RIDE CLEAN NEW YORK

A pilot for New York City's first ebike subsidy program

BIKE NEW YORK

UCS Urban Cycling Solutions

Contents

1. INTRODUCTION

Overview

In alignment with NYSERDA's Clean Mobility Program Goals, the purpose of this study is to develop a program plan for an ebike incentive program in New York City. More broadly, this study will lay the groundwork for greatly expanding micromobility in NYC by making thousands of safe, legal class 1 electric bikes affordable for residents throughout the city – particularly those with less access to the subway and bus systems. The proposed Ride Clean Program represents a significant step forward for ebike incentives in New York State. With a goal to facilitate the sale of more than 4,000 subsidized ebikes – many to low-income New Yorkers as well as others living in less transit dense neighborhoods and public housing developments – this will be the largest ebike incentive program in New York State to date, and will serve as a pilot for a scalable subsidy program at both the municipal and statewide levels. This program includes several innovative features:

- Ride Clean will be the first ebike incentive program in the US to incorporate first and last mile connectivity with transit systems as a priority eligibility criterion.
- Ride Clean will be the first ebike subsidy program in the US to establish a direct product sourcing model in order to maintain price control, guarantee product quality, and maximize the number of bikes supported by this new and innovative effort.

The Ride Clean program is also an important initiative for New York City to proactively combat prevailing public negativity, safety concerns and policy focused increasingly on the large number of commercial ebikes operating throughout the five boroughs. *A core goal of the Ride Clean program is to use education to illustrate the positive impacts of safe accessible ebikes for all New Yorkers*. That's why Bike New York – the City's preeminent provider of free bike education programs to more than 30,000 New Yorkers each year – has built a robust strategy to ensure that all Ride Clean participants are informed on crucial topics such as battery charging safety, New York City traffic rules and ebike handling skills. Specifically:

- The Ride Clean Program sign-up process includes a mandatory education requirement upfront before accessing the ebike incentive. This will ensure that any New Yorker that participates in the program - whether they receive a voucher or not - will receive education regarding ebike safety.
- Bike New York will host ebike demonstration popups before, during and after the program launch, and make ebikes available to try for participants in existing and ongoing hands-on education classes.
- Bike New York will open new Bicycle Education Centers for hands on ebike training in low stress parks and schools in the outer boroughs.

Program Sustainability & Longevity

Similar to other large-scale ebike subsidy programs across North America, the core program benefit – cash incentives that reduce the upfront cost of purchasing an ebike for consumers – is constrained by available funding. Bike New York is committed to the longevity and sustainability of the Ride Clean program, and views it through four lenses:

- Building Infrastructure: The Ride Clean Program will establish a robust virtual infrastructure to manage program administration as well as delivering marketing and educational assets. This represents a significant effort given the new subsidy program's unique parameters, goals and scale. Once established, this infrastructure can be used for subsequent iterations of the program, including an expansion to a larger scale.
- Testing and Recalibration: The initial launch of the Ride Clean Program will be a pilot with built-in flexibility to test program attributes and make adjustments based on dynamic and evolving real-world conditions. In addition to distributing ebike vouchers, the ultimate result of this pilot program will be a proven model for implementing an efficient and equitable ebike subsidy in New York City, and more broadly a template for a program at the state level.
- Continuing Education: The education assets developed for the Ride Clean Program will live on well beyond the initial distribution of ebike purchase incentives. Bike New York will continue to provide free ebike education both virtually and in-person at its bike education centers throughout all five boroughs.
- Demonstrating Demand: Similar programs throughout the country have proven impactful and tremendously popular – with incentives "selling out" quickly. Ride Clean performance data will provide a proof of concept to public and private New York City entities, creating new opportunities to fund the incentive portion of the program going forward. Looking beyond NYC, Ride Clean's success will demonstrate the potential for program extension at the statewide level.

Understanding the Ebike Landscape in New York City

The development and launch of the Ride Clean Program takes place amidst the backdrop of a tumultuous and uncertain time for ebikes in NYC. The current state of ebikes is characterized by several prevailing issues:

Focus on Commercial Cyclists: The growth in the number of ebikes in NYC has been dominated by commercial cyclists that rely on ebikes for their work. According to a 2021 study from the New York City Department of Worker and Consumer Protection, there are an estimated 65,000 food delivery workers in New York City – primarily immigrants and/or low-income individuals – who use bicycles to make deliveries, with 46% of them using e-bikes.

A Secondary Market for Illegal Ebikes: Prior to the statewide legalization of ebikes, few bike shops carried ebikes due to legal and enforcement ambiguity and uncertainty. Legalization coinciding with the pandemic slowed ebike inventory adoption, despite increasing demand for delivery services. Meanwhile, as delivery workers continued to operate throughout the pandemic, the high cost of ebikes, coupled with limited availability of legal models, created a secondary market for cheaper ebikes that don't conform to the three-tiered classification system for ebikes and frequently do not have UL battery safety certifications.

