



Case study: Establishing an e-bike library

Overview

Electric bike libraries are a rising solution that help address the gap between traditional bikeshare options and personal ownership at low or no cost to the users. This case study highlights the East Side Bike Club e-bike library established in Buffalo, New York by Local Initiatives Support Corporation of Western New York through the New York State Energy Research and Development Authority (NYSERDA) Clean Transportation Prize Program.¹

Across the country, electric bikes (e-bikes) are expanding access to mobility. E-bikes have surged in popularity, both for [individual consumers](#)² and in the [bikeshare industry](#),³ which has seen the number of systems offering e-bikes more than triple since 2019. Yet while e-bikes are substantially more affordable than cars, e-bike ownership can still present a financial barrier for many. As of 2025, the [price for an e-bike](#)⁴ from a reputable manufacturer ranges from \$1,500–\$3,000, with some models on the market selling for \$10,000 or more. Traditional bikeshare systems can provide access to e-bikes for residents within the service territory, but per-trip pricing and limited geographic coverage of these services can still present barriers to access.

E-bike libraries as an emerging solution

E-bike lending libraries are an emerging solution that fills the gap between traditional bikeshare systems (bikes and e-bikes that are available for hourly or daily rentals from designated stations) and personal e-bike ownership. These libraries offer e-bike rentals for extended periods—typically

¹ Local Initiatives Support Corporation of Western New York (LISC-WNY) received a Prize award for their proposal, “Centering People, Place and Policy for Buffalo’s Clean Energy Future.” The East Side Bike Club’s e-bike library is one component of LISC’s project. More details on the full project are available at nyserdera.ny.gov/All-Programs/New-York-Clean-Transportation-Prizes-Initiative/Clean-Transportation-in-Action/Western-New-York-Buffalos-Clean-Mobility-Future and at cleanmobilitybuffalo.org/

² “Electric Bicycle Market Insights from Industry Experts,” People for Bikes, July 2024. www.peopleforbikes.org/news/electric-bicycle-market-insights-2024

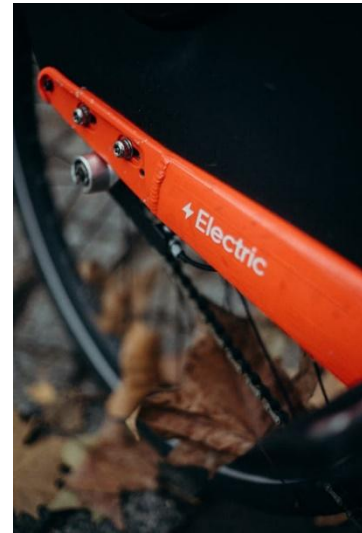
³ “Shared Micromobility Ridership Sets New Record, NABSA’s Sixth Shared Micromobility Report Shows” North American Bicycle and Scooter Share Association, August 2025 Press Release. nabsa.net/2025/08/07/2024industryreport/

⁴ “Is an Electric Bike Right for You?” Consumer Reports, April 2025. www.consumerreports.org/health/electric-bikes/is-an-e-bike-right-for-you-electric-bike-buying-guide-a2136838953/

3-7 days (but can be more or less)—at low or no cost to users. E-bike libraries can serve the dual purpose of exposing potential buyers to e-bikes for a long-term trial run as well as expanding access to reliable transportation for low-income communities.

A [May 2025 article](#)⁵ estimates that there are currently around 50 e-bike libraries in the country, with a wide spectrum of “scope, scale, and function.” E-bike libraries can be an effective solution for addressing mobility barriers, especially in smaller towns that lack funding or local capacity for operating a traditional citywide bikeshare network.

E-bike libraries can come about in different ways. Some operations are [largely grassroots](#),⁶ launched by one or two passionate individuals with the time, expertise, and resources to run a neighborhood-based program.⁷ Other e-bike libraries are managed by cities, with operations blended into the larger local library systems. [Recent research](#)⁸ from Portland State University provides an in-depth discussion on the emerging practice of e-bike libraries.



Insights from Buffalo

East Buffalo has experienced historic disinvestment and has faced longstanding challenges related to equitable transportation access. To help address local needs for affordable transportation, community leaders and program partners in East Buffalo have recently collaborated on launching a new e-bike library that offers free e-bike rentals to local residents. The new library is operated by [the East Side Bike Club](#) (ESBC), a community-based organization (CBO) with strong ties to the East Buffalo community. It uses pedal-assist e-bikes, which are like traditional bikes but with an added “boost” from an electric battery.

[Shared Mobility, Inc. \(SMI\)](#), a national nonprofit based in Buffalo with expertise in building mobility systems that serve disadvantaged communities in small and mid-sized markets, initially supported ESBC in launching and scaling the e-bike library. SMI has also supported the launch of [two other e-bike libraries in Western New York](#), as well as programs in other states, including California and Pennsylvania. For this case study, Mike Galligano, CEO of SMI, and Harvey Miles, director of the ESBC e-bike library, shared their insights on launching and operating an e-bike library.

