March 3, 2022

Ontario Energy Board
2300 Yonge St, 27th Floor
Toronto, ON
M4P 1E4

Attn: Nancy Marconi, Registrar

Dear Ms. Marconi:

Re: **EB-2022-0074 Stakeholder Meeting on Design of an "Optional Enhanced" Time of Use (TOU) Rate**

Thank you for the opportunity to suggest ways that the Ontario Energy Board (OEB) may improve its recommendations for an Alternative Time-of-Use (ATOU) price design in response to the Minister of Energy's November 16, 2021, letter. These are the comments of the Electricity Distributors Association (EDA) on OEB staff's proposed ATOU rate design as set out in the presentation materials on February 17th, 2022.

OEB staff's proposed ATOU pricing has been structured similarly to Alectra's Overnight, and Dynamic Regulated Price Plan (RPP) Pilot programs which ran during 2018 and 2019 (pre-COVID). The Overnight RPP Pilot tested a low overnight rate between 12am and 6am while keeping the other price periods consistent with standard TOU. The Dynamic RPP Pilot program shifted the on-peak periods to 3pm to 9pm year-round and tested variable peak pricing (VPP), setting the on-peak price at low, medium, or high based on the forecasted system demand. The Overnight pilot produced substantial demand shifting results, but also saw a net increase in total consumption, and the Dynamic pilot also produced demand shifting results.

We noted that the OEB has used partial elements of the referenced pilot programs as well as some recommendations from Guidehouse's *"Regulated Price Pilot Meta-Analysis Final Report"* to establish a hybrid rate design for ATOU. Referring to multiple sources makes it complicated to draw relative parallels between the RPP piloted program findings in relation to the OEB's proposed program.

We support providing customers with greater choice and control through an alternative RPP option which addresses forecasted increases from electrification, as well as shifting demand from high price to low price periods. While we appreciate the time constraints under which the OEB is operating to prepare its responses to the Ministry for this proposal, our capacity to provide concrete recommendations is limited by the lack of substantive evidence or forecasts to analyze.

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Throughout our responses we have identified noteworthy limitations embedded in the OEB's proposed ATOU which demonstrates that not all impacts have been assessed in the proposed methodology. As such, we offer the following as a **risk assessment**.

Our comments are organized by the OEB's two main discussion categories, and their respective questions asked to their stakeholders:

- Price Design
- Cost Recovery

Price Design

In this section we offer our members' expertise on the OEB's proposed ATOU rate design to incent demand-shifting of customer consumption during the price periods proposed. This is our collective responses to the OEB's questions on the proposed price design.

1. **Will the proposed price design be effective at achieving the following goals described in the letter from the Ministry of Energy?**

    a) **Incenting electricity usage behaviour that will benefit the electricity system under anticipated increase electrification.**

We are supportive that the proposed ATOU price design has the potential to incent electricity usage behaviour that is beneficial to the electricity system. Our reservation of the proposed plan is that the rate design might only appeal to a small subset of customers throughout the province. This would consequently limit the potential benefit of shifting demand from higher peak daily usage when energy costs are most expensive, to overnight usage when energy costs are least expensive. It is challenging to quantify the overall impact of this price design to influence electricity usage behaviour without having access to a method of determining the quantum and location of customers who own electric vehicles (EVs) or could benefit from low overnight prices throughout the province. Without these metrics and recognizing that the OEB is proposing a model which differs from Alectra's RPP pilot program in 2018 and 2019, it is difficult to approximate the shift in usage behaviour which might occur if the expected increase in electrification emerges.

    b) **Providing value for customers with consideration for overall rate payer impacts.**

We believe that if customer enrollment is successful then the proposed price design will be effective at providing value for customers with consideration for overall rate payer impact. Ultra-low overnight rates will provide individual value for customers who have the appropriate consumption patterns; however, price design will only be fully effective if enrollment is realized and marketed appropriately. It is important that customers who are considering switching to the ATOU plan are properly informed to understand their individual load profiles and comparative bill impacts between pricing options. Should customers who could benefit from

the ATOU have any confusion about the benefits of the plan, there is a risk that customers may not enroll in the plan, and value for overall rate payer impact will be reduced. If this occurs, then customers enrolling in the ATOU will only experience temporary savings until rates are reset at a higher level in the future and across all rate plans.

