Period of Comment:	Feb. 25, 2020 through Mar. 13, 2020	Contact:	
Comments From:	TransCanada Energy Limited (TCE)	Phone:	
Date:	2020/03/13	Email:	

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 <u>stakeholder.relations@aeso.ca</u> 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.

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	Questions	Stakeholder Comments
1.	Please describe why you are interested in sub-hourly settlement and how it affects your business.	TCE is both a load and a supplier, and has system access service through the AESO tariff under rates STS, DTS, IOS, and XOS. TCE expects that each of these tariff rates would be impacted by sub-hourly settlement.
2.	Is your organization a load, supplier, both a load and supplier, a billing agent, or other. If other, please describe.	Please see the response to question #1 above.
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.	 TCE agrees with the limited scope as outlined in the AESO's February 25, 2020 presentation. TCE opposes expanding the scope of this project to include changes to dispatch as this would cause a fundamental change to the market. TCE is concerned by the level of the AESO's trading charge and the impact that this has on the market, in particular the impact on imports that would otherwise be economic. With this in mind, TCE submits that the AESO should limit its market initiatives, and the scope of such initiatives, to those that are necessary and those that provide demonstrable net benefits to the market. TCE believes that the market is in need of stability and that fundamental changes to the market, such as changes to dispatch, are not necessary. TCE also requests that the AESO clarify whether the scope of sub-hourly settlement would go beyond energy settlement. For example, one of the billing determinants for Rate DTS is "metered demand", which is calculated as the average demand over a 15-minute interval. If sub-hourly settlement were to be calculated at an interval of something other than 15 minutes, would the calculation of metered demand change? This would appear to be out-of-scope of this initiative. If it is within scope, however, the AESO should inform stakeholders.

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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?	While TCE agrees at a high level that the objectives are reasonable, TCE requests that the AESO provide more information regarding the need for this initiative. The AESO states that based on the 2018 Net Demand Variability study "[m]ore flexibility in the fleet <u>may</u> be required to manage the evolving generation mix" [emphasis added]. TCE's understanding is that more flexibility <u>may</u> be needed in the mediumto long-term, but not in the short-term. However, this study is now two years old and pre-dates a number of recent market changes including: (i) the cancellation of the capacity market; (ii) the termination of the REP program; (iii) the establishment and the federal acceptance of the TIER regulation; and (iv) increased certainty of the coal-to-gas conversions. As such, additional flexibility may not be needed, or not for quite some time. TCE requests that the AESO demonstrate the need for a sub-hourly settlement interval and that if needed, demonstrate that it will provide a net benefit to the market.
5.	 Are there considerations other than the following that should be taken into account to determine the value in moving to sub-hourly settlement interval? 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 	In general, TCE agrees that the considerations identified by the AESO are required to determine the value in moving to a sub-hourly settlement interval. TCE recommends that that the AESO also consider whether a sub-hourly settlement interval would impose implementation and ongoing costs upon third-party service providers. For example, meter data is commonly provided by third-party service providers who would likely be impacted by a sub-hourly settlement interval. Market participants are unlikely to know what these costs would be, but would likely be required to pay for them.
6.	Please describe the size of your business in the approximate total MWhs consumed or produced in 2019.	TCE is one of the larger suppliers of power in Alberta, holding 448 MW of offer control plus 100 MW of firm transmission rights on the Alberta-BC intertie. TCE also has a significant industrial load in Alberta from its pipeline and gas storage operations.
7.	Do you currently have interval metering installed in your operations? If yes, please describe the approximate volume of your business that was measured using interval meters in 2019.	Most of TCE's operations have interval meters installed. TCE believes that it has interval meters at each of its sites for which it receives system access service from the AESO. Some of TCE's smaller sites may have cumulative meters



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8.	 Can you identify which of the following elements will be affected by the implementation of sub-hourly settlements at five-minute intervals? Metering IT systems Data storage Other 	Each of metering, IT systems, and data storage will be impacted by moving to a 5- minute settlement interval. In addition, moving to a shorter settlement interval would impact the administrative settlement between TCE and its partners and would likely require contractual changes since existing contracts are based on an hourly Pool Price.
9.	For each of the elements listed in question 8 above, please describe the changes that would be required for your business.	For metering, TCE understands that metering is already available on 15-minute intervals, and expects that moving to 5-minute intervals will cause increased costs from third-party meter data providers. Significant changes to the accounting models used to administrate settlement with TCE's partners will be required. 5-minute settlement will result in 12x more settlement data that may require faster hardware to process the data.
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.	TCE is not currently in a position to provide a magnitude of these costs. We expect that it would take 2-3 months to provide an estimate.
11.	For each of the elements listed in question 8 above, please describe the timing required to implement these changes.	TCE expects that these changes would require at least 6 months, if not more, to implement.
12.	Can you identify which of the following elements will be affected by the implementation of sub-hourly settlements at 15-minute intervals ? • Metering • IT systems • Data storage • Other	The IT systems will be impacted by moving to a 15-minute settlement interval. In addition, moving to a shorter settlement interval would impact the administrative settlement between TCE and its partners and would likely require contractual changes since existing contracts are based on an hourly Pool Price.



	Questions	Stakeholder Comments
13.	For each of the elements listed in question 12 above, please describe changes that would be required for your business.	Significant changes to the accounting models used to administrate settlement with TCE's partners will be required.
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.	TCE is not currently in a position to provide a magnitude of these costs. We expect that it would take 2-3 months to provide an estimate.
15.	For each of the elements listed in question 12 above, please describe the timing required to implement these changes.	TCE expects that these changes would require at least 6 months, if not more, to implement.
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?	As mentioned above, these changes may require contractual changes between market participants and their partners.
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?	In general, TCE recommends that if sub-hourly settlement is implemented, it should apply to all market participants required to have interval meters.
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?	The current treatment of PSM is such that suppliers are paid on a pay-as-bid basis, which creates distortions to the incentives because suppliers are paid differently from other suppliers for the same product during the same time period. Sub-hourly settlement could improve incentives. However, this could also be accomplished by making simple modifications to PSM.
		Sub-hourly settlement does not solve the mismatch between the settlement and dispatch interval even though the magnitude of the uplift payment would be reduced. As such, PSM would still be required.
19.	Are there any other benefits that have not been identified? Please elaborate.	TCE is not aware of any unidentified benefits.



	Questions	Stakeholder Comments
20.	Is the approach used for this engagement effective? If no, please provide specific feedback on how the AESO can make these sessions more constructive.	
21.	The AESO seeks to be transparent through this stakeholder engagement process and would like to publish all information as received.	In the interest of transparency, TCE has not provided any confidential information in the above comments. As such, no redactions are necessary.
	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?	
22.	Please provide any other comments you have related to the sub- hourly settlement engagement.	As stated above, TCE would like the AESO to clarify the need for this initiative. TCE understands and acknowledges the nature of the benefits that a sub-hourly settlement interval could create, but submits that a cost-benefit analysis is required to determine the efficacy of this initiative.
		TCE further submits that the AESO needs to clearly identify the differences to the benefits and costs between a 5-minute and a 15-minute settlement interval. For example, are there incremental benefits to price responsive loads for a 5-minute interval compared to a 15-minute interval? TCE expects that there would be few if any. However, the incremental cost may be significant.

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