner to retain metering data for a minimum of 8 years, which</p>

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			<p>is broader than the specific transaction sets in subsection 5.2.5(3)(a)(ii) of AUC Rule 021.</p> <p>In order to ensure data records are retained to assist with the post financial adjustment mechanism (“PFAM”) process and in case of disputes, the AESO believes including the 8-year minimum data retention requirement in Section 502.10 is appropriate.</p>
		<p>4. Replace reference 4(3) with 4(2) in 7(2).</p> <p><b>7(2)</b> The <b>legal owner</b> of a <b>revenue meter</b> must process metering data for each <b>measurement point</b> in accordance with the algorithm in the <b>measurement point definition record</b> issued in accordance with subsection 4(<del>3</del>2).</p>	<p>The AESO agrees and has corrected the typographical error.</p>
		<p>5. ATCO suggests replacing “validation” with “in-situ test” for consistency and avoiding confusion.</p> <p><b>7(4)</b> The <b>legal owner</b> must maintain <b>validation in-situ test</b> records until the next in-situ testing date set out in subsection 8(1).</p>	<p>The AESO does not agree with ATCO’s proposed revision to replace “validation” with “in-situ”. “Validation records” encompasses in-situ, commissioning and other test records which, in the AESO’s view, should be maintained until the next test is performed.</p> <p>Additionally, the AESO has removed the reference to subsection 8(1) from subsection 7(4) of final proposed Section 502.10 to clarify that the legal owner is required to maintain validation records until the date of the next in-situ test, which may be conducted on a date earlier than the schedule in subsection 8(1).</p> <p><b>7(4)</b> The <b>legal owner</b> must maintain validation records until the <b>date of the next in-situ test performed testing date set out in subsection 8(1)</b>.</p>

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		<p><b><u>EDTI</u></b></p> <p>EDTI agrees that the proposed final draft of Section 502.10 is not technically deficient.</p>	<p>The AESO acknowledges EDTI's comment.</p>
		<p><b><u>FortisAlberta</u></b></p> <p>FortisAlberta agrees.</p>	<p>The AESO acknowledges FortisAlberta's comment.</p>
		<p><b><u>Rodan</u></b></p> <p>While Rodan is sympathetic to the position espoused by other stakeholders in this consultation (cost and administrative burden), we are deeply concerned that the proposed testing intervals will leave the system potentially vulnerable. Although Rodan does not agree with the test frequencies in proposed Section 502.10, we agree with a general reduction. In previous submissions, Rodan's proposed test frequencies are less frequent than existing Measurement System Standard, but more frequent than what Section 502.10 proposes. Being the metering technicians who are commonly in the field performing tests, these are the recommendations based on best industry practices. The argument presented by other stakeholders that errors are not common occurrences is not accurate. It is not always just a measurement error of the revenue meter that we find. Rodan's metering technicians frequently find the following errors and damage when inspecting and testing revenue metering systems for our clients:</p> <ul style="list-style-type: none"> <li>• Misconfiguration MV90 file causing incorrect remote reads</li> <li>• Mislabeled/swapped meters on 2 x parallel feeders. Example: A Bus metered by B Meter; B Bus metered by A Meter</li> </ul>	<p>The AESO acknowledges Rodan's comments. As noted above in the AESO's reply to Item #1, proposed final Section 502.10 contains the minimum technical requirements for revenue metering systems.</p> <p>The AESO responds to Rodan's specific comments regarding testing frequency, MW class and MW range calculation in turn below.</p>

