

BILL ANALYSIS

SENATE TRANSPORTATION & HOUSING COMMITTEE
 SENATOR MARK DESAULNIER, CHAIRMAN

BILL NO: AB 2173
 AUTHOR: BRADFORD
 VERSION: 4/30/14
 FISCAL: NO

Analysis by: Nathan Phillips
 Hearing date: June 10, 2014

SUBJECT:

Motorized bicycles

DESCRIPTION:

This bill increases the maximum horsepower allowed under state law for electric scooters and mopeds from two to four.

ANALYSIS:

Existing law defines a "motorized bicycle" or "moped" as any two-wheeled or three-wheeled device having fully operative pedals for propulsion by human power, or having no pedals if powered solely by electrical energy, and an automatic transmission and a motor which produces less than two gross brake horsepower, and is capable of propelling the device at a maximum speed of not more than 30 miles per hour on level ground.

Existing law prohibits motorized bicycles from being used on bikeways, unless they are within or adjacent to roadways.

This bill redefines a motorized bicycle or moped under state law to increase the maximum gross brake horsepower that its motor produces to less than four.

COMMENTS:

1.Purpose . According to the sponsor, Scoot Networks, Inc., users of its two-horsepower rental electric scooters have difficulty maintaining safe speeds on hills, and have difficulty accelerating to keep pace with accelerating automobile traffic. The sponsor asserts 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.

2.Horsepower . Gross brake horsepower is "raw" engine

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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. Two horsepower, the limit for electric scooters and mopeds under current law, equals about 1,500 watts, and four horsepower equals about 3,000 watts. Another commonly used unit of power is the cubic centimeter (cc). Four horsepower equals 60 to 70 cc, which is about the power of the smallest motorcycles or pocket bikes. To appreciate the significance of these values, by comparison, low-speed electric bicycles have motors that range from 350 watts to 750 watts. Thus, doubling the power of the electric scooters considered here to nearly 3,000 watts would make them four to eight times as powerful as typical low-speed electric bikes. Because electric scooters and mopeds are designed to be primarily used on roadways and shared with motor vehicles, a need for motor power substantially greater than that of low-speed electric bicycles seems reasonable.

3.Electric scooters and mopeds in bike lanes . Existing law allows any motorized bicycle to use bikeways that are within or adjacent to a roadway. This bill would allow more powerful motorized bicycles to operate on bike lanes on roadways, and bike paths adjacent to roadways. Safety for all bikeway users would be reduced if these more powerful motorized bicycles enabled operators to take more chances, or to be more aggressive, in passing or "tailgating" conventional bicycle operators.

4.Will this promote louder and more polluting motorized bicycles ? A potential unintended consequence of this bill is promotion of more powerful, louder, and more polluting internal combustion-powered motorized bicycles, or mopeds. This is unlikely to happen. Gasoline-powered scooters like

Vespa, which continue to be popular, do not qualify as motorized bicycles because they lack pedals, and thus would not be affected by this bill. The market for mopeds, which do have pedals, appears to be dying, overtaken by electric scooters and low-speed electric bikes on the one hand, and gasoline-powered scooters on the other hand. New and more powerful internal combustion engine kits that attach to conventional bicycles could, in principal, result from passage of this bill, but they would need to comply with California Air Resources Board regulations that limit air emissions.

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Assembly Votes:

Floor: 78-0
Trans: 15-0

POSITIONS: (Communicated to the committee before noon on
Wednesday, June 4,
2014.)

SUPPORT: Scoot Networks, Inc. (sponsor)

OPPOSED: None received.