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TO: East Montpelier Select Board
CC: B. Johnson, P. Richards
FROM: Bill Powell
RE: WEC offer to install Type II EV charging station
DATE: 8 January 2016

WEC's offer to install a Type II EV charging station will be on the Select Board's agenda on 18 January. In anticipation of that opportunity to provide additional information here we will bring the project offer into focus.

WEC was awarded a grant in 2015 by VLITE, an entity within the governance of VELCO, the state's transmission provider. The grant is to deploy Type II EV charging stations, along with the network service and full service contract provided by the manufacturer, ChargePoint. WEC has so far deployed three of five stations in 2015.

Given the purchase of the former WEC garage, and the support of VTrans to fully pay for the future park/ride, WEC is making this offer contingent on those plans advancing as well. WEC has secured an extension into 2016 to allow East Montpelier to determine whether the EV station is part of the park/ride project. Included in VTrans' proposed design are 2 Type I (unmetered) charging ports, as well as appropriate LED lighting for the park/ride.

The Offer: There are two components of value to each installation. The equipment itself is a dual port Type II EV station. Based on a 2015 quotation by the Co-op's contractor (Middlesex Electric (Don Pierce) the value of the station installed is:

Type II EV (CT4000) dual charging station	\$ 6,561
Middlesex Electric installation	\$ 4,950
5 years ASSURE service contract dual station	\$ 4,790
	\$16,301

The ASSURE service contract is a five year, full warranty and service contract. Separately provided is an ASSURE summary of what this contract includes; this is a full service contract which holds the Town harmless for any/all expense of repair or maintenance.

Network Service: The station manufacturer (ChargePoint) is the market leader for EV charging stations. For a public location such as the proposed park/ride, the EV owner will have their own ChargePoint card. When a driver parks their EV to be charged, all the transactions occur via cellular communication to the Type II station. The ChargePoint cellular network service provides the billing and notification to users of the station.

Account management: ChargePoint’s account management involves setting up “rules” for (1) who is allowed to use the station, (2) under what cost per charging event, and (2) any variations the host (Town of East Montpelier) of when or how long an EV can use the facility. The “rules” are set up by the host/Select Board, and can be easily revised.

I have included a EV charging “tariff” from Stowe Electric for your consideration. The reason to consider this design is (1) it is a simple, understandable method for a rate to be collected by the Town, and (2) this design could easily be adapted to East Montpelier’s proposed Type II station.

I have assisted other host members with the setup of their account; the process is relatively easy, and once set up does not require on-going time commitment.

Revenue from the station: Assuming the Select Board accepts WEC’s offer, and the station is part of the park/ride design, any revenue from this station’s use is handled automatically by ChargePoint. The revenue is collected, and ChargePoint takes a 10% fee from any revenue collected. The remaining revenue is either returned to the Town in a check, or via ACH on a monthly basis.

The cost of electricity: WEC’s service to the future park/ride would be under the Rate 3 tariff (commercial, energy only).

WEC’s rates for same sort of commercial tariff (#3):

Monthly service charge	\$12.19
Kilowatthour (kwh) cost	.17897

IF the Town decides to set a charging rate to “break even” then what I recommend is (1) based on a similar structure as the Stowe Electric Department’s EV tariff, and (2) makes up for the 10% “take” of the ChargePoint back room service. So for a .18/kwh cost, the net rate should be around .20/kwh.

A first hour of EV charging can use up to 6 kwh’s, so a first hour rate (to collect) should be around \$1.20 (6 * .20/kwh). Some vehicles will come into the park/ride and have less than a full charge “need”; others may connect and stay on for a couple hours. For those instances where the Town wants to discourage EV “squatters” there should be a rate component after a base time, where the rate increases significantly. This would only need to occur when/if there was evidence of “squatting” and preventing another user from gaining access. What I’ve been recommending to other host members is to set something up, but not worry about getting the “final” rate model initially. See what happens, and learn from the actual utilization of the station.