

Date of Hearing: April 8, 2024

ASSEMBLY COMMITTEE ON TRANSPORTATION

Lori D. Wilson, Chair

AB 1774 (Dixon) – As Introduced January 3, 2024

SUBJECT: Vehicles: electric bicycles

SUMMARY: Prohibits a person from selling a product or device that can modify the speed capability of an electric bicycle such that it no longer meets the definition of an electric bicycle and clarifies a person can modify an electric bicycle so long as it continues to conform with the definition of an electric bicycle.

EXISTING LAW:

- 1) Defines an electric bicycle as a bicycle with fully operable pedals and an electric motor of less than 750 watts. Creates three classifications of electric bicycles (e-bikes) based on the ability for motors to achieve high speeds and replace pedaling. Class 1 and 2 electric bicycles have a maximum pedal assist speed of 20 miles per hour (mph), while Class 2 electric bicycles can have throttle assistance up to 20 mph. Class 3 electric bicycles have a maximum pedal assist of 28 mph. (Vehicle Code Section (VEH) 312.5)
- 2) Requires riders of Class 3 electric bicycles to be 16 years of age or older and requires riders to wear a helmet regardless of age. Requires Class 3 electric bicycles to be equipped with a speedometer. (VEH 34016 and 312.5)
- 3) Specifies that a person operating an electric bicycle is not subject to the provisions of the vehicle code related to financial responsibility, driver's licenses, registration, and license plate requirements, and that electric bicycles are not a motor vehicle. (VEH 34016)
- 4) Prohibits a person from changing the speed capability of the electric bicycle. (VEH 34016)
- 5) Defines "bicycle" to include electric bicycles. (VEH 231)

FISCAL EFFECT: Unknown

COMMENTS:

In California, the transportation sector is the largest contributor of greenhouse gas (GHG) emissions and is responsible for about 40% of the state's emissions with light-duty passenger vehicles being the single largest contributor. The Legislature has set several goals to reduce greenhouse (GHG) emissions and address climate change. The Global Warming Solutions Act of 2006 [AB 32 (Nunez), Chapter 488, Statutes of 2006] and subsequent companion legislation SB 32 (Pavley), Chapter 249, Statutes of 2016, requires California to reduce statewide GHG emissions to 40% below the 1990 level by 2030.

Reducing the number of miles that people drive every day can have a significant impact on reducing GHG emissions. Providing alternative modes of transportation such as public transportation using buses and light rail or other shared ride approaches could significantly reduce the number of vehicle miles traveled (VMT) in California. California has targeted a 15% reduction in VMT by 2050 as part of its larger strategy to reduce GHG emissions by 80% from 1990 levels by 2050.

Electric bicycles are an increasingly popular option to reduce personal car trips. According to the US Bureau of Transportation statistics, more than half of all trips in the US are under three miles. According to the University of Oxford study, *The Climate Change Mitigation Effects of Daily Active Travel in Cities*, choosing to use a bike just once a day can slash an individual's transportation emissions by 67%.

Electric bicycles are outselling electric cars. According to Kelly Blue Book, 800,000 electric cars were purchased in the United States in 2022. Electric bicycle imports, meanwhile, were 1.1 million.

As electric bicycle popularity has gone up, so have injuries. The Los Angeles Times reported in January of 2023 that during the first 10 months of 2022, staffers at Providence Mission Hospital in Mission Viejo documented 198 e-bike injuries, up from just 34 in 2020.

In New York City in 2023, cyclist deaths were at an all-time high. According to the New York City Department of Transportation, 30 individuals were killed on a bicycle in 2023, 23 of whom were on e-bikes. Despite the uptick in fatalities, the rate of cyclist fatalities and serious injuries has been trending downward, and cycling in the city has become safer. The rate of deaths and severe injuries was about 16 per 10 million bike rides, down from 34 per 10 million a decade ago.

