

Used Electric Vehicle Buyer's Guide

Driving an electric vehicle (EV) has many benefits. Not only will EV drivers save money on fuel and maintenance and experience a smoother, quieter driving experience, but EVs also reduce air pollution and provide benefits to the electric grid. With thousands of new EVs coming off of leases, used EVs are more available and more affordable than ever before, with some available for under \$10,000. There are also financial incentives for used EVs in some areas. This buyer's guide will take you through the finer points of used EV shopping.

What should I look for?

A major advantage of shopping for a used EV over a used internal combustion engine (ICE) vehicle is there are significantly fewer moving parts to break or fail. All-electric vehicles have no timing belts, fuel pumps, fuel injectors, manifolds, transmissions, piston rings, oil filters, crankshafts... the list goes on! With a used EV, the only major concern is the quality of the battery. Plug-in hybrid vehicles (PHEVs), which run on electricity and gas, do have ICE vehicle components. However, they experience less wear and tear because the miles driven on the electric motor reduce wear on the ICE vehicle components.

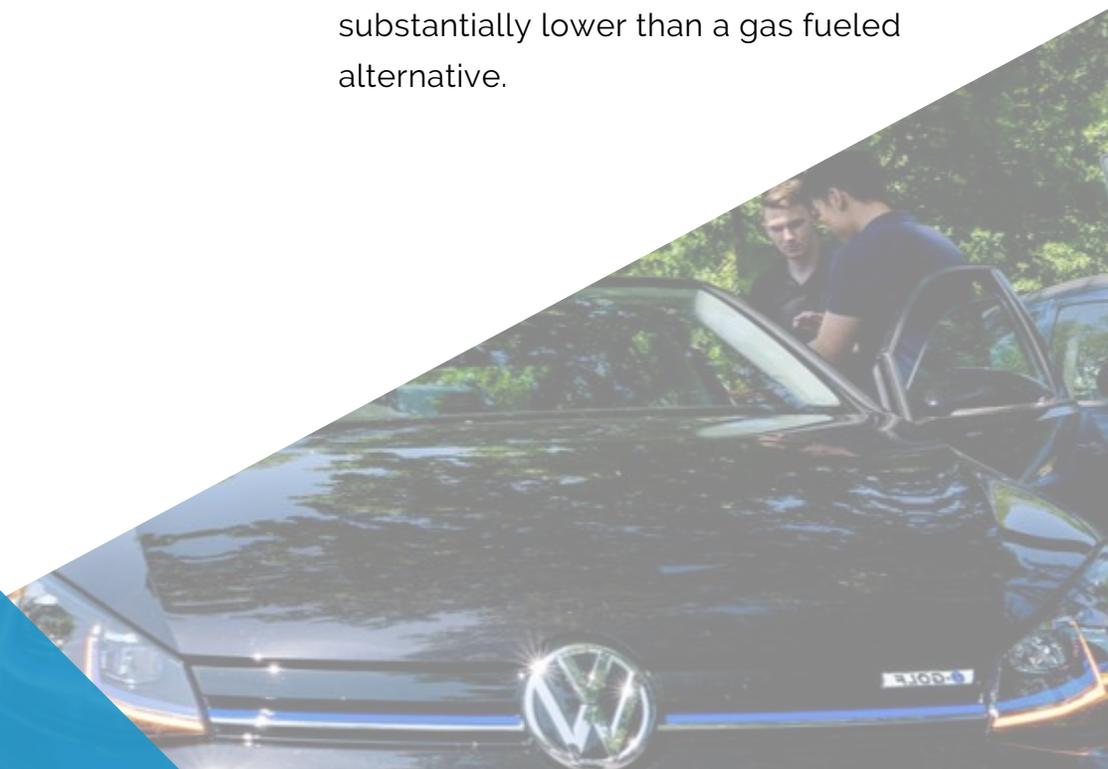


Battery warranties

The inclusion of a battery warranty is perhaps the most desirable attribute to look for in a used EV. Examine the warranty provisions carefully to see if you are protected against any deterioration in battery range. For example, if you expect to rely on the EV to commute 40 miles each way, be sure that your range will continue to deliver a minimum of 80 miles, plus buffer for other outings and errands. Some used EVs sold from franchise dealerships may be certified pre-owned (CPO) and come with an extended factory warranty. For many used EVs, this warranty is identical to the original warranty. For instance, the Nissan LEAF's CPO extended warranty is eight years/100,000 miles, and Tesla offers an eight-year/unlimited-mile battery warranty. (Both of these warranties cover battery failure, but not capacity degradation.)