WHAT IS 'UL' CERTIFICATION

UL (Underwriters Laboratories) battery certifications, are safety standards that ensure batteries have been rigorously tested for performance, construction, and safety. UL certified batteries have been tested to meet safety standards, reducing the risk of fire, electric shock, and other hazards. There is a distinction between products that are UL 'certified' vs UL 'listed.' UL Listed signifies that a complete product has been tested and found to meet specific safety standards. UL Certified, while sometimes used interchangeably, more often refers to the certification of components or materials used within a larger product.[1] In New York City, e-bike batteries must be certified to UL 2849, the standard for electrical systems for e-bikes, and UL 2271, the standard for batteries for light electric vehicles.[2]

[1] *Flux Power. (2019, October 23). Why UL marks are important for a lithium-ion battery pack. https://www.fluxpower.com/blog/why-ul-marks-are-important-for-a-lithium-ion-battery-pack*

[2] *UL Solutions. (n.d.). E-bikes certification: Evaluating and testing to UL 2849. https://www.ul.com/services/e-bikes-certificationevaluating-and-testing-ul-2849*

Battery Charging and Roadway Safety Concerns: Battery fires and public safety concerns have dominated public discourse and policy regarding ebikes. In 2023, 268 e-bike battery fires resulted in 18 deaths and 150 injuries in the city. The fire department responded to over 100 lithium-ion battery fires in 2024, resulting in 46 injuries and one death. In tandem, medical journals such as the American Journal of Public Health and the American College of Surgeons have published new data suggesting that micromobility vehicles, and ebikes in particular, represent an emerging public health hazard given increasing numbers of related injuries resulting in serious injuries and hospitalizations.[3] While this data provides a compelling finding in relation to ebike safety, the conclusions suggest a problem with the mode itself, with recommendations calling for stricter regulations such as helmet laws, speed restrictions and licensure.

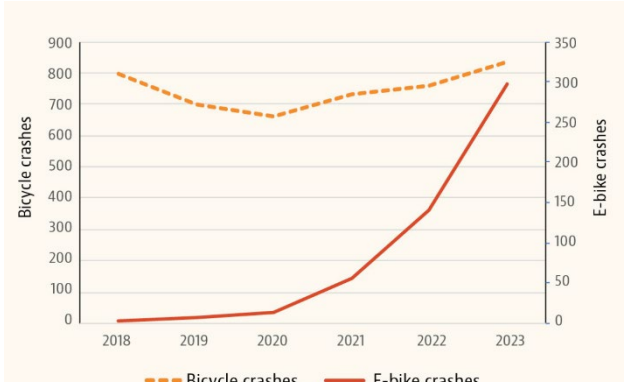


Figure 1. Excerpt graph from an article titled 'Electric Bikes Are Emerging as Public Health Hazard' from the American College of Surgeons illustrating a rise in ebike crashes Bicycle and e-Bike Crashes in San Diego County. It is important to note that the dramatic rise in ebike crashes correlates with growing ridership, and remains below pedal bike crashes as of 2023.

What is lost in this dialogue is the fact that ebikes have enabled more New Yorkers to access active transportation and have increased mode share for bicycling in general. As a result, more people than ever are operating pedal bikes and/or ebikes on roadway infrastructure throughout the city that – while among the best in the country – is not always designed to accommodate a growing volume of active users.

New York City and New York State Policy Response

In response to these issues, the City has undertaken several legislative and programmatic initiatives. In 2023, The City passed initiative 663-A[4] that prohibits the sale, lease or rental of powered mobility devices such as e-bikes and electric scooters, and storage batteries for these devices, that fail to meet recognized safety standards. Specifically, the law requires that all e-Bikes for lease, rent, sale or distribution in NYC must be compliant with the UL 2849 electrical system certification standards with civil penalties up to $1,000 per noncompliant device.[5] Additional regulations at the state level have reinforced these rules. Specifically, in 2024, Governor Kathy Hochul signed a package of bills aimed at reducing the risk of e-bike battery fires:

[3] *Maa, J., Doucet, J. J., Ignacio, R., & Alfrey, E. (2024, July/August). Electric bikes are emerging as public health hazard. Bulletin of the American College of Surgeons, 109(7), 24–30. https://www.facs.org/for-medical-professionals/news-publications/news-and-articles/bulletin/2024/julyaugust-2024-volume-109-issue-7/electric-bikes-are-emerging-as-public-health-hazard/*

