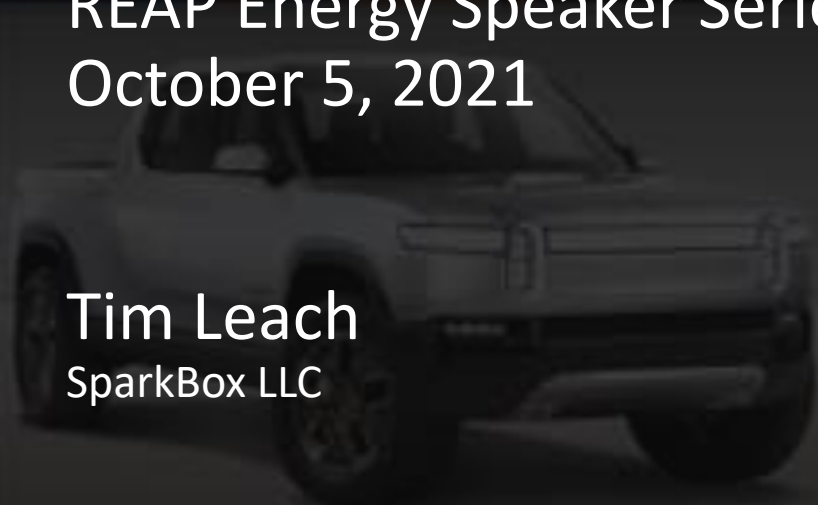


The Alaska EV Landscape

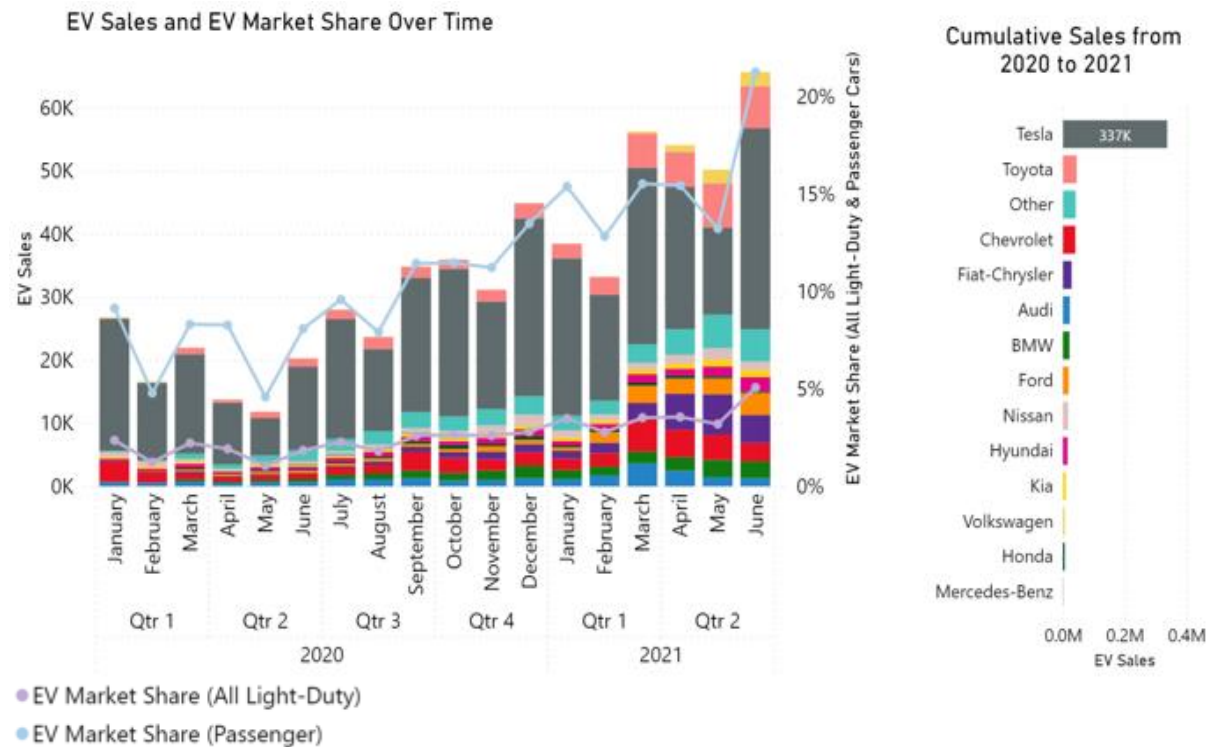
REAP Energy Speaker Series
October 5, 2021

