

My Math Approach to: Decarbonization

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Project “EV Charging & Fleet”

Main Goal: Help weigh where EV charging is needed/wanted by...

- Using **polling data** to better **understand the community's** perspective.
- Weighing pros & cons of available charging technology.
- Prioritizing Environmental Justice Communities for public EV charging.

Secondary Goal: Assess market viability of EVs for...

- Municipal fleets. (*police & fire departments, public works, animal shelter, etc*)
- The community. (*personal-use vehicles that utilize public charging the most*)

Project Details & Approach

Using polling data, we learned residents may have **misconceptions about the technology**:



"I don't own an EV and I never will. I don't support this..."

"EVs are dangerous / pose a threat to public health..."

"No one will use these chargers. People rarely use the existing ones..."

"Our taxpayer dollars are being wasted on this..."

Research & Data form the best objective address to these concerns:

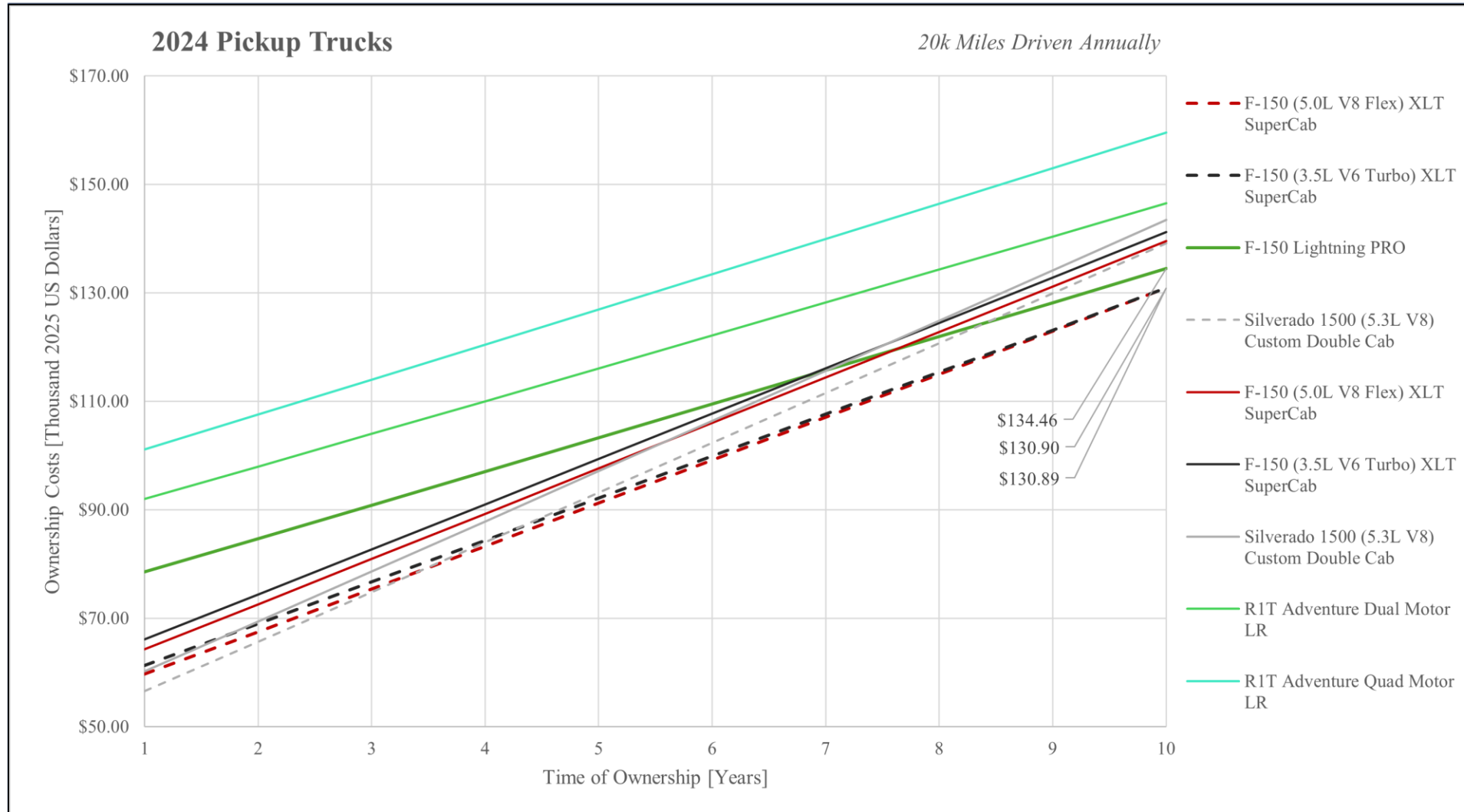
- Using cost information for existing chargers, we proved only a small fraction of charger install costs are from local taxpayer contributions.
- **Charger usage data** helps us infer what next charger procurement is most sensible.
- Locally-applicable data from [AAA.com](https://www.aaa.com) and [fueleconomy.gov](https://www.fueleconomy.gov) were used to drive cost estimation results that may open some eyes to the benefits of owning an EV.

Project Outcomes & Takeaways

- An **EV Cost Estimator** was created in Excel to help quantify the best-valued personal vehicle. (*More on this on the next slide.*)
- I was given the privilege to **interview Beverly Police Chief LeLacheur** regarding his experience using a police EV and perspective on EV Fleet Electrification.
- **Informative materials** were created in the hopes to **destigmatize EVs** and the surrounding technologies for better resident reception.
- **DCFC has taken prioritization** over new level 2 charger proposals. Athol has several Level 2s already, and DCFC will stimulate local business and EV procurement.



Project Outcomes & Takeaways II



20k Miles Annually:

Pickup Trucks

SUVs & Crossovers

Sedans,
Hatchbacks, &
Compacts

10k Miles Annually:

Pickup Trucks

SUVs & Crossovers

Sedans,
Hatchbacks, &
Compacts

If a graph does not appear, it may be behind another one that's open.

Reflection

Skills I Developed

- I used Microsoft Office Suite constantly, which boosted my familiarity and capabilities.
- I learned how to be a more effective researcher.
- My task & time management skills were exercised thoroughly.

Knowledge I Gained

- A new goal of mine is to work on developing sustainable energy solutions through a career or personal efforts.
- I learned we have a huge opportunity for energy independence in MA due to the economic and regulatory landscape, which is very exciting.

Questions?

Contact me!

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