

Electric Bicycle and Motor-Driven Cycle Laws

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September 27, 2024 | 2024-R-0154

Issue

Provide an overview of the laws governing electric bicycles (e-bikes) and motor-driven cycles.

Summary

E-bikes and motor-driven cycles (e.g., mopeds) are both lower-speed vehicles that may be legally operated in Connecticut. Although in some cases similar in appearance, they are separate vehicle classifications under state law and subject to different laws. An e-bike is a bicycle that has operable foot pedals and an electric motor of less than 750 watts and falls into one of three classifications. A motor-driven cycle is a motorcycle, scooter, or bicycle with a motor that has a (1) seat at least 26 inches high and (2) motor displacing less than 50 cubic centimeters (cc).

E-bikes are treated similarly to bicycles under state law. They do not need to be registered with the Department of Motor Vehicles (DMV) and riders do not need a driver's license. The same operating rules that apply to bicycles generally apply to e-bikes, but certain e-bikes are not permitted on bicycle or multi-use trails or paths. Like bicycles, e-bikes must have and display lights and reflectors at certain times and under certain conditions. But unlike bicycles, all e-bike riders are required to wear helmets, and state law imposes additional safety equipment requirements on e-bike manufacturers. The law expressly authorizes municipalities to regulate bicycle and e-bike use within their jurisdictions, as long as any enacted ordinance is consistent with state law and applicable regulations.

Unlike e-bike riders, motor-driven cycle riders must hold a driver’s license (but not a motorcycle endorsement). However, these vehicles do not need to be registered with DMV. Motor-driven cycle riders are generally subject to the same rules of the road as motor vehicles, but they are required to stay in the right lane or on the shoulder on roads with speed limits that are higher than the cycle’s top speed. Motor-driven cycles must have and display lights at certain times and under certain conditions, but riders do not need to wear helmets unless they are under age 18.

Electric Bicycles

E-bike Defined

By law, an electric bicycle is a bicycle that (1) has operable foot pedals and an electric motor of less than 750 watts and (2) qualifies as a class 1, class 2, or class 3 bicycle (see table 1 below) ([CGS § 14-1](#)). These classifications were developed by the [People for Bikes Coalition](#) and, according to the coalition, have been adopted in 41 states as of July 2023.

It is unclear how an e-bike with a motor of 750 watts or more would be classified under Connecticut law. It appears that vehicles with electric motors do not fall under the definition of motor-driven cycle (see below).

Table 1: E-Bike Classes

Class	Motor Engagement	Motor Disengagement	Top Speed
Class 1	Only while the rider uses the foot pedals	When the rider stops pedaling or when it hits the top speed	20 mph
Class 2	While the rider pedals or with a throttle (i.e., they may be powered exclusively by the motor)	When the brakes are applied or when it hits the top speed	20 mph
Class 3	Only while the rider uses the foot pedals	When the rider stops pedaling or when it hits the top speed	28 mph

Source: [CGS § 14-1](#)

Credentials Needed to Operate

E-bike riders do not need a driver’s license, and e-bikes are not registered with DMV. But state law prohibits anyone under age 16 from riding a class 3 e-bike unless they are riding as a passenger on an e-bike designed to carry one ([CGS § 14-289k\(e\)](#)). The law also specifically states that municipalities may require annual licensing for bicycles and e-bikes and registration of any sale or change of ownership of a bicycle or e-bike ([CGS § 14-289](#)).

Safety Equipment

State law imposes some equipment requirements on e-bike manufacturers. Specifically, e-bike manufacturers who offer e-bikes for sale in Connecticut must:

1. ensure that the e-bikes comply with all relevant federal safety requirements for bicycles (i.e., [16 C.F.R. § 1512](#));
2. attach a clearly visible label to each e-bike that indicates the bike's classification, maximum speed, and motor wattage;
3. equip each class 3 e-bike with a speedometer that displays the bike's speed in miles per hour; and
4. ensure that the motor disengages as the law requires for the bike's classification ([CGS § 14-289](#)).

