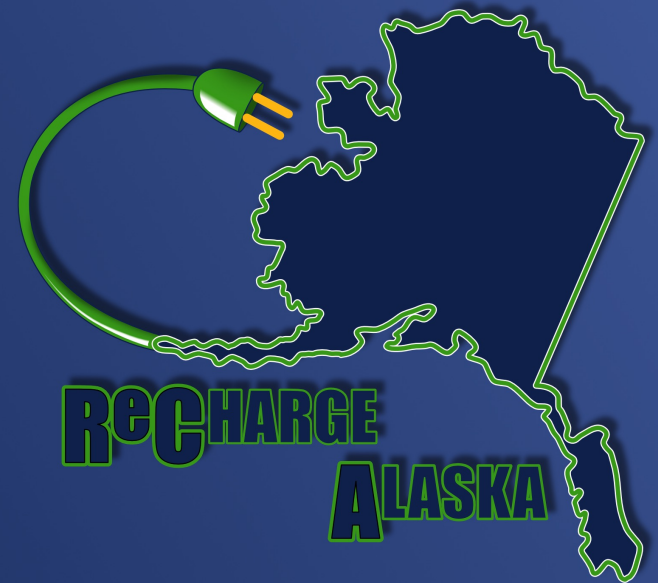


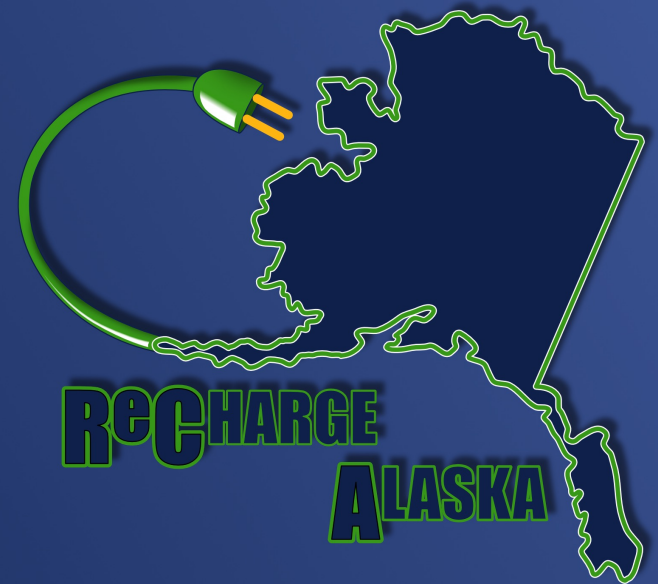
Electric Vehicles in Alaska

Sara Hall



Agenda

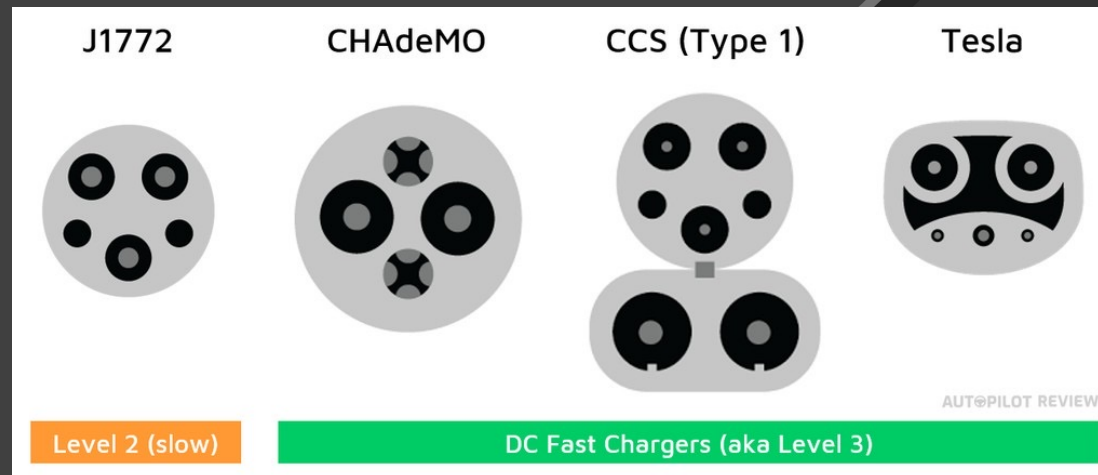
1. Using and charging an Electric Vehicle in Alaska
2. What ReCharge Alaska is doing to support EVs in Alaska
3. Alaskan regulations to consider





Plugging In

- When – Most people charge at night
- Where - ~90% of charging is done at home
- How much – Daily use is between 10% to 90%
- Plug types – CCS, CHAdeMO, J1772, and Tesla





Charging Up – Machine Specs

- Level 1 – About the size of a water bottle
- Level 2 – About the size of an air fryer
- Level 3 – About the size of a freezer or larger