Tim Leach
SparkBox LLC

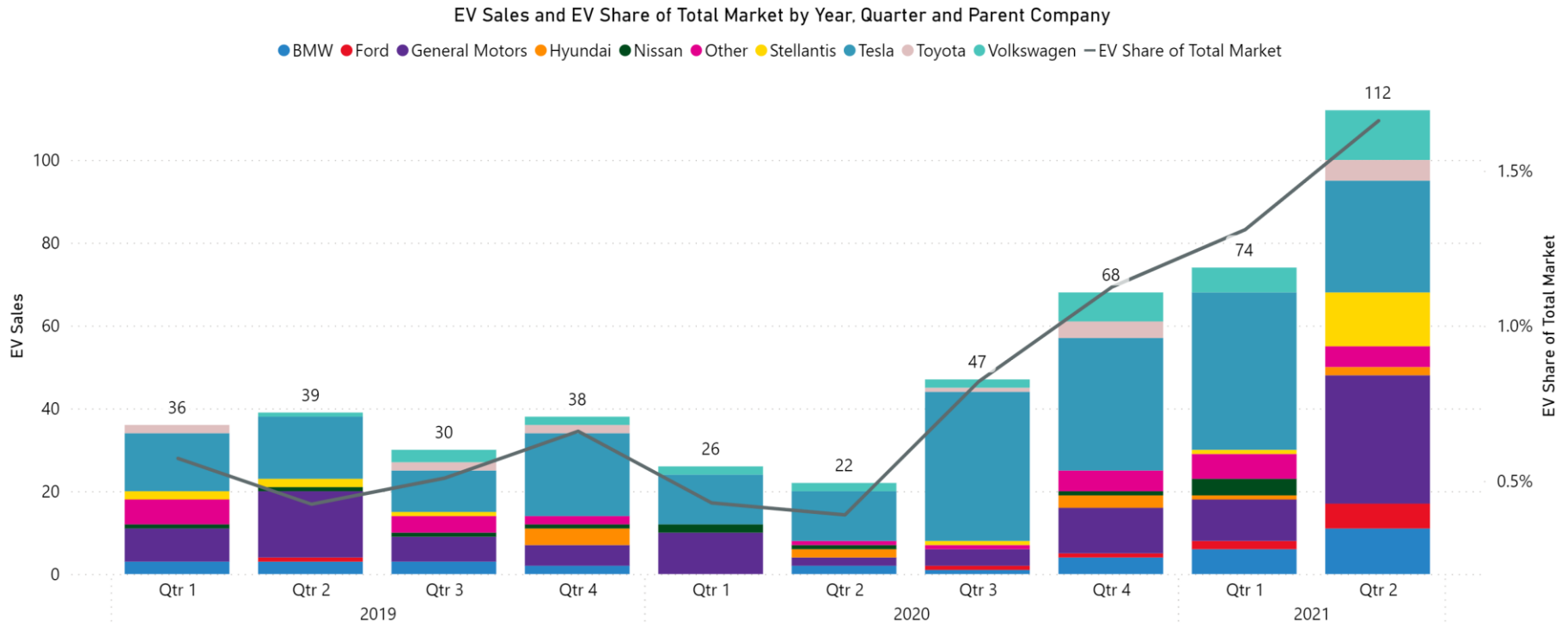


U.S. EV Sales

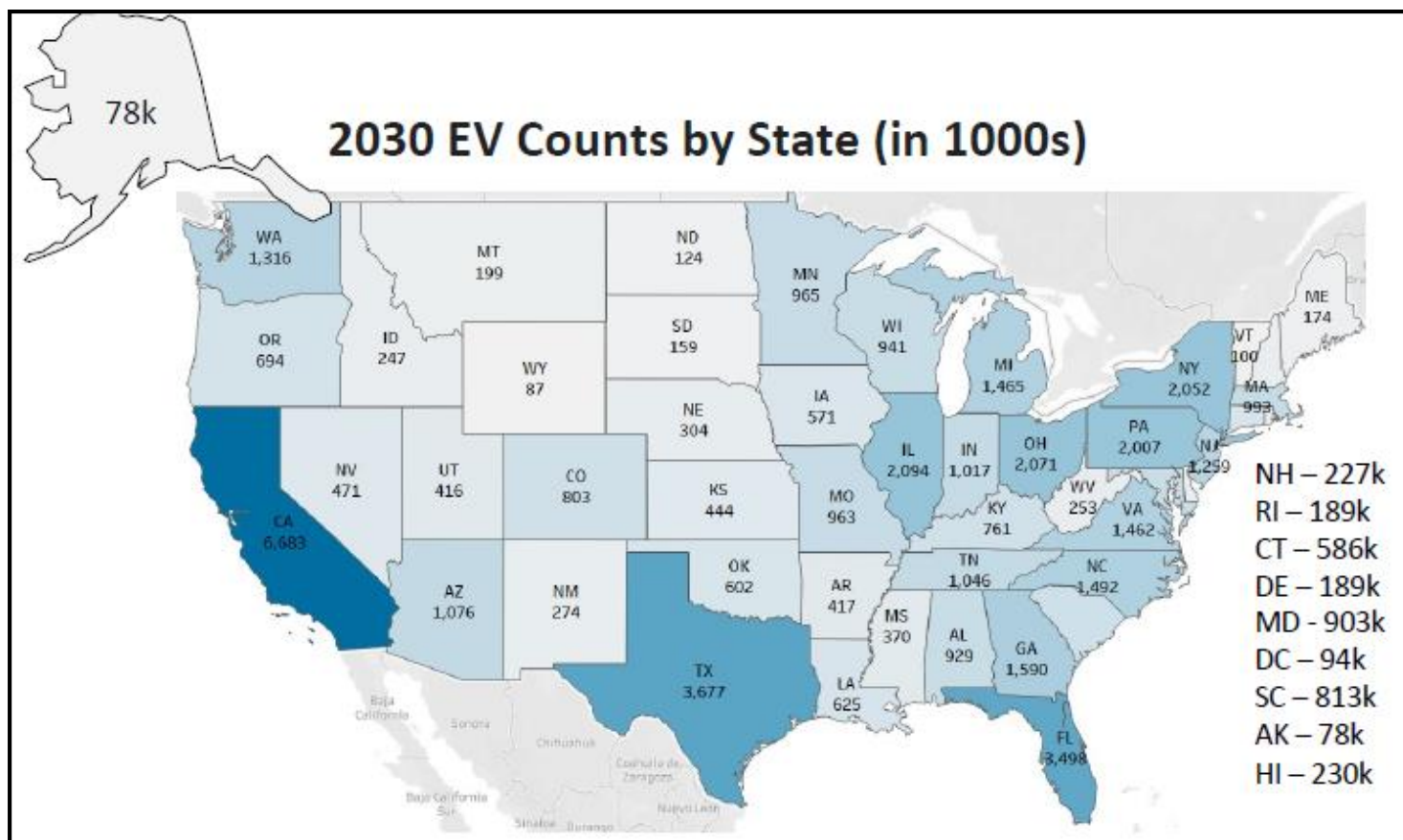
- Q2 2021 posts highest quarter on record
- 4% of all Light-Duty vehicle sales were EVs in Q2 2021
- Quarterly sales 33% higher in Q2 2021 than Q1 2021
- Cumulative EVs up 17% in first half of 2021 (19% for BEVs)



Alaska EV Sales Up 198% in Q2



Climate Targets require large Ramp-up in EVs



EV Charging Definitions



Level I – Charge time measured in days.

