

## Electric Vehicles for Consumers

More consumers are choosing electric vehicles (EVs) as new, competitively priced models with longer ranges hit the market. More public charging stations are also rapidly becoming available, and some offer quick charges to get drivers back on the road in minutes.

### Finding the Right Vehicle

New EVs are released all the time, with models designed to meet a wider variety of needs. To learn whether an EV is right for you, assess your driving requirements, available vehicles, and cost considerations. Easily compare costs and benefits of specific vehicles using the FuelEconomy.gov vehicle comparison tool ([fuelconomy.gov/feg/evSelect.jsp](https://fuelconomy.gov/feg/evSelect.jsp)).

### Driving Requirements

- Start with daily driving: How many miles do you typically drive (e.g., for work, errands)? Most EV charging is done at home, but there is a growing network of chargers available for you to charge at workplaces, the grocery store, conventional gas stations, and many other destinations.
- Next, consider longer trips: Are there public charging stations ([afdc.energy.gov/stations#/find/nearest?fuel=ELEC](https://afdc.energy.gov/stations#/find/nearest?fuel=ELEC)) along your route that are compatible with the vehicles you're considering? Can you get from one station to the next within your expected range? Keep in mind, many EVs can easily travel distances of 200–300 miles on a single charge, helping reduce range anxiety.



Competitively priced EV models are available with driving ranges that meet more consumer needs. Photo by Erik Nelsen, NREL 64290.

- Also factor in reduced range if the drive will include hilly terrain, hauling heavy loads, or a lot of heating or air conditioning use.

If an all-electric vehicle doesn't meet your needs or you prefer the security of gasoline backup, consider a plug-in hybrid electric vehicle.

### Availability

EVs are becoming increasingly available in a variety of popular sizes and body styles, from compact hatchbacks to luxury SUVs and pickup trucks. See the AFDC Vehicle Search ([afdc.energy.gov/vehicles/search](https://afdc.energy.gov/vehicles/search)) to find available models. Note that some EVs may only be available in certain states or dealerships, particularly when first released. Contact local dealerships or manufacturer websites to learn if a vehicle is available locally.

Unsure whether an EV is right for you in the long term? Many dealers offer lease options for a shorter-term commitment than outright purchase.

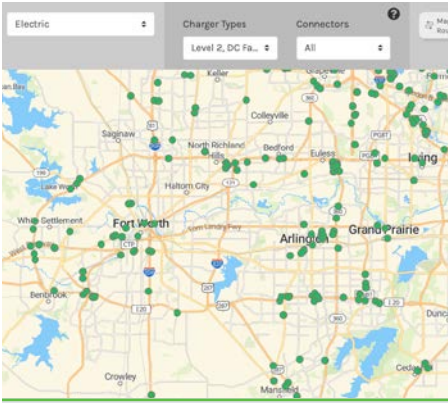
### Prices and Incentives

Although the initial price of many EVs is higher than comparable gasoline counterparts, tax incentives and rebates can offset much of this price difference. Search the AFDC Laws & Incentives database ([afdc.energy.gov/laws/electric-vehicles-for-tax-credit](https://afdc.energy.gov/laws/electric-vehicles-for-tax-credit)) or contact your local Clean Cities coalition ([cleancities.energy.gov/coalitions](https://cleancities.energy.gov/coalitions)) for the latest incentive information.

EV cost of ownership (your fuel and maintenance cost) is also lower, so you'll likely spend less over the life of your EV, especially in the case of all-electric vehicles, which have much lower maintenance requirements. Use the AFDC Vehicle Cost Calculator ([afdc.energy.gov/calc](https://afdc.energy.gov/calc)) to compare vehicle operating costs.

### Charging Your Vehicle

Your EV will come with a Level 1 cordset for charging via a standard 110 volt (V) household outlet (e.g., in your garage or driveway), and your dealer can recommend options for installing a



## Find a Charging Station

The AFDC Station Locator helps drivers find stations. Select “Electric” from the list of fuels, enter a location or route, and specify the type of station and connector you’re looking for. The locator generates a map with stations and more information. There are also free station mapping apps available, and some EVs come with a built-in station locator.

Level 2 unit. Level 1 can charge a smaller PHEV battery or partially depleted all-electric vehicle overnight, and Level 2 can generally charge a fully depleted all-electric vehicle overnight. Learn more about charging at home on the AFDC. For people living in multifamily housing, charging is becoming increasingly available ([afdc.energy.gov/fuels/electricity\\_charging\\_multi.html](https://afdc.energy.gov/fuels/electricity_charging_multi.html)).

Charging at work can be as simple as plugging in to an outlet (with permission from your employer) or using Level 2 equipment installed by the building owner.

Charging in public is another option. Tens of thousands of chargers are available nationwide and many can top up an all-electric vehicle in minutes.

## Connectors

Level 1 and Level 2 units use the same “SAE J1772” connector to the vehicle, while public DC fast charging (DCFC) will require one of two possible

	Charging Connector	
Level 1	SAE J1772	
Level 2	SAE J1772	
	Tesla	
DC Fast	CCS	
	CHAdEMO	
	Tesla	
	Supercharger	

connectors (Combined Charging System [CCS] or CHAdEMO). Most EVs can charge at any public charging station, although Tesla vehicles use a unique connector, and an adapter allows them to use non-Tesla equipment.

## Driving Your EV

EVs are as easy to drive and maintain as conventional vehicles, but some advanced planning can be important—especially before a longer trip or when the battery is low. While gas stations can be found almost anywhere in the United States, charging stations are not yet as common. So, it’s best to ensure that your EV is fully charged before leaving on a long trip and plan charging stops along the route.

The batteries in electric-drive vehicles are generally designed to last for the expected lifetime of the vehicle and several manufacturers offer 8-year/100,000-mile warranties for their EV batteries. Commercially available EVs meet the Federal Motor Vehicle Safety Standards and undergo the same rigorous safety testing as conventional vehicles sold in the United States.

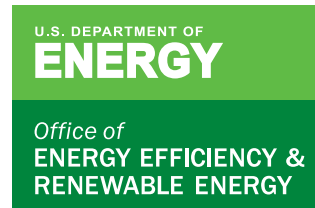
Refer to the AFDC ([afdc.energy.gov/ev-consumers](https://afdc.energy.gov/ev-consumers)) for more information. ■



## Typical Consumer Stories

- Meet Judy:** Judy owns an all-electric vehicle and drives 20 miles round trip for work each day. She charges the car at home overnight using her cordset and a garage outlet. Once Judy is ready for a longer commitment, she plans to have a Level 2 unit installed. Judy makes occasional trips out of state to see family and charges at a DCFC station along the route.
- Meet Paola:** Paola drives less than 20 miles round trip for work. She charges her PHEV at home using Level 1 and uses a public Level 2 station down the street occasionally. Paola opted to lease a PHEV to accommodate trips out of state but plans to switch to all-electric once her lease expires.
- Meet Erik and Deb:** For their daily commuter, an all-electric hatchback meets this couple’s needs. They have a light-duty pickup to pull their trailer when on vacation, for hauling loads or camping, or when they each need a vehicle.

Find more consumer testimonials at Plug In America ([pluginamerica.org/why-go-plug-in/why-i-went-electric](https://pluginamerica.org/why-go-plug-in/why-i-went-electric)).



For more information, visit: [afdc.energy.gov](https://afdc.energy.gov)

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