Franchise Agreement/ Collection Fleet Replacement: Zero Emission Vehicles (ZEV)

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Recology
San Mateo Coun
WASTE ZERO

ZEV Current Status: Summary

- **Recology's 100% Fleet transition:** 2021-2026 (144 vehicles)

- **New CARB Min. Requirements = 6 trucks by 2026**
  - **Other Regs:** Newsom's *EO N-79-20* non-ZEV ban by 2035 (= more ZEV)
  - **Member Agencies:** CAPs/Sustainable Vehicle Fleet Policies: Prioritizes ZEV purchases, even if costlier (MP)

- **Recology (Autocar):**
  - **2024**--ZEV truck delivery (est.); 1/2022--2 pilot Evs
  - **2024-2026**: Up to 54 ZEV vehicles
  - **Marketplace:** 1st/2nd gen ZEV Trucks in market now; more in 2021+

- **Notable ZEV Development Areas Needed:**
  - **Current Productivity Limits:** Recology's Jan 2020 pilot = 3:4 route productivity ratio
  - **Price Difference:** Higher purchase price/unit (SBWMA pays premium)
  - **Higher Lifecyle Cost:** Lower fueling costs/still higher lifecycle costs

- **Current Fuel: Renewable Diesel similar GHG/tailpipe emissions as RNG, but cheaper**
  - Recology has used since Nov-19 (plug and play); Best bridge option until ZEV transition in 2024

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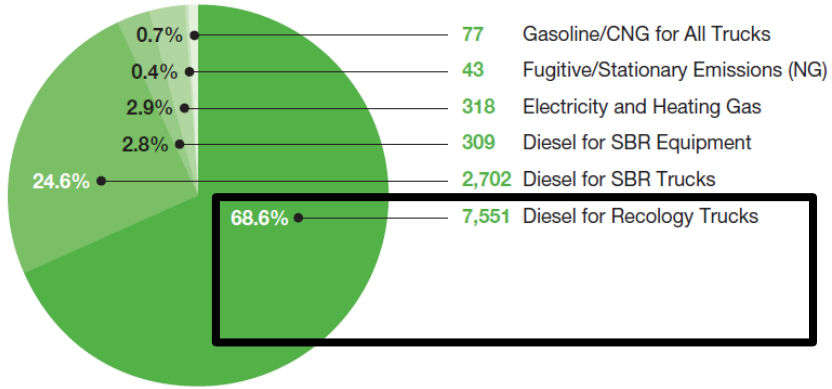
Recology's Planned Fleet Replacement Schedule + GHG impacts

- **120 total Class-8 trucks** (2021-2026)
  - +24 Support vehicles
- **Possible ZEV fleet candidates:** 2024-2026
- **Recology's (Autocar) at-scale ZEV delivery:** 2024
- **Up to 54 trucks could be ZEVs**
- **CARB minimum (by 2024):** 6 ZEV's

Figure 28. Agency Greenhouse Gas Emissions (in Metric Tons of Carbon Dioxide-Equivalents, 2017)



Year	2021	2022	2023	2024	2025	2026
# Trucks	4	36	50	**40**	**10**	**4**

54 units

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Est. Annual Cost of ZEVs *(w/no subsidies)*

Estimated Annual Cost and GHG Impact of ZEV Purchases						
			Per ZEV	Pilot ZEVs	CARB Min.	ZEV Purchases	
	Per Year Parameter | # ZEVs	1	2	6	24	54
1	ZEV Cost Premium ($/year) (1)	$31	$61	$183	$732	**$1,600**
2	Site Infrastr. Cost Premium (2)	$24	$24	$42	$169	**$355**
3	Fuel Savings (3)	-$1	-$3	-$8	-$34	**-$76**
4	LCFS Credit (4)	-$16	-$32	-$97	-$389	**-$876**
5	Maintenance Savings (5)	0	0	0	0	**0**
6	**Total Annual Premium (6)**	**$37**	**$51**	**$120**	**$478**	**$1,003**
7	**Rate Impact (7)**	**0.03%**	**0.04%**	**0.10%**	**0.40%**	**0.84%**
8	Diesel Reduction (gal/yr)	5,357	10,714	32,142	128,568	**289,278**
9	**SBWMA % GHG Reduction (8)**	**0.48%**	**0.96%**	**2.87%**	**11.48%**	**25.83%**

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Proposed ZEV Roadmap + Subsidy Considerations

- **Proposed Next Steps (1 of 2):**
  - **Continue use of RD as Bridge Fuel** (Recology)
  - **Research Subsidy Programs** (Staff/Recology/tech consultants)
  - **ZEV pilot (Jan. 2022)—Plan/Begin; Analyze pilot data** (Staff/Recology)
  - **Recology Comp Review (Attachment N); propose changes** (Staff/Recology to ZWC/Finance Committee/Board)
  - **Site/Facility Power Assessment** (Staff/Technical consultant then to ZWC/Finance Committee/Board)
  - **Charging station for Pilot ZEV trucks by Jan.2022--Install** (Staff/Recology)
  - **Charging infrastructure at Site--Plan/Install** (Staff/Tech consultant/Recology then to ZWC/Finance Committee/Board)
  - **ZEV Pilot Results/costs-Evaluate/Review Mkt. Options** (Staff/Recology/Tech consultants then ZWC)

