



BURLINGTON  
ELECTRIC  
DEPARTMENT



December 14, 2018

Ms. Judith C. Whitney, Clerk  
Vermont Public Utility Commission  
112 State Street, Drawer 20  
Montpelier, VT 05620

Re: Case 18 – 2660 – Investigation into promoting the ownership and use of Electric Vehicles

Dear Ms. Whitney;

At the request of the Vermont Public Utility Commission (“Commission”), the City of Burlington Electric Department (“BED”) and Vermont Public Power Supply Authority (“VPPSA”) submit the following information response. This response addresses a question raised by the Commission during its November 30<sup>th</sup> workshop relative to the cost of providing a meter to serve electric vehicle charging stations (or “EVSE”).

As a general matter, estimating the cost of installing a commercial revenue grade utility (or customer) meter (hereafter “meter”) is challenging as such costs are, by their nature, very site specific. And, because they are site specific, they can also be highly variable. Nevertheless, BED and VPPSA estimate that the fully loaded cost of installing a typical single phase meter to serve one dual port, Level 2 EV charger with a maximum output of 15 kW ranges from \$200 to \$400 per meter. The cost of the meter itself would not be directly paid upfront by the EVSE station owner but would instead be added to the utility’s cost of service and recoverable through rates (most typically the monthly customer charge).<sup>1</sup>

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<sup>1</sup> As an example, the monthly customer charge for a small commercial business in Burlington is \$11.62 per meter. See BED’s SG tariff. BED assumes that most level 2 EVSE station owners would be served under the small commercial general rate, until and unless the energy load exceeds 3,000 kWh per month (100 kWh per day) for three consecutive months.



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However, the cost of “metering” does not reflect the full cost of establishing electric service to the EVSE. There will be additional costs borne by both the non-utility EVSE station owner and the distribution utilities.

#### *EVSE Station Owner*

As an initial matter, the nonutility EVSE station owner would be responsible for all costs associated with connecting the meter, which is typically referred to as the point of delivery, to the EVSE pedestal. This would include the cost of the meter socket (or panel) as well as the cost of wiring, conduit, connectors and other EVSE related electronics (i.e. sub meters, billing, internet connections, etc.) on the customer’s side of the utility meter. In addition, nonutility EVSE station owners would be responsible for costs associated with connecting the utility meter to the nearest transformer, if such costs exceed that of a standard service drop overhead connection. This is often referred to as the utility side of the meter.

For example, “New customers requesting standard (low voltage) service receive up to 100 feet of wiring (and associated connectors) to the nearest transformer for free based on the cost of aerial service. Aerial service is calculated using the current cost of #2 aluminum triplex wire and the fully loaded cost of one crew for one hour”.<sup>2</sup> To the extent that a drop wire service connection exceeds the standard, then BED and VPPSA would invoice the customer for the incremental cost of that connection. Examples of such incremental costs would include additional wiring and conduit, trenching and backfill, a support pole (if needed) and labor hours. Depending on the location and the distance between the meter and the nearest transformer, the additional service connection needed to energize the EVSE could cost between \$500 and \$2,000.

#### *BED and VPPSA Cost*

As noted above, BED’s and VPPSA’s costs for a standard drop wire service connection ranges between \$200 and \$400, inclusive of the meter, 100 feet of drop wire and labor. These costs are recoverable from the monthly customer charge. To the extent

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<sup>2</sup> See: BED operating guidelines, as approved by the Vermont Public Utility Commission, 2/1/1997.



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that a transformer for a new customer connection needs to be upgraded to serve the additional load, the costs associated with such an upgrade would typically be capitalized by the utility and recovered through rates; although, the cost of installation – not the transformer itself - may be a customer responsibility, as well as the removal and disposal of the old transformer.

It bears noting that a utility designed, or statewide default EVSE rate, if properly designed, could potentially estimate the above noted costs more accurately and allocate them to a new EVSE customer class as EVSE represent an atypical load profile vis-à-vis other residential and small commercial customers.

*Additional Item*

Lastly, BED and VPPSA ask the Commission to take note of the recent Proposal for Decision in Docket 7307 dated November 30, 2018 relative to customer data privacy. It is unclear to BED and VPPSA whether the Commission's ruling in this proceeding would also apply to nonutility EVSE owners, particularly if they begin to sell electricity to EV owners on a kWh basis.

BED and VPPSA appreciate the opportunity to provide this feedback to the Commission in the above referenced proceeding. Should you have any additional questions or concerns, please feel free to contact us directly.

Sincerely,

Thomas Lyle  
Programs and Policy  
Burlington Electric Department

Melissa Bailey  
Legislative & Regulatory Affairs  
Vermont Public Power Supply Authority