

**TO:** Chairman Hornstein and the Transportation Finance & Policy Committee  
**FROM:** Morgan Lommele, Director of State and Local Policy, PeopleForBikes  
**DATE:** February 9, 2021  
**SUBJECT:** HF32 (Elkins) - Electric-assisted bicycle classification and regulation modified

Dear Chairman Hornstein and the Transportation Finance & Policy Committee,

On behalf of PeopleForBikes, I encourage passage of HF 32.

PeopleForBikes is the national advocacy group and trade association that works for better policies and infrastructure for bike riding. Our coalition includes companies that manufacture or sell bicycles and related products, including electric bicycles; as well as 40,000 individual supporters in Minnesota.

Electric bicycles are an emerging technology, and need clear rules to regulate their use and create stability in the marketplace. In states where modern day electric bicycles lack a specific vehicle classification, such as Minnesota, it is unclear how they are regulated, which creates significant confusion for consumers and retailers, and hinders the electric bicycle market.

Electric bicycles are enjoyed by people from all walks of life. They 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.

Until recently, manufacturers were faced with inconsistent, outdated and unclear rules that governed where electric bicycle purchasers could use their product. In response to this, U.S. electric bicycle manufacturers came together to develop the three-class system six years ago, reflected in HF 32, to update regulations around critical issues like speed, wattage, and operation. In states where the three-class system of electric bicycles has been promulgated, sales of electric bicycles have more than doubled. 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.

Electric bicycle laws are completely changing business models and customer bases. We created the class system that is the foundation of HF 32 in order to align the law with the three main forms of product that are currently on the marketplace and with the federal definitions of an electric bicycle, create consistent standards and rules for these devices, and clearly distinguish between an electric bicycle and a motorcycle. A uniform labeling standard for all electric bicycles helps law enforcement and public safety officials identify the class of electric bicycle in the event of enforcement issues. Additional restrictions ensure that they are used in a safe manner.

We have helped enact this system in 28 states (Arizona, Arkansas, California, Colorado, Connecticut, Georgia, Idaho, Illinois, Indiana, Maine, Maryland, Michigan, New Hampshire, New Jersey, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Utah, Washington, Wisconsin and Wyoming); and bills are progressing in 17 other states this year. It has been codified and implemented with no known issues in those 28 states.

PeopleForBikes supports HF 32, and we believe it is the proper way to regulate the use of electric bicycles in Minnesota. Again, we would urge a do-pass recommendation on HF 32. Thank you for your time.

Sincerely,  
Morgan Lommele  
Director of State + Local Policy  
PeopleForBikes

**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?**

Yes. Aside from Minnesota, similar legislative efforts are underway in 16 states: Iowa, Kansas, Nevada, Montana, Alabama, Alaska, Delaware, Massachusetts, Minnesota, Mississippi, Missouri, North Dakota, 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 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 federal definition uses very specific language to delineate the top speed of electric bicycles. The 20MPH 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.

**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 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 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 legislation that will place the onus on the owner to have a properly labeled bike if that were to occur. If someone was to tamper with an electric bicycle and create a machine 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?**

The bill regulates the use of electric bicycles on streets and on bicycle paths. The bill does not regulate the use of electric bicycles on trails, where land management agencies maintain their authority to regulate. The terminology in the bill is consistent with existing state statutes that govern electric bicycles and other types of motorized devices that require off-street infrastructure access, such as segways/EPAMDs.

### **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, approximately 300,000 electric bicycles are sold annually in the U.S. 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 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.