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March 3, 2022

VIA E-MAIL

Nancy Marconi
Registrar
Ontario Energy Board
Toronto, ON

Dear Ms. Marconi:

**Re: EB-2022-0074: Design of an “Optional Enhanced” Time of Use (TOU) Rate
Vulnerable Energy Consumers Coalition (VECC) Comments**

On January 22, 2022 the OEB issued a letter inviting interested parties to a February 17, 2022 stakeholder meeting for the purposes of receiving input on a proposed optional enhanced TOU price plan design. VECC participated in the stakeholder meeting. The same letter indicated that stakeholders would also have the opportunity to submit written comments following meeting. Set out below are VECC's written comments regarding the proposed optional enhanced TOU rate design.

In its presentation at the February 17th meeting, Board Staff set out a number of specific questions for which it was seeking input. VECC's comments have been structured accordingly. The comments are prefaced by a brief description of the proposed rate design based on VECC's understanding of the materials presented.

A. Proposed Optional Enhanced TOU Rate

Eligibility

All customers eligible for the current RPP TOU rates would be eligible for the Optional Enhanced TOU Rate.

Pricing Periods

The pricing periods would be the same all year (i.e., no variation between winter and summer as with the current RPP TOU rates). There would be different pricing periods for weekdays versus weekends and statutory holidays. For weekdays there would be three pricing periods: i) Low Overnight (LON) – from 11 pm to 7 am, ii) Mid-Peak (MidP) – from 7 am to 4 pm plus 9 pm to 11 pm and iii) Higher On-Peak (HOnP) – from 4 pm to 9 pm. For weekends and statutory holidays there would be two pricing periods:

i) Low Overnight (LON) – from 11 pm to 7 am and ii) Off-Peak (OffP) – from 7 am to 11 pm. Overall, there would be four different pricing periods.

While these periods differ from those used for the current RPP TOU rates, the proposal does not include any changes to the current RPP TOU periods.

Rate Design

While the design has not been finalized, the rates for the Peak and Off-Peak periods would be similar or the same as those for the current RPP TOU Peak and Off-Peak periods. The Higher On-Peak period rate would be set so as to be 10x higher than the Low Overnight period rate and so as to recover the same average revenue as the RPP TOU rates. Current modelling indicates that the resulting LON period rate would be in the order of two to three cents per kWh.

B. VECC's Comments

Question #1: Will the proposed price design be effective at achieving the following goals described in the letter from the Minister of Energy?

- a) Incenting electricity usage behaviour that will benefit the electricity system under anticipated increased electrification.*
- b) Providing value for customers with consideration for overall ratepayer impacts.*

In VECC's view it is important to distinguish between a goal that focuses on facilitating increased decarbonization and one that focuses on incenting electricity usage behaviour which will benefit the electricity system assuming increased electrification. VECC has interpreted the Minister's request as being for a rate design that achieves the latter. While decarbonization is an important goal, VECC submits that the question of whether electricity rates should be designed such that electricity users pay for or subsidize decarbonization initiatives such as fuel switching and EV usage are policy matters that go well beyond the scope of the current initiative or the goals as described in the Minister's letter.

In our view it is also important to clarify what is meant by a "benefit to the electricity system". In this regard, VECC submits that this should be interpreted as providing electricity service at a lower cost through more efficient use of Ontario's electricity system which, ideally, would mean lower costs of electricity service for all customers

Finally, with respect to the second goal, VECC agrees that the optional rate must provide value, in terms of lower bills, to at least some segment of the current customers who are eligible for TOU RPP. Otherwise, there will be no take-up of the optional rate and no system benefits will be achieved. However, it is important to distinguish between short-term and longer term rate impacts. VECC acknowledges that there may be short-term rate impacts on customers that will need to be considered and managed as some of the system benefits (e.g. longer term capacity savings) may not be achieved in the short term. It is these short-term term impacts that need to be considered when designing and implementing the proposed rate.

However, over the longer term, it is VECC's view that the goal of any optional rates should be to provide benefits to all customers or, at a minimum, hold other non-participating customers harmless. Otherwise, it is VECC's submission that such rates will lead to customers who are unable to benefit from the rate due to their particular

circumstances cross-subsidizing those that can. This “no harm” policy can be achieved by ensuring the optional rates are reflective of long-term costs such that when customers on the optional rate shift load the bill savings are commensurate with the overall system savings.

