



Electricity Delivery Rates for EV Charging

Stakeholder Meeting: OEB Staff Proposal for Discussion and Input

June 13, 2024

Overview of OEB staff proposal

Context

- The proposal responds to direction from the Minister of Energy to the OEB to consider rate design options for EV charging.
- The new RTSR would reflect estimated causality of low load factor EV chargers towards transmission system costs.

Illustrative bill impacts

- For participants with load factors between 5% and 15%:
 - RTSR savings between 74% and 91%.
 - Total bill savings between 8% and 42%.
 - Savings depend on load factor, LDC.
- Limited increases for other LDC customers in near term.

Proposal

- A new RTSR for low load factor public EV charging stations between 50kW and 4,999 kW (Electric Vehicle Charger Discount Electricity Rate, EVC Rate).
- LDCs to implement by January 1, 2026.
- Participation by customers on voluntary basis.

Next steps

- OEB staff requests written stakeholder feedback by June 27, 2024.
- OEB staff to finalize the proposal following receipt of stakeholder feedback.
- OEB staff to begin implementation work in Fall 2024.

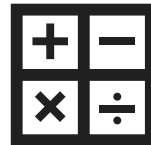
Eligibility

EV charging stations must meet the following four eligibility requirements to qualify for the proposed adjusted RTSR



Demand

EV charging stations would have to have a demand between 50 kW and 4,999 kW.



Load Factor

EV charging stations would have to have a load factor of 15% or lower.



Public Accessibility

EV charging stations would have to be publicly accessible.



Metering

EV charging stations would have to be separately metered.

Principle

OEB staff's proposal for an adjusted RTSR for EV charging is grounded in the principle of cost causality

Reflects costs

- Reflects causality of low load factor EV chargers towards transmission costs to be recovered from LDC customers.

Based on data

- Accounts for the lower contribution that low load factor EV chargers make to bulk system coincident peak demands compared to other LDC customers.

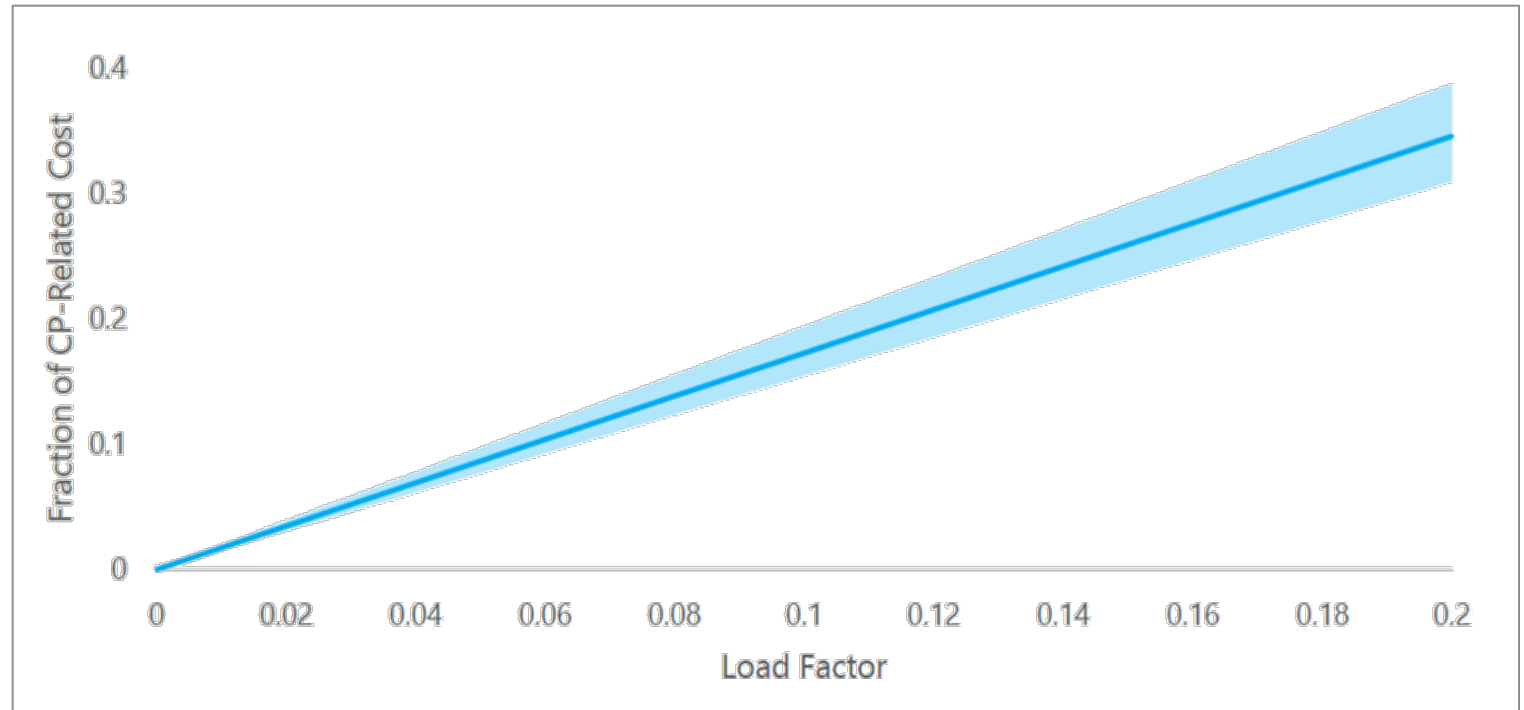
Expresses relationship between load factor and peak contribution

