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Alberta Utilities Commission
Eau Claire Tower
1400, 600 Third Avenue S.W.
Calgary, AB T2P 0G5

Attention: Nicole Morter
Director, Electric and Gas Transmission Rates

Dear Ms. Morter

Re: Draft Report on Time Varying Rates

Thank you for the opportunity to review the draft Time Varying Rates Report. EPCOR Distribution & Transmission Inc. (EDTI) appreciates the work done by the AUC to identify mechanisms that support the more efficient and affordable delivery of electricity service. EDTI has reviewed the report and has the following comments:

- (i) EDTI agrees with the recommended next steps set out at paragraph 75 of the Report and understands that more consultation and review will be required to confirm the viability and details related to implementation of Time Varying Rates (TVRs).
- (ii) EDTI fully supports the implementation of initiatives that reduce prices for customers and would like to better understand the Report's conclusion that the expected benefits will outweigh the expected costs by orders of magnitude, particularly if implemented over the next 3-4 years. One of the recommendations from the REM will be that metering to accommodate a 5-minute settlement would not be required until 2040. EDTI would like to better understand the timing and cost information set out in the Report and suggests that the PwC report be shared as part of any future engagement process.
- (iii) EDTI notes that the increased investment associated with metering infrastructure capable of 5-minute settlements was not included in the cost estimates for enabling TVRs because "the costs of installing smart meters are already expected to be included in current and future rates". This assumption may need to be revisited given the significant technical differences between EDTI's original AMI meters and the meters required for 5-minute

settlement. EDTI's current AMI meters and their associated systems do not have the capability for implementing time varying rates and EDTI is not planning to install meters and systems with this capability until the early to mid-2030's. Additionally, the funding levels provided by the PBR3 plan generally are subject to a pending appeal and, more specifically, at least one DFO is seeking incremental capital for its advanced metering program.

- (iv) As part of the future engagement, it would be helpful to understand the meaning of TVRs. Specifically, are TVRs limited to Time of Use rates or is the AUC considering a variety of TVRs including dynamic rates or other rate structures?
- (v) The Report indicates that shifting some of the EV charging load to off-peak times would reduce the peak demand on these lines and transformers and would allow distribution utilities to defer upgrades. EDTI agrees with this assertion but understands that a recent study has suggested that shifting EV load to off-peak times may inadvertently result in merely creating a new peak rather than actually lowering the peak. Please see "Electric Vehicles and the Energy Transition: Unintended Consequences of a Common Retail Rate Design"; Megan R. Bailey. David P. Brown, Erica Myers, Blake C. Shaffer, Frank A. Wolak; Working Paper 32886; National Bureau of Economic Research.
- (vi) The Report mentions that time-varying consumption data can also facilitate creative retail rates and demand response opportunities for customers. EDTI notes that each of these concepts are essential components that require significant review:
 - a. Retailers are key to the enablement of TVRs and as such their costs of implementation must be carefully considered, including costs associated with changes to billing systems. These costs could be considerable, and it will be important to accurately quantify them so that we can understand the total impact of the move to TVRs on customer bills. Additionally, EDTI assumes that "retailers" include RoLR providers with rates that are locked in. It is not clear how TVRs can be incorporated into the new RoLR legislative framework.
 - b. Additionally, given that TVRs are intended to encourage customers to change or shift their demand, TVRs must be considered along with demand side management.
 - c. EDTI notes that peak demand on the distribution system does not necessarily coincide with peak electricity prices. As such, if a DFO's customers are responding to a time varying or real time price signal for electricity, that response might not reduce the peak demand on the distribution system. EDTI would like to better understand the relationship between peak electricity prices and peak demand on the transmission and distribution systems in order to determine the impact to those systems of time varying electricity prices.

- (vii) The Report reviews the current decentralized model for meter reading and also considers a centralized model. While no material cost differences between the two models were identified to enable either system, higher costs are expected to implement the centralized model. There may be additional detailed analysis required to reach any definitive conclusions on this issue, including a review of how DFOs use metering data for other purposes such as data analytics. This would include an understanding of what technical complications might be introduced, including cybersecurity, by sharing one centralized database. In addition, it will be necessary to consider the compatibility of data and backwards compatibility to each DFO's system. Also noteworthy is that data validations and corrections are frequent between DFO and Retailer systems. Clarity around this process along with consideration for Rule 021 changes will be required. Finally, EDTI strongly suggests that DFOs be given sufficient time to make any required changes so that they can be aligned with existing plans for upgrades to their systems.
- (viii) Finally, as part of the future engagement process, it would be helpful to better understand customer interest in shifting their demand. EDTI has some concern that unless customers obtain fairly significant savings from a change in their behaviour, it may be challenging to secure uptake.

Thanks again for the opportunity to share our feedback,

Regards,



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