



Santa Rosa EV Masterplan

Santa Rosa City Council

November 18th, 2025



N|V|5



PROJECT BACKGROUND



GOALS

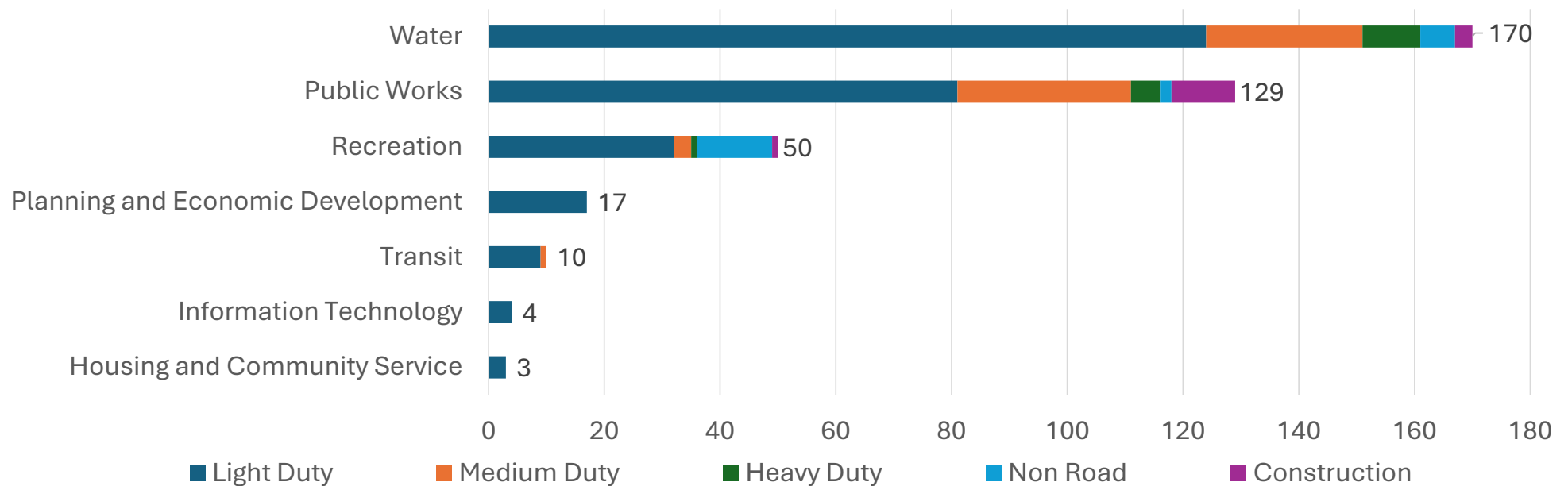
- A roadmap to compliance with State Advanced Clean Fleet Regulations
- Strategy for continuity of fleet operations, city services
- Evaluate EV charging options during grid outage
- Provide policy recommendations to expand EV charger access



