

Portland Clean Energy Task Force
Virtual Committee Discussion/ Presentation
Regular Meeting Moved to Virtual Format Due to Weather Conditions
6:30pm, January 16, 2024

PRESENT: Andy Bauer, Lou Pear, John Rooney, Kerry Darby, Heather Guilmette

ABSENT: Morgan Kennedy, Melissa Kelly

OTHERS PRESENT: Stephan Hartman of Earthlight Technologies, and Russ Kaplan, David Price, John Greeno of the East Hampton Energy Commission

GENERAL DISCUSSION / COMMUNICATIONS/CORRESPONDENCE

The Portland Library closed midafternoon on Tuesday, January 16, 2024, effectively leaving the evening's scheduled meeting without a physical meeting place. There were no action items, but Stephan Hartman had been scheduled to meet with the Task Force to explain the ins and outs of installing EV chargers. Given that we had planned to meet anyway, Stephan agreed to present online using Earthlight's Teams account. His flexibility was appreciated. Below are notes taken by Andy.

Earthlight Technologies

Earthlight Technologies is a solar, EV charger, & battery backup vendor and is on the state approved vendor list.

A Portland/Earthlight partnership might proceed as follows:

Stephan checks out electric bills and does a google map analysis.

Stephan meets with Ryan Curley and Ryan O'Halpin to reprise this introduction to them.

Stephan meets with Town Staff to visit prospective sites (as of this writing, those sites are the Library, Senior Center, Fire House #1, and the municipal lot behind Melillis).

Stephan/Earthlight present initial findings and rough cost estimates

Should Portland choose to move forward, a Letter Of Intent (LOI) is negotiated, meaning, should Portland go forward with an EV charger installation, Earthlight gets the job.

Stephan/Earthlight present a more detailed installation plan should a site look promising.

Portland decides to go for it, or not.

An EV charging station is comprised mainly of a charger and approximately a 20' cord to connect to an EV. It can be installed outside or inside. The charger can connect to the internet for payment and to verify whether or not it is available – a handy feature.

There are three types of EV chargers.

Level 1 which draws from a regular 120 Amp outlet and will add approximately 4-5 miles of range per hour of charging. A level 1 charger is usually no more than an electric cord with a built-in transformer that plugs into any household plug. *These are not planned for installation as part of this endeavor.*

Level 2 which draws from a 220 Amp circuit and must be installed by a licensed electrician. This adds approximately 20-30 miles of range per hour of charging. *The review of Portland Facilities will focus on Level 2 chargers.*

Level 3 which draws from a 440 Amp circuit. Also known as Direct Current Fast Chargers (DCFC), or just Fast Chargers, *will not be the focus of this review.*

Metering

Level 2 chargers can be wired into an existing service panel and their use goes on to that meter, or they can be installed with a separate meter. Most town facility meters are on a Standard Rate 30, but a newly installed dedicated meter for an EV charger can qualify for an EV Rate. The EV Rate would probably be better (cheaper) when it is first installed and the usage is low, however it can be switched to the Standard Rate which would be cheaper as usage increases.

Installation Costs

This can vary substantially from site to site, and Earthlight can do a preliminary site analysis at no cost to Portland. A very rough average estimate has a two-pole unit about \$12,000, and trenching, parking space prep, and connecting the charger to the meter can be another \$25,000.

Mitigating Installation Costs

A \$20,000 incentive administered through Eversource is available for equipment and labor, per site. The greater distance from meter to charger, the more money to install. Mounting the charger on a wall next to the parking space is less expensive than having to trench the wires 50' away. Avoiding sidewalk or pavement disruption also reduces the installation cost.

Town crews might be used for some of the construction, which will also reduce costs.

As an example, Portland could install four stations between the Senior Center and the Library. If all four are wired to the Senior Center, the incentive is \$20K. However if two of those stations are fed from the Library, the incentive would total \$40K (\$20K for each site).

The \$20 incentive is doubled for an EV charger installed in an Environment Justice Block Group area (<https://ctdeep.maps.arcgis.com/apps/webappviewer/index.html?id=d04ec429d0a4477b9526689dc7809ffe>). In Portland, this area is Northwest of Main St, from the Arrigoni Bridge to Strongs Ave. This incentive is for Commercial/Municipal chargers, not residential charging. Firehouse #1 and the lot behind Melillis are both in this area.

Operating Costs

Understand that the price a Rate 30 bill pays is determined by the highest usage point recorded by that meter over the monthly billing cycle. That's called the Peak (it looks like a bell curve) and is often recorded on hot days in the late afternoon. Charging an EV draws a lot of Amps, and an EV charging during Peak will raise the rate for the entire month. This could amount to several hundred dollars. Networking service is free for each charger for 5 years. After that, a new subscription (estimated at \$60) will be needed to keep pace with the next cell service upgrade. The hope is that online charging networks will move toward ethernet connections.

Mitigating Operating Costs

Portland can require payment to use a charger the Town installs. Also, a site administrator can set the 'cost to charge' to be higher during peak, thus discouraging use during that period and recouping a larger slice of the cost of electricity used. Think of the Utilities' 'Wait till 8' campaign a decade ago to encourage off-peak use.

It's worth it to educate EV drivers in best practices for charging. Town Staff needing to charge an EV can be given a code to avoid having the Town pay itself.