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Sustainability  
Advisory Board  
HARRISBURG, NC

National Drive Electric Week™



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# EV 101 - Start the journey to driving electric!



# Electric Vehicle basics

An electric vehicle (EV) is any vehicle that can drive on electricity from a wall plug or charging station.



## **ALL ELECTRIC**

Only uses electricity from a wall plug or charging station. It can't be fueled with gasoline.



## **PLUG-IN HYBRID**

Can use electricity from a wall plug or charging station and can be fueled with gasoline. Generally have smaller batteries, slower charging speeds, and can't use a fast charger, but have high total range by using both fuels.

# Electric Vehicle benefits

There are a lot of benefits to owning an electric vehicle.



## **AFFORDABLE**

When you consider the total cost of ownership, including purchase, rebates, fuel, and maintenance, most electric vehicles are cheaper than comparable gas vehicles.

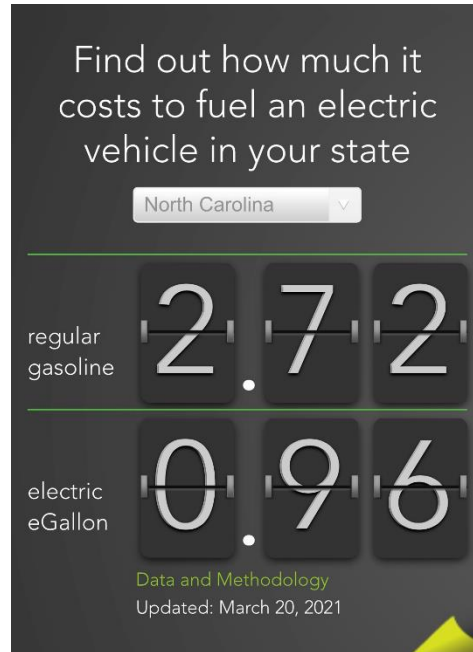
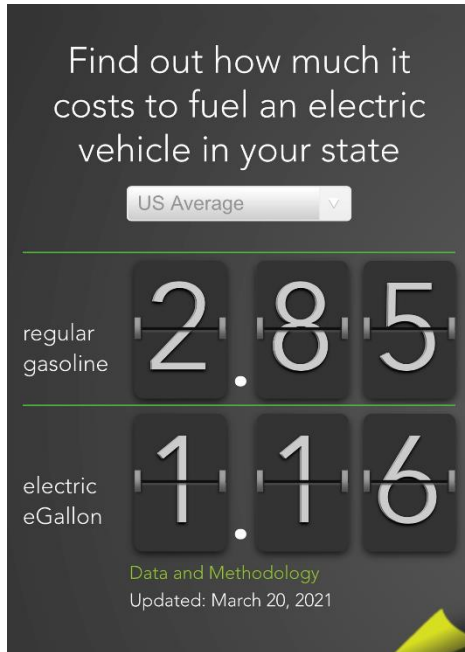


## **BETTER PERFORMANCE**

EVs provide maximum torque from a standstill, so when you hit the accelerator, they GO! Merging onto the freeway was never so much fun.

You can [browse](#) and [compare](#) vehicles on PlugStar.com.

# EVs are less expensive to fuel and maintain



**Fuel costs** are ~60% lower on average (electricity vs. gasoline)

- ~65% in North Carolina

**Maintenance costs** are several hundreds of dollars less per year

- No oil changes needed
- No air filters, timing or fan belts, spark plugs
- Regenerative braking extends the life of the braking system – and charges the battery

[www.energy.gov/maps/egallon](http://www.energy.gov/maps/egallon)

# Electric Vehicles available

## **NEW VEHICLES**

There are more than 50 models of electric vehicles on the market, starting at \$30,000. Many all-electric vehicles have a range of 250+ miles.

[Browse](#) vehicles at PlugStar.com

## **USED VEHICLES**

Because they have fewer moving parts, used electric vehicles are often inexpensive and a very dependable option, but we recommend checking the battery health.

[Used EV Buyers Guide](#) on PlugInAmerica.org

# Charging Options

For most people, over 90% of charging happens while their car is parked at home overnight (like a cell phone) or while at work, but there are lots of public charging stations for EVs as well.



## AT HOME

Level 1 charging (a standard wall plug) might meet your needs. If you drive a lot, you may need a level 2 charging station, which can be installed by a licensed electrician. You can find one at [PlugStar.com/electricians](https://www.plugstar.com/electricians).