⁵ “Can’t Afford an E-bike? Borrow One from a Free Lending Library.” Wired, May 2025. www.wired.com/story/ebike-lending-libraries/

⁶ *How and Why to Start a Neighborhood E-bike Library.* Streetsblog, March 2024. usa.streetsblog.org/2024/03/18/how-and-why-to-start-a-neighborhood-e-bike-library

⁷ An e-bike library organizer in MA created [this useful how-to guide](#) for individuals interested in launching neighborhood-based libraries

⁸ “E-bike Lending Libraries: Trends and Practices in the United States.” Portland State University, Transportation Research and Education Center, March 2025. rosap.ntl.bts.gov/view/dot/83378/dot_83378_DS1.pdf



Work directly with community-based organizations

As a first step for opening a new e-bike library, SMI's priority is to gain an in-depth understanding of the local community's needs and priorities. To do this, they work in close partnership with community leaders on the ground to ensure that a proposed e-bike library is designed to fit in with the local context. SMI recommends that e-bike library organizers use questionnaires or similar tools to help CBOs clearly articulate their vision and existing capacity to support the program.

“E-bike libraries are community-run by definition, and they should be focused on responding to community needs. So the first step is to define those needs, then you design a program that addresses them.” – Mike Galligano, SMI

Defining program goals from the outset is essential, because the structure of the library should be designed to meet those goals. For example, libraries with the goal of expanding access to mobility for all may have different operational needs than those designed to incentivize participants to eventually purchase their own e-bikes.

ESBC's strong foundation and name recognition within the community helped set up the Buffalo e-bike library for success. In the case of ESBC, the existing grassroots bike club had been organizing weekly group bike rides for more than a year before launching the library. This gave them a platform for organic marketing and allowed them to design a program that best matched the community's transportation needs.

“We're a tight-knit community in East Buffalo, and our group rides bring together a really diverse set of riders. We've been doing these grassroots rides for a while, and this gave the library a strong base for success.” – Harvey Miles, ESBC

Assemble a team of stakeholders with the right expertise

Most e-bike libraries will be “community-run” in one way or another, with the scope and scale of a community organization’s involvement dependent on local capacity, funding, and expertise. In Buffalo, ESBC had existing technical knowledge of bike and e-bike maintenance but did not have dedicated staff for operating the library program at the onset.

To prepare for the successful launch of the ESBC e-bike library, SMI supported ESBC in conducting proactive community outreach, helping craft educational campaigns designed to familiarize the community with e-bikes. As a subject matter expert, SMI was able to play a critical role in helping ESBC build administrative capacity for the library. The table below summarizes the roles of different stakeholders involved in launching an e-bike library.

Table 1: Common stakeholders and roles for e-bike library programs

Stakeholder Type	Role
Community-based organization (CBO)	• Host and operate e-bike library • Spearhead outreach and education efforts with community members
Philanthropic group	• Provide funding support
Government partner	• Provide funding support
Technical experts – bikes	• Support program launch • Train CBO partners on bike maintenance
Technical experts – program management and administration	• Support program launch • Train CBO partners on management, reporting, accounting, and other business skills

For many CBOs, operating an e-bike library can involve administrative challenges that may seem overwhelming at first. As the ESBC example shows, CBO leaders should connect with peers involved in other e-bike libraries and mentors who can provide guidance on best practices for program management and scaling, especially given the trial-and-error nature of launching a library.

Design program details for success

ESBC’s e-bike library’s first season ran from May to October 2025. Since the program is run by volunteers, ESBC only had capacity to operate the library when weather conditions in Buffalo were most conducive to cycling. Considering these details proactively was crucial to the program’s success. The table below summarizes the parameters of ESBC’s e-bike library.



Table 2: Details of East Side Bike Club’s e-bike library, as of fall 2025

Number and style of bikes	Rental period	Charging logistics	Safety training	Bike accessories	Liability
20 pedal-assist e-bikes	15 minutes to 3 days	ESBC charges bikes in its shop; users do not handle batteries or chargers	1-hour safety training at ESBC workshop required before renting a bike	Helmets are available with rental. Bikes include racks. ESBC is considering offering pannier bags for purchase.	\$1 fee to make a reservation allows ESBC to hold users accountable for negligence/damage

The ESBC library uses pedal-assist e-bikes, which are operated with pedals just like traditional bikes but with an added “boost” from the electric battery. Using these models instead of throttle-style e-bikes, which involve using a hand-operated throttle for acceleration, makes the library more approachable for casual riders. As an unforeseen benefit of the program, ESBC reported that several users have purchased their own e-bikes after rentals helped them gain more confidence that an e-bike would meet their needs.

ESBC uses scheduling software to help organize reservations, and library users must attend an hour-long safety training before they are able to check out a bike. This has led to some unanticipated impacts: multiple people who own their own e-bikes have attended the weekly e-bike safety training course just to take advantage of the learning opportunity.

Finally, to hedge against risks from damaged or stolen bikes, ESBC has users secure a reservation with a \$1.00 fee that must be paid by debit card or ACH. This way, they can capture user information to keep on file in case of negligence or theft.

