

Electric Vehicles at RECOA

RECOA owners receive their electricity from Central Electric Cooperative (CEC), which is governed by its member elected board of directors and, as a rural electric cooperative, is not subject to regulation by the Oregon Public Utilities Commission. CEC serves about 37,000 members and, as of mid-2021 about 400, or 1%, have Electric Vehicles (EVs) according to the Oregon Department of Environmental Quality (DEQ).

There is no data on the number of EVs in the area covered by RECOA, but a working assumption is probably 1% of the number of total residences of about 1,850 or nearly 20 EVs unadjusted for part time residents or visitors. This total is probably low as the 1% documented by DEQ is from mid 2021 and is thought to have increased significantly. However, even doubling the 1% estimate results in less than 50 EVs in RECOA's area.

To better understand EVs in RECOA's area, this summary will address electric charging capacity, charging infrastructure, and charging challenges.

Electric Charging Capacity

Two years ago, CEC assessed EV charging capacity and determined that capacity is adequate, assuming most charging occurs at off peak hours. However, Thomas Elzinga, CEC Energy Services Manager, did outline the process specific neighborhoods might have to evaluate if EV adoption increases significantly:

"The rate of adoption is the largest variable. That could mean there could be potential constraints at a specific location level. This is why it is extremely important to review any planned community charging, and individual residential level 2 charging prior to installation. This is no different than any member adding load for any other equipment or appliance. An example I have personally seen is homes converting from some kind of fossil fuel space and water heating to electric heat. This example, which would be no different than adding an EV charger, could involve a home panel upgrade, but also a transformer and service wire upgrade. On a more macro level, regardless of adoption rate, we do not see any capacity constraints."

As the level of EV adoption is very important to CEC, they are offering a \$50 rebate for EV owners to register their vehicles:

<https://www.cec.coop/electric-vehicle-rebate-form/>

Charging Infrastructure

All existing EV charging occurs at the residence of the EV owner utilizing their existing CEC electric meter. EV come with a Level 1 charger, which utilizes existing household wiring and will fully charge a battery in 11-20 hours. Alternatively, the EV owner can install a 208-240 Volt, 40

Amp circuit and purchase a Level 2 charger for \$700 or more and charge their battery in 3-8 hours. To encourage the purchase of a Level 2 charger, CEC offers a [rebate](https://www.cec.coop/electric-vehicle-rebate-form/) of up to \$450: <https://www.cec.coop/electric-vehicle-rebate-form/>

There is no charging infrastructure at residences without a garage such as those in Forest Greens or Creekside. Anecdotal evidence indicates some charging is happening using extension cords for residences, but the extent of that practice is unknown, as is the insurance exposure to RECOA on extension cords running across common areas, although our insurance agent did offer the following:

“My first reaction is the liability is with the homeowner. It is their cord, they are placing it etc. My only other thought would be if you have special restriction in your by-laws about use of a common area-what is allowed and not. If it addresses homeowners placing items/obstructions etc. then you may have some liability coming back if you should be monitoring for the hazards. Still feel that majority of liability lies with the homeowner.”

No charging is available in the parking lots at the golf course or sports centers (Not RECOA property).

Charging Challenges

The most significant challenge is the availability of charging in the neighborhoods without garages:

- Installing pedestal chargers, including cabling and billing software could cost up to \$20-25,000 per location
- Maintaining charging only parking places and enforcing time limits could create a costly “policing” activity
- Subsidizing charging stations with RECOA or neighborhood funds would result in non EV owners paying for assets that only benefit EV owners, unless some method were developed to collect the costs from EV owners.

A second challenge is chargers in the parking lots at the golf courses and sports centers. RECOA could not invest in these, but perhaps a third party that is in the business of building-out charging stations might be interested.

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In summary, RECOA and its electricity provider CEC are well positioned for future growth in EVs but will want to continue collecting data to maintain awareness.