

Stakeholder Comment Matrix – Feb 25, 2020

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



Period of Comment: Feb. 25, 2020 through Mar. 13, 2020
Comments From: Heartland Generation Ltd.
Date: [2020/03/13]

Contact: [REDACTED]
Phone: [REDACTED]
Email: [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 by Mar. 13, 2020*
- 4. Stakeholder comments will be published to 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.	Heartland Generation Ltd. (HGL) is an owner and operator of wholesale electricity generation assets in Alberta. As such, HGL will be affected by changes to the settlement interval. Further, HGL owns revenue class meters associated with its generating facilities; HGL is affected to the extent that sub-hourly settlement necessitates changes to the physical meters and/or data reconciliation processes.
2.	Is your organization a load, supplier, both a load and supplier, a billing agent, or other. If other, please describe.	HGL is a supplier of electric energy, and to a limited extent a load.
3.	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.	HGL believes the scope is appropriate. HGL suggests that the AESO provide further clarity about how the sub-hourly settlement consultation and flexibility roadmap will interact.

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4.	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?	The AESO has indicated that “interconnection with other areas” will occur in Session 3 (May 2020); HGL recommends that as part of that session the AESO should clearly indicate how sub-hourly settlement will impact the flexibility roadmap.
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"> • The expected enhancement in price fidelity and flexibility • The expected financial impact on loads and generators • Implementation costs for the AESO and market participants • Timing required to transition to a sub-hourly settlement interval 	<p>HGL agrees with the AESO that the following two criteria are of paramount importance:</p> <ul style="list-style-type: none"> • The expected financial impact on loads and generators • Implementation costs for the AESO and market participants <p>HGL does not have further considerations at this time.</p>
6.	Please describe the size of your business in the approximate total MWhs consumed or produced in 2019.	HGL is one of the largest suppliers of electricity in the Province, with a total production of approximately 16,000 GWh in 2019.
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>	As a generator of electricity, HGL has interval meters installed at all its generating facilities. Therefore, all of HGL’s production volumes, stated in response to question 6, was measured using an interval meter in 2019.
8.	<p>Can you identify which of the following elements will be affected by the implementation of sub-hourly settlements at five-minute intervals?</p> <ul style="list-style-type: none"> • Metering • IT systems • Data storage • Other 	Metering and IT systems (i.e. reconciliation and validation resources) will be primarily affected. Data storage could be affected, as increasing the number of settlement intervals will require increased storage requirements. However, this is a minor issue when compared to the other categories of costs given that electricity is a data-rich industry and data storage has significant economies of scale.
9.	For each of the elements listed in question 8 above, please describe the changes that would be required for your business.	HGL understands that current meters installed at its generation sites are currently capable of settlement at 15-minute intervals. This means that to accommodate 5-minute intervals, HGL would need to upgrade the physical meters at each of its generation facilities and incur the associated cost of replacement or modification.

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		Similarly, the IT system requirements of sub-hourly settlements would include system upgrades and additional resources for reconciliation and validation processes.
10.	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.	At this time HGL is not able to provide an estimate on the magnitude of the cost to upgrade IT systems associated with an interval meter capable of 5-minute settlement. As the consultation progresses and further details are revealed, HGL may be better able to provide the AESO with the magnitude of costs anticipated from upgrading IT systems.
11.	For each of the elements listed in question 8 above, please describe the timing required to implement these changes.	At this time HGL is not able to provide estimates on timing required by the implementation of 5-minute settlement intervals.
12.	<p>Can you identify which of the following elements will be affected by the implementation of sub-hourly settlements at 15-minute intervals?</p> <ul style="list-style-type: none"> • Metering • IT systems • Data storage • Other 	<p>See answer to number 8.</p> <p>As a further clarification, the data storage requirements for 15-minute interval should be less than for 5-minute settlement, but more than for the current hourly settlement. However, the relative difference in data storage requirements is an overall minor concern.</p>
13.	For each of the elements listed in question 12 above, please describe changes that would be required for your business.	<p>HGL understands that current meters installed at its generation sites are currently capable of settlement at 15-minute intervals.</p> <p>Similarly, the IT system requirements of sub-hourly settlements would include system upgrades and additional resources for reconciliation and validation processes.</p>
14.	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>As HGL understands that all the interval meters at its generating facilities are capable of 15-minute interval settlement without modification, therefore the magnitude of costs are not expected to place an undue burden on HGL.</p> <p>At this time HGL is not able to provide an estimate on the magnitude of the cost to upgrade IT systems associated with an interval meter capable of 15-minute settlement. As the consultation progresses and further details are revealed, HGL may be better able to provide the AESO with the magnitude of costs anticipated from</p>

