

# What to Know About E-bikes?



Photo: Rad Power Bikes

E-bikes (bicycles with electric motors to assist) can be a great way for people to enjoy transportation with movement. E-bikes can be helpful for those returning from a sedentary lifestyle, illness, or those with physical limitations. E-bikes can also provide a “boost” for someone to bicycle a greater distance at higher speed, replacing/reducing their dependency on cars.

Driving an e-bike requires situational awareness:

- on trails - slow down/communicate when passing pedestrians, children, and animals.
- minimize sidewalk/crosswalk riding - sightlines can be limited

## E-bikes under Pennsylvania law

Under Act 154 of 2014, E-bikes are classified as bicycles/pedalcycles with the following requirements:

- Rider must be at least 16 years old (driver’s license not req’d)
- 20 mph top speed (electric assist disengages above 20mph)
- Max power 750 watts (1 horsepower)
- Must have pedals and be pedal-assist (may have throttle)
- Need not be registered or insured



**1935 West Broad Street, Bethlehem, PA 18018**  
**610.954.5744**

Bicycling Education-Bicyclist/Motorist Diplomacy  
Safe/Enjoyable Pedestrian Access-Trails-Transit-Environment-Community

## Classification of E-bikes by the Bike Biz

- Class 1: Pedal-assist/pedelec (motor kicks in while pedaling, no throttle), max speed of 20mph
- Class 2: Throttle-controlled, max speed of 20mph
- Class 3: Pedal-assist, max speed of 28mph (not permitted under PA law)
- Note: E-bike software modifications to increase speeds render them illegal and should be avoided.
- PA law effectively allows Classes 1 & 2 though it does not reference the classes.

## “Bikes” with other types of motors under Pennsylvania Law

- Any bike with a gasoline-powered motor can be classified as a moped (<50cc, max 25mph, max 1.5 brake horsepower, automatic transmission) or motorcycle (>50cc) - both of which require vehicle registration and a driver’s license
- Electric “motor-driven cycles” (traditional scooters with a cushy seat and ~12” pneumatic tires) fall under the same requirements as mopeds
- Newer, urban-type electric scooters with small wheels - unclassified at this time
- Electric motorcycles (high horsepower, no pedals)
- Roller skates, non-electric scooters, skateboards are classified as pedestrians in Pennsylvania.
- Motorized devices designed for use by persons with disabilities

## More

- Off-road: E-bikes are not regulated on trails, but since most trail users use the roads to some degree, *adopting trail rules that match the PA vehicle code definition would make sense.*
- Pennsylvania Police Officers Crash Report Manual (PennDOT Pub 153, rev. 9-21) now tracks E-bikes as a “special-usage” vehicle type. *We are encouraging police departments to use this.*
- E-bike technology has been quickly advancing in the last five years, and with the integration of batteries and motors lower on the frame, they are more balanced and smoother to ride.

Updated 10-4-2022

# What to Know About E-bikes?



Photo: Rad Power Bikes

E-bikes (bicycles with electric motors to assist) can be a great way for people to enjoy transportation with movement. E-bikes can be helpful for those returning from a sedentary lifestyle, illness, or those with physical limitations. E-bikes can also provide a “boost” for someone to bicycle a greater distance at higher speed, replacing/reducing their dependency on cars.

Driving an e-bike requires situational awareness:

- on trails - slow down/communicate when passing pedestrians, children, and animals.
- minimize sidewalk/crosswalk riding - sightlines can be limited

## E-bikes under Pennsylvania law

Under Act 154 of 2014, E-bikes are classified as bicycles/pedalcycles with the following requirements:

- Rider must be at least 16 years old (driver’s license not req’d)
- 20 mph top speed (electric assist disengages above 20mph)
- Max power 750 watts (1 horsepower)
- Must have pedals and be pedal-assist (may have throttle)
- Need not be registered or insured



**1935 West Broad Street, Bethlehem, PA 18018**  
**610.954.5744**

Bicycling Education-Bicyclist/Motorist Diplomacy  
Safe/Enjoyable Pedestrian Access-Trails-Transit-Environment-Community

## Classification of E-bikes by the Bike Biz

- Class 1: Pedal-assist/pedelec (motor kicks in while pedaling, no throttle), max speed of 20mph
- Class 2: Throttle-controlled, max speed of 20mph
- Class 3: Pedal-assist, max speed of 28mph (not permitted under PA law)
- Note: E-bike software modifications to increase speeds render them illegal and should be avoided.
- PA law effectively allows Classes 1 & 2 though it does not reference the classes.

## “Bikes” with other types of motors under Pennsylvania Law

- Any bike with a gasoline-powered motor can be classified as a moped (<50cc, max 25mph, max 1.5 brake horsepower, automatic transmission) or motorcycle (>50cc) - both of which require vehicle registration and a driver’s license
- Electric “motor-driven cycles” (traditional scooters with a cushy seat and ~12” pneumatic tires) fall under the same requirements as mopeds
- Newer, urban-type electric scooters with small wheels - unclassified at this time
- Electric motorcycles (high horsepower, no pedals)
- Roller skates, non-electric scooters, skateboards are classified as pedestrians in Pennsylvania.
- Motorized devices designed for use by persons with disabilities

## More

- Off-road: E-bikes are not regulated on trails, but since most trail users use the roads to some degree, *adopting trail rules that match the PA vehicle code definition would make sense.*
- Pennsylvania Police Officers Crash Report Manual (PennDOT Pub 153, rev. 9-21) now tracks E-bikes as a “special-usage” vehicle type. *We are encouraging police departments to use this.*
- E-bike technology has been quickly advancing in the last five years, and with the integration of batteries and motors lower on the frame, they are more balanced and smoother to ride.

Updated 10-4-2022