



An e-bike rider travels along the bike lane on the Cherry Creek Trail in downtown Denver in 2022. *Photographer: RJ Sangosti/Denver Post via Getty Images*

Citylab | Transportation

## Is Denver's Big Bet on E-Bikes Paying Off?

Since 2022, the Colorado city has handed out close to 15,000 vouchers in a bid to cut traffic, clean the air and spark an electric cycling boom.

By [David Zipper](#)

October 30, 2024 at 10:10 AM EDT

Two and a half years ago, the city of Denver launched what might be the most explosively popular transportation policy of the post-pandemic era.

In April 2022, the city invited residents to request a rebate if they bought an electric bike at a local shop. Any adult could apply for a voucher worth \$400 off an e-bike or \$900 off an e-cargo bike; those with low-incomes could get \$800 more.

Denver was the first US city to create such a program, and officials weren't sure how it would go.

“We were expecting a couple hundred applications – for the entire year,” said Mike Salisbury, who then oversaw the e-bike rebate program as a city staffer.

“But in two weeks, we received ten times that number.”

Since then, Denver has distributed close to 15,000 vouchers, or roughly one for every 40 adult residents. The city has lowered the standard rebate to \$300 for an e-bike or \$500 for an e-cargo bike, but new batches of vouchers are still snapped up like Oasis reunion tickets. In August, some 17,000 people scrambled to snag one of 220 vouchers. They were gone in seconds.

The program has been the subject of countless local stories as well as much national coverage. It also inspired state and local policymakers from across the country to create their own e-bike initiatives, often modeled on Denver's. Promoters of such rebates see them as a way for cities to move the needle on local transportation emissions, replacing car trips with two-wheeled machines that are healthier as well as less polluting, hastening the arrival of what outlets like *National Geographic* have called “the future of green transportation.”



An attendee rides an e-bike at the Electrify Expo in Irvine, California, in 2021. *Photographer: Jill Connelly/Bloomberg*

But skeptics say that the popularity of e-bike vouchers conceals their modest impact on greenhouse gas emissions, and that they do nothing to address the

biggest roadblock to achieving e-biking nirvana: a dearth of high-quality bike lanes.

With Denver's rebate program reaching near-mythical status among climate and transportation advocates, I decided to visit Mile High City to see for myself to see how much of the hype was real – and to glean lessons that might apply to the cities across North America whose leaders hope to follow in its footsteps.

ACCORDING TO SALISBURY, THE IDEA FOR A LOCAL E-BIKE REBATE EMERGED IN 2020 within the Denver Climate Action Task Force, a group of civic leaders who brainstormed various emissions-reduction programs to be managed by the city's new Office of Climate Action. "There were recommendations around transit and bike lanes, which were out of the purview of our office," he said. "But an e-bike rebate, we could do that."

As potential car-replacers, e-bikes aligned nicely with the city's sustainability goals, and they also produced other societal benefits by providing exercise and reducing demand for car parking. At the time, European countries such as Finland and Sweden were already offering financial incentives to promote e-bikes, as were a few US utilities such as Austin Energy in Texas. But no major US city had made e-bike rebates broadly available. Denver would be the first.

As they shaped the new e-bike incentive program, Salisbury and his colleagues chose to offer more generous subsidies to residents with lower incomes as well as those buying e-cargo bikes, which tend to be more expensive. To ease redemption, they arranged for the rebates to be available at the "point of sale" – i.e., at a local bike shop that would later be reimbursed by the city. (Subsequent research has found that point-of-sale rebates are more likely to induce e-bike purchases than tax credits claimed later.) Mail-order e-bikes were ineligible because city officials worried that residents might struggle to have them serviced.



This father can carry three young children on his electric cargo bike *Photographer: UCG/Univers: Images Group Editorial via Getty Images*

Salisbury said that the online scrums to grab a newly released voucher – now hallmark of Denver’s rebate program – was not his preferred approach. Lawyers put the kibosh on initial plans to award vouchers through a random selection from submitted applications; it sounded too much like a lottery, which was a no-no. Although the rush to nab vouchers attracts media attention, Salisbury said he worries it is inequitable, excluding those whose jobs or personal commitments prevent them from logging on at a specific moment in time.

When the first e-bike vouchers were released on April 22, 2022, the program quickly became a sensation. Denver officials were thrilled – but also anxious. “We had \$300,000 allocated for rebates for the year,” Salisbury recalled. “In days, we had millions of dollars’ worth of applications.” He and his colleague in the city’s new climate office scrambled to secure new funding to keep the program going.

For Denver’s bike shops, the vouchers were a revelation.

Houshmand Moarefi opened eBikes USA in 2020, before Denver began offering rebates. Trim, loquacious, and obsessed with bikes (“I cannot tell you how many I own; my wife will use it against me in a court of law,” he told me), Moarefi guided me through his showroom which features twelve e-bike models grouped into comfortable “scramblers” that resemble pedal bikes to more rugged “cruisers” for longer distances, as well as e-cargo bikes that offer storage or room to carry kids.

**Read more:** [E-Trikes Are Coming to Rescue the Aging Suburbs](#)

Before the voucher program launched, “our target customer was a bit older, 55-plus, and they had money,” he said. Step-through scramblers, used largely for recreation, were most popular. “Once the rebates came on the scene, the age of the customers went down to 30- and 35-year-olds,” he said, “and they wanted more cruisers for their commutes.”

Moarefi said that his sales surged 25% in 2022, when around 70% of his customers redeemed a city voucher. (Now, the share is more like 1 in 10, he estimated.)