	Typical Power Output	AC Input Voltage	AC input Current	Number of Phases	Time to Charge
Level 1	~1.5 kW	120v	<16a	Single Phase	1 - 6 days
Level 2	6 to 19 kW	240v	24 to 80a	Split Phase	6 - 24 hours
Level 3	50 to 500 kW	480v	60 to 600a	Three Phase	18 – 120 minutes



Let's Drive

- 80 to 500 miles of range
- 54kWh to 212kWh for cars (commercial vehicles are larger)
- Road conditions, weather, and driving habits affect range
- 32.3 kWh = 1 gallon gasoline (US DOE)





Common Questions

- Do they work in Alaska?
 - EVs from Juneau to Kuparuk
- Where do you charge at?
 - Home and on the road
- How much range is lost during the winter?
 - Up to 40% as per ACEP
- How's the maintenance?
 - Minimal





ReCharge Alaska

- Born from the lack of public infrastructure.
- Founded in November 2020 to open a summer route between Fairbanks and Anchorage.
- Installed pilot project with the help of GVEA in summer of 2021.





Expansion

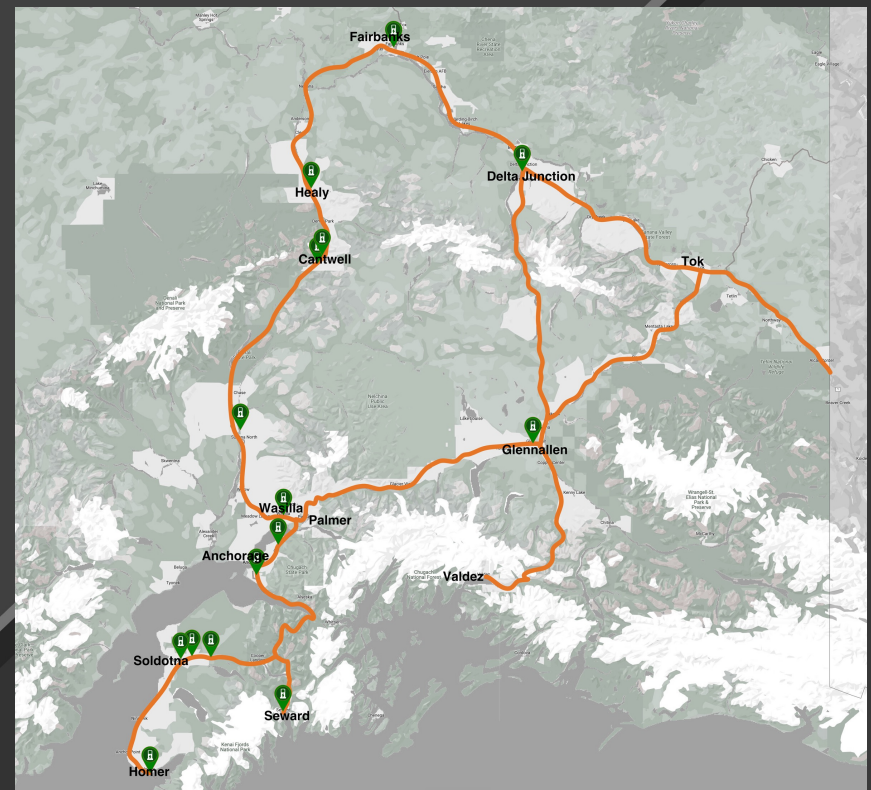
- Healy installed December 2021
- Delta Junction installed, with help from GVEA fall 2022
- Glennallen installed November 2022





EV Growth

- Charging stations in travel hubs
- \$52 million in NEVI funds coming to AK
- Many other grant opportunities
- We are working with people in the communities of North Pole, Valdez, Anchorage, and Palmer

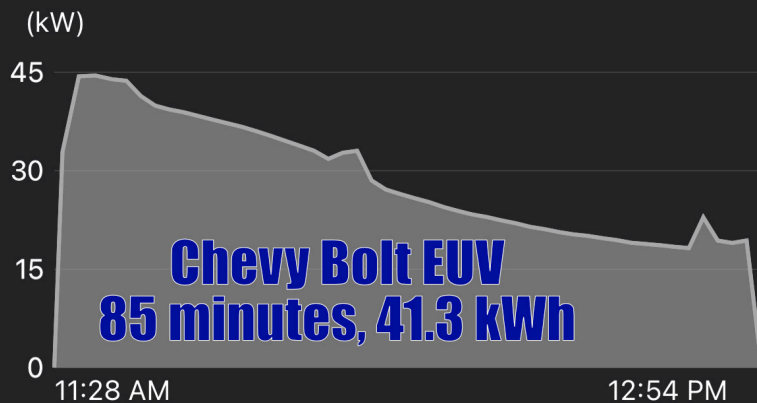




Considerations

- Resale of power
- Plug standardization
- Standard payment types
- Direct sale vs dealers
- Road tax
- AK mineral deposits

January 22, 2023 at 12:54 PM



March 3, 2023 at 7:02 PM