## AT WORK

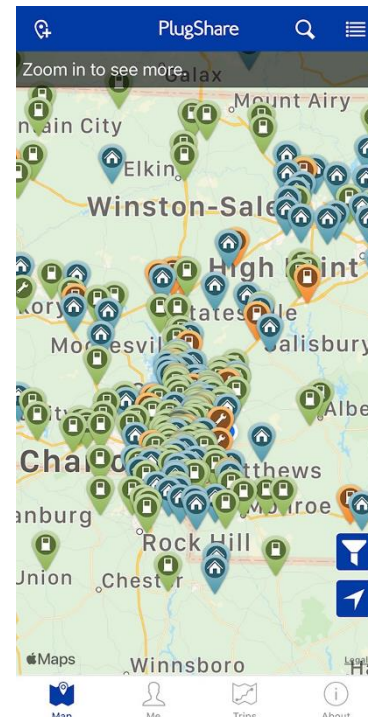
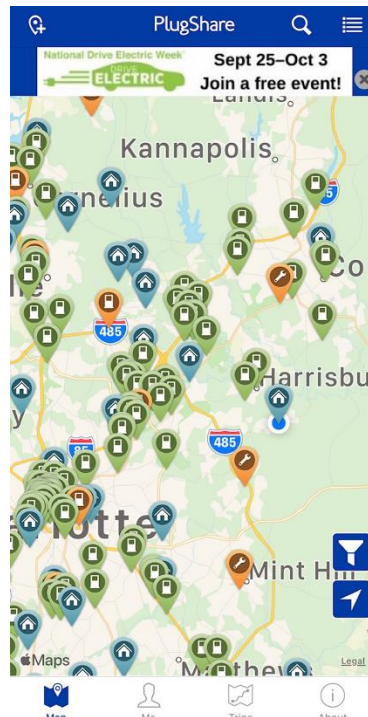
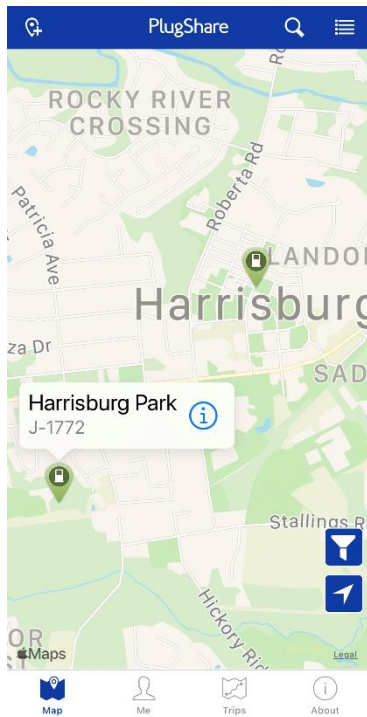
If your workplace doesn't yet have charging stations, ask them to consider it. Utility incentives can often help with the cost and other employees will thank you.



## ON THE GO

There are tens of thousands of public level 2 and fast charge stations across America. To find one, use your navigation map, [PlugStar.com/charging-map](https://www.plugstar.com/charging-map), or mobile apps like PlugShare, EVgo, Electrify America, Greenlots, ChargePoint.

# Harrisburg area EV charging locations



# Charging Levels

**The charging level you will use depends on the time and distance you are driving, and your specific needs.** The mileage figures provided below are directionally average – these will vary higher and lower based on a few variables: e.g. battery size (kWh), acceptance rate (kW), charger output power (kW).



## **LEVEL 1**

Standard wall plug: ~40 miles overnight

## **LEVEL 2**

240-volt outlet: ~25 miles per hour of charging

## **FAST CHARGE**

Public chargers: Goes from 0% to 80% charged in 20-40 minutes



# Incentives

There are many federal, state, and local incentives to help make EVs affordable.

## Federal Vehicle Tax Credit

Tax credit of up to \$7,500 for the purchase of a new electric vehicle. Credit amount depends on the car's battery capacity.\*

## Federal Alternate Fuel Infrastructure Tax Credit

Consumers who purchase and install an EV charging station in their homes prior to December 31, 2021, may receive a tax credit of 30% – up to \$1,000.\*

## North Carolina

- [High Occupancy Vehicle \(HOV\) Lane Exemption](#) – Use of HOV lanes regardless of the number of occupants
- Qualified EVs are [exempt from state emissions inspection requirements](#)

\*Consult a tax professional with more questions.

# Resources

## LEARN MORE

- [PlugStar.com](https://www.PlugStar.com)  
Compare vehicles, find incentives, get equipped
- Plug In America's EV Support Program  
1 (877) EV-HELP-1  
[support@pluginamerica.org](mailto:support@pluginamerica.org)
- [DriveElectricWeek.org](https://www.DriveElectricWeek.org)
- [DriveElectricEarthDay.org](https://www.DriveElectricEarthDay.org)
- [PlugInAmerica.org](https://www.PlugInAmerica.org)  
Learn more about our organization
- [SierraClub.org/transportation](https://www.SierraClub.org/transportation)  
Learn more about our organization
- [ElectricAuto.org](https://www.ElectricAuto.org)  
Learn more about our organization

# FAQs

- **How often do you have to replace the batteries?**
  - Not for many years. GM and Nissan offer warranties covering 8 years or 100,000 miles of driving on the lithium-ion batteries in the Volt or the LEAF. Plug In America is conducting surveys of battery life among EV drivers. You can [learn about survey results or participate](#).
- **Will plug-in cars lead to more power plants?**
  - No. The existing electric grid's off-peak capacity for power generation is sufficient to power 73 percent of commutes to and from work by cars, light trucks, SUVs and vans without building a single new power plant, according to the U.S. Department of Energy.
  - [See a recent article on this topic](#)
- **What's the recommended maintenance for EVs?**
  - BEVs generally require less maintenance than gasoline engines. The same applies to PHEVs if you don't have a long commute and drive mostly using electricity.
  - [See this sample owner's manual](#) for an idea of the suggested maintenance.

# Questions?

Email the Harrisburg Sustainability Advisory Board (HSAB) at [HarrisburgSAB@gmail.com](mailto:HarrisburgSAB@gmail.com) with questions regarding electric vehicles or other HSAB initiatives.



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