



COOL DAVIS PLANNING GUIDE: BUYING A USED ELECTRIC VEHICLE

When buying a used electric vehicle, the major concerns are the condition of the battery and battery warranties. However, there's still a lot to learn about this special purchase. For used plug-in hybrids, with both combustion engines and electric batteries, many of the usual concerns apply. (Updated March 2020)

California Clean Vehicle Assistance Program

California residents qualify for generous grants. For example, a family of 3 with an income of less than \$83,000 currently qualifies for the following grants if the vehicle is no more than 8 years old and has less than 75,000 miles. An additional \$2000 is also available for charging. Visit

<https://cleanvehiclegrants.org/> to apply.

\$5,000 Battery Electric Vehicle (BEV)

\$4,500 grant for a Plug-in Hybrid (PHEV)

\$1,500 grant for a Hybrid (HEV)

Pros to buying a used EV

- ⊕ Very competitive prices
- ⊕ Income-qualified incentives now available for used vehicles
- ⊕ Many are previously leased vehicles (clean, well-maintained, low miles)
- ⊕ Cash purchases avoid finance charges
- ⊕ PG&E purchase or HOV lane sticker incentives may not have been claimed (Federal incentives are for new vehicles only). CA incentives are available based on income.
- ⊕ Used EVs with healthy batteries are almost like a new car; a car with a degraded battery could still meet your needs
- ⊕ No or very low risk of engine or transmission failure

Cons to buying a used EV

- ⊕ New vehicle Federal tax credits are not likely to be available
- ⊕ Shorter range compared to newer models
- ⊕ Batteries and range will be somewhat degraded (which is normal)
- ⊕ Air-cooled battery packs may have experienced more degradation
- ⊕ Clean Air Vehicle decals (High Occupancy Vehicle HOV for "carpool" lanes) may no longer be valid and may be difficult to remove

Choosing the right used EV

- ⊕ Educate yourself about charging and range ahead of time
- ⊕ Choose the right electric vehicle for you, not just the cheapest one
- ⊕ Be realistic about range: estimate your needs by doubling your daily commute miles and adding some, even if you have workplace charging, then take into account battery degradation over time
- ⊕ Compare the price to leasing or buying a new or newer vehicles including incentives
- ⊕ Check the battery failure warranty from the manufacturer or certified used vehicle program
- ⊕ Look for a battery capacity warranty from the manufacturer or certified used vehicle program
- ⊕ Before you make the trip out to see the car, ask dealers and private party sellers about the current capacity of the battery compared to the original total capacity. Remember, the true health may not be accurately disclosed. This information will likely not be posted in advertisements or necessarily reflected in the price. Often dealers may not know this information.
- ⊕ For plug in hybrids, check both the electric only miles and gas miles. These will indicate wear on each. Electric motors typically have a longer life than gas engines. As an example, a used EV with 30,000 miles might only have 10,000 miles on the gas engine.

Making the purchase

- ⊕ Call ahead and request that the car be nearly fully charged when you arrive so you can test charging
- ⊕ Perform a test charge when you get there to make sure charging works
- ⊕ Make sure portable trickle charge cables (110-volt) are included and test the connection
- ⊕ Check battery capacity (or confirm): if the owner or dealer has not already provided a report on battery capacity, ask them to do so, or arrange for a reputable dealer or independent mechanic to perform a check and issue a report. There are third-party software and apps that also perform this function
- ⊕ Ask private party owners for records of actual range. Keep in mind: the reported range on the dash may not reflect the actual range especially for freeway trips
- ⊕ If no range records are available, consider asking to borrow the car with collateral for one charge and discharge cycle. For dealers, ask about a temporary borrowing program.

Making the purchase (cont.)

- ⊕ If none of these options are available, do a long test drive and note the difference between reported range and actual. Note that it is common for freeway range to be 20% less than city driving.
- ⊕ Ask private party sellers how they used the car. Did they travel at high speeds frequently? Drain the battery low and often?
- ⊕ Check if the vehicle has a “Quick Charge” connector if needed (not standard)

Popular Used Electric Vehicles

Chevy Spark EV
Fiat 500e
Tesla
Volkswagen eGolf
Nissan LEAF

Popular Used Plug-In Hybrid Vehicles

Chevy Volt and Bolt
BMW i3 REX
Prius Prime
Ford Fusion Energi

Special Case: Nissan Leaf

Nissan has extended its warranties due to class action suit and court order. Battery failure is now warranted to 8 years / 100,000 miles. Battery capacity is now guaranteed to remain above 8 bars for the soonest of 5 years / 60,000 miles, otherwise, it will be replaced with a brand new 24kW battery at no charge. The new battery comes with the warranty above. Ask at your local dealership then also call Nissan Consumer Affairs 1-877-664-2738 with questions about the warranty. Older model Leafs before 2013 will not have this information in the owner's warranty manual.

New and refurbished batteries

Purchasing and installing a new battery is possible but can be rather expensive. In addition to the cost of the new battery, several hours of labor and a battery retrofit kit may be needed. Some manufacturers have battery refurbishment programs and are providing discounts to recover the old batteries when replaced. Call the manufacturer of your vehicle for details.

Do more digging on the [Plug In America](http://PlugInAmerica.com) website to learn about buying an electric vehicle, whether used or new. Check out myev.com for a huge list of used electric vehicles for sale. Look for used EVs at car auctions as well. Peruse ev-vin.blogspot.com for the best deal on new car leases.