CITY OF SANTA ROSA FLEET VEHICLES



Vehicles by Department



Note: Public Safety vehicles and Buses not included

PURCHASE SCHEDULE ASSUMPTIONS



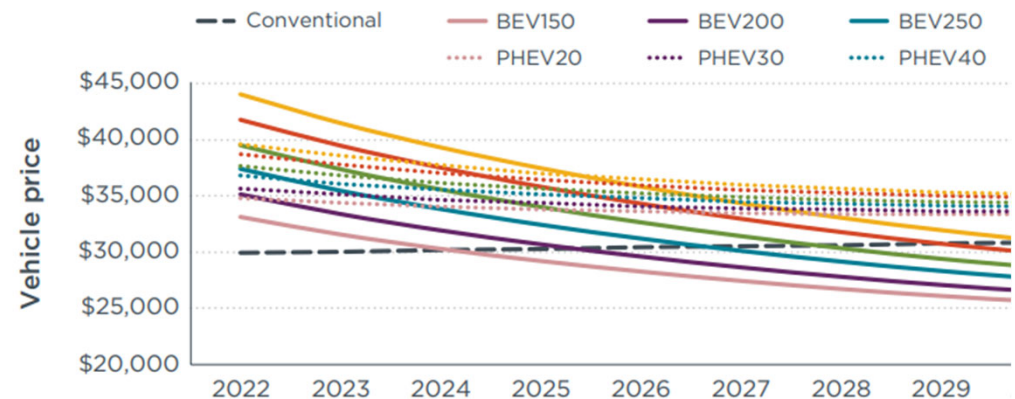
Replacements

- Vehicles are replaced at the end of their planned service life
- Overdue replacements are spread over the first 4 years of the transition
- EVs are purchased if a feasible AND suitable model is available
- Cap of \$10M annually, not adjusted for inflation

ACF	2025-2026	2027 Onward
EV %	50%	100%

Costs

- EV cost reference current market prices
- EVs that are not commercially available are assumed to be 2.5x the price of their fossil fuel counterparts in 2025
- Costs projected to the future based on International Council on Clean Transportation studies (graph below)



Source: [ICCT](#)

ACF COMPLIANCE REALIZATION CHALLENGES

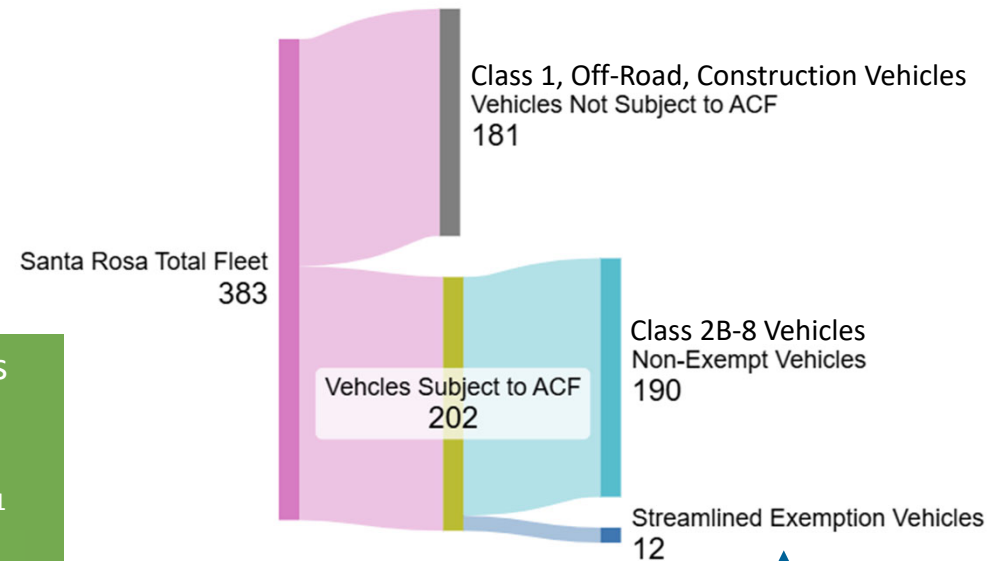


Mismatch between vehicles that CARB considers available as an EV and those that Santa Rosa may consider suitable as an EV.

Santa Rosa considers $\frac{3}{4}$, 1, 1.5-ton EV pickups not available in 2025 since they aren't commercially sold



CARB considers those EVs available because EV van chassis can be upfit with pickup truck body styles.¹



CARB granted categorical exemption to very few vehicle types

¹ [CARB Exempt Vehicles List](#)

