

Electric Bicycle Law Basics

PeopleForBikes and the Bicycle Product Suppliers Association (BPSA) are working to update and clarify state laws governing the use of electric-assisted bicycles across the United States. Our objective is to ensure that certain low-speed electric bicycles are regulated similarly to traditional, human-powered bicycles to provide the same access that riders of traditional bicycles enjoy.

In many states, electric bicycles are regulated under antiquated laws that are primarily aimed at combustion engine vehicles such as mopeds or scooters. 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.

Federal Law Governing Low-Speed Electric Bicycles:

Electric-assisted bicycles have been defined and regulated at the federal level since 2002. [Public Law 107-319](#) established that electric bicycles are regulated as consumer products under the Consumer Product Safety Act, and more specifically, subject to the same regulations that govern traditional, human-powered bicycles. Thus, electric bicycles are regulated by the Consumer Product Safety Commission, and must comply with the bicycle safety standards at [16 C.F.R. Part 1512](#). In addition, electric bicycles are explicitly not “motor vehicles” for the purposes of federal law, and are not subject to National Highway Traffic Safety Administration vehicle standards. As a practical matter, Public Law 107-319 ensures that electric bicycles are designed, manufactured, and tested like traditional bicycles for the purposes of consumer product safety law. The main provisions of Public Law 107-319 are codified at [15 U.S.C. § 2085](#).

Under federal law, an electric bicycle is referred to as a “low-speed electric bicycle,” which is defined as “a two- or three-wheeled vehicle with fully operable pedals and an electric motor of less than 750 watts (1 h.p.), whose maximum speed on a paved level surface, when powered solely by such a motor while ridden by an operator who weighs 170 pounds, is less than 20 mph.” Significantly, this definition provides a maximum assisted speed that an electric bicycle can travel when being powered only by the motor, but does not provide a maximum assisted speed for when an electric bicycle is being powered by a combination of human and motor power.

Federal law does not preempt any state traffic laws or vehicle codes. While there is a preemption provision in Public Law 107-319, that provision is limited in scope to product safety regulation. Therefore, Public Law 107-319 has no impact on state traffic laws or vehicle codes, which regulate the use of electric bicycles, and it is still necessary to update these laws to incorporate these devices.

State Traffic Laws:

Nearly 20 states have incorporated e-bikes into their traffic codes and regulated them similarly to traditional bicycles. However, approximately 30 states still have outdated laws that lack a specific classification for electric bicycles. In these states, electric bicycles are regulated under a patchwork of laws aimed at mopeds or scooters, or in some cases it is not obvious how electric

bicycles are classified at all. This creates significant confusion for consumers, retailers, and manufacturers, and it discourages the public from taking advantage of the benefits that electric bicycles offer.

The central problem in many states is that their statutes lack a term specifically aimed at electric bicycles. Under many state laws, “bicycles” are limited to devices moved solely by human-power. The only other definitions that exist under state law are aimed at combustion engine vehicles (commonly 50cc or less), and may inadvertently include electric bicycles simply because there are no other options. Common vehicle classifications that may include electric bicycles in different states are “moped,” “motorized bicycle,” and “motor-driven cycle.” State laws governing these devices often include additional administrative requirements that are impractical or not necessary for electric bicycles, such as licensing, registration, or insurance.

BPSA Class System

In order to modernize electric bicycle law in the United States, the BPSA has devised a three-class system to categorize electric bicycles and properly regulate them based on their maximum assisted speed. The BPSA class system would create the following categories of electric bicycles:

- 1) A “class 1 electric bicycle,” or “low-speed pedal-assisted electric bicycle,” is a bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of 20 miles per hour.
- 2) A “class 2 electric bicycle,” or “low-speed throttle-assisted electric bicycle,” is a bicycle equipped with a motor that may be used exclusively to propel the bicycle, and that is not capable of providing assistance when the bicycle reaches the speed of 20 miles per hour.
- 3)) A “class 3 electric bicycle,” or “speed pedal-assisted electric bicycle,” is a bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of 28 miles per hour, and is equipped with a speedometer.

For all classes, the maximum power output is 750 watts (1 h.p.), and manufacturers and distributors of electric bicycles would be required to apply a class identification label to each electric bicycle.

The BPSA system also creates rules governing the use of electric bicycles, with safety as the top priority. Class 1 and 2 electric bicycles would be permitted to travel anywhere traditional bikes are permitted, as the maximum assisted speed of these devices is closely aligned with speeds traveled by traditional bicycles. Class 3 electric bicycles could be ridden on streets and roadways where traditional bicycles are permitted, including bicycle lanes, but would be restricted from slower speed areas such as multi-use paths. Class 3 electric bicycles would also be subject to additional requirements, such as a minimum user age and helmet mandate. Electric bicycles would not be subject to any licensing, registration, or insurance requirements.

A bill implementing the three-class system in California, AB 1096, has passed the State Assembly and is pending in the State Senate. BPSA and PeopleForBikes hope to expand the use of the class system beyond California so that additional states can be on the forefront of electric

bicycle law, and create a modern regulatory system that properly governs electric bicycles as the use of these devices expands.

During the 2015 legislative session, additional bills to clarify electric bicycle regulations were passed in Montana and Nebraska. Additional bills have been put forward in Hawaii, New York, and South Carolina.