VECC considers this interpretation of the Minister’s goals to be fully aligned with both:

- The OEB’s statutory objectives in relation to electricity which include: i) To inform consumers and protect their interests with respect to prices and the adequacy, reliability and quality of electricity service and ii) To promote economic efficiency and cost effectiveness in the generation, transmission, distribution, sale and demand management of electricity and to facilitate the maintenance of a financially viable electricity industry¹.
- The objectives for RPP pricing set out in the OEB’s Regulated Price Plan Manual which include: i) Set the price structure to reflect current and future RPP supply costs, ii) Set the price structure to support the achievement of efficient electricity system operation and investment; iii) Set both prices and the price structure to give consumers incentives and opportunities to reduce their electricity bills by shifting their time of electricity use and reducing their peak demand and iv) Provide fair, stable and predictable commodity prices to consumers.²

Turning to the current enhanced optional TOU rate proposal VECC notes that, although the TOU periods are somewhat different, the general design of the rate is similar to the Overnight Rate pilot undertaken by Alectra³.

In the Regulated Price Plan Pilot Meta-Analysis Report⁴ prepared by Guidehouse Canada the consultants observed that:

“Of all the price plans tested in the RPP pilots, the Overnight price plan provides the most dramatic example of a behavioural change in consumption. Participants in this price plan increased their demand in the Overnight Off-Peak period by 45% in the summer and 73% in the winter months (see Section 2.2.3). This was accompanied by substantial increases in the abutting “standard” Off-Peak hours – demand increased in these hours by 16% in the winter months and 5% in the summer hours.

Though participants appeared to have engaged in some load shifting in the summer months (9.6% and 8.1% reduction in On-Peak and Mid-Peak, respectively), this is not the case in the winter months (no statistically significant change in On-Peak or Mid-Peak consumption).”⁵

Given the extent of the load shifting and the price differentials between periods in the Overnight Rate pilot, it is reasonable to conclude that the proposed enhanced TOU option will provide value to participating customers. This is confirmed by the

¹ OEB Act, Section 1 (1)

² Regulated Price Plan Manual, October 2020, pages 22-23

³ See February 17, 2022 Alternative Time-of-Use Price Design presentation, Slide 6

⁴ The “Guidehouse Report”

⁵ Page 88

Guidehouse Report which noted that “*the Alectra Overnight treatment received one of the highest scores for both potential and realized savings*”.⁶

Also, given the peak reductions and load shifting that occurred in the Alectra Overnight Rate pilot, it might be reasonable to assume that the proposed enhanced option TOU rate will incent behaviour that is beneficial to the electricity system. However, the case is not clear.

The Guidehouse Report also noted that the Alectra Overnight Rate pilot resulted in a 15% increase in overall energy use⁷. This in turn led to “*negative avoided energy benefits due to increased overnight consumption that were greater than the avoided capacity benefit*”⁸. In its report Guidehouse hypothesized that the overall increase in energy use was due, in part, to a transition from charging EVs away from the home to charging EVs at home and participants supplementing some overnight natural gas space heating with auxiliary electric space heating⁹. If such was the case then the benefits of the price plan calculated by Guidehouse would be undervalued. However, Guidehouse was not in a position to fully explore these matters and recommended that further analysis be undertaken to understand the sources for the load shifting and increases in overall demand¹⁰. During the stakeholder meeting Board Staff indicated that such analysis had been initiated but that it was still ongoing.

In VECC’s view further analysis needs to be completed before one can confirm that the change in behaviour incented by an Overnight style rate will “benefit the electricity system”.

Other issues raised by Guidehouse are that “*the Overnight price plan is one of the least cost-reflective price plans in the long-term*” and that “*this price plan fares the worst in terms of cost recovery*”¹¹. The fact the prices paid by customers are not reflective of system costs means that: i) the value customers attach to decisions regarding their electricity usage do not reflect the benefits that will accrue to the system and ii) changes in usage patterns will aggravate issues of cost recovery and increase the costs to be recovered from non-participating customers.

Finally, Guidehouse notes that “*recruitment for this price plan (i.e., the Overnight Rate pilot) was a significant challenge*”¹². This issue is discussed further below in response to Question #4. However, low levels of uptake for the proposed enhanced TOU option would limit both the overall system benefits potentially achievable as well as limiting the number of customers that would see bill savings as a result of participating in the optional plan.

⁶ Page 80

⁷ Page 21

⁸ Page 72

⁹ Page 22

¹⁰ Pages 116-118

¹¹ Page 89

¹² Page 89

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

In VECC's view the price design could be improved so as to better achieve the goals listed by ensuring the rates are more closely align with system costs. The more significant behavioural changes triggered by Alectra's Overnight Rate were primarily related to a reduction in On-Peak and (to a lesser extent) Mid-Peak use and an increase in the Low Overnight period usage. Given this the focus should be on ensuring the differential between the On-Peak and Low Overnight period rates, the differential between the Mid-Peak and Low Overnight period rates as well as the level of the Low Overnight rate itself are reflective of long term system costs. This latter point is of particular importance given the significant increase observed in the Low Overnight period use in the Alectra Overnight Rate pilot and the fact it was this usage that led to the overall system benefits being negative. Such an approach would also align with Guidehouse's recommendation¹³ that the period pricing differentials should be adjusted so as to improve long-term cost reflectiveness.