ACF COMPLIANCE IN CURRENT PLAN



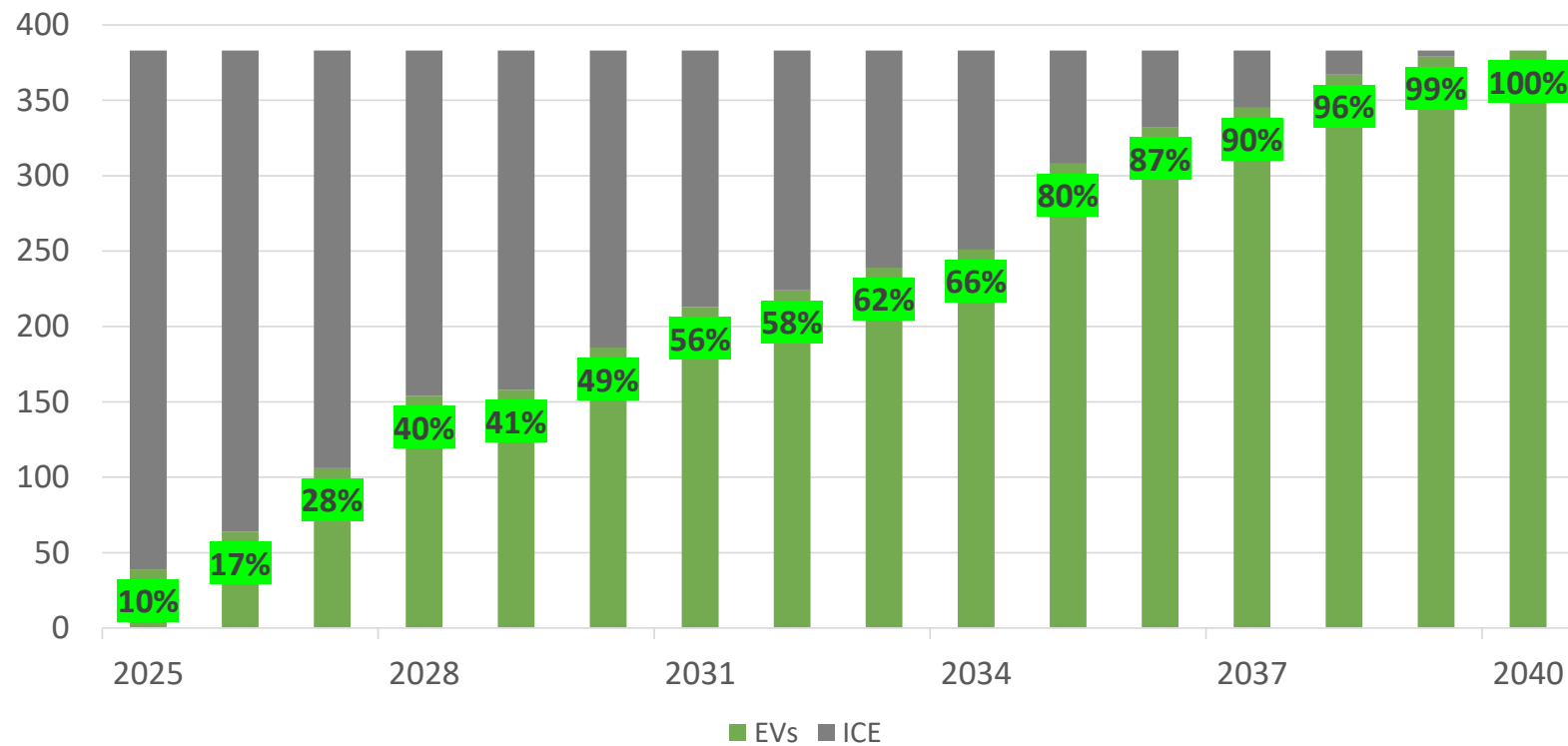
Purchases of ACF-regulated vehicles		2025	2026	2027	2028	2029	2030
ACF Purchase Rules	ZEV Purchase Requirement (Current)	50%		100%			
	ZEV Purchase Requirement (Post 2027 Update)	50%					100%
Non-Exempt	Percent Electric Purchases	8%	10%	53%	78%	17%	100%
	Electric Purchases	3	4	8	31	2	24
	Fossil Fuel Purchases	35	35	7	9	10	0

- ACF compliance is expected to be achievable from 2027.
- Overcompliance (2028) count towards future compliance (2029)

