

## Stakeholder Comment Matrix – Feb 25, 2020

### Request for feedback on sub-hourly settlement, session 1 material



<b>Period of Comment:</b> Feb. 25, 2020 through Mar. 13, 2020	<b>Contact:</b> [REDACTED]
<b>Comments From:</b> FortisAlberta Inc.	<b>Phone:</b> [REDACTED]
<b>Date:</b> Mar 13, 2020	<b>Email:</b> [REDACTED]

*The AESO is seeking comments from stakeholders on its approach to reviewing sub-hourly settlement, and content from Session 1.*

- 1. Please fill out the section above as indicated.*
- 2. Please respond to the questions below and provide your specific comments.*
- 3. Email your completed matrix to [stakeholder.relations@aeso.ca](mailto:stakeholder.relations@aeso.ca) by Mar. 13, 2020*
- 4. Stakeholder comments will be published to [aeso.ca](http://aeso.ca), in their original state, with personal or commercially sensitive information redacted, following Mar. 13, 2020.*

	Questions	Stakeholder Comments
1.	Please describe why you are interested in sub-hourly settlement and how it affects your business.	<p>FortisAlberta is a regulated electricity distribution utility in the province of Alberta. Its business is the ownership and operation of electricity distribution facilities that distribute electricity generated by other market participants from high-voltage transmission substations to end-use customers.</p> <p>FortisAlberta is responsible for collecting metering data, correcting and validating interval metering data, storing historic data, and reporting load and consumption data for periods of time to appropriate parties. It is also in the business of conducting load settlement calculations for 44% of the load in the Alberta electricity market.</p> <p>Enhancements to the market due to sub-hourly settlement addressing both generation and load response is an initiative with significant impacts on our business.</p> <p>Changes to existing AUC Rules, market transactions, metering, increased computational power of our Load Settlement system and other supporting IT systems, data storage, communication networks, head end systems, meter data management systems, and customer information systems will be required.</p>
2.	Is your organization a load, supplier, both a load and supplier, a billing agent, or other. If other, please describe.	<p>FortisAlberta is a Distribution Facility Owner (DFO), Meter Data Manager (MDM) and Load Settlement Agent (LSA).</p> <p>As an MDM we are responsible for metering and collecting metering data, correcting and validating interval metering data, storing historic data and reporting load and consumption data together with corresponding time periods to appropriate parties.</p> <p>As an LSA we conduct hourly load settlement calculations for the FortisAlberta settlement zone.</p> <p>The MDM and LSA functions will be affected by this initiative.</p>

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3.	<p>The AESO has described the scope for this process, general agenda items and timing for upcoming stakeholder engagements. Please describe if you believe the scope is appropriate. If not, please describe/provide your rationale.</p>	<p>FortisAlberta recommends that the scope consider alignment with several provincial and federal inquiries and regulatory reviews, currently underway, expected to influence the use of interval data and therefore the evolution of this initiative.</p> <p>Examples of related regulations and initiatives include:</p> <ul style="list-style-type: none"> <li>• AUC – Distribution System Inquiry – Modules One, Two and Three.</li> <li>• AESO – ISO Rule Section 502.10 Revenue Metering System Technical &amp; Operation Requirements</li> <li>• Measurement Canada – S-E-11 – Specifications for the installation and use of approved and verified electricity meters used to establish processed legal units of measure.</li> <li>• Measurement Canada - E-31 – Implementation of policies and specifications relating to standardized electricity legal units of measure and the derivation of values outside an approved meter.</li> <li>• AUC – Alberta Electric Meter Minimum Capability Guideline.</li> <li>• Modernization of the <i>Electricity and Gas Inspection Act</i> (EGIA) and Regulations (EGIR) – concludes in 2021.</li> </ul>
4.	<p>At the session, the AESO outlined the objectives of the sub-hourly settlement, which was to improve price fidelity and incent flexibility. Do you have any comments on the objectives of the sub-hourly settlement engagement?</p>	<p>FortisAlberta believes that understanding the price elasticity and the ability of all end use customers to respond to sub-hourly versus hourly price signals should be added to the objectives.</p>
5.	<p>Are there considerations other than the following that should be taken into account to determine the value in moving to sub-hourly settlement interval?</p> <ul style="list-style-type: none"> <li>• The expected enhancement in price fidelity and flexibility</li> <li>• The expected financial impact on loads and generators</li> <li>• Implementation costs for the AESO and market participants</li> <li>• Timing required to transition to a sub-hourly settlement interval</li> </ul>	<p>FortisAlberta recommends the following considerations be included:</p> <ul style="list-style-type: none"> <li>• Determination of price elasticity of load customers by rate class to sub-hourly price signals versus the current hourly price signals.</li> <li>• Quantification of changes to IT systems and costs required to provide timely sub-hourly price signals to load customers and thus enabling an adequate response.</li> <li>• Clear determination of which costs will be recovered from generation market participants and which cost will be recovered from load market participants.</li> </ul>