Theoretically, we agree that if the Higher On-Peak (HOnP) price is set high enough that customers on ATOU are paying their share of attributable energy costs, then the ATOU program will provide value for overall rate payer impacts. Though, if the HOnP price is not set appropriately, recovery of costs will be subsidized by all RPP customers, and this does not provide value for overall rate payer impact. Consideration for the value of overall rate payer impact is difficult to determine without estimating the average revenue to be recovered by the rate design option(s), bill impacts and expected shift in peak demand under different enrollment assumptions. There is a risk that TOU and Tiered pricing customers might be subsidizing the benefit of customers who can afford EVs through their RPP rates. We suggest that the OEB give thought to the way in which information on TOU, Tiered, and ATOU is made available and communicated, and how customers can compare the various price plans.

2. Do you have any recommendations for improving the price design to achieve the goals listed above?

We suggest that the OEB consider incorporating each of the following recommendations for improving the price design of the proposed ATOU to achieve the Ministry goals above:

- **Align TOU, Tiered, and ATOU price periods to be more comparable.** We recommend aligning the timing of the price periods for ATOU with the price periods for standard TOU. This can be achieved by:
  I. Eliminating the Low-Overnight (LON) price period on weekends and holidays and replace with the regular Off-Peak.
  II. Shifting the HOnP period to begin at 7pm and end at 11pm so that the Mid-Peak period operates from 7am to 7pm on weekdays.

Align ATOU		Price Periods																							
	Hour Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Alternative TOU Price	Weekday (All Year)	Low Overnight							Mid-Peak (MidP)												Higher On-Peak (HOnP) = 10 X LON				LON
	Weekend (All Year)	Off-Peak (OffP)																							

This change would simplify the comparability of the standard TOU and ATOU rate plans and allows customers to use their historical consumption data for comparative purposes to make well informed price plan choices. Additionally, the OEB should develop tools, and enhance the current bill calculator to assist customers to compare and understand the bill impact of shifting between the standard TOU, Tiered and ATOU rate plans.

- **Shorten the proposed Higher On-Peak (HOnP) price period from 4-9pm to 6-9pm**. A longer price period window is a disincentive for customers to participate in ATOU.

Shortening the price period will add incentive for customers to opt into ATOU and result in shifting usage behaviour. While this would make the plan more attractive to customers, it could also reduce the effectiveness of the plan to address system peaks (e.g., if the provincial peak is on average from 4pm to 9pm, but the HOnP is reduced to 4pm to 7pm). The OEB will need to weigh the value of potentially higher enrollment with ensuring that the rate is designed to optimize system benefits.

Reduce HOnP		Price Periods																					
	Hour Ending	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Alternative TOU Price	Weekday (All Year)	Low Overnight							Mid-Peak (MidP)											Higher On-Peak (HOnP) = 10 X LON)			LON		
	Weekend (All Year)	Off-Peak (OffP)																							

- **Un-bundle price plan rates and costs by Regulated Price Plan.** Currently RPP forecasted costs are shared amongst all RPP pricing structures. We suggest that the forecasted costs and actual costs of supply be unbundled by pricing plan. Rather than aggregating actual pricing structures, the benefits will be realized and not later cross-subsidized across pricing plans. It would be acceptable in the first year of establishing the ATOU that the rate design and cost recovery be bundled, but we encourage the OEB to evaluate the impacts of cross-subsidization and to monitor the electricity usage behaviour and consideration for overall rate payer impact. This will assign price signals which are true to pricing plans and customers will use price signals to select the pricing plan which provides the most utility for them.
- **Educate Customers.** Educating customers about generation costs associated with provincial peak loads, cost of electricity, and the benefits of reducing the peak load when customers consume power outside the peak periods could also achieve the Ministry's two objectives.
- **Measures of Success**. Critical to the achievement of the RPP rate option goal is the establishment of effective measures that assess the impact (e.g., customer response) of each rate option on the system peak. This will inform future rate design considerations and help identify where existing pricing plans may fall short of the intended goal(s).