The data from New York City is in line with other research that has shown that one of the best ways to increase safety for cyclists is to increase the number of cyclists on the road. According to *Safety-in-numbers: A Systematic Review and Meta-Analysis of Evidence*, a systemic review of studies has found that the crash rate for cyclists goes down as the number of cyclists goes up. This has often been attributed to cars becoming more aware of cyclist on the roads and changing their behavior accordingly.

A bicycle that is capable of going faster than 20 mph using a throttle or faster than 28 mph because of pedal assist is not an e-bike for the purposes of the law and either would be considered motorized bicycles or a motorcycle or a "motor driven cycle" if it displaces less than 150 cubic centimeters. Unlike an e-bike, motorized bicycles, motorcycles and motor driven cycles require a class M1 or M2 license to operate and have to be registered with DMV. The devices may also not be street legal if they lack equipment required for motorcycles or other devices.

The state currently prohibits a person from modifying their e-bike to have a speed greater than what is currently allowed, but does not prohibit the sale of a device capable of allowing a person to illegally modify their e-bike.

According to the author, “AB 1774 will ban the sale of electric bicycle (e-bike) speed modification devices (i.e. tuning kits) in California. These devices modify e-bikes far beyond the legal definition of an e-bike in State Vehicle Code. I recognize that e-bikes have provided all age groups an alternative form of transportation that can be beneficial when safety precautions are taken. In current law, the definition of an e-bike has strict speed guidelines and modifying the speed of an e-bike is illegal and unsafe. This bill will further prohibit the sale of these devices. AB 1774 will protect our communities by encouraging safe biking practices.”

The city of Huntington Beach, writing in support of this bill, argues “California law caps the top speed of an electric bike at 28 miles per hour. E-bikes are exempt from driver's licenses and license plate requirements. Unfortunately, modifications that increase the maximum speed of electric bikes are easy to purchase and install. Increasing the maximum speed creates serious safety issues on our local streets, sidewalks and public areas.

While this bill would prohibit the sale of devices that allow an e-bike to go beyond the speed permitted by law, many e-bikes can be modified to bypass the speed limiter by reprogramming the bicycle. The limiter can be tricked by changing the tire size on the panel on the bicycle. Other e-bikes, like the Super 73, allow you to change the speed of the bicycle using an app that comes with the e-bike.

Related Legislation: AB 1773 (Dixon) of 2024 would authorize local governments to prohibit or regulate the use of an e-bike on a bicycle path along a board walk. That bill is pending before this committee.

AB 1778 (Connolly) of 2024 authorizes the County of Marin or any city within the county of Marin to prohibit individuals under the age of 16 from riding a class 2 (e-bike) and to require all individuals to wear a helmet when riding a class 2 (e-bike).

AB 2234 (Boerner) of 2024 would prohibit a person under 12 years old from riding a class 1 or 2 e-bike, would require e-bike riders to have a state issued ID, and require e-bike riders to either have a driver’s license or pass an e-bike safety course. That bill is pending before this committee.

SB 1271 (Min) of 2024 creates battery standards for e-bikes and requires a manufacturer and distributor of e-bikes to include on the label of the classification of an e-bike the highest classes of which it is capable.

Previous Legislation: SB 381 (Min), Chapter 869, Statutes of 2023 requires the Mineta Transportation Institute at San Jose State University, in consultation with relevant stakeholders, to conduct a study on electric bicycles and the safety of riders and pedestrians by January 1, 2026.

AB1909 (Friedman), Chapter 343, Statutes of 2022 removed the authority for local governments to prohibit electric bicycles on bicycle paths or lanes.

AB 1946 (Boerner), Chapter 147, Statutes of 2022 required the California Highway Patrol to develop statewide safety and training programs based on evidence-based practices for uses of e-bikes.

AB 1096 (Chiu), Chapter 568, Statutes of 2015 established the definitions, classification, and requirements for the operation, sale, and manufacturing of e-bikes.

REGISTERED SUPPORT / OPPOSITION:

Support

City of Goleta
City of Huntington Beach
City of Irvine
City of Laguna Beach
E-BikeAccess.org
Streets for All

Opposition

None on file

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