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		<ul style="list-style-type: none"> <li>• Incorrect billing multiplier being used for 400MVA+ generation site</li> <li>• Shorted Current Transformers</li> <li>• Current Transformers on incorrect taps</li> <li>• Site where customer removed test switches</li> <li>• Faulty test switch not properly shorting CTs and arcing</li> <li>• Burnt test switch. Cause unknown</li> <li>• Instrument Transformers not Measurement Canada Approved</li> <li>• Blown PT fuses</li> <li>• Instrument Transformers Measurement Canada approved, but metering connected to an unapproved ratio</li> <li>• Burden exceeded on Instrument Transformer</li> <li>• Burden exceeded on revenue meter</li> <li>• Copper theft affecting grounding</li> <li>• Rodents building nests and chewing wire. Especially for pad-mount installations</li> <li>• Bees and wasp nests in meter cabinets</li> </ul> <p>An appropriate analogy would be the testing performed on automobiles or airplanes. The industry performs regular testing and inspections of cars, trucks, trains and planes, etc. as preventative measures – that prevent failures/errors before they happen to ensure safety, minimize the risk of injury during product use, proper technical documentation and future design improvements. The cost of regularly testing a revenue meter compared to the security,</p>	<p>The AESO is of the view that electrical safety issues are the mandate of the <i>Alberta Electrical Utility Code</i> and should not be included in an ISO rule. The <i>Alberta Electrical Utility Code</i> provides specific installation and maintenance requirements for metering equipment. Various safety requirements are also covered in the <i>Canadian Electrical Code</i>.</p>

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		<p>reliability and cost impact of the revenue ledger of the entire electricity system is negligible.</p> <p>More frequent testing intervals provide the following important benefits:</p> <ul style="list-style-type: none"> <li>a. To prevent long periods of possible inaccurate measurement which can lead to difficult settlements, MC disputes, data estimations and corrections.</li> <li>b. To detect unauthorized access and tampering within reasonable time frames.</li> <li>c. For safety. Metering Equipment can experience damage from rodents (especially with pad mounted units), weather damage, corrosion, water damage, etc. that can cause the units to malfunction or become safety hazards.</li> <li>d. Utilities charge customers based on their ratchet demand due, because to the strain they put on the system during peak periods. Electrical services that have more impact on the grid when they are active should be tested more often.</li> <li>e. The most frequent testing interval in the proposed Section 502.10 is 2 years. This is not adequate for large sites in excess of 50MW. Measurement problems on sites of this magnitude should be identified within a year in order to minimize the potential financial impact to all the parties involved. The larger sites pose a bigger risk because of the financial impact even a small error would cause. The cost of annual testing for a large site (&gt;50MW) is arguably negligible in relation to revenue earned from power production.</li> <li>g. Most meters currently deployed in AB have a 4-year seal (6 years after installation when new and 4 years thereafter). At that point, the meters need to be taken out of service and resealed. With a 4-year test interval, a meter will be in service for an entire seal period having</li> </ul>	<p>Testing frequency was the subject of extensive consultation with Stakeholders.</p> <p>While more frequent in-situ testing would reduce the likelihood of errors, the AESO is of the view that that testing frequency needs to balance the benefits of ensuring the accuracy of data with the costs of testing.</p> <p>The AESO reviewed historical data and determined that in-situ test failures have been minimal. The AESO heard from Stakeholders that a significant challenge for meter testing is the cost associated with outage scheduling and travel to locations. Taking into account these considerations and current industry practice, the AESO is of the view that the testing frequencies in final proposed Section 502.10 achieve the right balance between costs and benefits for testing.</p> <p>The final proposed Section 502.10 defines the minimum requirements for testing frequency. These requirements do not prevent the legal owner of a revenue meter to test on a more frequent basis if they deem it appropriate.</p> <p>The AESO provides the following responses to Rodan's list of specific reasons supporting more frequent testing:</p> <p>Points a and d – Subsections 6 and 8 of final proposed Section 502.10 contain requirements for measurement transformer accuracy and revenue meter test frequency, respectively, which guard against the issues listed in points a and d. Also see the AESO's response to points e and g below.</p>



