



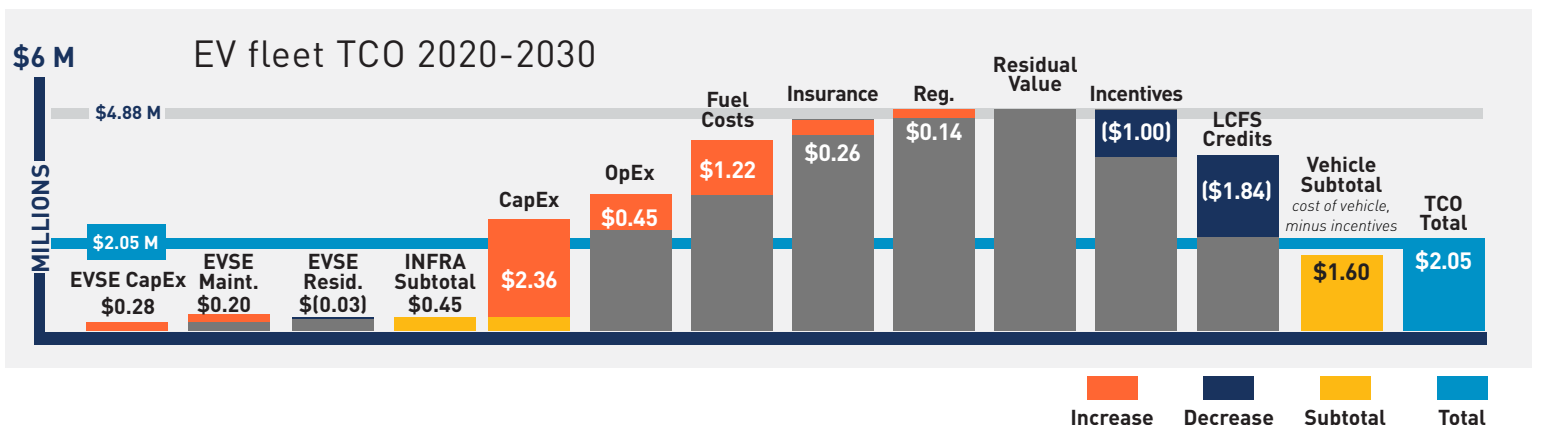
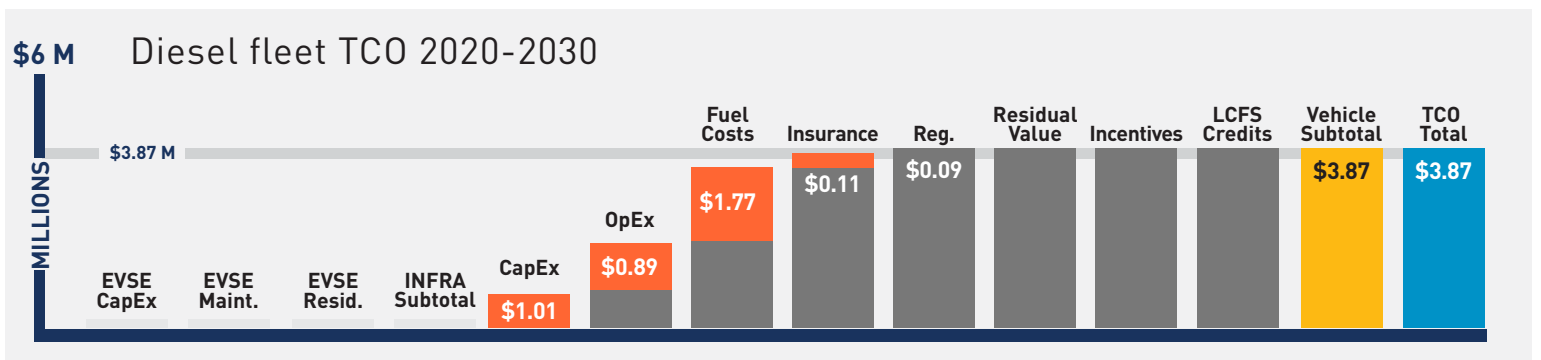
Calculating Total Cost of Ownership (TCO) for Your Distribution & Delivery EV Fleet



Electric vehicles (EVs) have the potential to offer fleets lower total cost of ownership (TCO) compared to diesel vehicles. While EVs require higher upfront costs to procure vehicles and invest in charging infrastructure, they also provide reduced operating and fuel costs. When incentives and LCFS credits are factored in, EVs can provide fleets steep cost-savings.

However, a complete TCO analysis can be complex, particularly for fleets that are new to EVs. This fact sheet provides a sample TCO analysis of a Class 3 delivery van and key factors fleets should consider when developing their own analysis.

TCO of a 20 vehicle fleet: diesel vs. electric Class 3 delivery van



■ Increase
 ■ Decrease
 ■ Subtotal
 ■ Total

TCO assumptions

Residual value of vehicles straight line depreciation over 7 years

9.25% Sales tax

Insurance costs 3% of vehicle residual value

LCFS credit price \$200 per credit

20

VEHICLES

90

MILES/DAY

250

DAYS/YEAR OPERATION

10

YEAR AVG. VEHICLE LIFE

Fuel Type

DIESEL

ELECTRIC

Per Vehicle purchase cost (2020)

\$50,000

\$120,000

Fuel cost

\$3.90/gallon

\$0.16/kWh

Fuel efficiency

12 mpg

0.7 kWh/mile

Maintenance costs

\$0.15/mile

\$0.07/mile

Infrastructure purchase costs

Negligible

\$5,000/charger + \$8,750*

Infrastructure maintenance costs

Negligible

\$1,100/charger per year

Purchase incentives

\$0

\$50,000/vehicle until 2022

*Reflects other infrastructure costs (utility interconnect, civil work, etc)

Concentrate transition of vehicles to further improve TCO

While replacing vehicles gradually over time has its benefits, concentrating the transition to EVs in a shorter period of time can improve TCO. This is primarily due to the cost of site improvements to add electrical service, upgrade switchgear, and install EVSE, which do not scale linearly with the number of EVs. More specifically, it is cheaper (per unit) to install ten chargers at a site than it is to install two.

Replace 20 vehicles at the same time

DIESEL \$3.87 M

EV \$2.05 M



Replace 20 vehicles over 10 years (two per year)

DIESEL \$3.87 M

EV \$3.24 M

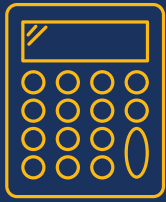


Try our new EV Fleet Savings Calculator

Check your eligibility for PG&E's EV Fleet program, find available funding programs, and calculate fuel savings. [CLICK HERE FOR TOOL.](#)

TCO factors to consider

01



[Determine energy costs with our EV Fleet Savings Calculator](#)

Fuel cost:

Typically, fleets can expect to save on fuel costs with EVs as the cost of electricity can be significantly less than traditional fuels. The time of day that you charge is often just as important as how much energy you use. PG&E can help you determine how to save with our Business EV Rate.

02



Fuel Efficiency:

EVs often use fuel more efficiently than traditional combustion engines, which could lead to fuel cost savings. Your vehicle manufacturer or dealer should be able to estimate the expected energy consumption for your duty cycles.

03

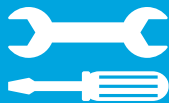


Infrastructure Costs:

Electric Vehicle Supply Equipment (EVSE), commonly referred to as “chargers,” require improvements to the existing site’s electrical infrastructure, as well as periodic maintenance and service fees. These costs must be included in a TCO analysis. **PG&E’s EV Fleet program offers rebates and incentives** to reduce these costs.

[Find infrastructure incentives with our EV Fleet Savings Calculator](#)

04



Maintenance Costs:

EVs can significantly reduce the cost of maintenance by eliminating common costs including oil changes, exhaust aftertreatment maintenance, spark plugs, fuel injectors, and transmission repairs.

05



Purchase Incentives:

Incentives can reduce EV and EVSE costs substantially, possibly by tens of thousands of dollars per vehicle. Incentive funding is not unlimited and often subject to competition, so early adopters are more likely to benefit from these incentives.

[Find incentives with our EV Fleet Savings Calculator](#)

06



Sales Tax:

The higher purchase price of EVs means that sales tax is also higher than conventional vehicles. Note, the Federal Excise Tax (12% of the vehicle price) only applies to Class 7 and Class 8 trucks, and shouldn’t be added to lower weight class vehicles.

07

LCFS Credits:

EVs have great revenue potential under the California Low Carbon Fuel Standard Program (LCFS), which allows fleets to generate credits based on the GHG reductions they achieve using EVs. For example, a fleet with an electric Class 6 box truck can generate up to \$7,000 per vehicle annually under LCFS.

[Watch our recent webinar on how to earn revenue with LCFS](#)



To learn more, visit: pge.com/evfleet

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