We further recommend that the two goals of incenting electricity usage behaviour and providing value for customers be balanced against one another. Fully incenting enrollment in the ATOU may disadvantage the remaining RPP customers. Care should be taken to minimize variances created by the pricing plan, and any potential negative customer impacts in the future.

3. **Does the proposed price plan pose any risks not already considered?**

Yes, the ATOU price plan does pose risks which have not been considered in the OEB's proposal. We encourage the OEB to quantify, compare and address each of the following items of concern.

- **Long-Term Price Analysis.** There is an unquantified risk that the ATOU pricing structure will not provide long-term savings for customers who enroll in the program. After the first year, the rates as proposed will be adjusted using an average forecasted cost of supply which is expected to increase rates across all price plans if the program is not successful.
- **Customer Load Profiles.** The RPP Pilot Program ran prior to the COVID-19 pandemic (COVID). In OEB staff's presentation, the concentration of Ontario consumption has been provided for the 2016 to 2021 period, four years of which are prior to COVID impacts, and two years are inclusive of COVID impacts including Emergency TOU rates which would skew consumption patterns during those periods. As we move forward beyond COVID, there is uncertainty with respect to residential and small business load profiles. Much will depend on whether workers will continue to work from home or return to workplaces, and whether businesses will continue operating at restricted capacity. Basing the pricing plan on customer load profiles which were recorded prior to COVID presents the risk of under-recovery of costs and could reduce the success of the program.
- **LDC Customer Projections.** Consideration has not been given to the fact that we do not have access to information about the quantum and location of customers who own EVs. We also do not have access to the number of customers who operate on regular night shift schedules in workplaces such as hospitals, agriculture, and manufacturing. The price plan has not considered the wide range of customer profiles across LDCs to forecast customer enrollment in the ATOU and the resulting impact of demand shifting to perform a cost/benefit analysis. The OEB should develop forecasts regarding program uptake.
- **Regional Impacts.** The proposed price plan does not consider that the ATOU may not be an appropriate alternative pricing option for some regions of Ontario which are smaller in size, "bedroom" communities, residential retirement communities, or regions that do not engage in EV infrastructure. The ATOU may also negatively impact regions which already experience an overnight demand peak. This proposed pricing plan benefits customers who live in industrial and agricultural (shift work) areas, city centres, located near ONroute corridors, and have the means to invest in EVs. Peak demand periods are not consistent throughout the province. For example, in the Leamington area the system peak occurs during the overnight hours. We recommend that the OEB consider the variability in peak demand across different regions of the province when it conducts its assessment of potential risks, alignment with the Ministry's objectives and when considering the potential bill and system impacts of the proposed ATOU rate.

- **Billing Components**. The proposed price plan does not address how the Ontario Electricity Rebate, Final RPP Variance rate, and billing adjustments will be handled in the future and what impacts customers will experience on their bills.
- **Customer Confusion and Education.** The proposed price plan does not establish definitive customer eligibility, opt in, or opt out limitations, or recourse for customers who misunderstand the ATOU and are issued high bills due to the HOnP. There are significant risks that a customer may misunderstand the ATOU offerings or their individual load profiles. Customer price confusion could deter customers from enrolling in the ATOU program. To mitigate this issue, we urge the OEB to enhance its customer bill calculator as a first step to make certain the proposal fits with the Ministry's intended outcome.
- **Program Comparatives.** Under the proposed plan there have not been average revenue calculations by rate design option, bill impacts, and expected shift in peak demand performed under the different enrollment assumptions. There are risks that if the comparatives using the OEB bill calculator are not tested and communicated clearly, a customer with an inappropriate load profile may opt into ATOU and receive a large bill. The implication of this happening could result in negative publicity of the ATOU price plan and reduce enrollment in the program province wide.
- **Billing Complexity.** Billing complexity and associated costs have not been explored for each LDC. Customer service, billing, settlement and I.T. departments will need to be engaged to set up proper price plan procedures for both back-end, and front-end system changes related to the MDM/R. The currently proposed design includes four pricing periods, which is an increase from the current three pricing periods under TOU. This increase adds billing complexity and may require programming updates and/or an increase in mailing costs because of the need for longer bill presentation (e.g., on a bill containing a pricing change, ATOU would require 8 bill lines). This also does not consider when a customer opts to switch rate plans and the complexity of setting up a billing switchover which would consist of multiple line items. Bills are our primary method of communication with our customers, and LDCs do not wish to risk billing accuracy for speed of delivering the ATOU plan.