E-bikes must also have lights and reflectors to increase their visibility to other vehicles. The law, which also applies to bicycles, requires e-bikes to have the following:

1. a forward-facing white light that is visible from at least 500 feet away in clear conditions, which must be displayed during the same times and conditions that motor vehicles must turn on their headlights (e.g., at any time between a half hour after sunset and a half hour before sunrise);
2. a reflector or reflecting tail light lens attached to the rear that is visible from at least 600 feet away when illuminated by a motor vehicle's headlights; and
3. reflective material placed in a way and large and reflective enough to be similarly visible from both sides of the e-bike ([CGS § 14-288](#)).

E-bike riders who fail to comply with the law's light and reflector requirements commit an infraction, punishable by a \$50 fine plus surcharges (\$92 total, see [infractions schedule](#)). (An infraction is not a crime, and violators can pay the fine by mail or online through the Centralized Infractions Bureau without making a court appearance.) There is no specific penalty for manufacturers who do not adhere to the equipment requirements, but they may be subject to the general penalty for vehicle highway use violations (i.e., Chapter 248) that are not designated an infraction or do not have a specified penalty (i.e., a fine of up to \$50, [CGS § 14-296](#)).

Helmets

Unlike with bicycles, e-bike riders must wear a helmet regardless of their age. The law specifically prohibits riding or sitting as a passenger on an e-bike without protective headgear meeting specified standards. For bicycles, only children under age 16 are required to wear a helmet ([CGS](#)

[§§ 14-289k & 14-286d](#)). E-bike riders ages 16 and older who do not wear helmets may be subject to the general penalty for vehicle highway use violations discussed above. For those under age 16, failing to wear a helmet is not a violation or an offense, but a police officer may issue a verbal warning to the child's parent or guardian ([CGS § 14-286d \(b\)&\(c\)](#)).

Operating Rules

State law gives e-bike riders the same duties and privileges as bicycle riders and allows e-bikes to be ridden where bicycles are permitted (with certain exceptions, see below) ([CGS §14-289k\(a\) &\(b\)](#)). Generally, the law treats bicycles like motor vehicles when traveling on the road and like pedestrians when they travel on sidewalks or crosswalks, but it also sets several rules specific to bicycle operation. While on the road, bicycle and e-bike riders must follow traffic rules applicable to motor vehicles, except (1) those which, by their nature, cannot apply and (2) in cases where the Office of the State Traffic Administration (OSTA) or a local traffic authority has set different regulations ([CGS §§ 14-286a](#)).

Bicycle-Specific Rules. In addition to these general rules of the road, bicycle and e-bike riders must follow certain bicycle-specific operating rules, including the following:

1. When going slower than the normal speed of traffic, a bicycle or e-bike rider must ride as close to the right side of the road as is safe, in the person's judgement, except under specific circumstances (e.g., passing another vehicle, turning left, or avoiding hazards).
2. When traveling on a sidewalk or crosswalk, bicycle and e-bike riders must yield the right of way to any pedestrian and give an audible signal within a reasonable distance before passing the pedestrian.
3. Bicycles and e-bikes generally may not ride more than two abreast, and those doing so may not impede the normal movement of traffic and must ride within a single lane (if the road has lanes).
4. Riders may not carry (1) passengers on bicycles and e-bikes that are not equipped or designed to carry passengers or (2) packages or other articles that prevent the rider from using both hands for operating the bicycle or e-bike ([CGS §§ 14-286 & -286b](#)).

Failure to follow these laws is an infraction, punishable by a \$50 fine plus surcharges (\$92 total for most violations, see [infractions schedule](#)).

Location Restrictions and Municipal Regulation. Although state law broadly authorizes e-bikes to travel where bicycles are allowed, it limits e-bike use on bicycle and multi-use trails and paths and allows municipalities to regulate where e-bikes may be ridden within their jurisdictions.

