Date of Hearing: June 17, 2024

ASSEMBLY COMMITTEE ON TRANSPORTATION
Lori D. Wilson, Chair
SB 1271 (Min) – As Amended June 11, 2024

SENATE VOTE:

SUBJECT: E-bikes, powered mobility devices, and storage batteries.

SUMMARY: Prohibits a person from selling, leasing, renting or offering for sale, lease or rent an electric bicycle (e-bike) unless the battery has been tested by an accredited testing laboratory for compliance with certain standards and modifies the definition of an e-bike. Specifically, **this bill**:

1) Prohibits, beginning January 1, 2026, the sale, distribution, or leasing of an e-bike unless the battery has been tested by an accredited testing laboratory for compliance with a standard referenced in ANSI/CAN/UL 2849, EN 15194, or other safety standard that the State Fire Marshal has established by rule.

2) Prohibits, beginning January 1, 2026, the distribution, sale, or leasing of a powered mobility device unless the battery has been tested by an accredited testing laboratory for compliance with ANSI/CAN/UL 2272.

3) Prohibits, beginning January 1, 2026, the distribution, sale, or lease of a storage battery unless it complies with the same set of safety standards as required by this bill for the type of device it is designed to be used with.

4) Prohibits, beginning January 1, 2026, the distribution, sale, or lease of a new e-bike, powered mobility device, or storage battery unless the logo, wordmark, or name of an accredited testing laboratory and the applicable test standard used to show compliance is displayed on the packaging or documentation provided to the buyer at the time of sale or directly on the device itself.

5) Prohibits, beginning January 1, 2028, offering for rent an e-bike, powered mobility device, or storage unless the battery has been tested by an accredited testing laboratory for the applicable test standard.

6) Prohibits, beginning January 1, 2028 a person from being required to display the logo, wordmark, or name of an accredited testing laboratory if the e-bike, powered mobility device, or storage battery is being rented.

7) Requires, beginning January 1, 2026, a manufacturer, importer, distributor, or retailer of an e-bike, powered mobility device, or storage battery subject to testing under this bill to provide a true and accurate copy of the test report for the product issued by the accredited testing laboratory upon request.

8) Modifies the definition of "e-bike" to clarify that it must have a motor with a continuous rated mechanical power of not more than 750 watts.

9) Modifies the definition of a class 1 e-bike to specify that the motor shall not be capable of exclusively propelling the bicycle and that is not capable of providing assistance to reach speeds greater than 20 miles an hour.

10) Modifies the definition of a class 3 e-bike to specify that the motor shall not be capable of exclusively propelling the bicycle.

11) Defines, for the purpose of this legislation:

    a) "Accredited testing laboratory" as an independent laboratory accredited by an accreditation body to ISO 17025, 17065, or a nationally recognized testing laboratory;
    b) "Powered mobility device" as a motorized scooter, a motorized bicycle, an off-highway motorcycle, or any other powered mobility device powered by a lithium ion storage battery. This does not include mobility devices for use by persons with disabilities or vehicles powered by an internal combustion engine; and,
    c) "Storage battery" as a rechargeable lithium-ion traction battery that supplies the power to a motor for an e-bike or powered mobility device, a battery sold as part of a kit intended to convert a bicycle into an e-bike, or a battery advertised as suitable for use with an e-bike or powered mobility device.

12) Prohibits a vehicle from being advertised, sold or offered for sale or labeled as an electric bicycle if:

    a) The vehicle with two or three wheels is powered by an electric motor that is intended by the manufacturer to be modifiable to attain a speed of 20 miles per hour or greater on a motor power alone or a continuous rated mechanical power of more than 750 watts; and,
    b) The vehicle is modified to attain a speed of 20 miles per hour or greater on motor power alone or a continuous rated mechanical power of more than 750 watts, or modified to have its operable pedals removed.

