

E-bikes Have Made it to Belize,
Fad or Key to Revolutionizing Belize's Urban Transportation?
By André Habet

On a recent scroll through your Facebook newsfeed, you might have encountered one of the advertisements for stores in Belize now selling electric bicycles (also known as e-bikes), bikes powered by a lightweight battery and motor system that can go anywhere between 20-28 mph depending on the model and road conditions. Expanding the post, you're likely to see the comments section littered with questions about the bikes' cost, battery charge times and hold, quality, warranty, and servicing options, and find yourself starting to wonder whether this whole e-bike thing may be the answer to your transportation problems.

Nicole Moro is one such Belizean for whom an interest in an e-bike led to an eventual purchase after first seeing one in a parade during a video call with her father based in New York City. She's now had it for three months and rides it every day. "I would go up to Camalote," Moro said when asked how far she sometimes rides on the e-bike, something she'd never done previously on her push bike. Ian Morrison, 55, a civil engineer living in Belmopan, first gained an interest in electric vehicles in 2016, writing two articles on the subject for Belizean newspapers. Morrison decided to purchase an e-bike last October "after I saw the way you can seamlessly include it in your daily commute." Morrison also owns an electric car, but he uses his e-bike every day, racking up at least 4 miles cycling to and from work.

It seems as if Belize has finally hit the point at which electric bikes have become a viable option many are considering in light of the ever-increasing cost of fuel and

vehicle maintenance, most recently the increase in car insurance premiums. Electric bikes aren't new inventions by any means, with the earliest recorded models first patented in the late 19th century, and consumer models becoming widely available in other parts of the world in the early 2000s. E-bikes are mostly similar to their push bike counterparts with the exception of the additional motor, battery, and controller. The rechargeable battery provides power to the motor, and the controller regulates how much power is sent from the battery to the motor depending on the rider's assist settings. Based on the assist settings, the electric components can either take all the resistance out of the pedaling action or assist the rider by giving the pedaling action more power.

Eliseo Figueroa of Capital City Bikes in Belmopan and Andrew Ordonez of Ordonez Bike Shop in Belize City both said they've been assembling and servicing mechanical components on customers' e-bikes for at least 5 years. According to Figueroa, e-bike users he's assisted have often been elderly people. Elderly folks and those with mobility-related disabilities in other countries have found the e-bike a great alternative that provides them autonomy of movement and reduces the strain some find riding push bikes.

Ordonez said he's seen various women visit his shop requesting assembly and service for their e-bikes. Expanding on the appeal of e-bikes among women, Ordonez said, "Say you're a young lady riding to work, but you don't want to perspire. With the e-bike, you 'zup' to work without perspiring."

E-bike costs vary widely, with those available locally ranging anywhere from \$1200 BZD to \$5500 BZD depending on frame quality, battery longevity, motor durability, and brand. Although significantly cheaper than an automobile, that price

point might still make some consumers gawk and raise their eyebrows, especially since the quality of imported e-bikes can differ, with Figueroa reporting several customers who purchased bikes at the lower price point seeing issues with the battery's ability to maintain a charge.

Of course, while you can now purchase an e-bike in the country, servicing them may prove a barrier for interested consumers. Though mechanics familiar with working on push bikes won't have any issues with mechanical repairs, finding a local means to address electronic issues continues to prove elusive.

So far, neither Ordonez nor Capital City has the tools or technical capacity to address problems with e-bikes' electric components, though both have stated their interest in developing that capacity as they become more common. Local retailers of e-bikes, including Belmopan Aggregates Hardware, Hopsing Bicycle Company, and Facebook store My Lights Shop, all said that they do not yet have replacement parts on hand to assist customers with repairs but are working on that. Asked about how they've serviced their e-bikes Moro said she hadn't run into any issues that her husband couldn't address, and Morrison stated that he'd had one issue that required a replacement part that the manufacturer was able to ship directly.

Another issue posed by e-bikes is that their high cost makes them a prime target for thieves. For instance, a week after our interview, Moro contacted me and requested I forward her an image of her bike I took to share with the police following the theft of her e-bike. E-bike owners should therefore invest in quality locks to limit their bike's vulnerability to theft, as well as note the bike's serial number in a secure location.

Ordonez also strongly emphasizes that "people who ride an e-bike wear a helmet," due to the speed at which they move. Given the lack of helmet requirements for cyclists in Belize, this last point deserves special attention as a preventative measure to avoid cranial injuries and possibly death among e-bike users.

Despite these concerns, everyone spoken to for this article mostly spoke glowingly about e-bikes. Morrison, an e-bike owner for more than six months, recommends that "If you commute a lot in your vehicle for very small items, it'll be very useful to get an electric bike. It is an extremely cost-effective way to travel."

E-bikes also have the potential to reduce urban centers' traffic congestion by reducing the number of large vehicles on the road, Ordonez adding that "one good thing about e-bikes is that they are eco-friendly." By reducing congestion, e-bikes would be a significant contributor to reducing a city's traffic-related pollution. One study led by Michael McQueen in Portland, Oregon, USA, showed that tailpipe carbon dioxide emissions could be reduced by as much as 12% if people converted 15% of their transportation time to e-bikes.

E-bikes have the potential globally to assist in the reduction of greenhouse gas emissions and warming since vehicle-related emissions account for almost 30% of total global emissions. Those emissions put places especially vulnerable to climate change, like Belize, at significant risk of loss. E-bike's adaptation, though slow, may soon prove to be a major tool in the arsenal for fighting for greater climate justice and giving people in places like Belize a chance to survive as the costs of goods and vehicle-related expenses continue to rise.

Whether their adaptation will happen fast enough and be supported by government

programs has yet to be seen, but for now, Belizeans can celebrate having one more option for getting to the office or the party without breaking a sweat.

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