Question #3: Does the proposed price plan pose any risks not already considered?

There are at least three additional "risks" that we believe should be noted at this time.

The first is related to the definition of the periods and, in particular, the definition of the Higher On-Peak period. In its February 17th presentation Board Staff noted that the 4 pm to 9 pm hours were selected based on an analysis of Ontario's hourly peak demands. However, in assessing system reliability the IESO relies on Loss of Load Expectation (LOLE) calculations¹⁴. While the hourly contributions to the system's overall LOLE will be closely related to the system's hourly demands there may be differences. As result, it will be important for that the appropriateness of the proposed Higher On-Peak period's hours be confirmed with the IESO.

The current optional enhanced TOU rates proposal also makes no distinction between winter and summer. While this simplifies the rate design for customers, it does result in a Higher On-Peak period of over 1,200 hours. IESO input should also be sought regarding the importance of the winter and shoulder seasons in the determination of overall system reliability and the need for new capacity.

Second, in establishing the hours for the Higher On-Peak period it will be important to recognize that any load shifting is likely to increase load in the hours immediately adjacent to the Higher On-Peak period's hours. This shift could result in the overall system peak shifting to hours outside of the defined Higher On-Peak period and the need to redefine the Higher On-Peak period's hours. To avoid this outcome consideration should be given to adding additional hours to the beginning and the end of the Higher On-Peak period.

Finally, as noted in the response to Question #4, the proposed optional enhanced TOU rate plan is likely to appeal to and benefit only a small and specific segment of RPP customers. As a result, there could be a "backlash" from the wider pool of RPP customers if the plan is viewed as offering preferential service to select customers at the

¹³ Guidehouse Report, page xiii

¹⁴ IESO 2021 Annual Planning Outlook Report, page 42

expense of other customers who are unable to utilize or benefit from the rate option. Contributing to this concern is likely to be the fact that among the key beneficiaries for the Alectra's Overnight Rate pilot were EV owners¹⁵, who tend to be customers with higher incomes. This concern will be further aggravated if these customers are treated differently and preferentially from a cost recovery perspective¹⁶.

Question #4: Which types of consumers will be interested in choosing the proposed price plan?

The Guidehouse Report noted¹⁷ that, with respect to Alectra's Overnight Rate pilot, the evaluation plan identified the key demographics for recruitment as EV owners, shift workers and "those who would benefit from low overnight rates". The Guidehouse Report also hypothesized¹⁸ that, in addition to EV charging, the significant increase in electricity usage during the Low Overnight period was due to the fact: i) participants may be practicing some form of behavioural fuel-switching and displacing some natural gas use with auxiliary electric heat¹⁹ and ii) participants may be pre-cooling the house overnight to reduce charges incurred during more expensive time periods, or at least reducing A/C use during On-Peak and Mid-Peak hours²⁰. VECC would expect that similar types of consumers would participate in the proposed price plan.

At the same time, Guidehouse noted that:

"There are relatively few end-uses that can be time-shifted without inconvenience. No matter how drastic rate differentials are, immediate-use end-uses (watching television, doing laundry, ironing clothes, etc.) cannot realistically be shifted to the midnight to 6 a.m. period in any meaningful way."²¹

To VECC this suggests that the participants in the proposed plan are likely to have unique characteristics such as those outlined in the previous paragraph. The overall result is that the proposed plan will only appeal to a specific segments of RPP customers. This observation is supported by the fact that Alectra had difficulty recruiting the 500 planned participants for its Overnight Rate pilot and only succeeded in recruiting 440 by extending the recruitment period into the pilot period²².

Overall, we are concerned that there will be little to no opportunity for the types of customers that VECC represents (lower income customer and seniors) to benefit from the proposed optional TOU rate.

Question #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?

¹⁵ The Guidehouse Report (page 10) noted that 43% of participants owned or leased EVs

¹⁶ For further discussion on this see the response to Question #5, #6 and #7

¹⁷ Page 89

¹⁸ As noted earlier (see Question #1) Guidehouse recommended that further analysis be undertaken to fully understand the sources for the load shifting and increased off-peak use.

¹⁹ Page 88

²⁰ Page 24

²¹ Page 23

²² Guidehouse Report, page 14

To date the current practice for both the TOU and Tiered RPP plans is for any under recovery of costs to be recovered from all RPP customers. It is our view that under recovery of costs should be minimized by designing rates for each RPP option that reflect the cost of serving the customers concerned. However, to the extent there is cost under recovery, VECC sees no reason for treating customers on the optional enhanced TOU plan any differently. Indeed, to do so, would likely lead to claims of unfair treatment.

