



# ELECTRIC BICYCLE FAQ

## **Why is this legislation needed for electric bicycles?**

In many states, electric bicycles lack a specific vehicle classification. In these states it is unclear how they are regulated, or they may be interpreted to fall within terms primarily aimed at combustion engine vehicles such as mopeds or scooters. These classifications that were never intended to apply to electric bicycles. This legal scheme creates significant confusion for consumers and retailers, and hinders the electric bicycle market. In order to clarify state law, and properly regulate electric bicycles like traditional bicycles, it is critical to understand the existing legal rules that govern electric bicycles.

## **What other states use the classification system in this bill?**

At the end of 2020, 28 states (Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Indiana, Louisiana, Maine, Maryland, Michigan, New Hampshire, New Jersey, New York, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, Wisconsin and Wyoming) had passed laws that define three classes of electric bicycles in their traffic statutes.

## **Are you working to advance similar legislation elsewhere in 2021?**

Similar legislative efforts are underway in 17 states: North Dakota, Kansas, Nevada, Montana, Alabama, Alaska, Delaware, Iowa, Massachusetts, Minnesota, Mississippi, Missouri, Oregon, Pennsylvania, Rhode Island, South Carolina, and Vermont.

## **Why is the top speed for Class 3 electric bicycles 28 MPH?**

In Europe, the classification that is equivalent to a class 3 electric bicycle is "speed pedelec." Under European rules, speed pedelecs are limited to a top assisted speed of 45 KPH, which is equivalent to 28 MPH. Therefore, these rules provide Uniform product standards between the European and U.S. markets.

## **I have read the federal definition of an electric bicycle and it says that the top speed is 20MPH. How are class 3 electric bicycles legal given the federal definition?**

The federal definition uses very specific language to delineate the top speed of electric bicycles. The 20 MPH threshold applies when the electric bicycle is being operated "solely" under motor power. However, electric bicycles are most commonly ridden under a combination of human and motor power. The federal definition does not provide a top speed for when an electric bicycle is being operated under combined human and motor power. The class 3 definition clarifies this ambiguity by specifying the maximum assisted speed for electric bicycles at 28MPH.

## **Can electric bicycles be safely operated on bike paths?**

Yes. Researchers who have compared riders of electric bicycles and regular bikes at the University of Tennessee observed that electric bicycle riders exhibit similar safety behavior as riders of traditional bicycles. Perhaps most importantly, electric bicycle riders traveled at similar speeds to riders of human powered bicycles. They rode slightly faster when riding on the road (1.8 mph), but actually slower than regular bike riders when on bicycle paths (1 mph).

## **Why not regulate electric bicycles at the federal level?**

Electric bicycles have been regulated federally since 2002. However, as with other consumer products, the federal regulations are limited to product safety. They do not specify where electric bicycles may be ridden or what rules of the road govern their use. While the federal government can intervene in these matters in very rare situations, the rules of the road are generally a matter of state law. Other emerging technologies have followed the same path of creating new state traffic laws to address the use of these devices on our streets. This includes segways, autocycles, and commercial quadricycles.

## **How can anyone tell what an electric bicycle is?**

Electric bicycles are becoming more and more difficult to distinguish from regular bicycles. The labeling requirement in the model bill is a proactive measure on behalf of the industry to ensure that law enforcement or land managers can easily tell that a bicycle is in fact an electric bicycle, and quickly assess which type of electric bicycle it is.

### **Can people tamper with electric bicycles?**

Like other mechanized or motorized devices, it is possible that a user could tamper with an electric bicycle. We have inserted a tampering provision in the model bill that will place the onus on the manufacturer or owner to have a properly labeled bike if that were to occur. If someone was to tamper with an electric bicycle and create a vehicle that can travel faster than any of the specified classifications of electric bicycles, they would presumably be operating an unlicensed and unregistered vehicle, and would be subject to any applicable penalties.

### **Does the bill regulate electric bicycles off-road?**

No, it only amends the traffic laws located in the revised vehicle code, providing for the regulation of electric bicycles on streets and bicycle paths (not on trails).

### **Who is the typical purchaser of an electric bicycle?**

While all types of people purchase and use electric bicycles, the typical demographics are couples and households, urban dwellers, aging bicyclists, and people with physical or cognitive limitations. Electric bicycles make riding a bicycle for fun, commuting or transportation easier and faster and provide an affordable and competitive transportation option. Electric bicycles are also a dependable option for people limited by fitness, age, or disability; as well as for those who traditionally drive to work in the 5-20 mile range.

### **How many electric bicycles are sold each year in the U.S.?**

Approximately 260,000 electric bicycles are sold annually in the U.S. They are the fastest growing segment of the bicycle industry sales, with approximately 100% year over year growth. Total electric bicycle sales in 2019 amounted to \$222,000,000, whereas total electric bicycle sales in 2020 amounted to \$540,000,000.

### **How much do electric bicycles cost?**

The average price of an electric bicycle is \$2,000. Entry-level electric bicycles are about \$1,000. High-end electric bicycles can cost \$6,000 or more.

### **Why distinguish between class 1 and class 2 electric bicycles in the bill if the rules are the same?**

The distinction between these two types of electric bicycles provides for greater local flexibility. Some municipalities have demonstrated an interest in prohibiting throttle-powered electric bicycles from certain types of infrastructure, and this bill provides the flexibility to take those measures if they are desired on a local level.

### **Does the rider have to be pedaling for the electric bicycle's motor to be engaged?**

It depends on the type of electric bicycle. For Class 1 and Class 3 electric bicycles, the rider must be pedaling for the motor to be engaged. For Class 2 electric bicycles, the motor can propel the electric bicycle without the rider pedaling.