- Based on analysis which estimates the relationship among public EV charging station electricity demand, load factor and Ontario coincident peak demand.

Proposed EVC Rate to be achieved by applying OEB-issued parameter to RTSRs

- This figure relates the share of base RTSR costs to be recovered from EVC Rate participants and their load factor.
- This relationship can be expressed through a parameter that the OEB would provide to distributors.
- Distributors would use the parameter to reduce RTSRs for participants.
- The value of the parameter would depend on the specific EVC Rate design implemented.

Idealized Share of Coincident Peak Demand-Related Transmission Cost vs. Load Factor for Public Electric Vehicle Direct Current Fast Charger Stations



Three EVC Rate design options for consideration

- OEB staff proposes that participating EV charging customers be assigned a lower RTSR than other members of that class.
- The quantum of the lower RTSR would reflect a distributor's base RTSR for its General Service 50 kW to 4,999 kW rate class multiplied by a parameter(s) provided by the OEB.
- The value of the parameter(s) would depend on the EVC Rate design option chosen. OEB staff has considered the three EVC Rate design options shown in the table.
- OEB staff recommends Option A.

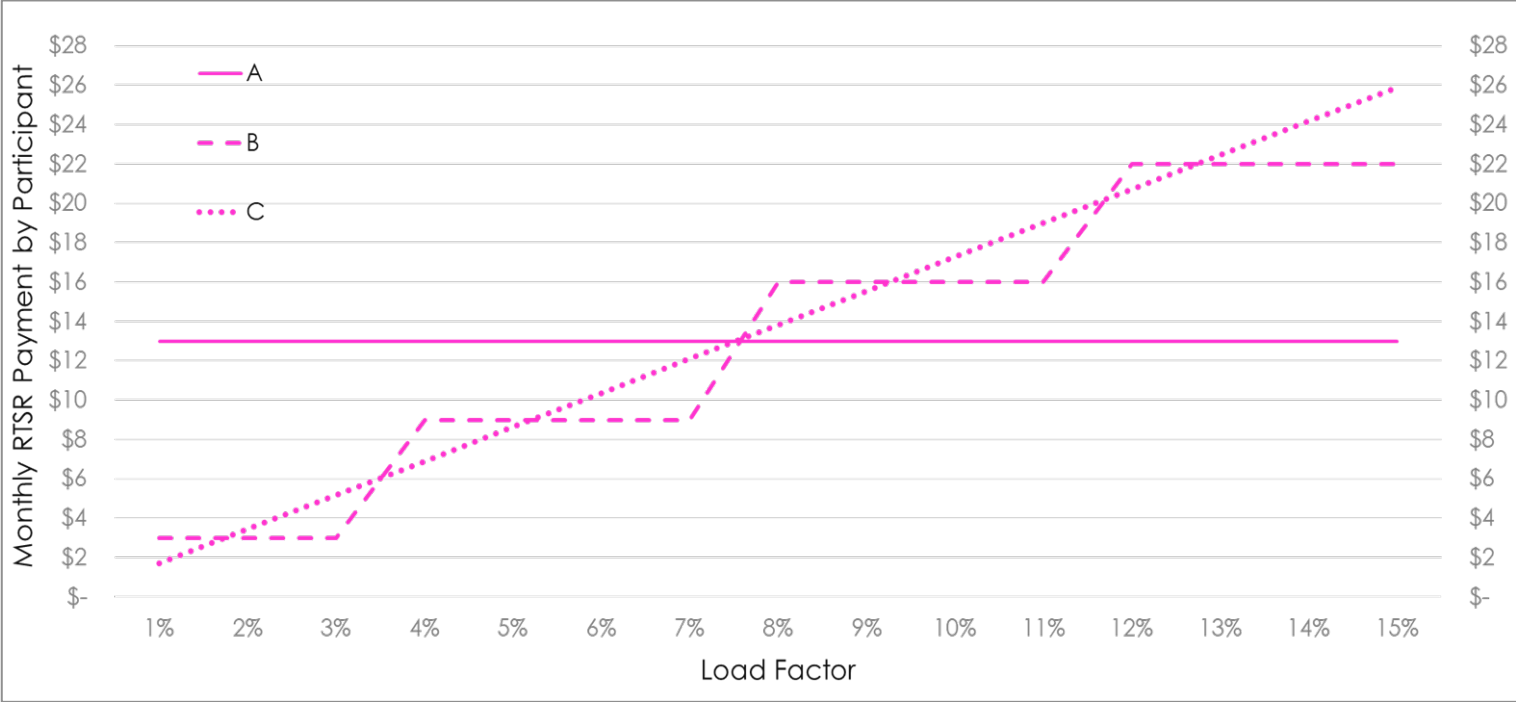
Overview of three EVC Rate design options

