



# E-Bikes 101

## What Are E-Bikes All About?

An e-bike is a regular bike with a battery powering a motor to assist with pedaling. E-bikes are FUN machines that help you get from point A to point B quickly and cost-effectively, while helping the environment and your well being along the way.

Compared to electric vehicles, e-bikes are 20 times more energy efficient and deliver 30-100 times more miles per pound of battery. They will move you more than 70 times as far as a gas fueled car per pound of CO2 emissions.

(source: climateaction.center)

## Things To Consider Before Buying Your E-Bike

### Storage/Weight

E-bikes weigh 30-80 pounds. Most owners need space on the ground for storage, without stairs or lifting.

### Where to Buy: Online vs. Local Shop

If you buy from a local shop, you get sized properly and can test ride bikes. Bikes bought from local shops can have better warranties and are often more serviceable when it comes time for repair. Some shops only repair e-bikes they sell, or at least only e-bikes from reputable brands. While you can buy a bike online to have it shipped to your house, these bikes still need to be put together by a bike mechanic. **Shop local!**

### Locking

Consider investing in a substantial u-lock with a way to lock both wheels and frame. Register your bike on [www.bikeindex.org](http://www.bikeindex.org).

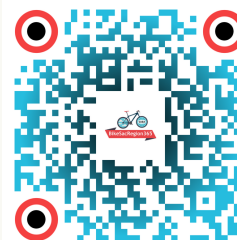


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# E-Bike Basics

## Class 1- Pedal Assist

Class 1 bikes are pedal assist only. They will assist you in pedaling your bike up to a speed of 20mph.

## Class 2- Pedal Assist & Throttle

Class 2 bikes have both pedal assist and a throttle, which boosts pedaling, up to 20mph. Class 2 bikes are hub-drive only.

## Class 3- Pedal Assist+

Class 3 bikes are pedal assist only, but with a max speed of 28mph. These bikes come equipped with a speedometer, and require riders be least 16 years of age and wear a helmet. **Class 3 e-bikes are typically not allowed on trails or bike paths.**

## Serviceability

Some bike shops will only work on e-bikes they sell, or at least only e-bikes from reputable brands. E-bikes costing less than \$1,000 may not have replaceable parts or batteries and may be turned away by some mechanics.



## Hub Drive vs Mid Drive

E-bikes have a motor in either the hub (center of rear wheel) or the middle of the bike between the crank arms. Mid-drive bikes are more efficient and ride smoother, but are more expensive up front and to maintain. Hub drive bikes are more common. Bikes with throttles (Class 2) are hub-drive only.

## Pricing

E-bikes have a larger initial investment compared to regular bikes, but a much lower one to any kind of gas-powered transportation. Consumers can find e-bikes online starting around \$800. However, reliable e-bikes that are serviceable, with reliable batteries and components, usually start closer to \$1,200. For cargo e-bikes and e-bikes with more features or upgraded components, consumers can expect to spend \$2,000+.

## Range

The distance you're able to travel will vary depending on the amount of pedal assist used, terrain, battery power/age and total weight you'll carry. Many companies quote +/-40-60 miles on a single charge.



# E-Bikes Are

- Great at climbing hills, beating headwinds, tackling long commutes, hauling kids & loads.
- Safer in traffic thanks to the extra power boost.
- Cheap to ride - less than a penny per mile to charge the battery, and no parking fees.
- Easy to park.
- Great at slipping around and through traffic.
- Impressively efficient - from 1000 to 4000 MPGe (miles per gallon equivalent).
- Good for your health - but won't make you sweat (unless you want to).
- Easy on cranky joints.
- LOTS OF FUN!

(source: climateaction.center)

**SABA is a nonprofit organization dedicated to making our region a safer, healthier, and friendlier place to ride a bike, whether for commuting, recreation, or exercise, for all people, regardless of race, income or ability.**

**To learn more about our work, events, programs, volunteer opportunities and membership, visit [sacbike.org](http://sacbike.org)**



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