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		upgrading IT systems.
15.	For each of the elements listed in question 12 above, please describe the timing required to implement these changes.	At this time HGL is not able to provide estimates on timing required by the implementation of 15-minute settlement intervals.
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?	One potential challenge that should be explored are the consequences of having different settlement intervals for different market participants. For example, generators and price-responsive loads may receive 15-minute settlement, while the remaining loads would presumably continue with hourly settlement. Will this structure cause any mismatch of payments that would require reconciliation? If a mismatch does occur, how will it be addressed (i.e. in the adjustment for losses volumes through the ISO Tariff-Rider E, or some other method)?
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?	<p>HGL understands that sub-hourly settlement would be required for all generators and would be optional for loads that meet the metering and technical requirements; if metering upgrades are required, their cost will be at the individual market participant's expense. It will be important in the AESO's cost-benefit analysis to adjust the benefit to reflect the level of adoption (i.e. if only a subset of loads benefit). This consideration is important as the cost of upgrading AESO systems will likely be socialized across all market participants.</p> <p>Depending on the results of the cost-benefit analysis, it may be more efficient to allow voluntary participation for a subset of market participants over mandatory participation for all market participants (for example, if residential load customers are less likely to individually benefit from sub-hourly settlement). If the AESO were to mandate sub-hourly settlement for <i>all</i> loads, the cost of upgrading meters would likely be much larger than the resulting benefit. HGL recommends that for completeness the AESO provide the cost-benefit analysis of this scenario.</p>
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?	PSM would still be required to correct for the mismatch between dispatch and the sub-hourly settlement interval. PSM supports proper price formation in the energy-only market: for example, if a 15-minute settlement is chosen, a generator dispatched for part of an interval should still be eligible for PSM if the average price over that interval is less than the generator's offer price. Conversely, a settlement interval of minute-to-minute, which matches the dispatch interval, would no longer

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		<p>warrant PSM as the settlement interval pool price would be equal to the marginal offer in each dispatch interval.</p> <p>With respect to flexibility, according to the AESO's analysis a fast generator receives both higher revenue and a higher PSM payment than a slow generator under both hourly and sub-hourly settlement. Whether generator response is adequately "incented" in either case should be addressed as part of the Flexibility Roadmap.</p>
19.	<p>Are there any other benefits that have not been identified? Please elaborate.</p>	<p>HGL has not identified any other benefits of sub-hourly settlement that have not already been identified by the AESO.</p>
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>The sessions could be improved by including tables and facilitated discussion, as was employed for the capacity market consultations.</p> <p>The AESO should communicate its expected timelines and agendas for upcoming sessions at the outset. The comment matrix after each session to provide feedback is also helpful.</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 aeso.ca? If no, please indicate the sections of your response that should be redacted?</p>	<p>None of HGL's feedback requires redaction.</p>
22.	<p>Please provide any other comments you have related to the sub-hourly settlement engagement.</p>	<p>In the 2020 Budget Review Process the AESO confirmed that it is conducting a "Settlement Audit". HGL recommends that the AESO contemplate the audit timing in its process and publish the results of this audit, since doing so would be helpful for the sub-hourly settlement consultation.</p>

Thank you for your input. Please email your comments to: stakeholder.relations@aeso.ca.