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6.	Please describe the size of your business in the approximate total MWhs consumed or produced in 2019.	<p>FortisAlberta acts as a Distribution Facility Owner, Meter Data Manager, and Load Settlement Agent. FortisAlberta is not involved in generation and only has relatively minor loads such as offices and service centres.</p> <p>FortisAlberta provides the following load settlement information for information purposes.</p> <p>During 2019 FortisAlberta settled 44% of the Alberta electricity load.</p> <p>A breakdown of sites in the FortisAlberta settlement zone by meter type, and settled consumption in MWhs is provided in the table below:</p> <table border="1" data-bbox="1020 639 1656 862"> <thead> <tr> <th>FortisAlberta settlement zone 2019</th> <th>Site Count</th> <th>MWh</th> </tr> </thead> <tbody> <tr> <td>Interval Metered</td> <td>2,110</td> <td>14,472,607</td> </tr> <tr> <td>Cumulative Meter</td> <td>579,185</td> <td>9,793,241</td> </tr> <tr> <td>Unmetered</td> <td>13,807</td> <td>56,024</td> </tr> <tr> <td>Total</td> <td>595,102</td> <td>24,321,872</td> </tr> </tbody> </table>	FortisAlberta settlement zone 2019	Site Count	MWh	Interval Metered	2,110	14,472,607	Cumulative Meter	579,185	9,793,241	Unmetered	13,807	56,024	Total	595,102	24,321,872
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7.	<p>Do you currently have interval metering installed in your operations?</p> <p>If yes, please describe the approximate volume of your business that was measured using interval meters in 2019.</p>	<p>A breakdown of sites in the FortisAlberta service area by meter type, settled consumption in MWhs and % of total is provided in the table below:</p> <table border="1" data-bbox="1020 407 1906 630"> <thead> <tr> <th>FortisAlberta service area 2019</th> <th>Site Count</th> <th>MWh</th> <th>% of total site count</th> <th>% of total settled load</th> </tr> </thead> <tbody> <tr> <td>Interval Metered</td> <td>2,109</td> <td>14,464,279</td> <td>0.37</td> <td>60.66</td> </tr> <tr> <td>Cumulative Meter</td> <td>550,232</td> <td>9,325,156</td> <td>97.19</td> <td>39.11</td> </tr> <tr> <td>Unmetered</td> <td>13,805</td> <td>56,019</td> <td>2.44</td> <td>0.23</td> </tr> <tr> <td>Total</td> <td>566,146</td> <td>23,845,454</td> <td>100.00</td> <td>100.00</td> </tr> </tbody> </table>	FortisAlberta service area 2019	Site Count	MWh	% of total site count	% of total settled load	Interval Metered	2,109	14,464,279	0.37	60.66	Cumulative Meter	550,232	9,325,156	97.19	39.11	Unmetered	13,805	56,019	2.44	0.23	Total	566,146	23,845,454	100.00	100.00
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8.	<p>Can you identify which of the following elements will be affected by the implementation of sub-hourly settlements at <b>five-minute intervals</b>?</p> <ul style="list-style-type: none"> <li>• Metering</li> <li>• IT systems</li> <li>• Data storage</li> <li>• Other</li> </ul>	<p>All identified elements will require major or significant preparation, evaluation, and planning for this change as well as for the regulated recovery of associated expenses from customers.</p> <ul style="list-style-type: none"> <li>• <b>Metering</b> - significant</li> <li>• <b>IT systems</b> - significant</li> <li>• <b>Data storage</b> - significant</li> <li>• <b>Other</b> - major</li> </ul>																									