Other bike shops also capitalized on Denver’s vouchers, which could only be redeemed at a physical location within the city. Rad Power, the mostly online e-bike company based in Seattle, [opened a pop-up store](#) weeks after the rebate program launched, and it now maintains a permanent one in North Denver. According to the city, over 30 local retailers are now registered to redeem vouchers.



A row of Rad Power e-bikes in 2024. The Seattle company opened retail outlets in Denver after the city's rebate program launched. *Photographer: David Ryder/Bloomberg*

Sue Baldwin, who currently oversees the city's e-bike program, said that she talks constantly with bike shop staff, who give real-time feedback about market dynamics and program operations. It was their suggestion that led the city to require that rebate-eligible e-bikes be UL-certified, which reduces the risk of battery fires. She sees the program as a boon for economic development: "One of the unintended consequences is that we're supporting small businesses."

According to the city, a little over 9,000 city vouchers have now been redeemed, or about 62% of those distributed. (Vouchers must be redeemed at an e-bike retailer within 90 days of issuance; otherwise they expire.) Surveys in 2022 and 2023 found that the average new e-bike owner replaced over 1,200 miles of annual driving with their new two-wheeler.

Salisbury bristled when I asked about a recent academic study of e-bike rebates, which declared them to be a relatively inefficient means of reducing emissions. He estimated that more than half of the Denverites using a voucher would not have otherwise purchased an e-bike, a share far higher than the researchers estimated. While acknowledging that other emission mitigation

tactics may be more efficient, Salisbury said that most are outside the scope of urban policy. “A city isn’t going to invest in utility-scale wind,” he said.

Over drinks near Union Station, I met up with Jill Locantore, head of the transportation advocacy group Denver Streets Partnership. She told me that focusing only on reducing emissions undersells the impact of the city’s e-bike promotions. “The rebates have had a huge impact on the culture here,” she said. “More people are thinking about ways to travel beyond driving.”

Many of them are also discovering that purchase price is not the only deterrent to e-biking around this sprawling city. “Our bike infrastructure is a work in progress,” Locantore said.

Although Denver built 137 miles of bike lanes from 2018 to 2023, the network still has significant gaps, a concern Baldwin readily admitted. “In our surveys we hear that a lot – that people would ride more if they felt safer,” she said.



A bike-only sign marks the South Broadway bike lane in Denver, part of the city's new wave of bicycle infrastructure. *Photographer: Hyoung Chang/Denver Post*

After I toured Moarefi’s store, he and Baldwin led me on a meandering e-bike tour of South Broadway, a neighborhood adjacent to downtown. On some stretches I relaxed as I rode along a protected cycletrack, but elsewhere I had

to either bike on the sidewalk – a workaround of dubious legality – or share a lane where cars zoomed by. At one point a pickup edged into an intersection ahead, forcing me to swerve into a fast arterial. It was stressful.

Every cyclist I met in Denver told me that insufficient bike lanes are a major drag on e-bike adoption. Locantore said that the rebates have helped more residents experience firsthand how harrowing it can be to bike in a traffic lane shared with cars. “The rebate program implicitly puts pressure on the city to build better bike infrastructure,” she said.

This summer, the city unveiled a new, 20-year biking agenda that includes 23 miles of additional lanes and the establishment of a “core network” that would crisscross the city. But because of Denver’s sheer size (the city covers 155 square miles, more than twice as large as the similarly populous District of Columbia), the task is a daunting one; riding around the city now, cyclists find themselves far outnumbered by ubiquitous SUVs.

Locantore publicly praised the city’s plan, but she is impatient to see it progress beyond the drafting stage. “Denver is very good at making plans,” she told me. “Implementation is hit-and-miss.”

COLORADO HAS EMERGED AS A NATIONAL HOTBED FOR E-BIKE REBATES, WITH cities including Boulder, Durango and Glenwood Springs now providing their own local programs, along with a statewide rebate program for low-income purchasers.

Earlier this year Colorado became the first US state to offer all residents, regardless of income, a credit worth \$450 off the price of an e-bike at the point of sale. Unlike the highly competitive Denver program, there is no cap to the number of state credits available; any Coloradan can claim one regardless of how many others have done so.

Some jurisdictions in Colorado have made their local e-bike rebates “stackable” with the state program, but Denver forces residents to redeem one or the other when buying a new machine. Unless a Denverite is purchasing an e-cargo bike or qualifies as low-income, they can receive a larger discount by using the state program instead of the city one. For middle-class or affluent

residents eyeing a traditional e-bike, the local rebates are now effectively superfluous.

As a result, Baldwin says the city might revamp its e-bike program to focus exclusively on low-income residents, perhaps with new assistance that extends beyond the vehicle purchase. “We have concerns about putting expensive assets into the marketplace that people can’t afford to fix,” she said. “Replacing a flat is \$45 to \$65, so for somebody who was already struggling to pay the sales tax on their income-qualified e-bike, are they able to do that?”



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Baldwin also wants to address growing concerns about secure bike storage, since the relatively high price and popularity of e-bikes makes them enticing targets for thieves. The city now provides up to \$100,000 to business and nonprofit groups that install secure bike storage, and other efforts are under discussion. E-bike retailers have themselves become targets; after multiple thefts at his store last year, one owner told the *Denver Post* that “with e-bike popularity right now, they can turn around and sell them in seconds.”

Meanwhile, other jurisdictions across the country seem as enthusiastic as ever about launching e-bike rebates. A tracker maintained by Portland State University lists over 140 active and proposed incentive programs nationwide, from Hawaii to Maine. Despite a slumping market for new pedal bikes, e-bike sales have remained robust: Last year they outsold electric cars.

Ash Lovell, the vice-president of government relations for People for Bikes, an industry group, credits incentives like Denver’s for turbocharging the sector’s growth. “Without the rebates,” she told me, “that wouldn’t have happened.”

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