Load Factor	Option A: (a single \$/kW rate)	Option B: (a stepped \$/kW rate)	Option C: (a \$/kWh rate)
0 to 3%	0.13 * RTSR * kW	0.03 * RTSR * kW	1.7262 ÷ Number of hours in billing period * RTSR * kWh
3 to 7%		0.09 * RTSR * kW	
7 to 11%		0.16 * RTSR * kW	
11 to 15%		0.22 * RTSR * kW	
above 15%	1 * RTSR * kW	1 * RTSR * kW	1 * RTSR * kW

EVC Rate options A, B and C: comparison of monthly RTSR payment by a participating customer, using illustrative assumptions

- This figure illustrates options A, B and C using illustrative assumptions to facilitate comparison.
- The figure shows what a monthly RTSR payment would be by a participating customer assuming a \$1 RTSR and a peak customer demand of 100kW.

Illustrative comparison of EVC Rate options A, B and C: monthly RTSR payment by a participating customer assuming a \$1 RTSR and a peak demand of 100 kW



EVC Rate design options – summary



A: Single Tier

- A single parameter would apply to participating customers. The parameter does not change depending on the specific load factor, as long as the load factor is between 0% and 15%.
- Option A is the simplest, but it is the most general.
- OEB staff recommends Option A.



B: Multiple Tiers

- The value of the parameter changes by increments, or tiers, corresponding to increases in load factor. There are four increments in OEB staff's proposal.
- Option B is more complicated than Option A but more closely approximates the idealized linear relationship between public EV charging station coincident peak contribution and load factor.



C: Energy-Based

- Like Option B, RTSR payment increases with load factor. However, the RTSR itself is energy-based (\$/kWh).
- Option C relies on a less widespread \$/kWh rate structure. It has the greatest resolution of the three options and relies on only one single new parameter. However, it is arguably the least intuitive of the three options and its derivation is the most complicated.

Bill impacts

Impact on RTSR for participants

- RTSR savings between 74% and 91% for load factors between 5% and 15%, depending on load factor and LDC.
- Directionally, customers (charging facility owners) with lower load factors save more.
- Customers where RTSR is a larger proportion of their total bill save more.

Impact on total bill for participants

- Total bill savings (including commodity costs) to EV charging facility owner range between 8% and 42% for load factors between 5% and 15%, depending on load factor and LDC.

Impact on total bill for non-Participants

- Limited RTSR increase for non-participants in near-term, as RTSR obligation is reapportioned among existing customers.
- Future participants are not expected to increase RTSRs for non-participants: the participants will pay the costs of serving them.
- Estimated bill increase of 0.1% in 2026.

Questions for discussion

Context

- OEB staff would appreciate your thoughts on the following questions today.
- The Appendix contains additional questions for consideration, in case helpful for those who wish to file written comments on OEB staff's proposal after today's meeting.