EXISTING LAW:

1) Defines an e-bike as a bicycle with fully operable pedals and an electric motor of less than 750 watts. Creates three classifications of e-bikes based on the ability for motors to achieve high speeds and replace pedaling. Class 1 and 2 e-bikes have a maximum pedal assist speed of 20 miles per hour (mph), while Class 2 e-bikes can have throttle assistance up to 20 mph. Class 3 e-bikes have a maximum pedal assist of 28 mph. (Vehicle Code (VEH) 312.5)

2) Requires riders of Class 3 e-bikes to be 16 years of age or older and requires riders to wear a helmet regardless of age. Requires Class 3 e-bikes to be equipped with a speedometer. (VEH 34016 and 312.5)

3) Specifies that a person operating an e-bike is not subject to the provisions of the vehicle code related to financial responsibility, driver's licenses, registration, and license plate requirements, and that e-bikes are not a motor vehicle. (VEH 34016)

4) Prohibits a person from changing the speed capability of the e-bike. (VEH 34016)

5) Defines “bicycle” to include e-bikes. (VEH 231)

6) Permits a transit development board, or a public agency, including the Regents of the University of California and the Trustees of the California State University, to adopt rules or regulations to restrict the use of e-bikes. (VEH 21113)

7) Authorizes local authorities, by ordinance, from regulating the parking and operation of bicycles on pedestrian or bicycle facilities, provided such regulations are not in conflict with the provisions of the vehicle code. (VEH 21206)

8) Requires an operator of a bicycle to obey all the provisions of traffic control devices that are applicable to the driver of a vehicle, except starting in 2024 may proceed through an intersection when the “walk” sign is on or if there is an official traffic control device signal for bicycles. (VEH 21456.2)

9) Provides that all of the rules of the road apply to bicycles, except those provisions which by their very nature cannot apply to a bicycle. (VEH 21200)

FISCAL EFFECT: According to the Senate Appropriations Committee, pursuant to Senate Rule 28.8, negligible state costs.

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 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. 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.

E-bikes 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%.

E-bikes are outselling electric cars. According to Kelly Blue Book, 800,000 electric cars were purchased in the United States in 2022. E-bike imports, meanwhile, were 1.1 million.

According to the author, “Personal mobility devices, such as e-bikes and electric scooters (e-scooters), are an affordable and convenient alternative to cars. It is no surprise that in recent years the sale of these devices has skyrocketed. Most e-bikes and e-scooters are powered by lithium-ion batteries. This is the same type of battery that powers many of today's electric

vehicles, cell phones, laptops, and power tools. Though generally safe, if the batteries are poorly manufactured or abused they carry a fire risk. Experts point to uncertified batteries as being a major factor in the risk of a lithium-ion battery fires. In order to protect consumers and the public, low quality powered personal mobility devices must be removed from the market."

E-bike battery fires: E-bike and electric scooter battery fires have been prevalent in New York City. According to the publication *The City*, the Fire Department of New York (FDNY) reported 666 battery-triggered fires from 2019 to 2023, resulting in 28 deaths and 412 injuries. These fires were triggered either through improper charging devices, charging too many batteries at once or uncertified batteries.

San Francisco has also seen an increase of fires related to lithium-ion batteries. From 2020 to November of 2023 San Francisco responded to 90 battery related fires.

Standards adopted by various organizations have been developed to ensure the safety of e-bike batteries. These include the American National Standards Institute (ANSI), UL Standards and Engagement is responsible for developing more than 1,700 voluntary safety standards and is a global testing, inspection and certification company, and European Standards also known as EN standards have been ratified by one of the three European Standards Organizations.

Both New York City and San Francisco have passed city ordinances similar to the language in this bill in order to do what…

New York City's ordinance adopts only a UL standard, while the San Francisco ordinance permits both an EN standard and a UL standard. New York City's ordinance, like this bill, does not require a UL mark for secondhand sales of e-bikes, while San Francisco's ordinance does. Both ordinances also address the charging of the lithium-ion batteries, which has been a large contributing factor to the fires themselves. This bill does not.

UL Solutions is opposing this bill, arguing "The American National Standards (ANS) for these products should protect California micromobility users' safety. UL 2849, UL 2272 and UL 2271 were developed through an open, transparent consensus process that requires the participation of a balanced group of stakeholders (no one category of stakeholders can dominate the technical committee process). Moreover, the standards that the U.S. Consumer Product Safety Commission (CPSC) has pointed to as a means to protect U.S. consumers should protect them. In December of 2022, the CPSC's Office of Compliance and Field Operations issued a letter to more than 2,000 micromobility manufacturers and importers to urge them "to ensure that [their] micromobility devices . . . have been designed, manufactured and certified for compliance with the applicable consensus safety standards," which include ANSI/CAN/UL 2272 – Standard for Electrical Systems for Personal E-Mobility Devices and ANSI/CAN/UL 2849 – Standard for Safety for Electrical Systems for eBikes 6 The letter further notes that "[c]onsumers face an unreasonable risk of fire and risk serious injury or death if their micromobility devices do not meet the level of safety provided by the relevant UL Standards….