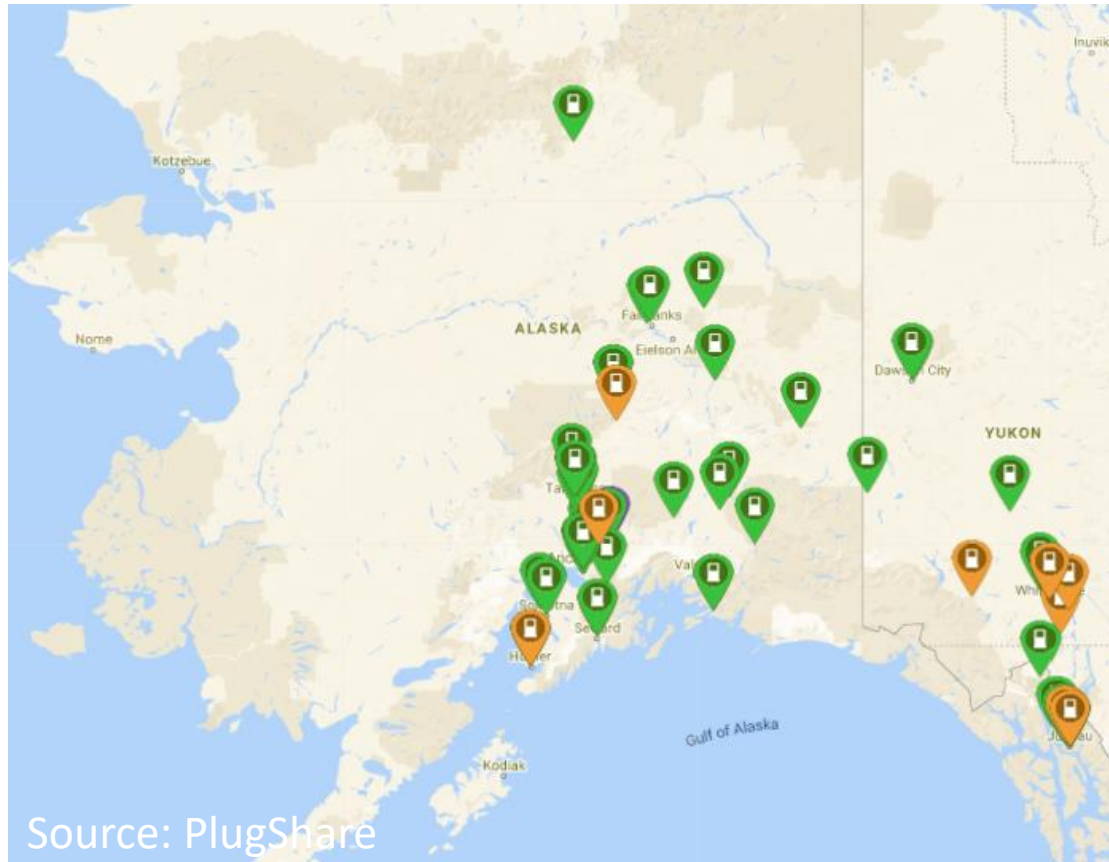


Level II – Charge time measured in hours.



Level III – Charge time measured in minutes. This is also called fast charging or DCFC.