4. **Which types of consumers will be interested in choosing the proposed price plan?**

Customers who are interested in participating in the proposed price plan are those who are conscientious of their energy profile management and can shift their electricity load towards traditional "off-peak" hours, specifically, customers who can easily recognize that their enrollment in ATOU will reduce their electricity bill and fit the ATOU consumption profile. Examples could be, but are not limited to:

- Self-Generators
- Customers with EVs
- Customers with battery storage
- Customers who have electric heat

- Agricultural Customers
- Regular fixed shift workers (not applicable to split, rotational, on call, or continental shifts, and those who do not share residence with non-shift employees)
- Small businesses which use a high amount of electricity during LON hours
- Small businesses which use very little electricity during the HOnP hours.

It is less likely that customers with traditional consumption profiles would choose the ATOU price plan because the HOnP price period is from 4pm-9pm. These are the hours during which residential customers and their household typically return home from the workplace and school, begin meal preparation and consequently, consume the most energy. Similarly, some small businesses such as restaurants and entertainment venues, could be expected to avoid the ATOU option. Therefore, the HOnP poses a disincentive for these customers to enroll in the ATOU. The ATOU price plan is more restrictive than TOU, and because it is not aligned with the traditional TOU price period hours, it may make comparatives for customers more difficult and decrease the uptake of the ATOU. We encourage the OEB to define customer eligibility criteria, align the price periods to be easily comparable, and shorten/delay the HOnP price period to increase the number of customers who will be interested and enroll in this price plan.

Cost Recovery

In this section we offer our members' expertise on the OEB's proposed ATOU cost recovery to incent demand-shifting of customer consumption during the proposed price periods.

5. Should consumer cost savings (i.e., under-recovery) from shifting consumption be recovered from all RPP consumers in subsequent price setting periods? If not, how should those costs be recovered?

We recognize that the OEB will need to balance the simplicity of rate design and implementation with adhering to rate making principles (e.g., mitigating cross-subsidization). In the long term, if there is significant over or under recovery in any of the three RPP price plans that is being subsidized by the other price plans, we would strongly encourage the OEB to consider changing the rate setting methodology to address issues of cross-subsidization.

Pricing should reflect the true contribution recovery amount across all regulated price plan consumers. Rates should be set using a principled methodology which is reasonable and equitable. The proposed cost recovery uses a socialized methodology which would result in cross-subsidization of the existing RPP price plans in the future and penalize a subset of electricity customers to benefit another. This could also be interpreted as price-setting designed to favour customers with available resources to adopt EVs, smart home equipment, and other commercial load shifting technologies, and effectively exclude the customers who do not have the same access to resources. Without quantification to support the proposal, there is concern that this methodology will cause the RPP variance account to exceed its materiality threshold and trigger multiple rate changes per year. To set fair and justifiable electricity rates, costs should be recovered using an appropriate cost allocation and cost recovery mechanism.

We suggest that the OEB use an unbundled methodology which recovers the costs of producing and delivering the electricity from the appropriate enrolled customer groupings.

Theoretically, if customer enrollment is high, and consumption shifts as the OEB proposes, total supply costs may eventually decrease over time as more customers use energy during low-cost periods. However, in the absence of load projections, EV customer information, or customer enrollment projections, we can not determine the break-even point of consumer costs savings or how appropriate a true-up mechanism could be to manage this risk.