RESULTS – EV ADOPTION TREND



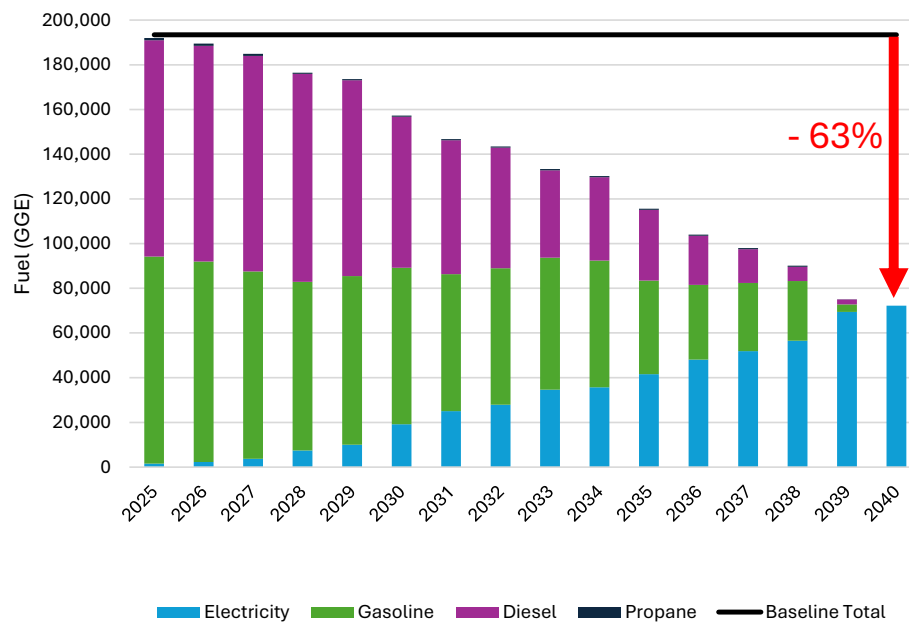
EV Fleet Composition from 2025 to 2040



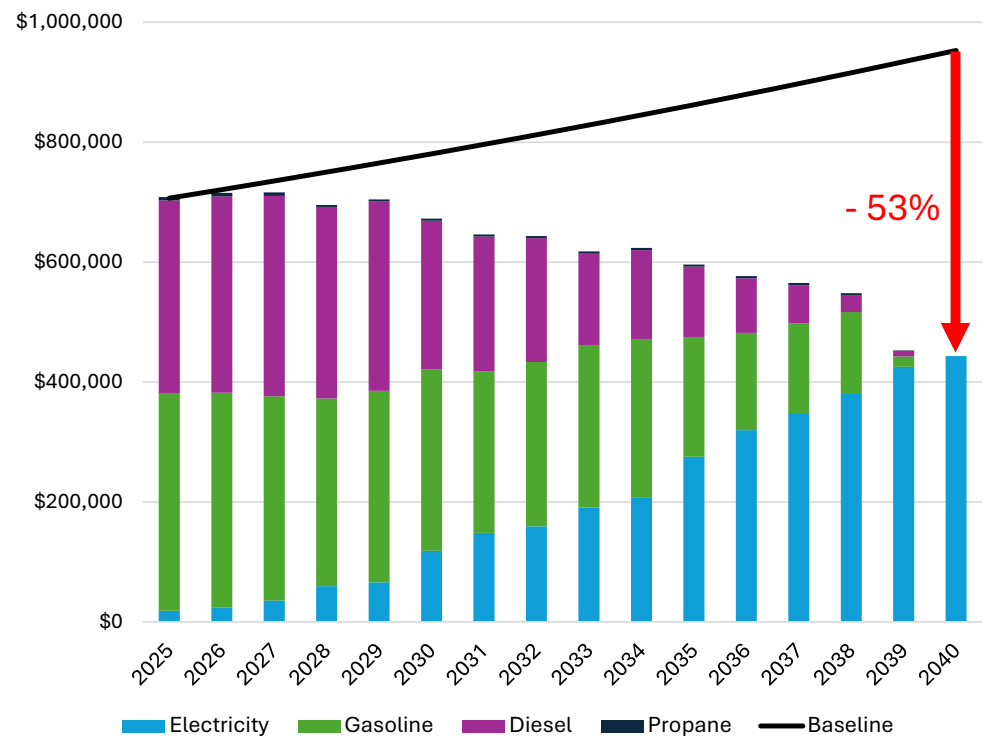
FUEL TRANSITION



Annual Fuel Consumption (Gasoline Gallon Equivalent)