Battery health

Another item to look for when purchasing a used EV is proof of the battery's state of health. The most effective way to measure battery health is through an on-board diagnostics check. Ask a reputable used car dealer or an experienced independent EV mechanic to perform this check on the vehicle. Identifying the health of the battery is very important—a used EV with a healthy battery is almost like a new car. However, even an EV with a somewhat degraded battery could be an excellent deal if it meets your needs. For example, a used 2011–2016 Nissan LEAF that has lost 15–25% of its battery capacity could still travel 50–70 miles on a single charge. If this is sufficient for you, it could be the cheapest possible vehicle to meet your needs. Plus, as an EV, the vehicle will not need continued maintenance and the cost to charge will be substantially lower than a gas fueled alternative.



Where to purchase?

First and foremost, it is important to purchase from a trustworthy seller. As with any used car purchase, there are always certain risks. For used EVs, the true health of the battery may not be properly disclosed. Used EVs can be purchased from franchise dealerships, private sellers or from used car dealers. Some used car dealers specialize in the sale of used EVs, while others may offer little to no assistance with the unique features of an EV. You may receive a reduced sticker price from a used car dealer compared to a franchise dealership, but be aware that buying from a used car lot means no certified pre-owned warranty. With a private seller, the price may also be a lower purchase price, but the car is sold "as is" and the seller cannot ensure that the health of the battery is in good condition.

Which used EV models should I look for?

The vehicles listed below represent makes and models that have been available to consumers for several years. Therefore, consumers should be able to find a good deal on these used EV models.

All-electric

Nissan LEAF
Chevy Spark EV
Ford Focus Electric
Fiat 500e
Tesla
Volkswagen eGolf

Plug-in hybrid

Chevy Volt
Ford Fusion Energi
BMW i3 REX
Ford C-Max Energi



Testimonials

Lynn W. purchased a used 2013 Nissan LEAF that still has around 80 miles of range on a single charge. She recommends calculating your daily mileage because an extended range on the battery may not be needed by everyone. She charges at home on a standard 120-volt outlet and estimates her average electricity costs to be the equivalent of paying \$1.25/gallon of gas, which is appealing for those concerned about rising gas prices.

Mark C. chose to buy a used Nissan LEAF due to the higher price of a new EV compared to the value of a used one. After accounting for fuel, maintenance, insurance, and registration fees, Mark estimates a net savings of around \$500. While the savings are great, Mark says his primary reason for driving electric is environmental.

Keith J. bought his used 2013 Smart ED for \$4,000 in 2014 and has since put 23,000 miles on it. He really enjoys driving electric in the city and in traffic compared to a gas-powered car. He prioritized battery health when he purchased his used EV. He also recommends potential buyers look for DC fast charging on road trips to reduce any range anxiety, to ask if replacement parts are available at local repair shops, and to estimate the battery capacity in winter weather. He estimates he saves around \$100/month over a gas car commuting into New York City.

John V. purchased a used 2014 Fiat 500e with 31,000 miles for \$6,800. He also purchased a five-year extended warranty for his EV. He says the 85-mile range is perfect for daily commuting and driving around town. He is likely to buy a used EV again because it has been so reliable.

**Plug In
America**

We drive electric. You can too.



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The voice of the EV driver

Founded in 2008, Plug In America is a nonprofit organization serving and representing EV drivers.

- We fight for pro-EV policies, including tax credits and access to HOV lanes. Join our network to take action!
- We present National Drive Electric Week and Drive Electric Earth Day for first-hand EV experiences.
- Our PlugStar EV Shopping Assistant and EV Support Program make it easy for drivers to switch to clean EVs.

Join the movement at
PlugInAmerica.org

PlugStar.com • DriveElectricWeek.org • DriveElectricEarthDay.org

Purchase incentives for used EVs

The federal EV tax credit and many state and local incentives lower the effective purchase price of new EVs, which can have a secondary effect on used EV prices. In addition, there are also an increasing number of incentives for used EVs. These can take the form of a direct rebate, sales tax exemption, a "cash for clunkers" program, a reduced charging rate or charging equipment rebate from local utilities. For full incentive information, visit PlugStar.com or the U.S. Department of Energy's Alternative Fuels Data Center.