6. **Under the OEB's current price-setting methodology, everything else being equal, alternative TOU prices are expected to increase in response to consumers shifting demand to lower-cost periods (see slide 10).**

    a) **Will this price increase pose a risk to achieving the goals described in the letter from the Minister of Energy?**

Without customer forecasts and proposed pricing rates, we are unable to determine this with a level of certainty. It is our projection, that under the current price-setting methodology, the cost savings of shifting load to overnight price periods will be eroded in future rate setting periods. Delaying the price increase poses a risk to achieving the goals described in the letter from the Minister of Energy because the initial incentive of cost savings will only be experienced if the magnitude of customers shifting is great enough to recover the total costs of the ATOU program. Once average savings for customers who shift demand to low-cost periods reduces, it is our assessment that customers will switch back to whichever RPP option is more affordable for their consumption profile. It cannot be assumed that customers will only switch once and remain on that price plan.

There is also concern for the small businesses and consumers that do not have the opportunity to shift their load under the proposed new structure and as the TOU rates increase, they will experience bill impacts which are outside of their control. If ATOU is not communicated appropriately there may be a public customer backlash which will encourage customers to opt-out of the ATOU program. Price signals and the difference between ATOU, TOU and Tiered programs will increasingly drive customers behaviour as cost are recovered and the prices stabilize in the following years.

    b) **Should the OEB consider changes to its price-setting methodology to provide longer-lasting financial incentive for consumers to shift demand?**

Yes, we encourage the OEB to consider changes to its price-setting methodology to provide longer lasting financial incentive for consumers to shift demand to overnight price periods and drive long-term saving success. As previously mentioned, there is only a temporary incentive for customers who choose ATOU and actively manage their load. The OEB proposal does not present enough details to evaluate such a proposal for consideration, but it is our opinion that

the OEB should consider longer term price setting strategies which could isolate the cost reductions associated with shifting power supply costs related to demand shifting from ATOU. This methodology presents a fair solution for passing those benefits on to customers who enrolled in the rate plan. This approach would balance the Ministry's goal of incenting electricity behaviour and providing value for customers with consideration for overall rate payer impacts.

Additionally, if the pricing periods remain the same, and it is only the prices that are adjusted, then the implementation of the ATOU plan will be able to support an inexpensive and more efficient offering to customers which could be more easily implemented. If additional pricing periods are added, then LDCs anticipate that program implementation will require significant effort and cost throughout various agencies and companies (e.g., MDM/R changes, communication efforts, billing system programming changes, potential increase in mailing costs, etc.). For these costs to be justified, the chosen rate design should have long term and sustainable benefits to the customers who select to opt-in, as well as the remainder of RPP rate payers and the electrical system (e.g., through the mitigation of expected generation and delivery expansion requirements from electrification).

7. The OEB has proposed the use of historical/baseline load profiles to set alternative TOU prices to avoid/delay price increases and provide a longer-term financial incentive (see slide 11).

a) Will this proposal help in achieving the goals described in the letter from the Minister of Energy?

We recommend that the OEB consider whether the proposed baseline load profiles from the Alectra Overnight RPP Pilot could be augmented to account for the impacts of COVID and to reflect the load profiles under the Alectra Dynamic RPP pilot. Alectra's Overnight RPP pilot overlaid a low off-peak rate of 2 cents/kWh between 12 am and 6 am and kept the rest of the standard TOU price periods the same. This is materially different from the proposed enhanced ATOU rate that, in addition to introducing a low off-peak rate during similar hours (11 pm to 7 am), is also introducing a new high on-peak rate in the afternoon (4 pm to 9 pm), which would be expected to incent demand-shifting behaviour, especially given the proposed price ratio of 10:1 (high on-peak rate to low off-peak rate).

We suggest that the OEB consider augmenting the load profile data from the Alectra Overnight RPP with the Alectra Dynamic VPP pilot as this pilot also shifted the on-peak period to 3 pm to 9 pm on weekdays, so that the load profile used to set the new proposed rate is more reflective of the anticipated behavioural changes. These augmentations would be expected to more closely align the 'baseline' profile used with the anticipated customer behaviour under the new rate plan, and thus help to minimize potential rate structure under-recovery.