Unlike EN 62133-2, UL 2271 contains test requirements that cover the mechanical, electrical and environmental conditions and misuse an e-bike battery is likely to encounter during use. EN 62133-2 requires no environmental testing, minimal mechanical testing and many fewer electrical tests as compared to UL 2271.

It also bears noting that e-bikes that meet EN 15194, including the battery requirements, no longer enjoy a presumption of conformity with the EU Machinery Directive (2006/42/EC). The Machinery Directive establishes the requisite level of safety harmonization for all machinery and machinery parts — including light electric vehicles like e-bikes — sold on the European market. In January of 2023, the European Commission acted on objections from the Netherlands, which argued that the requirements in EN 15194 were insufficient to establish safety…

Given the rise in popularity of micromobility devices as a transportation option, there is an urgent need to mitigate the fire and electrical hazards this equipment can pose. We urge California to follow the lead of New York City, whose City Council last year voted to ban from sale, lease or rent micromobility devices not certified to UL 2849 or UL 2272, or in the case of separately sold replacement traction batteries, UL 2271."

In May of 2024 the House of Representatives passed a bill that would direct the Consumer Product Safety Commission to promulgate a final consumer product safety standard for rechargeable lithium-ion batteries used in micromobility devices to protect against the risk of fires. The standard has to include requirements with respect to equipment related to or used with the batteries, including battery chargers, charging cables, external terminals on battery backs and free-standing stations used for recharging.

Definition of an e-bike changes: A variety of motorized devices marketed as electric bicycles have entered the marketplace that are capable of achieving speeds much greater than what is permitted by law. One such motorized device is the Super 73, which has an "off-road mode" that is capable of achieving speeds greater than 28 mph using throttle assist.

Streets for All and the California Bicycle Coalition, writing in support of this bill, argue "SB 1271"s provision to standardize the classification of e-bicycles, specifically prohibiting the sale of devices capable of switching between Class 1, 2, and 3 as anything less than a Class 3 e-bicycle, is a sensible measure that provides clarity to consumers. It ensures that all e-bicycles capable of achieving speeds up to 28mph are subject to the same rigorous regulatory framework, thereby mitigating the risk of accidents and injuries to riders and pedestrians alike."

SB 1271 clarifies the definition of a class 1 and class 2 e-bike. Class 1 e-bikes are redefined to make it clear they cannot be capable of be exclusively propelling the bicycle (the definition of a class 2 e-bike) and that they cannot be capable of providing assistance to reach speeds greater than 20 miles per hour. Class 3 e-bikes are redefined to be clear that they are not capable of exclusively propelling the bicycle. This would ensure that a class 3 e-bike cannot have class 2 capabilities of having a throttle assist cut off at 20 mph, while having a pedal assist that ceases at 28 mph.

Committee concerns: The EN standard for certifying batteries may not be appropriate for mobility devices. Several European countries, including the United Kingdom, have modified the standard as it still imposed risk of extreme temperatures. The author's office may wish to continue to work with fire departments and the State Fire Marshall to determine what is the most appropriate standard for micromobility devices lithium-ion batteries.

A large percentage of the fires caused by micromobility devices are from misuse of chargers, either by charging too many devices at once or from using an incorrect charger. The author's

office may want to consider mirroring the New York and San Francisco ordinances as they relate to chargers for the devices.

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's hearing was canceled at the request of the author in this committee.

AB 1774 (Dixon) of 2024 would prohibit the sale of a device that makes it someone can increase the speed of an e-bike beyond the speed permitted by law (28 mph). That bill is pending before Senate Appropriations Committee.

AB 1778 (Connolly) of 2024 establishes the Marin Electric Bicycle Safety Pilot Program allowing Marin county or local authorities to prohibit a person under 16 years of age from operating a class 2 electric bicycle and to prohibit a person of any age from operating a class 2 electric bicycle without a helmet until January 1, 2029. This bill requires a report of the safety impact of this program by January 1, 2028. That bill is pending before the Senate Floor.

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 Senate Appropriations Committee.

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

Bike LA
California Bicycle Coalition
City of Irvine
East Bay for Everyone
Everybody's Long Beach
Marin County Bicycle Coalition
Pedal Movement
Streets for All
University of California

Opposition

UI Solutions (unless amended)

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