Questions

- **Service to all EV models:** Should charging stations be required to provide service to all EV models to be eligible for the EVC Rate?
- **EVC Rate design options:** What are your thoughts on the three EVC Rate design options (A, B and C)?
 - Which option would you recommend and why?
 - How strong is your preference?
 - Do you have any other advice on what to consider when choosing the EVC Rate design option?
- **Further clarification:** What important aspects of the draft proposal should be clarified as it is finalized?
- **General:** Is there anything else you would like to tell us today?

Thank you and invitation for written feedback

- Thank you for your time and participation today.
- OEB staff invites your written feedback on its draft proposal by **June 27, 2024**.
- Details of how to submit your feedback are provided in the letter to stakeholders dated May 1, 2024, which can be found on the OEB's [Electric Vehicle Integration page](#).
- Please consider the questions that were discussed today as well as those that are outlined in the appendix, but please also feel free to comment on other aspects of the draft proposal as you see fit.
- Stakeholder feedback will inform OEB consideration of options and next steps.



Appendix: Additional information and questions for stakeholder consideration

EVC Rate mandatory to offer by distributors, optional to sign up for

Considerations

- Electricity distributors would be required to offer the EVC Rate to eligible customers.
- Eligible customers who wish to have the EVC Rate applied to them would voluntarily opt in.
- A voluntary, opt-in approach would not require LDC to have insight into end-uses.
- The “opt-in” nature of the proposed EVC Rate represents a departure from conventional practice for transmission and distribution delivery rates.

Questions for your input

- What do you think of the voluntary opt-in nature of the proposed EVC Rate?
- Should there be a limit on how frequently a participant may opt in and out of the EVC Rate?

Eligibility requirement 1: demand between 50 kW and 4,999 kW

Considerations

- Distributors would measure peak demand and billing demand for participants consistent with how they measure peak demand and billing demand for customers in their General Service 50 kW to 4,999 kW rate classes.
- Distributors would periodically review the ongoing eligibility of participants, consistent with how they periodically review ongoing eligibility for customers within the General Service 50 kW to 4,999 kW classes.

Questions for your input

- Do you have any advice on measuring demand for purposes of this EVC Rate?
- Do you have any advice on assessing a participant's ongoing eligibility for the EVC Rate?

Eligibility requirement 2: publicly accessible

Considerations

- Charging stations that only or primarily serve fleets would not be eligible.
- The public must be able to access the charging stations, subject to requirements, conditions or restrictions established by the charging station owners.
- Illustrative examples of use cases are listed in the OEB Staff Discussion Paper.
- A charging station does not have to provide service to all EV models to be eligible for the EVC Rate. A “universal” charging port would not be required.

Questions for your input

- Should charging stations be required to provide service to all EV models to be eligible for the EVC Rate? Why?
- Would it be feasible for charging stations to provide universal service? How would it be accomplished?

Eligibility requirement 3: load factor up to 15%

Considerations

- The 15% load factor cutoff refers to a monthly load factor.
- Stations without any charging data could apply for the EVC Rate based on load factor projections.
- Distributors to apply their existing procedures for dealing with participants whose monthly load factors occasionally exceed 15%.
- The proposed 15% cutoff is meant to capture most stations, while recognizing limitations and approximations to the analysis (e.g., less data on load factors above 15%).

Questions for your input

- What do you think of the proposed approach in which distributors would apply their existing procedures for dealing with participants whose monthly load factors occasionally exceed 15%?

Eligibility requirement 4: separately metered

Considerations

- The intent is to ensure that the EVC Rate is applied only to electricity demand for EV charging services, including eligible auxiliary load.
- Certain auxiliary loads will be permitted to be included in an EVC Rate participant's total qualifying EV charging station load.
- OEB staff does not propose to require distinct meters for Direct Current Fast Charge (DCFC) and other charging types at participating charging stations. While the EVC Rate is proposed on the basis of DCFC service, it is recognized that some stations might also provide lower voltage charging, such as level 2 charging.

Questions for your input

- Is the set of eligible auxiliary loads identified in the discussion paper appropriate? Are there others that you'd recommend?
- Should stations that have some or no DCFC chargers be eligible for the EVC Rate?
- Should a limit be prescribed on the share of charging station load that may come from other types of EV chargers that are not DCFC chargers? If so, what should that limit be?