State law expressly grants municipalities broad authority to enact ordinances governing bicycle and e-bike use and imposing appropriate penalties, as long as they are consistent with state laws and any OSTA regulations ([CGS § 14-289](#)). It also explicitly prohibits people from riding a bicycle or an e-bike on any sidewalk or crosswalk where doing so is prohibited by a local ordinance ([CGS § 14-286\(a\)](#)). Some towns have enacted ordinances restricting bicycle use on certain sidewalks under their jurisdiction (e.g., [Greenwich](#) and [West Hartford](#)); presumably, these restrictions extend to e-bikes.

Regarding trails and paths, state law prohibits riding a class 3 e-bike on any bicycle or multi-use trail or path. It also prohibits class 1 or 2 e-bike operation on trails or paths designated for nonmotorized traffic with a natural surface tread and no added surface materials, but it allows municipalities to allow this use on trails under their jurisdiction by ordinance ([CGS § 14-289k\(c\) & \(d\)](#)). There is no specific penalty for riding e-bikes on trails where they are prohibited, but riders may be subject to the general penalty for vehicle highway use violations (i.e., Chapter 248) that are not designated an infraction or do not have a specified penalty (i.e., a fine of up to \$50, [CGS § 14-296](#)).

Motor-Driven Cycles

Motor-Driven Cycle Defined

A motor-driven cycle is any of the following with a seat at least 26 inches high and a motor displacing less than 50 cubic centimeters (cc): a (1) motorcycle, (2) motor scooter, or (3) bicycle with attached motor, except electric bicycles ([CGS § 14-1](#)). Because cubic centimeter is a measurement of cylinder volume in an internal combustion engine, it appears that any electric powered vehicle would not be considered a motor-driven cycle.

Two- and three-wheeled vehicles with a motor displacing less than 50 cc but a seat height under 26 inches are considered “mini-motorcycles” under state law and may not be operated on public roads or sidewalks ([CGS § 14-289j](#)).

Credentials Needed to Operate

A person must hold a driver’s license (or a special permit) to operate a motor-driven cycle, but they do not need to register it with DMV. State law requires all “motor vehicles” to be registered with DMV, but it exempts motor-driven cycles from the definition of motor vehicle that applies to the vehicle registration laws ([CGS §§ 14-286\(b\) & 14-1](#)). (See OLR Report [2020-R-0257](#) for more detail on motor-driven cycle registration.)

Driving a motor-driven cycle without a driver's license is an infraction, punishable by a \$50 fine plus surcharges (\$117 total, see [infractions schedule](#)).

Helmets and Safety Equipment

As is the case with motorcycles, Connecticut does not have a universal helmet requirement for motor-driven cycle riders. However, motor-driven cycle riders and passengers under age 18 must wear a helmet that meets federal standards ([CGS § 14-289g](#)). Failure to do so is an infraction, punishable by a \$90 fine plus surcharges (\$136 total, see [infractions schedule](#)).

It appears that motor-driven cycles are subject to the general lighting requirements for vehicles (which apply to all vehicles to which a more specific statute does not apply). Under this law, vehicles must have (1) a forward-facing white light that is visible from at least 1,000 feet away and (2) two rear-facing red lights visible from 1,000 feet away or, alternatively, one such red light and two red reflectors visible from all distances between 600 and 100 feet away when illuminated by the upper beams of head lamps ([CGS § 14-96n](#)). Motor-driven cycle riders must use these lights during the times and conditions that motor vehicles must display their headlights ([CGS § 14-96a](#)). People who fail to have these lights or use them as required commit an infraction, punishable by a \$50 fine plus surcharges (\$92 total, see [infractions schedule](#)).

Operating Rules

Motor-driven cycles are generally subject to the same rules of the road as other motor vehicles. Specific laws that apply to them include the following:

1. Motor-driven cycles may not be operated on sidewalks, limited access highways, or turnpikes and
2. When a road's speed limit is higher than the top speed of the motor-driven cycle, a person must ride only in the right lane or on a useable shoulder on the right side of the road, except when preparing to turn left ([CGS § 14-286](#)).

Violations of the specific motor-driven cycle laws are infractions, punishable by a \$50 fine plus surcharges (\$117 total, see [infractions schedule](#)).

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