



## Electric Bikes FAQs

Q. What is an electrically assisted bicycle?

A. An electrically assisted bicycle is essentially a conventional bike that uses an electric motor to assist the rider on demand.

Q. What are the running costs for a Pedego electric bike?

A. You will have no worries about rising fuel prices at the pumps. All our electrically powered vehicles use household electricity. The average cost per full charge is about 2 cents per charge. If you charged the battery every single day for a year, it would cost you about \$7.30 per year.

Q. Can I ride up hills and against strong headwinds on my Pedego electric bike?

A. Yes. One of the main advantages of cycling on a Pedego electrical bicycle is that it literally flattens hills and increases your average speed when tackling inclines and headwinds. If you provide a reasonable amount of effort, but you should be able to tackle anything from a 1 in 10 (10%) gradient up to a 1 in 7 (14%) gradient with relative ease. You will be amazed at the relative ease that your new Pedego electric bike can tackle some of the most arduous journeys.

Q. Do I need a driving license, insurance or registration?

A. No, you don't. According to Federal law, electric bikes that are under 750 watts are classified as bicycles. For all intensive purposes, it's simply a bicycle that requires very little pedaling to travel 20 mph, saving you time and hassle. The law does require the use of helmet and riders to be at least 16 years old.

Q. Do I need to pedal an electric bike?

A. No but it helps to prolong battery life. The motor on our bikes is throttle controlled, allowing you to decide how much power you desire. Have you ever tried to cycle when speeding downhill on your normal bicycle? It's just like that. The motor is propelling you faster than you're cycling so there is pretty much no resistance, it's merely a formality!

Q. What happens when I use the brakes under powered assistance?

A. All our bikes are equipped with brake levers that have an in-built safety switch that automatically cuts off the motor power under normal braking conditions. This not only ensures a safe un-powered stopping feature, but also protects the motor under braking conditions so that it isn't working against the brakes

Q. How far will a Pedego take me?

A. This all depends on a few factors. Cycling on pedal assist along a straight road under normal conditions the battery should last about 15-30 miles. Cycling up steep hills will obviously take more energy out of the battery and factors such as road surface, wind resistance, weight of the rider and tire pressure will affect your range. An optional additional battery pack can double your range.

Q. What happens if I get a flat tire?

A. The tires on our bikes are the same as conventional bicycles. Simply replace the tube with a tube of the right size and inflate it. No special tires or parts will be needed.

Q. They're a bit expensive aren't they?

A. It's true that electric bikes have a high initial cost but this expense is offset by the savings you make in the future. Think about the amount of money you spend maintaining a car for short distance commuting. First of all, you have the ever increasing price of gas that is constantly burned up while sitting in traffic. Then you have insurance which can be exorbitant under a variety of circumstances. Couple these factors with replacing some of the many moving parts (which can be very expensive) along with labor (which is more expensive), servicing and parking. Our bikes have none of these associated costs and the cost of the electricity to charge the bike is nothing in comparison. But possibly the most important saving to some people will be time. Commuting at peak times is much faster and less stressful compared to cars and you can't put a price on that !

Q. Why does Pedego use Brushless Motors on all of its bikes?

A. Pedego uses only the best and most technically advanced components in all their bikes. This is why we only use brushless maintenance free motors on all our bikes. The main differences between brushed motors and brushless motors are as follows:

Brushed Motors - Most electric bikes currently use the lower cost, high maintenance brushed motors, which use carbon brushes to make contact with the rotor of the motor. This results in constant contact and friction inside the motor and produces fine carbon particles within the workings of the motor that slowly reduces its efficiency and effectiveness as its life increases. The carbon brushes consequently need to be changed by a dealer at fixed mileage intervals. The net result of using brushed motors is that the range of the battery reduces as the motor deteriorates and they have to have replacement brushes at regular intervals. Because brushed motors are less efficient than brushless motors, bikes using this old technology generally need bigger batteries to equal the range of the Pedego electric bikes.

Brushless Motors are used on all Pedego bikes to maintain their high performance, with no deterioration of performance over time; they offer a constant maximum efficiency which equates to greater mileage versus brushed motors for the same size battery; they are generally much smaller and lighter than brushed motors and finally brushless motors are maintenance free.

Q. Are the bikes light enough to be lifted without help?

A. In the past, electric bikes were very heavy and would take some effort to lift on your own. Steel frames and lead acid batteries were the main contributor to this. Pedego electric bikes are made with aluminum frames and lithium ion batteries. This reduces the weight considerably to around 50 lbs. which means the bikes are easily lifted by one person. The motor is located on the rear wheel hub and so the back is heavier than the front but is still easily manageable.

Q. Will I stand out cycling a Pedego electric bike?

A. Not at all. Some electric bikes have crazy styling and unusual looks that make them stick out. The Pedego electric bikes look just like average bicycles but with the added benefit of an electric motor. Pedego Comfort Cruisers are incredibly comfortable 'beach cruiser' style bicycles. The Pedego Umbrella Bike is a little unusual as it is a compact folding bike but more and more folding bikes are being cycled these days and so they are becoming the norm. Anyway, in the future you can call yourself a trend setter saying, 'I had one before they became popular.

Q. How do I know when the battery is low?

A. All the batteries have independent indicators on them so you always know how much power is in each one. The bicycles also have easily visible light indicators located on the handle bars that show the amount of juice left. If it is getting low and you don't think you will make it to your destination, you can switch off your motor and keep it just for the difficult bits. You have no excuse for running out of power.

Q. Do I have to wait for the battery to empty before I charge it?

A. No. The batteries we use are Lithium-ion batteries which do not suffer from 'memory effect'. This means that there is no need to discharge a battery completely before you recharge it again. You can partially recharge the battery at any time without reducing its voltage or lifespan .

Q. Do electric bikes recharge when freewheeling or coasting downhill?

A. Yes and no. The bikes do generate current when freewheeling, but generally speaking the amount of power produced is little more than a trickle charge and you would have to coast or freewheel for many miles to have a noticeable effect.

Q. What is the best configuration for the electric motor – front or rear?

A. There are two main motor configurations found on the vast majority of electrically assisted bikes. Front mounted hub motor or rear wheel mounted hub motor.

Front mounted hub motor -The front mounted hub motor is the simplest and cheapest engineering solution and is consequently found on many lower priced, lower quality electric bicycles.

- The main disadvantage of the front wheel hub is the lack of traction when tackling gradients (due to the bulk of the weight over the rear wheel) that can cause the front wheel to lose control and slip under power.
- The front wheel hub motor can also cause the front wheel to lose traction and spin in wet weather, which could be extremely dangerous.

Rear Wheel mounted hub motor-The rear wheel hub motor is more of an engineering challenge and therefore not found on less substantial electrically assisted bikes. However, the main advantages of rear wheel drive are threefold:

- More balanced and superior traction due to the rear bias of weight distribution on all bike types.
- Superior handling in wet weather conditions
- Superior traction control when cycling up gradients

Q. Okay, I'm convinced. How do I buy one of your bicycles?

A. Our bikes are distributed exclusively by Pedego Neighborhood Electric Dealers. Please visit [www.pedego.com](http://www.pedego.com) to find a dealer near you. If you are interested in becoming a Pedego Neighborhood Electric Dealer, please send an inquiry to [dealer@pedego.com](mailto:dealer@pedego.com).

If your question isn't answered here, send your question to [info@pedego.com](mailto:info@pedego.com)