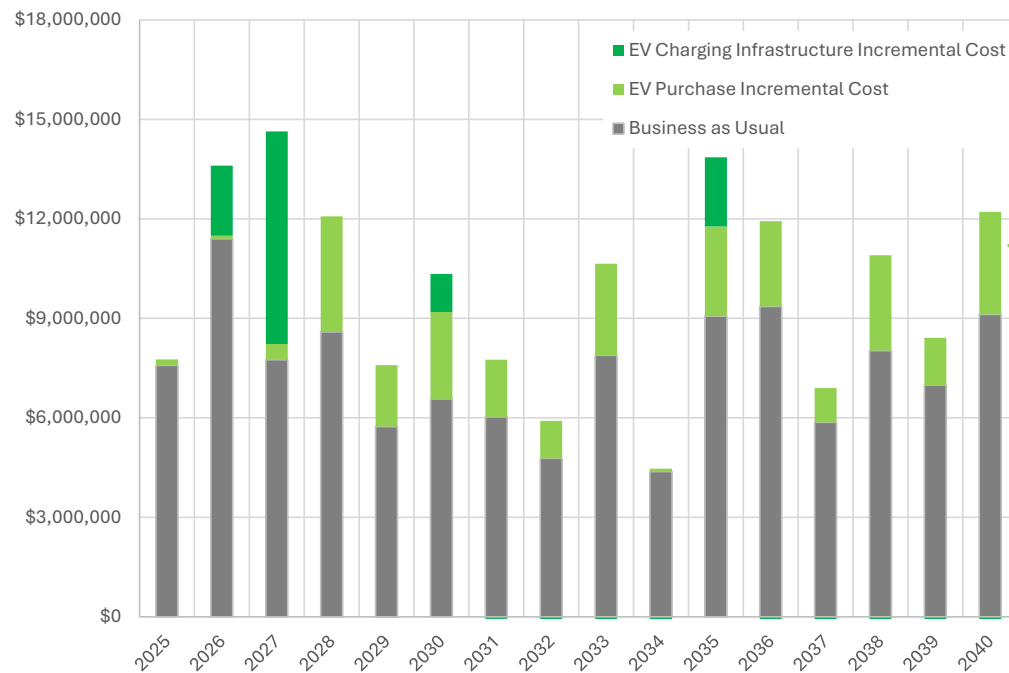
Annual Fuel Cost



RESULTS – ALL-IN EV ADOPTION COST



Annual All-In Cost of Baseline vs Transition Scenarios

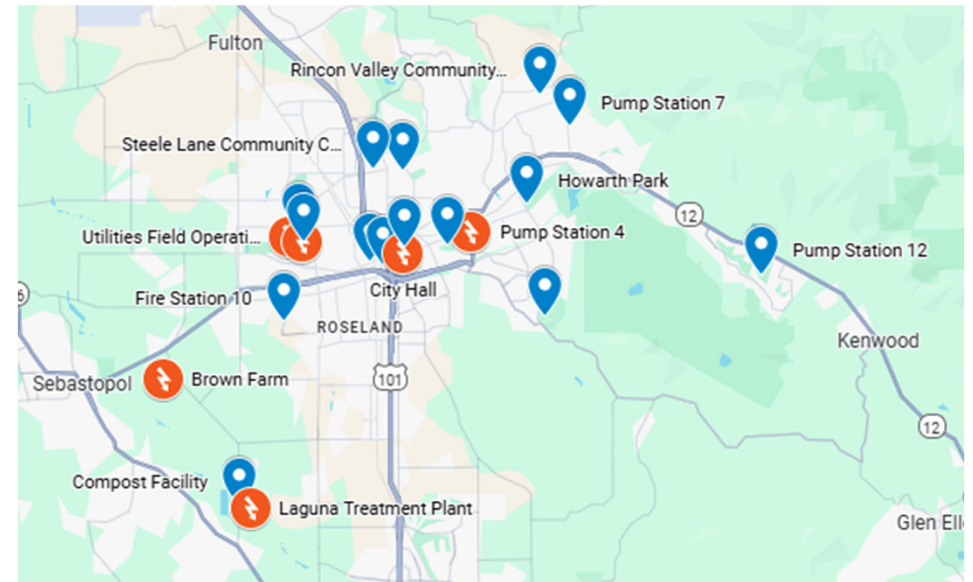


Nominal Cost Increase of \$38 million
 EV Purchase: \$28 million
 EV Chargers: \$10 million

Incentives	Included	Not Included
	PG&E EV Fleet (\$0.5 million)	Inflation Reduction Act (\$2.4 million)
		Communities in Charge (\$0.4 million)
		Incentives from BAAQMD, Sonoma Clean Power, HVIP

RESILIENCY STUDY OVERVIEW

- 6 backup EV charging locations
- 2 configurations reviewed
 - Solar panels + stationary battery storage + generator
 - Generator Only