The use of historical/baseline load profiles to set ATOU prices should be monitored very closely on an ongoing basis as there could be a shift in consumption patterns post-COVID. If this

approach is not monitored very closely by the OEB, the proposed approach will systematically produce over or under recover variances, while perhaps using recent customer load patterns would reduce forecasting risk and send more suitable price signals to the market. As electrification increases and load shape shifts over time, TOU times and prices may theoretically need to be adjusted. The OEB should consider additional work to forecast and compare the actual load shape for 2022 onward and avoid the use of historical data to help achieve the goals described in the letter from the Ministry of Energy.

b) What are some potential risks with implementing this proposal?

Potential risks of implementing this proposal using baseline load profiles on historical data rather than recent load patterns of customers who have adopted the new price are:

- Forecasting errors: if the baseline load profile used is materially different from the behaviour of customers that enroll in the ATOU, this would be expected to impact system cost recovery causing rates to change in the following rate setting period.
- Price signals will be delayed and using the historical baseline load profiles will knowingly setting rates on outdated data. This will be confusing for customers and risk enrollment of ATOU.
- If price signals and cost recovery are volatile, then there is a risk that enrollment may be reduced and the opportunity to address increased electrification will not be effective.
- Load profiles will change as more customers from different regions of the province shift price plans and there is greater uptake on EV charging. Consumer behaviour could potentially change as the prices change having an unintended negative impact.
- It is not a sustainable solution designing rates using outdated information to achieve an intended outcome (not increasing the rates). If implemented, this approach should only be considered as temporary and used for a defined period during the initial implementation.

8. What other ways might the OEB modify its price-setting procedure for the proposed alternative TOU price to provide meaningful financial incentive to shift consumption for customers on the price plan, while fairly recovering supply costs from all RPP consumers?

The OEB proposal does not present enough detail to evaluate such a proposal for consideration.

In the longer term as the OEB considers the structure of the RPP under the RPP Roadmap, we suggest that the OEB may consider unbundling or changing the level of overall supply costs intended to be recovered from each type of RPP customer to better reflect the costs they contribute. Supply cost savings need to occur because pricing alternatives will reallocate existing costs over the same customers. It cannot be assumed that a customer with peak overnight consumption will contribute the same level of costs as a customer with peak daytime consumption. This review may establish a more principled way to ensure that customers generating system savings by shifting their consumption patterns are not disincentivized from

doing so in future rate setting. The largest concern with this proposal is that there has not been a pilot performed with quantitative evidence to support the OEB's proposed Hybrid ATOU or investigation of the sensitivity of price incentive for load shifting vs. conventional TOU. However, there are many assumptions to predict customer behaviour embedded within this proposal.

Conclusion

While this proposal has potential to achieve the Minister's goals, it does not address the Minister's request for the OEB to estimate the average revenue to be recovered by the rate design option(s), bill impacts, and expected shift in peak demand under different enrollment assumptions. There are several concerns with this methodology as proposed which can impact the achievement of goals to incent electricity usage behaviour that will benefit the electricity system under anticipated increased electrification and provide value for customers with consideration for overall ratepayer impacts.

While we support providing customers with choice and control over their pricing plans, a rate design and cost recovery should be established which promotes fairness, equity, participation, and operational efficiencies. We also encourage the OEB to communicate and educate customers appropriately so there is no confusion, and the program results are maximized. The OEB may consider aligning the rates price periods, decreasing the length of the HOnP price period, and providing customers with a clear bill calculator comparison to achieve the minister's two objectives with greater success. It is incumbent upon the OEB to enhance the OEB bill calculator to be easily comparable between RPP plans and load profiles. The current online calculator is an excellent tool that needs to be enhanced so that customers can make informed decisions when considering which pricing plan is appropriate for their consumption patterns. We look forward to working with you and your team to help you fulfill this request by the Ministry.

Please do not hesitate to contact Brittany Ashby, Senior Regulatory Affairs Advisor, at bashby@eda-on.ca or at 416.886.4420, if you have any questions or require anything further.

Sincerely,

Teresa Sarkesian
President & Chief Executive Officer