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	<p>only been tested once when it is first installed. There should be at least one other test performed on these meters during the 4-year seal period to ensure accuracy, particularly at larger sites.</p> <p>Revenue Metering Systems should be tested at each of the following trigger points:</p> <p>a) Prior to the energization of a new metering system (commissioning tests only).</p> <p>b) Within four weeks of the energization of a new or altered metering system.</p> <p>c) Upon the change of any equipment associated with a metering system.</p> <p>d) Within the time period specified in the following table:</p> <table border="1" data-bbox="655 1295 1346 1421"> <thead> <tr> <th>MW Class</th> <th>Average MW Range</th> <th>Testing Interval</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>&lt;1MW</td> <td>6 years</td> </tr> </tbody> </table>	MW Class	Average MW Range	Testing Interval	A	<1MW	6 years	<p>Point b – Measurement Canada standards contain provisions for meter tampering and corrective actions. It is not necessary to duplicate these regulatory requirements in final proposed Section 502.10.</p> <p>Point c – The <i>Alberta Electrical Utility Code</i> has provisions for electrical safety. It is also related to good electric industry practice. It is not necessary to duplicate these regulatory requirements in final proposed Section 502.10.</p> <p>Point e and g – Please see the AESO’s above responses regarding testing frequency. The AESO further notes that Measurement Canada is in the process of amending S-E-11, <i>Specifications for the Installation and Use of Approved and Verified Electricity Meter Used to Establish Processed Legal Units of Measure</i> to require mandatory testing whenever a metering component is changed.</p> <p>In the AESO’s view, trigger points a), b) and c) identified by Rodan are covered in subsection 8(1) of final proposed Section 502.10.</p> <p>At the June 29, 2017 working group meeting, Stakeholders presented test frequency data. Upon extensive discussions, the working group agreed to reduce the number of MW classes from 5, as set out in the <i>AESO Measurement System Standard</i>. The majority of Stakeholders have agreed upon the following MW classes:</p> <ol style="list-style-type: none"> <li>&lt; 5 MW governed by Measurement Canada therefore not included in the final proposed Section 502.10;</li> </ol>
MW Class	Average MW Range	Testing Interval						
A	<1MW	6 years						

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		B	>=1MW and <=10MW	4 years	<p>2. <math>\leq 20</math> MW and <math>\geq 5</math> MW, every 4 years, detailed in subsection 8(1) of the final proposed Section 502.10; and</p> <p>3. <math>&gt; 20</math> MW, every 2 years, detailed in subsection 8(1) of the final proposed Section 502.10.</p> <p>In May 2020, the AESO requested feedback from Stakeholders on whether 0 MW intervals should be factored into the methodology for determining MW class. The majority of Stakeholder feedback received supported including 0 MW intervals in the MW class methodology.</p> <p>Counting 0 MW intervals provides a simple and straightforward calculation. If 0 MW intervals are excluded, other factors would also need to be considered, including the MW or percentage threshold at which an interval is counted.</p>	
C	>10MW and <=20MW	3 years	D	>20MW and <=50 MW		2 years
E	>50MW	1 year	<p><b>Proposed MW Range Calculation</b></p> <p>The proposed MW Range calculation has the potential of further reducing test frequencies in larger load and generation sites. In Rodan's view:</p> <p>a. MW Range should be based on average demand when the electrical service being metered is active, instead of cumulative annual energy transfer.</p> <p>b. The MW Range calculation should not include zero intervals. It should be calculated based on non-zero intervals only. For example, if a 50MW site is delivering/receiving 55MW for half the year, they should be in the &gt;50MW class, as opposed to the &gt;20 MW and &lt;=50MW class.</p> <p>c. Using the methodology proposed above will ensure that electrical services which have a high average demand when operational are tested more frequently. This is important because the settlement values are much greater, and the impact on the grid during operational times is more substantial.</p> <p>d. For large loads &amp; generator sites, potential measurement issues should be identified as soon as reasonably possible to avoid difficulty settlements, MC disputes, data estimations and corrections; regardless of</p>			