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Proposed ZEV Roadmap + Subsidy Considerations

- **Proposed Next Steps (2 of 2):**
  - **Develop ZEV Fleet transition Plan** (Staff/Recology/Tech consultants to ZWC/Finance Committee/Board)
    - Base recommendation: 6 ZEVs (CARB Mandate)
    - Option 1: + 24 additional ZEVs (current PG&E Fleet Subsidy Max)
    - Option 2: Up to 54 ZEVs (All eligible Recology replacement vehicles planned in 2024-26)
  - **Subsidy Funding Opportunities:**
    - **PG&E: Apply immediately before money expires:**
      - Submit Letter of Intend (Needs BOD approval)
      - Fleet Subsidy: $9k/vehicle
      - Site Upgrades: $50k-$500k “Behind the meter” expenses covered
    - **TBD: BAAQMD; Fed/State; PCE**

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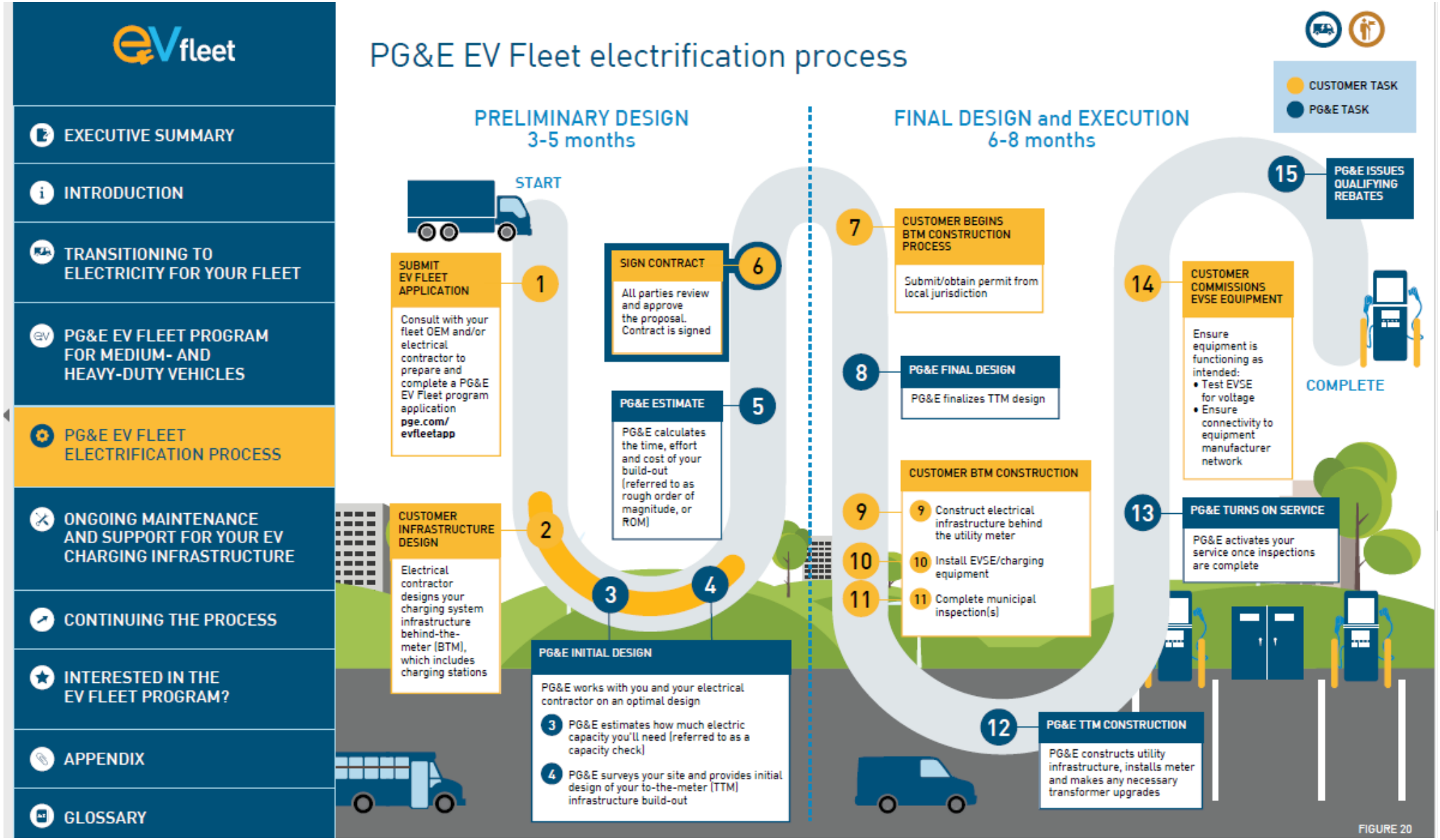
EV Fleet Process and Timing



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