Date of Hearing: January 8, 2018

ASSEMBLY COMMITTEE ON TRANSPORTATION
Jim Frazier, Chair
AB 1201 (Chiu) – As Amended March 30, 2017

SUBJECT: Motorized bicycles

SUMMARY: Changes the definition of a motorized bicycle or moped the allowable gross brake horsepower from four to five.

EXISTING LAW: Defines motorized bicycles or mopeds as a two- or three-wheeled device with fully operative pedals for human-powered propulsion, or having no pedals if powered solely by electrical energy, and an automatic transmission and a motor that is less than four horsepower and is capable of propelling the device at a maximum speed of not more than 30 miles per hour (mph).

FISCAL EFFECT: Unknown

COMMENTS: Motorized bicycles utilize a variety of engines, from internal-combustion two-stroke and four-stroke gasoline engines to electric propulsion. Most motorized bicycles are based on or derived from standard general-purpose bicycle frame designs and technologies, although exceptions abound.

The bill's supporter, Scoot Networks, rents electric mopeds to thousands of people who work or live in San Francisco. Scoot notes that this bill is necessary because riders will be safer if they have an additional horsepower [from four to five] in order to get them up hills and to keep up with traffic. Interestingly, writing in support of AB 2173 (Bradford), Chapter 60, Statutes of 2014, a bill that increased the allowable horsepower for motorized bicycles from two to four, Scoot claimed in 2014 that users of its two-horsepower rental electric scooters had difficulty maintaining safe speeds on hills, and had difficulty accelerating to keep pace with automobile traffic. At the time, Scoot asserted that increasing horsepower from two to four would increase safety by allowing operators to maintain speed on hills and accelerate more quickly when needed in traffic.

Gross brake horsepower is "raw" engine horsepower, not including losses from elements like the drivetrain or ancillary equipment. The net power of a motorized bicycle, exerted by tire onto pavement, will be somewhat less than the gross brake horsepower. Four horsepower, the limit for motorized bicycles and mopeds under current law, equals about 3,000 watts, and five horsepower equals about 3,750 watts. To appreciate the significance of these values, by comparison, low-speed electric bicycles have motors that range from 350 watts to 750 watts. Thus, the increase in horsepower considered in this bill would make these vehicles five to ten times as powerful as typical low-speed electric bikes.

Currently, federal regulations define a "motor-driven cycle" as a motorcycle with a motor that produces 5 horsepower or less. However, there appears to be no other state in the US in which motorized bicycles are allowed to have more than 2 horsepower, let alone 5 horsepower.

The proponents of this bill point out that, while the bill increases the engine horsepower available for these types of vehicles, the speed at which the cycles can be operated remains at 30 mph.

Committee comments:

Neither the author nor the bill's supporter has demonstrated the need for this change. While it is self-evident that San Francisco has hills, and it can be assumed that an increase in horsepower would enable cycles to climb steeper hills at greater speeds, all else being equal, it is unclear whether there is a need or whether increasing from 4 to 5 horsepower resolves that need. The increase in horsepower in this bill, however, applies to any motorized bicycle in California, not just electric cycles in San Francisco, and therefore could have a number of unintended consequences. For example:

1) Statute clearly limits the speed for motorized bicycles to 30 mph; however, statute does not include any enforcement mechanism to enable law enforcement to penalize operators who exceed this limit on streets that may have higher speed limits than 30 mph. Increasing the power of the cycle only improves the ability for these vehicles to exceed the statutory speed limit, while not addressing the challenge of enforcement.

2) The intention of this bill is to increase the power of motorized bicycles. More powerful vehicles bring with them increased safety concerns. Without a clear understanding of the difference between 4 and 5 horsepower, it is unclear whether additional safety requirements should be considered with this bill.

3) This bill impacts both electric-powered and gas-powered motorized bicycles. The California Air Resources Board (ARB) regulates all gas-powered motorized bicycles with 50cc engines or larger. While not exactly equivalent, it appears that an increase in horsepower from four to five for a gas-powered cycle could move that vehicle into ARB's regulatory realm. This potential impact should be carefully considered with this bill.

4) Additional horsepower in a gas-powered motorized cycle will lead to increased emissions from those vehicles. Some believe that increasing the horsepower threshold for motorized bicycles will make them a more attractive alternative for transport. In this way, this bill may run contrary to the state objectives of reducing emissions, and unintentionally incentivize dirtier modes of transportation.

Prior Legislation: AB 1096 (Chiu), Chapter 568, Statutes of 2015, defined various classes of electric bicycles and establishes parameters for their operation in California.

AB 2173 (Bradford), Chapter 60, Statutes of 2014, increased the maximum horsepower allowed under state law for electric scooters and mopeds from two to four.

REGISTERED SUPPORT / OPPOSITION:

Support

Scoot Networks

Opposition

None on file

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