Collaborate with partners to surmount challenges

Launching an e-bike library can involve unforeseen challenges. Sustained investments in training and mentoring program leads, especially pre-launch, can help position e-bike libraries for success. SMI's deep engagement with ESBC, through in-depth support around bolstering the CBO's administrative and technical capacity, all paid off in the long run.

"At first, we were all learning on the fly, because SMI was one of the first ones to do something like this. It was difficult to understand what skillsets were needed, and we had a lot of late-night phone calls in the early days trying to set the program up. But our team has pride in that, and the East Buffalo e-bike library has been a major success. That success can be attributed to ESBC's deep commitment to the community." – Mike Galligano, SMI

Recharging and battery swapping present logistical hurdles. ESBC e-bike library users must bring bikes into the shop for a battery swap instead of charging at home, and volunteers ensure bikes only charge while the shop is attended. Dealing with the logistics around charging may mean CBOs need to stay open for longer hours, presenting new hurdles for staffing and communication to users to make sure they know when they can return.

Although in-shop battery swapping removes safety concerns and liabilities from users charging e-bikes at home, it is still a labor-intensive process. Using ESBC's existing facility for charging the small e-bike fleet also meant that CBO leaders had to navigate new regulatory territory with the city, which involved working closely with the fire department and other local regulators to interpret the applicable building code standards. Productive conversations and proactive outreach to local officials helped all stakeholders agree on the right safety standards for the library's charging operations.

"Our most consistent riders use the library's bike for their main source of transportation. We've also had several people use the library as an extended test-ride, then go on to purchase their own e-bikes. We see this as a win." – Harvey Miles, ESBC

Robust data collection (to gain insights on trip patterns, user demographics, etc.) is another challenge for the volunteer-run ESBC e-bike library, but ESBC is exploring technical tools that would help expand capacity for this in the future. For the inaugural season, anecdotal insights from ESBC reveal that many riders are checking out e-bikes to meet everyday transportation needs like commuting and grocery runs.



Advice for other communities

- **Budget for both capital and operating expenses at the onset of launching a new program.** Whether through government grants, philanthropic contributions, corporate sponsorships, or other avenues, e-bike libraries require both up-front capital investments as well as sustained operational funding. Annual e-bike library costs can range from \$25,000 on the lower end to \$250,000 or more for larger programs, depending on the number and style of bikes as well as program staffing and administrative expenses.⁹
- **Build on the existing strengths of CBO partners.** Successful e-bike libraries can be built from existing CBO skills and resources. In Buffalo, ESBC’s expertise with bike maintenance as well as its strong relationships and name recognition within the community meant that the library was able to quickly gain traction and build trust with community members.
- **Keep e-bike libraries affordable.** While most e-bike libraries aim to operate with a free lending model, like traditional libraries, using an optional “pay what you can” structure or accepting donations from riders can help achieve equity goals while still generating revenue to support operating costs.
- **Right-size the launch and scale over time.** Designing the program to balance CBO capacity with community needs can be difficult, but it’s important that libraries launch at a scale they can reasonably manage. For ESBC, launching with about 20 bikes was the sweet spot for a volunteer-run program serving a community the size of East Buffalo.

As evidenced by the East Side Bike Club’s program, e-bike libraries are innovative strategies that expand access to affordable and sustainable modes of transportation. SMI and ESBC both encourage other communities interested in launching an e-bike library to reach out to them with any questions not addressed in this case study. As an additional resource, the table below provides a snapshot of several other e-bike library programs across the country.

⁹ See cost estimates on page 29 of the report “*E-bike Lending Libraries: Trends and Practices in the United States.*” Portland State University, Transportation Research and Education Center, March 2025. rosap.nhtl.bts.gov/view/dot/83378/dot_83378_DS1.pdf

Table 3: Additional e-bike library examples

E-bike library name	Location	Operator & staffing typology	Rental period	Charging	Other notable features
<u>Community pedal power</u>	Somerville, MA	Nonprofit, volunteer-run	Up to one week	Rental includes charger; users charge at home	Started by an individual identifying an opportunity to help neighbors experience e-bikes. Users can choose from 15 models. Many bikes were donated by manufacturers.
<u>Elk Grove e-bike lending library</u>	Elk Grove, CA	Government; City Hall	Up to three weeks	Rental includes charger; users charge at home	Pilot program run by city government. Users can choose from eight e-bike models, including an e-trike. Safety training and waiver required.
<u>E-bike library C'ville</u>	Charlottesville, VA	Volunteer run	Up to one week	Rental includes charger; users charge at home	Run by an individual out of their home. Users can choose from 11 models. Donations support operations.
<u>E-bike lending library</u>	Chapel Hill, NC	Government; Planning department partnership with local bike shops	Up to a week	Rental includes charger; users charge at home	Users can choose from several models, including e-trikes. Program supported by EECBG and ARPA federal funding.
<u>Ilseley e-bike library</u>	Middlebury, VT	Government; Public library partnership with local bike shops	Either Tues–Th or Fri–Mon, once a month	Rental includes charger; users charge at home	Users can choose from three models. Program only runs May–October on certain days of the week. Users must have a library card.

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