



Crested Butte Fleet Electrification



Fleet Summary



All Electric Vehicles: 18

- 7 Neighborhood Electric Vehicles (NEVs)
- 3 Tesla Sedans (pursuit-modified)
- 2 Ford Lightning-s
- 2 Patrol Motorcycles
- 3 Ford Transit Vans
- 1 Mower



Hybrid (Non-plug in): 3

- 2 Front End Hybrid Loaders
- 1 Ford Escape Hybrid



Neighborhood Electric Vehicle (NEV)



Marshal Vehicles



Light Duty



Heavy Duty



Future Purchases – Peterbilt 520 EV





Retrofits

Staff Buy In



Fleet Zero-Emission Resource Opportunity (Fleet-ZERO)



Advantages:

- Up to \$500,000 for 100+ kW DCFC
- Rolling application <\$50,000
- Extremely inclusive eligible costs:
 - Equipment, construction, labor, permitting, electrical upgrades, **future proofing, networking & subscription fees, paint...etc., etc., etc!**

Challenges:

- BABA Requirements (mix of state/federal funding)
- Timing

Climate Impacts

Gasoline:

- **~ 59.1 MT CO₂e avoided from EV conversion since 2016**
 - 13.1 passenger vehicles for 1 year
 - 11.5 homes electricity use for 1 year
- **~ \$28,716 saved in gasoline costs**

Diesel:

- 1 loader left to convert (John Deere 644X)
- **40** gallons/ 8 hr shift → **20** gallons/8 hr shift
- ~50% reduction in GHG emissions



Successes & Challenges

Successes

- Lower regular maintenance costs/labor
 - Est. \$450 saving per 15,000 mi (Sawatch Labs)
- Heavier vehicles (handle better in inclement weather)
- No gas = lower operating costs, no emissions, noise reduction
- Fast! (Teslas)

Challenges

- Tesla warranties
- Cold weather considerations
- Crested Butte's Environment!
- Temps below 32 degrees equate to a 30%-40% range reduction
 - Range, charging, performing job duties
 - National Avg. Jan '23: **35.2 deg F**,
Gunnison County Avg Jan '23: **17 deg F**
- Workforce trainings
- 10-year replacement cycle vs. 15-year?

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