Having said this there are issues with the way the OEB's Regulated Price Manual calculates the under recovery of costs. Currently, for each of the two price plans (Tiered and TOU) under recovery is calculated by comparing the revenue under a specific plan with the average cost of supply for all RPP customers. However, to the extent the load profiles for the customers under the two plans differ the actual average supply cost for each will differ. This issue will also exist for those customers choosing to be served under the optional enhanced TOU rate plan. VECC appreciates that the scope of the current initiative does not include reassessing the pricing of the current RPP options. However, this is an issue that the Board may wish to explore with stakeholders in the near future.

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

VECC understands that the increase in the alternative TOU prices is due to the fact that the pricing for each of the plans is based on an up-to-date aggregate load profile for the customers on the plan but the rates are set so as to recover the overall average cost of for all RPP supply. VECC agrees that this outcome poses a risk to achieving the goals set out by the Minister of Energy by lessening (over time) the savings to be realized by those opting for the plan. However, VECC notes that the same issue exists with the current TOU plan, although the impacts may be less pronounced.

As discussed in the response to Questions #7 and #8, the solutions involve changing the way that rates are set for the various RPP options (i.e., to be more closely aligned with longer term system costs for each pricing periods used in each option) and the way cost under recovery is calculated (i.e., to be more reflective of the cost of serving the customers on each RPP rat option).

Question #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?*
- b) What are some potential risks with implementing this proposal?*

In VECC's view the solution is not (as suggested in Slide 11 of the February 17th presentation) to use a "baseline" load profile but rather to address the underlying

problem. As noted in the response to Question #5 the problem is the fact that the pricing for all options is designed to recover the average cost for all RPP supply. However, the actual cost of supplying the customers on each option will vary based on their load profile. Using a common cost reflective approach to allocate the RPP supply costs to hours, periods and ultimately all the different RPP plans would go part way to addressing this issue and the one noted in Question #6. It would also be consistent with the Board's the use of a common cost allocation methodology in the setting of rates for distribution and transmission service.

As noted in the response to Question #5, VECC appreciates that work on such an initiative falls outside the scope of the current exercise. However, adopting an approach such as that suggested in Slide #11 could be viewed as providing unfair and preferential treatment to customers electing for the optional enhanced TOU plan.

Question #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 responses to the preceding questions have already identified the need to: i) ensure that the total costs to be recovered from the customer on each RPP plan are reflective of the cost of serving load profile associated with the particular plan and ii) set prices that are reflective of system costs as two ways of modifying the RPP price setting procedures so as to provide "meaningful financial incentive to shift consumption for customers on the price plan, while fairly recovering supply costs from all RPP consumers".

With respect to the first point, VECC takes particular notice of the footnote in the Guidehouse Report²³ wherein it states:

"OEB staff are continuing to study alternative demand-based allocations of the GA that better reflect long-term system costs in an economically efficient manner. While it is clear from this on-going analysis that a price plan in which the Off-Peak period begins at 9pm instead of 7pm is more reflective of long-term costs, the question of the relative magnitude of these costs (and thus the appropriate TOU period price differentials) remains open. Guidehouse's recommendation with respect to price differentials is conditional on the most recently available information at the time of writing, and as a result, may need to be reconsidered as this work of the OEB's progresses."

We think that better results will be achieved if the Board continues to seek input from stakeholders as it continues these studies.

Of particular importance is the need to set prices and price differentials for the various RPP options that reflect system costs. The current approach to designing the optional enhanced TOU rate appears to be overly fixated on setting the Higher On-Peak period rate at 10x the rate for the Low Overnight period based on the view that this differential will provide material bill savings, thereby encourage customer to shift load. However, the goal is not simply to shift load but rather to shift load in a way that benefits the

²³ Page xii, Footnote #14

electricity system and benefits customers through lower costs. To the extent bill savings don't translate into savings in system cost the difference must be recovered from all customers. One way to address this is to ensure that electricity rates are reflective of system costs.

Finally, while the above changes will reduce the degree of under cost recovery they will not eliminate the issue on a year to year basis since some system benefits (e.g. capacity savings) are only achieved over the longer term. As a result, there may be merit in also reviewing the manner in which such costs are recovered (e.g., on a proportional as to fixed \$/kWh basis) and a need to monitor the overall level of under cost recovery required.

Thank you for the opportunity to comment on this important matter and, if there are any questions regarding the preceding comments, the undersigned would be more willing to discuss them further with Board Staff.

Yours truly,

A handwritten signature in black ink, appearing to read "W Harper". The signature is written in a cursive, flowing style.

William Harper
Consultant for VECC/PIAC