peopleforbikes

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TO: Chair Solomon and House Corporations Committee
FROM: Alex Logemann, Policy Counsel, PeopleForBikes Coalition
DATE: March 28, 2022
SUBJECT: House Bill 7839 (Electric Bicycles)

Dear Chair Solomon and Members of the House Corporations Committee:

On behalf of the PeopleForBikes Coalition, thank you for the opportunity to provide testimony in support of House Bill 7839, legislation that would define and regulate electric bicycles.

The PeopleForBikes Coalition is the national advocacy group and trade association that works for better policies and infrastructure for bike riding. Our coalition includes nearly 300 companies and brands that manufacture, distribute, or sell bicycles and related products, including electric bicycles.

Electric bicycles are a still emerging technology that need clear rules to regulate their use and create stability in the marketplace. As electric bicycle adoption continues to grow and these products mature, manufacturers, retailers, and bike riders need clear rules that define these products and state what rules apply to them when they are being used. Our goal at PeopleForBikes has been to harmonize terminology and regulation at all levels of government so electric bicycles have consistent rules throughout the United States.

Before discussing the changes that this legislation would make to the law, I'd like to provide some general information about electric bicycles and who rides them. An electric bicycle is designed similarly to a traditional bicycle but has three additional components – a small motor that provides assistance to the bike rider, a battery to provide power to the motor, and electronics that enable the rider to control the system. Recent advances in electronic and battery technology have made electric bicycles more affordable and more enjoyable to ride. As technology has developed, the broad category of electric bicycles has divided into three types or classes of electric bicycle based on their speed and type of motor engagement. These are known as Class 1, 2, or 3 electric bicycles. They can quickly be summarized as follows:

- Class 1: Pedal-assist electric bicycle (the rider must be pedaling for the motor to engage), top speed of 20 miles per hour.
- Class 2: Throttle-assist electric bicycle (the motor can provide power independently of whether the rider is pedaling), top speed of 20 miles per hour.
- Class 3: Pedal-assist electric bicycle, top speed of 28 miles per hour.

Electric bicycles are enjoyed by people from all walks of life, and they are being widely adopted by Americans from all age groups. Older Americans often report using electric bicycles for recreational purposes and that the electric assist features of an electric bicycles have enabled them to ride their bike for more of their life than they otherwise would have. Younger people are increasingly electric bicycles for transportation. Electric bicycles are also a dependable option for people limited by fitness, age, or disability, as well as for short trips in the 5 to 10 mile range.

I can personally attest to the value that an electric bicycle can provide for short range transportation. I own a fairly basic Class 1 electric bicycle. I frequently use my electric bicycle with a small child trailer attached to make trips to the park with my daughter, go to the grocery story, or even pick up home repair supplies from the hardware store. I would have never been able to achieve the same level of practicality and functionality without the assist that my electric bicycle provides.

Until recently, the regulation of electric bicycles in the United States had evolved in a piecemeal and uncoordinated manner. The federal government has regulated electric bicycles since 2002, when legislation was passed clarifying their product safety standards. Under this federal law, electric bicycles are treated similarly to bicycles for these purposes. They are regulated by the United States Consumer Product Safety Commission and they must comply with the federal safety standards for bicycles.

During the last 20 years, some state legislatures passed laws to recognize electric bicycles. Other states have never addressed their use. Some states borrowed the federal consumer product safety definition, others altered it, and some created entirely new definitions for what an electric bicycle is. As a result, manufacturers were faced with inconsistent and often unclear rules that governed what an electric bicycle was and where electric bicycle purchasers could use their product.

Recognizing the need for greater consistency as the market for electric bicycles grew, U.S. electric bicycle manufacturers developed the three-class system six years ago, reflected in H 7839, to update regulations around critical issues like speed and operation. On the local level, bike retailers in states that have passed this law claim that having a three-class electric bicycle system helps their team clearly explain where electric bicycles are and aren't allowed to go. In their retail shops, electric bicycle sales have helped stores offset the loss of sales due to other declining categories of traditional bicycles.

The three class system for electric bicycle regulation has now been adopted in 36 states (listed in the FAQ that follows). The three class system has also been adopted by the United States Congress in its recent update to federal transportation funding laws, and four federal agencies.

Existing Rhode Island law is an example of how the state and federal law grew increasingly disconnected as electric bicycle laws evolved, and demonstrates the need for updated legislation. Under existing law, Rhode Island's e-bikes standards deviate from the federal standards in several key ways. Below is a comparison of the product specifications allowed under existing Rhode Island, federal law, and H 7839:

	Current R.I. Law	Federal CPSC Law	Federal Funding Law (Uses 3 class system)	H 7839 (Uses 3 class system)
Maximum throttle speed	25 miles per hour	20 miles per hour	20 miles per hour	20 miles per hour
Maximum pedal-assist speed	25 miles per hour	Not specified	28 miles per hour	28 miles per hour

The legislation before the Committee would implement the three-class system in Rhode Island. As the table above demonstration, it would also bring Rhode Island's definition of an electric bicycle into alignment with federal standards. It would also clarify that electric bicycles are subject to the same laws that apply to bicycles, and that the requirements for motor vehicles, such as licensing and registration do not apply to electric bicycles. It would require that electric bicycles be labeled according to their class, aligning Rhode Island with the laws of 36 other states and the federal government. It would also require to electric bicycles to meet appropriate federal safety standards. Finally, it would clarify how local government can manage electric bicycle use on off-street paths.

PeopleForBikes supports H 7839, and we believe it is the proper way to regulate the use of electric bicycles in Rhode Island. We would encourage the Committee to pass this bill. Thank you for your time.

Sincerely,
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What other states use the classification system in this bill?
At the end of 2021, 36 states (Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Louisiana, Maine, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nevada, New Hampshire, New Jersey, New York, North Dakota, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin and Wyoming) had passed laws that define three classes of electric bicycles in their traffic statutes.

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 45KPH, which is equivalent to 28MPH. Therefore, these rules provide uniform product standards between the European and U.S. markets.

The federal definition of an electric bicycle says that the top speed is 20MPH. How are class 3 electric bicycles legal given the federal definition?
The 20 MPH threshold in federal law (15 U.S.C. § 2085) applies when the electric bicycle is being operated "solely" under motor power – commonly referred to as "throttle" power. However, many electric bicycles do not utilize a throttle, and are always operated under a combination of human and motor power – referred to as "pedal-assist." 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 important ambiguity by specifying the maximum assisted speed for electric bicycles at 28 MPH. The class system aligns the definition of a Class 2 e-bikes – which utilizes a throttle – with federal law. In addition, federal law has adopted the class system, including the Class 3 electric bicycle definition, in the statutes governing federal funding (23 U.S.C. § 217).

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.

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 bicycles 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 bikes riders when on bicycle paths (1 mph). Observations regarding the safe use of electric bicycles on existing bike infrastructure are consistent with the results of a pilot study in Boulder, Colorado from 2013, where no safety issues emerged after a lengthy trial period.

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 manufacturing and 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 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.

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.

How many electric bicycles are sold each year in the U.S.?
While data on this are imperfect, at least 500,000 electric bicycles were sold in the U.S. in 2021. They are the fastest growing segment of the bicycle sales.

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 classes of electric bicycles in the bill if many of the rules are the same?
The distinction between these classes of electric bicycles provides for greater local flexibility. Some municipalities have demonstrated an interest in prohibiting some classes of 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. The definitions could serve as the foundation for future determinations that will need to be made by land managers for natural surface use.