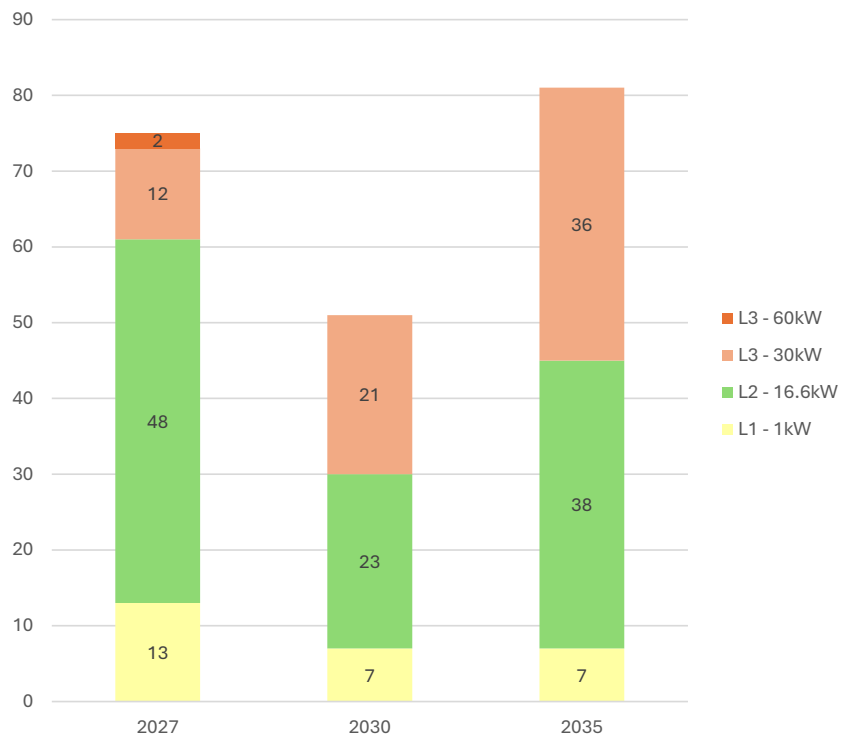
EV charging site with backup power



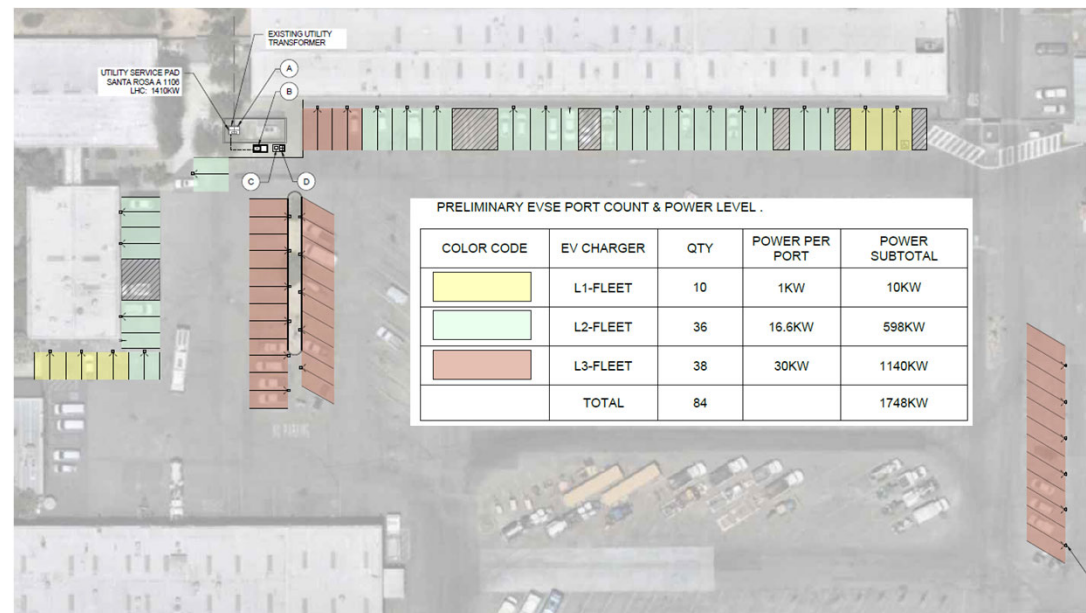
EV charging site without backup power

RESULTS – EV CHARGER INSTALLATIONS

Chargers Added by Phase



Conceptual layout at MSC North



Concepts developed for 8 total sites:

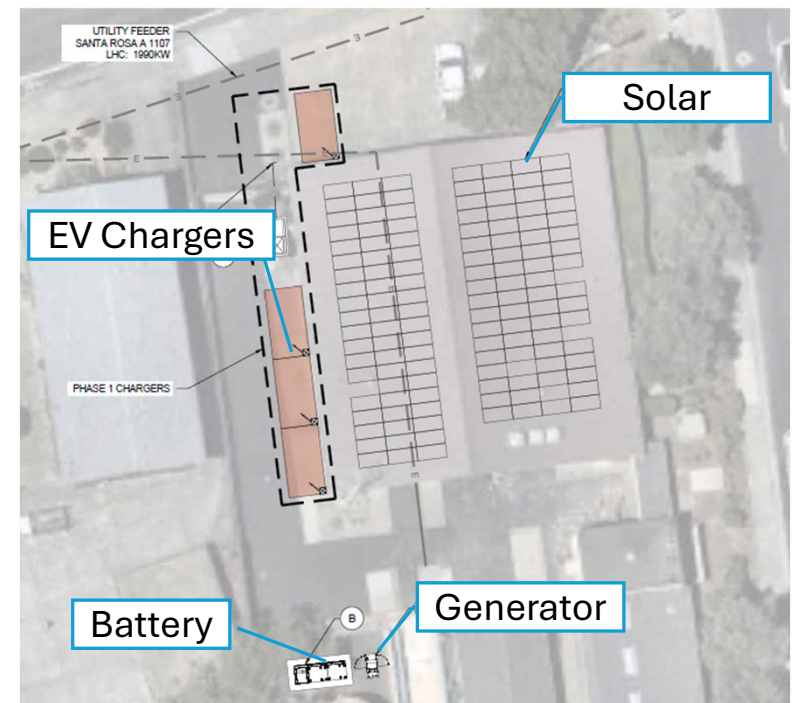
MSC North, MSC South, UFO, Finley Park, City Hall, Laguna Treatment Plant, Brown Farm, Station 4

BACKUP EV CHARGING OPTIONS

- Department staff provided assumptions on operational needs during power outages.
- Assumptions:
 - Three 1-day outages per year
 - One 7-day outage per 4-years

