



E-bikes: An exciting alternative

by Paul Mackie, Director of Research and Communications, Mobility Lab

It's too early to tell if electric bicycles hold the secret to grand pronouncements such as "the future of transportation." But there's definitely something interesting happening.

Anecdotally, I researched e-bikes for years before I felt comfortable enough to buy one as a way to improve my mobility options in a ridiculously congested place like the Washington D.C. region. There weren't enough retailers who would also be able to make necessary repairs, something this is more complicated than with traditional bicycles. The battery technology wasn't good enough to carry a charge decent enough to get back-and-forth across the city. The first e-bike I bought ended up being too difficult to get repaired and I returned it, thankfully (after lots of headaches), for a full refund from the German company, with a California wholesaler and a D.C. retailer.

But earlier this year I tried again. After test riding many e-bikes and researching online (and, despite the excellent [Electric Bike Reviews](#) site, with so many manufacturers and models, it's still an intimidating purchase decision), I purchased an excellent [Magnum Metro](#) from [Hybrid Pedals](#) in Arlington, Va.

I've never met anyone who didn't agree that, after riding an e-bike, it changed their life. The problem is that so few people have actually ridden e-bikes. The U.S. [market grew](#) by 25 percent in 2017, to 263,000 e-bikes sold. At that rate, it will take a long time to make much of a dent in the still-small percentage of people who bike for utilitarian purposes like getting to work, going to eat, or meeting friends.

Some of the good news is that new and trendy options like Uber, Lyft, e-scooter shares, dockless bikeshares, and soon autonomous shuttles may slowly be getting people out of their century-long drive-alone mindset. In an increasingly crowded and polluted world, e-bikes could play a valuable role in being a gateway to switch from this bad habit to these healthier, more sustainable, more affordable, and just plain fun choices.

If all bikes today - every single bicycle in the entire world - were suddenly thrown away and replaced with e-bikes, that wouldn't be good for the environment. Obviously.

But e-bikes are good for the environment in a somewhat surprising way: because riding an e-bike is less physically demanding than a regular bike, making it easier to climb hills and go longer distances, people might ditch cars for e-bikes.

Sounds far-fetched, but research says otherwise. An extensive survey of more than 1,800 e-bike users in the United States by the National Institute of Transportation and Communities earlier this year found that most participants switched to e-bikes to reduce car use.

“What stood out, however, is how many motives involved eliminating driving hassles,” [Bicycling’s Selene Yeager wrote of the study](#). “Twenty-eight percent of respondents said they bought an e-bike specifically to replace car trips. Others pointed to craving a more car-free lifestyle, such as using e-bikes to carry cargo or kids, avoid parking and traffic woes, be more environmentally minded, and have a more cost-effective form of transportation.”

But Americans are buying e-bikes at [much lower rates](#) than people in China and Europe. In fact, the Wall Street Journal [quoted](#) a transit expert in 2016 claiming that 60 percent of all battery production in China was for e-bikes. That’s a lot of batteries.

So how can we fix this? We can educate people on the benefits of e-bikes (and make sure they know that riding an e-bike is still [good for your health](#)). We can advocate for better bike infrastructure, which is [proven](#) to increase rates of bicycling across the board.

The research holds for me personally as well. I definitely bought my e-bike to maneuver more easily and efficiently through D.C.’s stressful traffic. My car trips have gone way down, and now my 17-mile roundtrip work commute is often the best part of my day.

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