Alaska — Public EV Charging



- Electric Vehicle Service Equipment
 - 68 charging stations listed on Plug Share for AK
 - 6 are fast chargers
 - 18 stations are in Juneau, including 3 fast chargers
- AK Transportation Fuel Expenditures (2018)
 - \$3.57 billion

Challenges to Market Adoption of EVs



PURCHASE PRICE



RANGE ANXIETY



COLD WEATHER
PERFORMANCE



BATTERY CAPACITY



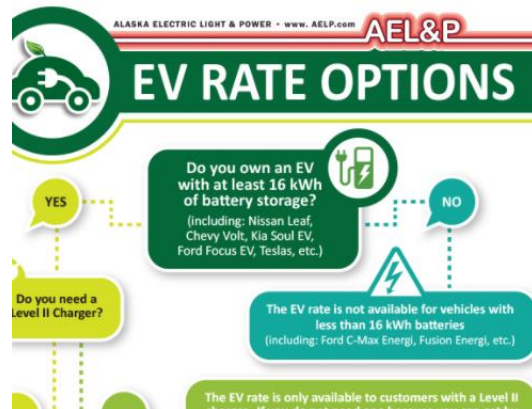
LACK OF EV CHARGING
INFRASTRUCTURE



ELECTRIC DEMAND
CHARGE

Utility Led Solutions

Customer Service Internet



Home » Energy Solutions » Electric Vehicles

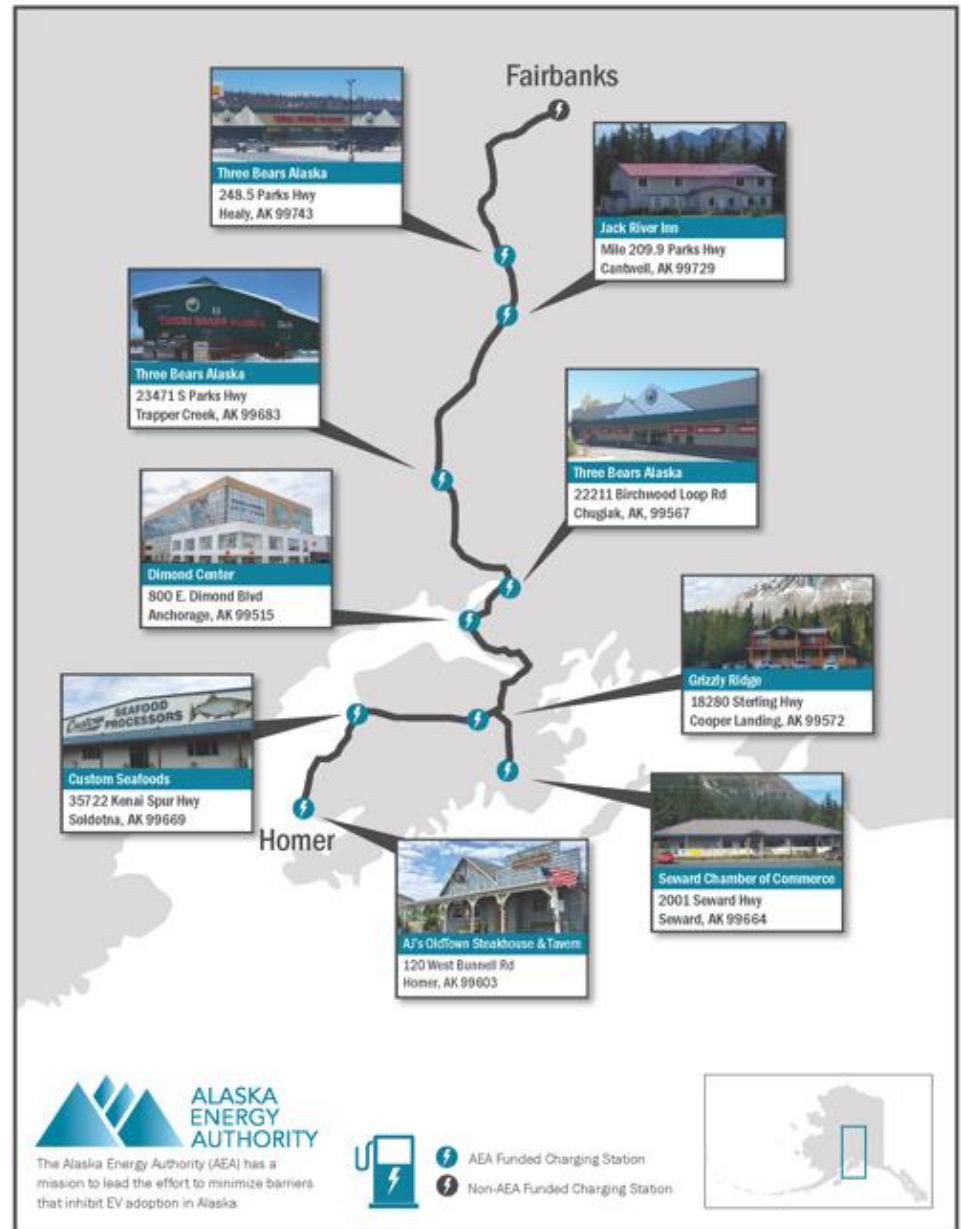
About Electric Vehicles

There are more electric vehicles (EVs) on the road every year, including of EVs that connect to the grid. Battery Electric Vehicles (BEV) run solely

- Alaska Electric Light & Power
 - EV TOU Rate
 - L2 Rental Option
- Alaska Power & Telephone
 - EV & EVSE Rebates
- Chugach Electric Association
 - EVSE Installation Rebates & Credits
 - EV Rental Reimbursement
 - Transportation Network Driver lease incentive
- Golden Valley Electric Association
 - EVSE Installations
- Homer Electric Association
 - L2 chargers installed Homer & Kenai