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9.	<p>For each of the elements listed in question 8 above, please describe the changes that would be required for your business.</p>	<p>Based on a preliminary review, the following changes have been identified. It is expected that more changes, with potentially significant cost implications, may be required once the chosen option is better understood.</p> <p><b>Metering</b></p> <ul style="list-style-type: none"> <li>• Replacement or reprogramming of current population of interval meters to capture and store data at five-minute intervals</li> <li>• Replacement of current population of cumulative meters to capture and store data at five-minute intervals.</li> </ul> <p><b>IT systems</b></p> <ul style="list-style-type: none"> <li>• Upgrades and enhancements of meter reading collection systems</li> <li>• Upgrades and enhancements of Meter Data Management systems</li> <li>• Upgrades of load settlement systems</li> </ul> <p><b>Data storage</b></p> <ul style="list-style-type: none"> <li>• Increased data storage requirements by 12 times</li> <li>• Increased processing time</li> </ul> <p><b>Other</b></p> <ul style="list-style-type: none"> <li>• AUC rules changes to enforce settlement at 5-minute intervals and the exchange of information between market participants</li> <li>• Updates of internal and external reporting</li> </ul>
10.	<p>The AESO is looking to understand the magnitude of costs during this initial phase. For each of the elements listed in question 8 above, please provide estimates of the cost required to implement these changes. If you are unable to provide cost estimates, please indicate when you can do so.</p>	<p>As multiple systems and market transactions are involved, FortisAlberta is unable to provide cost estimates until the “Option Exploration” phase is completed and clear regulatory requirements are defined. A minimum of three months will be required thereafter for providing cost estimates for each of the elements listed in question 8 and for others expected to be identified during the Option Exploration stage.</p>

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11.	<p>For each of the elements listed in question 8 above, please describe the timing required to implement these changes.</p>	<p>Below is the required effort for independently completing the main elements listed in question 8. However, due to complexity, dependencies, availability of staff, cost recovery mechanisms, overall duration and overall elapsed time are difficult to estimate.</p> <ul style="list-style-type: none"> <li>• <b>Metering</b> – between 3 years for replacement or reprogramming of interval meters and up to 10 years for replacement of cumulative meters in urban locations. Although technically capable this is currently cost prohibitive for rural locations.</li> <li>• <b>IT systems</b> – 18 months</li> <li>• <b>Data storage</b> – 5 months</li> <li>• <b>Other</b> – 18 months for rules development and implementation</li> </ul>
12.	<p>Can you identify which of the following elements will be affected by the implementation of sub-hourly settlements at <b>15-minute intervals</b>?</p> <ul style="list-style-type: none"> <li>• Metering</li> <li>• IT systems</li> <li>• Data storage</li> <li>• Other</li> </ul>	<p>All of the identified elements will require various levels of preparation, evaluation, planning for change, and approval for the recovery of incurred expenses.</p> <ul style="list-style-type: none"> <li>• <b>Metering</b> – No change to interval metering, changes to cumulative meters required</li> <li>• <b>IT systems</b> – significant if changes to cumulative meter data are required</li> <li>• <b>Data storage</b> – significant if changes to cumulative meter data are required</li> <li>• <b>Other</b> - major</li> </ul>