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		<p>whether the electrical service being metered is inactive for a portion of the year.</p> <p><b>Other Recommendations for Best Practices</b></p> <p>AUC Rule 021 does not include any guidelines for minimum memory requirements for the storage of interval data in a revenue meter. Revenue meters should have sufficient memory to store interval data for specified duration of time in the event of a communication system failure.</p> <p>A minimum retention period of meter readings and clock functions in the absence of line power is necessary to prevent data loss and maintain clock synchronization if a revenue meter loses power for an extended period of time.</p> <p>Rodan recommends that Introduction of a sealed backup (alternate) revenue meter requirement for new meter points. The backup (alternate) meter can share Instrument Transformers with the primary meter but should have a dedicated test switch.</p> <p>When a meter point has a sealed backup (alternate) meter available, it eliminates the need to seek temporary dispensation from Measurement Canada in the event of a primary meter failure. Backup (alternate) meters also reduce site downtime and eliminate the need for data estimations. In many cases, proxy data used for data estimations comes from measurement systems that are not revenue grade and typically have a lower accuracy rating. Backup (alternate) meters also serve as an excellent alternate/secondary source for meter testing.</p> <p>If a site doesn't have sealed backup metering, the only options the client has in the event of a failure are:</p> <ol style="list-style-type: none"> <li>a. Immediately replace the meter, or</li> </ol>	<p>The AESO recommends that Rodan raise any concerns regarding AUC Rule 021 with the Alberta Utilities Commission.</p> <p>In May 2020, the AESO canvassed Stakeholders on their use of back-up meters, the costs associated with back-up meters, and whether back up meters should be a minimum requirement for Alberta. The feedback indicated that, based on current practices and costs, back-up meters should not be a minimum technical requirement.</p> <p>Final proposed Section 502.10 does not prevent a legal owner of a revenue meter from installing one or more backup meters. The installation and maintenance of these backup meters will be at the legal owner's cost.</p>

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		<p>b. If a suitable sealed revenue meter is not available for immediate replacement, all parties are technically forced to seek a dispensation from Measurement Canada which appears to be a laborious process.</p> <p>Section 502.10 should also include minimum security requirements to prevent unauthorized access and tampering of revenue metering systems including revenue meters, recorders, meter cabinets, test switches, instrument transformer cabinets, instrument transformer secondary terminals, CT shorting terminals, communications equipment, demand reset mechanisms, meter socket ring seals and meter power/potential reference fuse blocks and/or breakers. If the meter is the only component of a revenue metering system that is required to have a sea, it leaves vulnerabilities and enables tampering methods such as:</p> <ul style="list-style-type: none"> <li>• Shorting CTs via test switch or shorting terminals</li> <li>• Changing taps on CTs &amp; PTs at secondary terminals or terminal blocks</li> <li>• Turning off meter power, or potential references via test switches, fuse blocks, and/or breakers</li> <li>• Removing meters from sockets</li> <li>• Tampering via re-programming of communications equipment</li> </ul> <p>Section 502.10 should include a rule stating that instrument transformers and secondary circuits must be commissioned and tested prior to energization. Commissioning/Test reports should be documented. This step is often skipped. If there is a problem with the instrument transformer installation, it can lead to large amounts of power being delivered/received to/from the grid, and not being registered correctly until the problem is</p>	<p>The AESO notes that Measurement Canada has specific provisions for meter tampering and corrective actions. In Alberta, every legal owner of a transmission facility and distribution facility have their terms and conditions for electric services respecting wiring, installation, operation and siting for metering and metering equipment.</p> <p>The AESO is of the understanding that the testing of instrument transformers, which includes secondary circuits, occurs prior to commissioning as part of the factory acceptance test. It is not necessary to duplicate this testing in final proposed Section 502.10.</p>

