

Electric Scooters: Coming Soon?

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Travel to any large metropolitan city in America and you probably have witnessed people riding small, two-wheeled electric scooters. You probably also so many of them littered along sidewalks and other public areas.

Are electric scooters headed for cities in Iowa? Some Iowa cities (including Des Moines and Cedar Rapids) are looking into it, as cities across the country try to regulate their use. Many are asking how they work, if they are safe and whether they benefit communities.

History of electric scooters:

The concept of the scooter goes back at least to 1817 and Baron Karl von Drais de Sauerbrun of Germany. After he presented his two-wheeled, human-powered ride, the concept quickly spun off to bicycles, tricycles and kick scooters. Motors were added with rear-treadle drives in Scotland around 1840. Battery-powered machines entered the picture when Ogden Bolton was issued a U.S. patent for his battery-powered bicycle in 1895.

The simple scooter has been around America for years and often is marketed as a toy and used for recreation. The move to create a scooter for use beyond personal recreation began in 2002 when the Segway was launched. The Segway is a battery powered device that uses gyroscopes to balance on two wheels and travel at 12 miles per hour. It cost \$4,950 when introduced, was too heavy to carry easily, and its batteries ran low quickly. It soon became associated with “tech bros” and elitism, and became a punchline.

Mobile application devices, longer battery life and a sleeker, lighter design have helped advance electric scooters. Battery prices dropped 86% between 2010 and 2016, making the scooters relatively cheap (\$200 to \$500), which has added to their popularity. Additionally, electric scooters can now travel 20 to 30 miles between charges.

How electric scooters work:

Most scooters are dockless, rent-by-the-minute and can reach speeds of 15 miles per hour. The two major rental companies on the market are Bird and Lime. Both have similar steps for operation.

To use a Bird scooter:

1. Download the app on your mobile device.
2. Create a login with your email address.
3. An in-app map shows you nearby e-scooters (called Birds).
4. Zoom in to see more detail, like each scooter's battery charge.
5. Before you grab an e-scooter, add your credit card information to the app (Settings > Payments).
6. When you find an e-scooter to use, tap the button to unlock it.
7. The app asks you to snap a photo of the scooter's QR code.
8. On your first rental, you may need to scan your driver's license.
9. To start the e-scooter, kick off three times, then push the throttle button.
10. You squeeze with the right hand to accelerate, and brake with the left.
11. When done, park by a bike rack and don't block public pathways.
12. To end the ride, open the app and tap the button to lock the scooter.
13. The app will show you the ride-time cost.
14. See Bird's tutorial: www.bird.co/how

Most electric scooters charge \$1 and then 15 cents for each minute after unlocking the device. A two-mile ride takes about 10 minutes and costs less than \$3. The scooters have GPS units and 4G data connections to track riders.

Rental companies hire workers, known as juicers, to track down the scooters, recharge them and place them back on the streets. Those who are hired as juicers get special access through the app that highlights scooters that need charging.

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Depending on how low the battery is, a juicer can net between \$9 to \$12 for charging one electric scooter. Charging the scooter requires about a half a kilowatt hour of electricity (about \$.05 worth of power).

Issues:

Most city ordinances say motorized vehicles should not be ridden on sidewalks, leaving the scooters to travel on streets. With car traffic going twice the speed of scooters, it can make for unsafe conditions, which, in turn, prompts many scooter operators to ignore the law and ride on sidewalks, becoming a danger to pedestrians.

Crashes often stem from inexperience, as there is no clear-cut manner for riding a scooter. Pedestrians, drivers and cyclists can't anticipate what a scooter will do, which leads to collisions. Some electric scooters follow pedestrian signals, and some obey traffic lights, while others don't. Scooters also do not have turn signals, so it's harder to determine their actions.

The electric scooter is a transportation mode designed for whim and convenience, so most riders do not have a helmet on hand, which adds to the danger. Additionally, when agreeing to the terms of use on the app, companies often require the renter/rider to waive liability.

Finally, many communities have raised concerns about the street clutter of the electric scooters, as they block sidewalks and cause a public nuisance to pedestrians and road traffic.

Solutions:

Establishing a set of best practices would go a long way to smooth the tensions of proper transportation and safety issues around electric scooters. It would require regulation from cities and education from the scooter companies. However, several electric scooter companies have begun to lobby state legislatures to preempt them from city ordinances.

To address the clutter issue, several cities have turned to geofencing, which requires the scooter to be left in an area designated by the city for parking/storage. Failure to "dock" the scooter at one of these parking zones keeps the meter running and the renter continues to accrue charges. Though tests run in Phoenix found that renters were still able to terminate their ride outside of the parking zones, some believe the program has potential once the bugs are worked out.

Iowa legislation:

In Iowa, [SSB 1024](#) was introduced in 2019, and one subcommittee meeting was held on the legislation. The bill would authorize electric scooters on highways, bikeways and sidewalks. It would not preempt any local ordinances, but does exclude electric scooters from the definition of "vehicle," which means they would not be required to follow Chapter 321 (motor vehicles and law of the road).

Des Moines has established work groups to look at the issue of electric scooters and what ordinances may need to be in place once a private company launches in their city. Cedar Rapids has a more defined set of local laws on the books and controls the number of scooters allowed in certain areas and where they can operate. Due to the high number of injuries and hospitalizations with electric scooter crashes, the Iowa Association for Justice is asking cities to make sure that insurance coverage is a requirement of the rentals.

College campuses also are on the radar for private companies to launch, so policy makers in these communities need to prepare for the inevitable arrival of the electric scooter.