AEA Led Solutions:

Planned EV Fast Charging Corridor



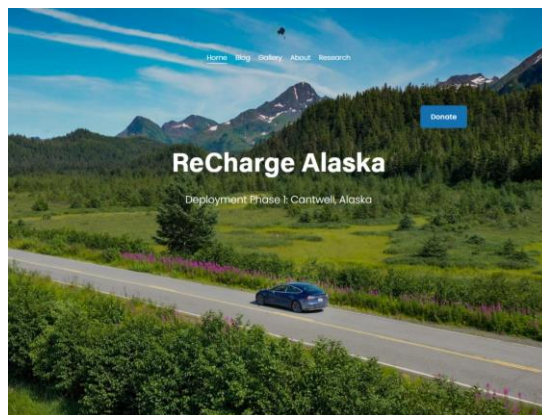
AEA Led Solutions: Community Based Level 2 Chargers (at State-owned facilities)



Home Grown Solutions



Photo: Devon Kibby



- Advocates and Developers
 - Juneau Electric Vehicle Association
 - Alaska Electric Vehicle Association
 - ReCharge Alaska
- Site Hosts
 - Private Businesses along the Railbelt and in Southeast Alaska

High Demand Charge = Barrier

Current Railbelt rate structures (with demand charges) can bring the cost of a 25-minute 120-kW fast charging session to over \$5,600, even if the station is only used one time each month.

Cost per month for one 25-minute 120-kW charge:

<u>Utility</u>	<u>Cost with DC (\$)</u>	<u>Cost without DC (\$)</u>
Chugach	2,767.63	8.44
Chugach (ML&P)	5,679.61	7.84
HEA	2,712.23	11.59
MEA	999.91	9.98
GVEA	2,791.51	12.25



Photo credit: Tesla

Alaska Electric Vehicle Working Group

An AEA-sponsored stakeholder collaborative promoting the use of EVs in Alaska by removing barriers to EV adoption and increasing access to charging infrastructure.



Thank You

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