STATE OF TENNESSEE
OFFICE OF THE ATTORNEY GENERAL

March 5, 2014

Opinion No. 14-26

Regulation of Electric Bicycles

QUESTIONS

1. Is an electric bicycle considered a "motor vehicle" for purposes of Title 55, Chapters 8 to 10, of the Tennessee Code?

2. If the answer to question 1 is yes, is an electric bicycle that is propelled solely by an electric motor that does not exceed five (5) brake horsepower, or has a cylinder capacity not to exceed 125 cubic centimeters (125 cc), a "motor-driven cycle" under Tenn. Code Ann. § 55-8-101(36)?

3. Are operators of electric bicycles required to possess a valid driver's license pursuant to Tenn. Code Ann. § 55-50-351?

4. May a law enforcement officer charge the operator of an electric bicycle with driving under the influence of an intoxicant in violation of Tenn. Code Ann. § 55-10-401?

OPINIONS

1. Yes, provided that the electric bicycle is self-propelled by its motor rather than propelled by the rider.

2. A self-propelled electric bicycle would be a "motor-driven cycle" only if it had the capacity to maintain posted highway speed limits and otherwise met the definition of the term "motorcycle."

3. Yes, provided that the electric bicycle is self-propelled and is operated upon a highway.

4. Yes.

ANALYSIS

An electric bicycle is a bicycle equipped with an electric motor. We assume for purposes of this opinion that on some electric bicycles the motor is used only to assist with pedaling but that on others the motor is powerful enough to propel the

bicycle without any need for pedaling; we further assume that electric bicycles in this latter category can reach speeds in excess of 20 miles per hour.

1. Tenn. Code Ann. § 55-8-101(34) defines "motor vehicle" to mean:

> every vehicle, including a low speed vehicle or a medium-speed vehicle that is self-propelled, excluding motorized bicycles, and every vehicle, including a low speed vehicle or a medium speed vehicle that is propelled by electric power obtained from overhead trolley wires, but not operated upon rails.[1]

A "vehicle" is generally defined as "every device in, upon or by which any person or property is or may be transported or drawn upon a highway, excepting devices used exclusively upon stationary rails or tracks." Tenn. Code Ann. § 55-8-101(77).[2] The definition of "motor vehicle" excludes motorized bicycles, which are vehicles "with two (2) or three (3) wheels, an automatic transmission, and a motor with a cylinder capacity not exceeding fifty cubic centimeters (50cc) which produces no more than two (2) brake horsepower and is capable of propelling the vehicle at a maximum design speed of no more than thirty miles per hour (30 mph) on level ground." Tenn. Code Ann. § 55-8-101(37).

Electric bicycles are capable of transporting persons and therefore meet the definition of "vehicle," and electric bicycles that are "self-propelled" qualify as "motor vehicles." The exclusion for "motorized bicycles" does not apply to self-propelled electric bicycles because motorized bicycles are defined in terms of "cylinder capacity," which is a feature of internal combustion engines, not electric motors.[3]

2. "Motor-driven cycle" means "every motorcycle, including every motor scooter, with a motor that produces not to exceed five (5) brake horsepower, or with a motor with a cylinder capacity not exceeding one hundred twenty-five cubic centimeters (125cc)." Tenn. Code Ann. § 55-8-101(36). The term "motorcycle" is defined to mean:

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[1] This definition also applies to Chapter 9 and Chapter 10, Parts 1 to 5, of Title 55. Tenn. Code Ann. §§ 55-8-101; 55-9-101. A substantially similar definition is set forth in Tenn. Code Ann. § 55-1-103, governing the Tennessee Motor Vehicle Title and Registration Law.

[2] "Highway" is defined as "the entire width between the boundary lines of every way when any part thereto is open to the use of the public for purposes of vehicular travel." Tenn. Code Ann. § 55-8-101(24).

[3] *See e.g., Bradley Cnty. Farm Bureau v. Epperson,* 73 S.W.2d 116, 117 (Tenn. Ct. App. 1934) (explaining the working of an "ordinary four-cylinder or four-cycle gasoline engine").

> every motor vehicle having a seat or saddle for the use of the rider and designed to travel on not more than three (3) wheels in contact with the ground, including a vehicle that is fully enclosed, has three (3) wheels in contact with the ground, weighs less than one thousand five hundred pounds (1,500 lbs.), and has the capacity to maintain posted highway speed limits, excluding a tractor or motorized bicycle.

Tenn. Code Ann. § 55-8-101(35).

Under these provisions, motor-driven cycles are a low-powered subset of motorcycles. Self-propelled electric bicycles would not qualify as motorcycles, and thus could not be motor-driven cycles, unless they have the ability to "maintain posted highway speed limits."

3. Tenn. Code Ann. § 55-50-301(a)(1) provides that "[n]o person, except those expressly exempted in this section, shall drive any motor vehicle upon a highway in this state unless the person has a valid driver license under this chapter for the type or class of vehicle being driven." Tenn. Code Ann. § 55-50-351 generally requires operators of motor vehicles to carry their licenses with them and to display them upon demand of law enforcement officers. Because a self-propelled electric bicycle is a motor vehicle,[4] those who operate self-propelled electric bicycles upon the highways of this State are required to possess a valid driver's license. As discussed above, however, such electric bicycles may not fit nicely into any particular class of vehicle for licensing purposes. *Cf.* Tenn. Code Ann. § 55-50-102(21)(E), (F) (providing license classes for motorcycles, motor-driven cycles, mopeds, and motorized bicycles).

4. Tenn. Code Ann. § 55-10-401 provides:

> It is unlawful for any person to drive or to be in physical control of any automobile or other motor driven vehicle on any of the public roads and highways of the state, any shopping center, trailer park, apartment house complex or any other location which is generally frequented by the public at large, while . . . [u]nder the influence of any intoxicant . . . .

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[4] For purposes of driver licenses, Tenn. Code Ann. § 55-50-102(29) defines "motor vehicle" to mean:

> a vehicle, low speed vehicle or medium speed vehicle as defined in this section, machine, tractor, trailer or semitrailer propelled or drawn by mechanical power used on highways or any other vehicle required to be registered under the laws of this state, but does not include any vehicle, machine, tractor, trailer or semitrailer operated exclusively on a rail.

For the reasons discussed above, a self-propelled electric bicycle is a "motor driven vehicle." *See* Tenn. Atty. Gen. Op. 84-343 (Dec. 21, 1984) (opining that a motorized bicycle is a motor-driven vehicle because it "has, by definition, a 'motor' and is capable of being self-propelled"). Accordingly, the operator of a self-propelled electric bicycle may be charged with driving while under the influence of an intoxicant.

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