Florida

- The Orlando Utilities Commission (OUC) provides rebates of \$200 to residential customers who purchase or lease an eligible new or used EV. Applicants must apply within six months of the purchase or lease of the EV. [1]

New Hampshire

- The New Hampshire Electric Co-op (NHEC) offers rebates of \$1,000 for the purchase or lease of a new or used BEV, and \$600 for the purchase or lease of a new or used PHEV. However, the qualifying EV can only receive the credit one time, per the VIN number of the vehicle (so some used EVs might not be eligible). [2]

Oregon

- Clean Vehicle Rebate Program: Oregon residents that meet low or moderate household income requirements are eligible for rebates of \$2,500 for the purchase or lease of used BEVs (not PHEVs). [3]
- Eugene Water and Electric Board offers a \$300 Clean Ride Rebate to pay for clean, electric fuel for a year for drivers, or to help offset the cost of a home charging station. The incentive is available to customers who purchase or lease a new or used qualifying EV. [4]

Pennsylvania

- Duquesne Light Company (DLC) offers a one-time bill credit of \$60 to residential customers who purchase or lease a new or used PEV. [5]
- The state Alternative Fuel Vehicle rebate offers \$750 for "one-time pre-owned" EVs with less than 75,000 miles. [6]

Washington

- Customers who purchase a used EV are eligible for sales tax exemption until July 31, 2025. A plug-in hybrid vehicle must travel at least 30 miles on battery power alone, and the used vehicle cannot exceed \$30,000 in sales price or fair market value before any trade-in to qualify. [7]

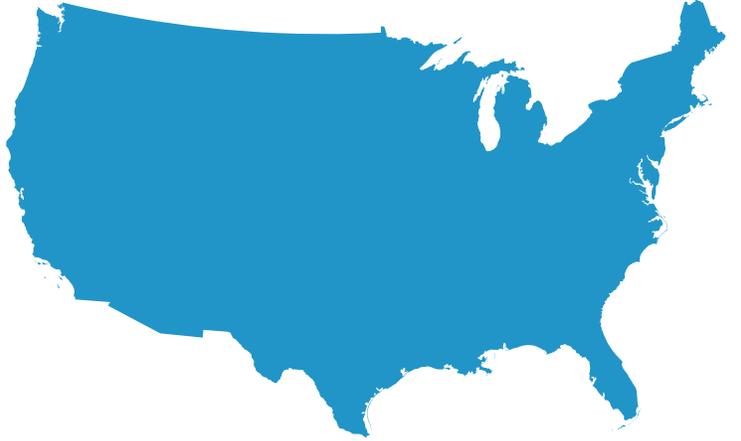


[1] <https://www.ouc.com/residential/save-energy-water-money/electric-vehicles-at-home>
[2] <https://www.nhec.com/wp-content/uploads/2019/01/2019-Electric-Vehicle-Rebate-Terms-and-Conditions.pdf>
[3] <https://www.oregon.gov/deq/air/programs/Pages/ZEV-Rebate.aspx>
[4] <http://www.eweb.org/residential-customers/going-green/electric-vehicles>
[5] <https://www.duquesnelight.com/energy-money-savings/electric-vehicles>
[6] <https://afdc.energy.gov/laws/5812>
[7] <https://dor.wa.gov/about/news-releases/2019/new-sales-and-use-tax-exemptions-green-vehicles-begin-aug-1>

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California

- The Clean Vehicle Assistance Program offers grants and affordable financing to help low-income Californians purchase a new or used EV. Grants are \$5,000 for a used EV, but the used EV must be 8 years old or newer with 75,000 miles or less to qualify. [1]
 - The South Coast Air Quality Management District (SCAQMD) Replace your Ride program allows applicants to retire an older vehicle and replace it with a used EV. Rebates range from \$2,500 to \$4,500, or higher, based on income level as compared to the Federal Poverty Level (FPL), replacement vehicle type and qualifying area. [2]
 - San Diego Gas & Electric (SDG&E) offers an annual credit to residential customers ranging from \$50 to \$500 to customers who own or lease an EV, new or used. The credit is available to qualified customers through 2019. [3]
 - Southern California Edison's (SCE) Clean Fuel Reward Program provides rebates of up to \$1,000 to residential customers who purchase or lease an eligible new or used EV. Residential account holders may apply on behalf of a EV owner in their household. [4]
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- Pasadena Water and Power (PWP) provides rebates of \$250 to residential customers who purchase or lease an eligible new or used EV. An additional \$250 is available for eligible EVs purchased or leased from a Pasadena dealership. Customers participating in PWP's income-qualifying programs may also qualify for an additional \$250 rebate, for a total of \$750. [5]
 - The California Air Resources Board (ARB) will establish the Zero Emission Assurance Project (ZAP) to offer rebates for the replacement of the battery or other related vehicle components for eligible used EVs. Rebates will be limited to one per vehicle, and applicants must be at or below 80% of the statewide medium income. Rebates will be available through July 31, 2025. [6]

[1] <https://cleanvehiclegrants.org/>

[2] <https://xapprod.aqmd.gov/RYR/Home/ReplacementOptions>

[3] <https://www.sdge.com/residential/electric-vehicles/electric-vehicle-climate-credit>

[4] <https://evrebates.sce.com/cleanfuel>

[5] <https://ww5.cityofpasadena.net/water-and-power/residentialevrebate/>

[6] http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB193