

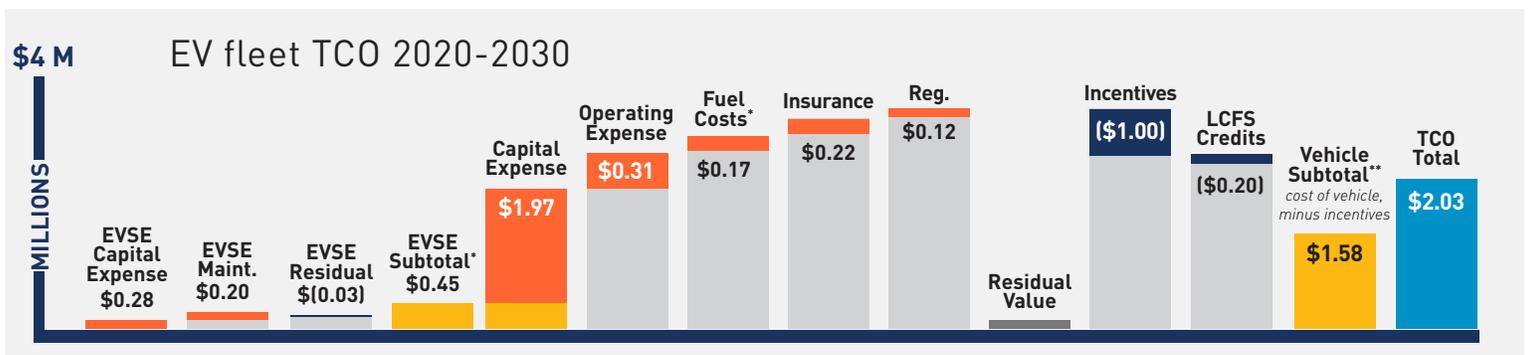
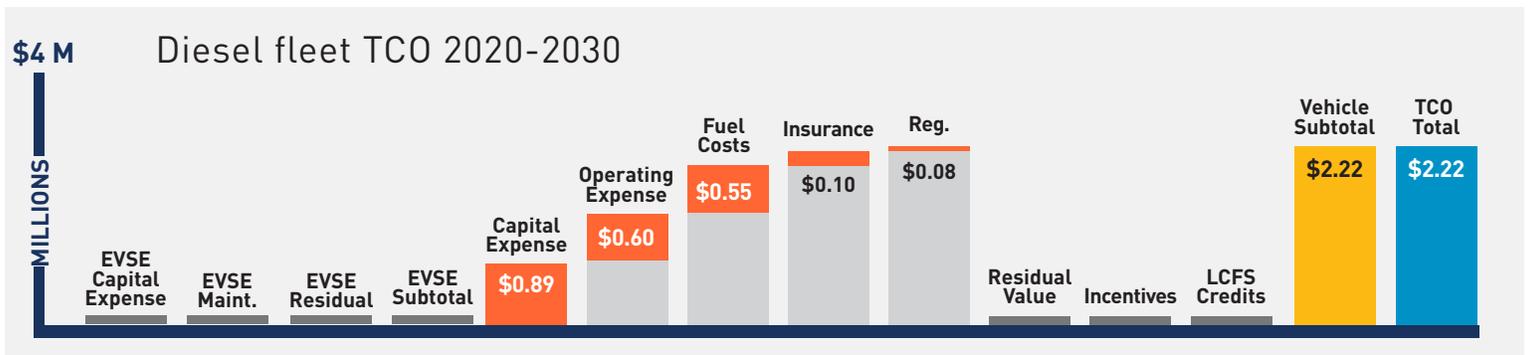


Calculating Total Cost of Ownership (TCO) for your Municipal EV Fleet



Municipalities are increasingly turning to EVs to meet local and state mandates to reduce harmful vehicle emissions. While EVs require higher upfront costs to procure vehicles and the necessary electric vehicle supply equipment (EVSE), they can help balance out your bottom line with lower operating and fuel costs. When vehicle and infrastructure incentives, as well as LCFS credits, are factored in EVs can provide fleets even more cost savings. A complete TCO analysis can be complex, particularly for municipal fleets, which are typically new to EVs. This fact sheet provides a sample TCO analysis of a diesel medium-duty truck fleet versus electric, with key factors fleets should consider when developing their own analysis.

TCO to transition a 20 vehicle fleet Comparing a diesel vs. electric medium-duty cab chassis



*TCO calculation reflects the infrastructure incentives and energy savings available through PG&E's EV Fleet program

**Vehicle subtotal before incentives totals \$3.24 million



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

20

MILES/DAY

248

DAYS/YEAR OPERATION

10

YEAR AVG. VEHICLE LIFE

Fuel Type

DIESEL

EV

Per Vehicle purchase cost (2020)

\$44,000

\$100,000

Fuel cost

\$3.47/gallon

\$0.16/kWh

Fuel efficiency

7 mpg

22 mpg

Maintenance costs

\$0.57/mile

\$0.26/mile

Infrastructure purchase costs

Negligible

\$13,750/charger *

Infrastructure maintenance costs

Negligible

\$990/charger per year

Purchase incentives

\$0

**\$50,000/vehicle
until 2022**

*Price of typical EVSE cost, does not reflect EV Fleet rebates and incentives available to certain fleets

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 chargers.

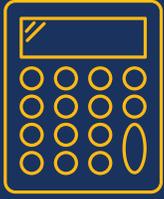
Additionally, municipalities currently have access to a variety of vehicle funding opportunities from agencies looking to encourage zero-emission technology now. These incentives may not be as widely available for fleets that wait to electrify.

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



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 plans.

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

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

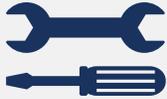


Infrastructure costs:

EVSE, which includes the EV chargers, requires 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 municipal fleets 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 funding with our summary of incentives for municipal fleets](#)

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 medium-duty truck can generate over \$1,000 annually under LCFS.

[Check out our LCFS fact sheet.](#) [And watch our recent webinar on how to earn revenue with LCFS](#)



To learn more, visit: pge.com/evfleet

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