	Generators all 6 sites	Solar + Battery + Generators all 6 sites
Capital Cost	(\$2.6 million)	(\$14.6 million)
25-Year Net Present Value	(\$3.4 million)	(\$11.8 million)
Annual GHG Emission (metric tons)	46	27.6

Conceptual layout at Sonoma Ave WTP



POLICY STUDY OVERVIEW

NV5

- Planning and Economic Development (PED) seeks recommendations on encouraging private-led EV charger deployment in the public right of way.
- Santa Rosa's *General Plan 2050* and *GHG Reduction Strategy* include objectives and measures for increased public EV charging.
- NV5 and Santa Rosa interviewed:
 - EV charger companies (It's Electric, Voltpost)
 - City of Santa Rosa (Planning, Parking)
 - City of San Francisco (SF DPW, SF Environment, SFMTA)
 - City of Alameda



It's Electric EV Charging Station

POLICY STUDY OVERVIEW - RECOMMENDATIONS

NV5

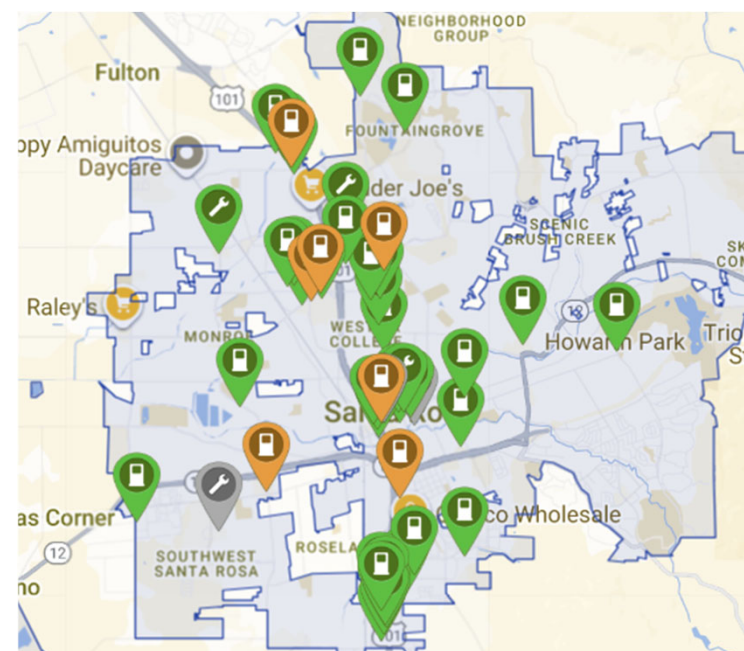
1. Impact/Development Fees

- Develop Capital Investment Plan for a city-wide deployment of EV chargers
- Collect development fees to fund the program
- Determine priority locations (charging deserts)

2. Facilitate Private Agreements for EV Charger Providers

- Establish permitting pathways for private companies to partner with property owners to install EV chargers on curbside
- Update regulations to allow installations

3. Develop a Public EV Charging Task Force



EV charger map from PlugShare

MAIN FINDINGS OF FLEET ELECTRIFICATION STUDY



1. Fleet Electrification costs \$38 million from 2025 to 2040 over business as usual.
2. Near-term compliance with ACF is difficult due to vehicle availability and cost.
3. City should pursue all exemptions allowable under ACF, and update fleet electrification plan to match future ACF amendments.
4. City should standardize a charge management platform and EV charger.
5. City fleet should leverage CityBus EV chargers for near-term charging flexibility.
6. Conventionally fueled internal combustion generators are currently the most cost-effective option to provide EV charging resiliency to the City.
7. City should explore detailed feasibility, regulatory requirements, and costs of installing generators at EV charging depots.

It is recommended by the Board of Public Utilities, Santa Rosa Water, and the Transportation and Public Works Department that the Council, by motion, review and accept the Fleet Electrification Master Plan

QUESTIONS

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