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		<p>corrected. Commissioning and Testing of instrument transformers prior to energization can also identify major installation problems and prevent damage to expensive equipment upon site start-up. There are several reasons why Rodan believes Instrument Transformers should be tested periodically:</p> <ul style="list-style-type: none"> <li>a. Primary current and voltage measurements are rarely possible to take in-situ due to safety restrictions.</li> <li>b. Secondary/alternate source checks during in-situ testing cannot identify inaccurate instrument transformers if the secondary/alternate source shares instrument transformers with the revenue meter, which is very common.</li> <li>c. In the event where primary measurements are possible, it is difficult to accurately test Instrument Transformer accuracy while energized (during in-situ testing for example) because the electrical service loading can fluctuate quickly and measurements need to be compared between two separate devices (revenue meter/power analyzer and primary measurement source).</li> <li>d. Periodic testing of Instrument Transformers can identify potential problems (related to performance and safety) and prevent failures before they happen.</li> </ul>	
		<p><b><u>TCE</u></b> To date, TCE has not identified any technical deficiencies in the proposed rule.</p>	<p>The AESO acknowledges TCE's comment.</p>
<p>3</p>	<p>Whether you agree with the proposed final draft of Section 502.10, taken together with all ISO rules, supports a fair, efficient</p>	<p><b><u>AltaLink</u></b> AltaLink is in agreement the proposed final draft is fair and efficient for an openly competitive market.</p>	<p>The AESO acknowledges AltaLink's comment.</p>

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	and openly competitive market, and if not, why.	<p><b><u>ATCO</u></b> No comment</p>	
		<p><b><u>EDTI</u></b> EDTI agrees the proposed final draft of Section 502.10 supports a fair, efficient and openly competitive market.</p>	The AESO acknowledges EDTI's comment.
		<p><b><u>FortisAlberta</u></b> FortisAlberta agrees.</p>	The AESO acknowledges FortisAlberta's comment.
		<p><b><u>Rodan</u></b> The proposed final draft of Section 502.10 does not support a fair and efficient market. Inaccurate measurement of electricity generation and consumption is not “fair” as in most cases there will be one party that will suffer financial harm – either because the revenue metering system over or under reports the amount of electricity generated or consumed. In order to ensure fairness, the minimum technical requirements for metering must be established in rules or regulations and Measurement Canada regulations must be enforced. This will mean that all meter system providers will have to bid into projects with systems that comply with these rules and regulations. When Rodan bids into a project, we propose fully MC compliant systems because we are aware of all the regulations.</p>	<p>The requirements in final proposed Section 502.10 clearly set out the minimum technical and operating requirements for revenue metering systems in order to ensure accurate data. The AESO does not agree with Rodan that proposed final Section 502.10 will lead to issues with electricity measurement that will undermine the fair and efficient operation of the market.</p> <p>Final proposed Section 502.10 operates in tandem with Measurement Canada regulations, AUC Rule 021 and the <i>Alberta Electrical Utility Code</i>, which also have specific provisions respecting corrective actions for measurement and data errors. The AESO agrees with Rodan that Measurement Canada regulations must be enforced but maintains that the proper body for enforcing such regulations is Measurement Canada. Again, it is not necessary for final proposed Section 502.10 to duplicate provincial or federal regulatory requirements, which could result in double jeopardy for market participants under their respective enforcement</p>

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		<p><b><u>TCE</u></b></p> <p>The AESO has proposed that the legal owner be the party responsible for the metering technical and operating requirements even though they may not be the party responsible for conducting the work. Indeed, in some cases the legal owner does not have the necessary credentials to do the work. This is a change from the current practice and will increase costs to market participants and will not result in an efficient outcome. TCE submits that the efficient outcome would be for the party responsible for performing the work be the party responsible for meeting the requirement.</p> <p>Notwithstanding the above, TCE supports the AESO's in-situ testing frequency as set out in subsection 8(1) and (2) in the proposed rule. This testing frequency, and the calculations to determine the "MW Class" are reasonable considering the Measurement Canada testing interval and the fact that the AESO can request an in-situ test for the metering equipment if necessary.</p>	<p>regimes and a referral to the MSA for ISO rule non-compliance.</p> <p>Regarding the applicability of final proposed Section 502.10, please see the AESO's response to AltaLink's comment on item #2 above.</p> <p>The AESO acknowledges TCE's comment regarding in-situ testing frequency.</p>
4	Whether you agree that the proposed final draft of Section 502.10 supports the public interest, and if not, why.	<p><b><u>AltaLink</u></b></p> <p>AltaLink is in agreement the proposed final draft supports the interest of the public.</p> <p><b><u>ATCO</u></b></p> <p>No comment</p> <p><b><u>EDTI</u></b></p> <p>EDTI agrees the proposed final draft of Section 502.10 supports public interest.</p>	<p>The AESO acknowledges AltaLink's comment.</p> <p>The AESO acknowledges EDTI's comment.</p>