	Questions	Stakeholder Comments
13.	<p>For each of the elements listed in question 12 above, please describe changes that would be required for your business.</p>	<p>Based on the preliminary review, the following changes have been identified. It is expected that more changes with potentially significant cost implications may be identified as the chosen option is better understood.</p> <p><b>Metering</b></p> <ul style="list-style-type: none"> <li>No change to interval metering, current roadmap is for all cumulative meters to have 15-minute capability with-in 10 years, roadmap does not include IT systems or data storage</li> </ul> <p><b>IT systems</b></p> <ul style="list-style-type: none"> <li>Upgrades and enhancements of meter reading systems if changes to cumulative meter data are required</li> <li>Upgrades and enhancements of Meter Data Management systems if changes to cumulative meter data are required</li> <li>Upgrades of load settlement systems</li> </ul> <p><b>Data storage</b></p> <ul style="list-style-type: none"> <li>Increased data storage requirements</li> </ul> <p><b>Other</b></p> <ul style="list-style-type: none"> <li>AUC rules changes to enforce settlement at 15-minute intervals</li> <li>Updates of internal and external reporting</li> </ul>
14.	<p>The AESO is looking to understand the magnitude of costs during this initial phase. For each of the elements listed in question 12 above, please provide estimates of the cost required to implement these changes. If you are unable to provide cost estimates by the end of the comment period (March 13, 2020), please indicate when you can do so.</p>	<p>As multiple systems and market transactions are involved FortisAlberta, is unable to provide cost estimates until the “Option Exploration” phase is completed and clear regulatory requirements are defined. A minimum of three months will be required thereafter for providing cost estimates for each of the elements listed in question 12 and for others expected to be identified during the Option Exploration stage.</p>



	Questions	Stakeholder Comments
15.	For each of the elements listed in question 12 above, please describe the timing required to implement these changes.	<p>Below is the required effort for independently completing the main elements listed in question 12. However, due to complexity, dependencies, availability of staff, cost recovery mechanisms, overall duration and overall elapsed time are difficult to estimate.</p> <ul style="list-style-type: none"> <li>• <b>Metering</b> – up to 10 years for replacement of cumulative meters if required</li> <li>• <b>IT systems</b> – 12 months</li> <li>• <b>Data storage</b> – 5 months</li> <li>• <b>Other</b> – 12 months for rules development and implementation</li> </ul>
16.	The AESO has described some challenges that may impact market participants. Are there other challenges that have not been identified that are unique to the market participant or in general?	<p>FortisAlberta may require AUC approval before incurring additional costs related to the development and implementation of sub-hourly load settlement and related DFO, MDM or LSA activities.</p> <p>In general, FortisAlberta would like to highlight that today we do not synchronize actual cumulative data with settlement periods. If it is the intent of the AESO to transition to shorter settlement periods for all load customers (interval and cumulative) then required timelines for analysis, business requirements and implementation would be significantly extended.</p>
17.	Should sub-hourly settlement apply to all market participants? Is it fair for sub-hourly settlement to only apply to a subset of market participants?	Sub-hourly settlement could be different for generation and load market participants. Load settlement should be consistent for all load market participants.
18.	Does payment to suppliers on the margin (PSM) sufficiently incent generator response without sub-hourly settlement? If we move to sub-hourly settlement, is PSM still required to address the mismatch between settlement and dispatch interval?	No comment
19.	Are there any other benefits that have not been identified? Please elaborate.	None have been identified.

	Questions	Stakeholder Comments
20.	<p>Is the approach used for this engagement effective? If no, please provide specific feedback on how the AESO can make these sessions more constructive.</p>	<p>FortisAlberta supports the opportunity to provide stakeholder feedback in this important discussion.</p> <p>Due to the number of market participants that would be impacted and the complexity regarding any change to sub-hourly settlement, FortisAlberta submits that the engagement timeline is too short and all market participants may not have had an opportunity to participate.</p> <p>To allow for a proper assessment of costs and benefits, the “Option Exploration” phase should be completed first and used to identify clear regulatory requirements in coordination with in-flight initiatives noted in the answer to question 3. Once completed, all organizations would be in a better position to provide a meaningful cost analysis to support the full understanding and timing of the initiative.</p>
21.	<p>The AESO seeks to be transparent through this stakeholder engagement process and would like to publish all information as received.</p> <p>Is the information provided in this feedback suitable to be published by the AESO on <a href="http://aeso.ca">aeso.ca</a>? If no, please indicate the sections of your response that should be redacted?</p>	<p>In the interest of a transparent stakeholder engagement FortisAlberta does not oppose making these comments available to all interested parties. However, give the preliminary stage of the engagement, FortisAlberta notes that its comments may be subject to change as the chosen option is better understood.</p>
22.	<p>Please provide any other comments you have related to the sub-hourly settlement engagement.</p>	<p>No comment</p>

Thank you for your input. Please email your comments to: [stakeholder.relations@aeso.ca](mailto:stakeholder.relations@aeso.ca).