Customer to attest to eligibility upon opting in

Considerations

- The attestation would confirm that, over the next 12 months, the charging station demand is expected to be between 50 kW and 4,999 kW, the station will be publicly accessible, the station will have a load factor of 15% or lower, and the station will be separately metered.
- The attestation would also verify that auxiliary loads at the charging station will not exceed 10% of the charging station's projected peak demand.
- Electricity distributors would not be expected to independently validate the attestation of eligibility provided by customers who opt into the EVC Rate.

Questions for your input

- What do you think of this approach of self-declaring eligibility for the EVC Rate?
- Is it appropriate that the attestation should come from a “representative” of the customer, or should something more specific be required? For example, should the attestation be signed by someone like a professional engineer?
- Are there any existing distributor processes for opting in that can be leveraged?

No new rate classes

Considerations

- OEB staff proposes that participating public EV charging stations will remain within the General Service 50 kW to 4,999 kW class that has been established by their respective electricity distributor.
- Making use of existing rate classes would reduce the complexity and administrative burden of establishing any new rate classes for participating EV charging stations.
- Making use of existing rate classes would also help ensure that the EVC Rate can be implemented by 2026.

Questions for your input

- Do you agree with the proposed approach of not establishing new rate classes for participating EV charging stations upon implementation of the EVC Rate?

EVC Rate options: A, B and C

Considerations

- EVC Rate Option A is the simplest, but it is the most general.
- EVC Rate Option B is more complicated than option A (involves establishing tiers) but more closely approximates the idealized linear relationship between public EV charging station coincident peak contribution and load factor which was illustrated previously.
- EVC Rate Option C relies on a less widespread \$/kWh rate structure. It has the greatest resolution of the three options and relies on only one new parameter. However, it is arguably the least intuitive of the three options and its derivation is the most complicated.

Questions for your input

- What are your thoughts on the three EVC Rate design options?
- Which option would you recommend and why?
- How strong is your preference for the option that you recommend compared to the other EVC Rate design options?
- Do you have any other advice on what to consider when choosing the EVC Rate design option?

Provincewide parameter for now

Considerations

- In time, distributors may wish to establish a more specific coincident peak contribution parameter for their respective service territories.
- Distributors would have the opportunity to propose any specific customization to their EVC Rate in future cost of service applications. It is expected that any distributor-specific EVC Rate would be underpinned by a study conducted by or on behalf of the distributor.
- In the meantime, adopting a provincewide EVC Rate established by the OEB is probably the most administratively simple option.

Questions for your input

- What do you think of the approach of starting out with the RTSR reduction parameter issued by the OEB initially, but allowing the opportunity for distributors to propose more territory-specific EVC Rates in the future if they wish?
- Does the potential distribution-specific customization of the EVC Rate in the future influence or change your thoughts on which EVC Rate design option (A, B or C) should be selected for now? For example, is one EVC Rate design option likely to be more amenable to customization than another?

Existing DVAs should continue to be used by distributors to record and recover any RTSR revenue shortfalls

Considerations

- Existing EV charger customers who pay the base RTSR rate just prior to implementation of the EVC Rate will cause, all else being equal, an RTSR revenue shortfall upon opting into the EVC Rate, until base RTSRs are reset.
- Distributors should continue to use their RTSR variance accounts to record RTSR revenue variances.
- Distributors should continue to follow established variance account disposition processes to dispose of RTSR revenue variances.

Questions for your input

- Does anything need to be clarified about RTSR DVAs before OEB staff's proposal is finalized?
- What, if anything, is missing from the proposal discussion paper about RTSR DVAs that needs to be added before OEB staff's proposal is finalized?

The EVC Rate would be implemented through changes to the RTSR Workform and IRM Rate Generator Model

Considerations

- RTSRs are set through a Cost of Service process or an IRM process:
 - Through the RTSR workform in a Cost-of-Service process.
 - Through the IRM Rate Generator Model in an IRM process.
- The RTSR workform and IRM Generator Model are created and updated by the OEB and completed by distributors.
- The OEB would revise both models to facilitate implementation of the EVC Rate.

Questions for your input

- Does anything need to be clarified about the RTSR workform and/or IRM Rate Generator Model before OEB staff's proposal is finalized?
- What, if anything, is missing from the draft proposal discussion paper on the subject of the RTSR workform and/or IRM Rate Generator Model that needs to be added before OEB staff's proposal is finalized?