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		<p><b><u>FortisAlberta</u></b> FortisAlberta agrees.</p> <p><b><u>Rodan</u></b> Rodan is strongly of the opinion that the proposed final draft of Section 502.10 does not support the public interest for the reasons stated above.</p> <p>In addition, we offer the following recommendations that support the public interest:</p> <ol style="list-style-type: none"> <li>1. Meter System Providers (MSP) form a large and critical component of the Alberta Electricity Market. They are responsible for the proper engineering, installation and maintenance of revenue metering systems which are used for settlement purposes on a legal owner's behalf. AUC Rule 021 contains references to MSP, but the roles and responsibilities of an MSP is not defined nor elaborated anywhere within that document.</li> <li>2. Providing Meter System Services (MSS) and Meter Data Management Services (MDM) is vital to the proper and accurate operation of revenue metering systems and should be defined in Section 502.10. Market participants seldom provide Metering System Services or Meter Data Services themselves. Including a clause in Section 502.10 that owners are free to contract these responsibilities will provide clarity for market participants and would be a more accurate representation of how the Alberta Electricity Market currently operates.</li> <li>3. Including the procedures and requirements for MSS in Section 502.10 will promote system-wide consistency and provide market participants with assurance that providers are performing services to a provincial standard. In the absence of clearly defined procedures, an MSP may</li> </ol>	<p>The AESO acknowledges FortisAlberta's comment.</p> <p>Please see the AESO's response to Rodan's comment regarding item #1.</p> <p>In addition, the AESO has the following responses to Rodan's recommendations:</p> <ol style="list-style-type: none"> <li>1. The AESO recommends that Rodan raise any concerns regarding AUC Rule 021 with the Alberta Utilities Commission.</li> <li>2. Please see the AESO's response to AltaLink's comment on item #3 above. Final proposed Section 502.10 is an authoritative document that contains only legal obligations related to revenue metering systems. It is not necessary to include a legal owner's freedom to contract in final proposed Section 502.10.</li> <li>3. The final proposed Section 502.10 sets out the minimum technical and operating requirements determined appropriate for metering systems in Alberta. The AESO expects meter system service procedures to be compliant with these requirements. The AESO disagrees that specific requirements regarding meter system service procedures are necessary to ensure consistency and compliance with the minimum technical and operating requirements.</li> </ol>



Item #		Stakeholder comments	AESO Replies
		implement MSS procedures which may not comply with AESO expectations and standards.	
		<p><b><u>TCE</u></b> Please refer to TCE's comments to #3 above.</p>	Please see the AESO's response to TCE's comment regarding item #3 above.
5	Any additional comments regarding the proposed final draft of Section 502.10.	<p><b><u>AltaLink</u></b> AltaLink has no additional comments.</p>	
		<p><b><u>ATCO</u></b> No comment</p>	
		<p><b><u>EDTI</u></b> No additional comments.</p>	
		<p><b><u>FortisAlberta</u></b> No further comments other than those already provided throughout this engagement.</p>	
		<p><b><u>Rodan</u></b> Rodan understands and agrees that there are changes needed to the current Measurement System Standard. Regardless of what changes are made, we strongly recommend that the implementation of these changes is carefully planned and considers a phased approach and not just a blanket applied with a start date. This would especially apply to testing intervals and MW Class. Consider a plan where the new testing intervals start after their next scheduled test, or some other phase in approach. As we track most of the seals and in situ testing schedules for Alberta, we recommend including Rodan in</p>	The AESO acknowledges Rodan's comment. Please see the AESO's response to Rodan's comment regarding item #2 above.

Item #		Stakeholder comments	AESO Replies
		the implementation schedule for a new Measurement System Standard.	
		<b><u>TCE</u></b> No further comments at this time.	