[4] *NYC Office of the Mayor. (2023, March 20). Mayor Adams' plan to combat lithium-ion battery fires and promote safe electric micromobility [Press release]. https://www.nyc.gov/office-of-the-mayor/news/195-23/mayor-adams-plan-combat-lithium-ion-battery-fires-promote-safe-electric-micromobility*

[5] *N.Y.C. Local Law No. 39. (2023). https://legistar.council.nyc.gov/LegislationDetail.aspx?GUID=D0854615-5297-460B-BCBC-646D24A75B2E&ID=5839354*

- S.154-F/A.4938-D - Prohibits Sale of Lithium-Ion Batteries that are not compliant with UL 2849, UL 2271 or EN 15194, or UL 2272.
- S.8742/A.9337- Requires first responders to receive training materials related to incidents Involving Lithium-Ion Batteries.
- S.7503-B/A.1910-B Requires retailers to provide operating manuals for ebikes and other micromobility devices with Lithium-Ion Batteries.
- S.9419/A.7628-A Requires Reports Following E-Bike or E-Scooter Accidents Resulting in Injury or death, including the specific type of device.
- S.7760-A/A.8102-A Requires micro-mobility devices to have red tags on charging cords stating to unplug when not in use.
- S.7744-D/A.8310-C Requires retailers to place safety stickers on ebikes that instruct consumers to follow traffic laws and yield to pedestrians.[6]

In 2024, the City passed Int. No. 19-A requiring all businesses that sell e-bikes, e-scooters and other personal mobility devices powered by batteries, to post lithium-ion battery safety informational materials and guides. Violations are subject to fines ranging from $150 to $350 per reported incident.[7]

In addition to legal changes, the Mayor's Office issued *Charge Safe, Ride Safe: NYC's Electric Micromobility*, and the New York City Comptroller issued *Street Safety in the Era of Micromobility.* Both documents provide a series of strategies and recommendations to enhance charging safety detailed in section 3 below. In alignment with these plans, the New York City Department of Transportation has led several initiatives including an Ebike Battery Charging Pilot, and E-Bike Battery Swapping and Charging Cabinets on Public Sidewalks Programs. The New York City Parks Department is also undertaking a Electric Micromobility Pilot on major park drives. Additional details on these and other New York City ebike safety initiatives are detailed in section 3.

[6] *New York State Office of the Governor. (2024, July 11). Governor Hochul signs legislation to encourage the safe use of e-bikes and lithium-ion batteries and protect New Yorkers [Press release].* https://www.governor.ny.gov/news/governor-hochul-signs-legislation-encourage-safe-use-e-bikes-and-lithium-ion-batteries-and

[7] *N.Y.C. Local Law No. 49. (2024).* https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=6494987&GUID=9AB19F32-BD0C-4E32-A1EC-D0CDA71235B6

The Benefits of Ebikes

While safety challenges related to commercial cyclists, roadway safety and battery fires have dominated the public narrative, ebikes have the benefit to greatly benefit neighborhoods across New York City:

- ✓ Ebikes reduce barriers to active transportation: Bicycling is a fun, healthy and efficient mode of transportation, particularly in dense urban environments like New York City. Despite these benefits, steep grades on bridge climbs, overall distance to key destinations, and physical requirements may represent barriers to biking for many New Yorkers, especially those with mobility impairments. Ebikes mitigate these barriers by providing motorized assistance to human power and reducing physical requirements while maintaining at least 70% of the exercise benefits of each ride![8]

- ✓ Ebikes enable more types of trips: Ebikes allow New Yorkers to complete a wider variety of trips that might be challenging for a traditional pedal bike. A trip to the grocery store may create challenges for riders returning home with heavy loads on their bike. Similarly, ebikes allow riders to operate a wider variety of vehicles including Long-tail cargo bikes that can be outfitted for carrying kids to school and other activities.

- ✓ Ebikes expand the reach of the subway and bus system: With more than one billion riders each year, New York City is home to one of largest and most complex transit systems in the world in terms of ridership, geographic reach and density. Despite its unparalleled scale, the subway and bus network density is not uniform in providing equal services to all residents. For example, neighborhoods in eastern Queens and Staten Island have significantly fewer bus stops and subway stations per square mile then midtown Manhattan. With fewer subway stations, and less frequent bus service, New Yorkers in these areas need to travel farther to access transit. Ebikes address this issue by making it easier for New Yorkers to ride to transit stations and bus hubs.

[8] *Herbert, K. (2022, April 28). The health benefits of electric bikes. PeopleForBikes. https://www.peopleforbikes.org/news/the-health-benefits-of-electric-bikes*

Study Overview

This plan provides a clear roadmap for implementing a point-of-sale subsidy for ebike purchases in less transit dense NYC neighborhoods. The framework for this program was developed through extensive research and review through the following methods:

Industry Interviews	• Bike New York conducted in depth interviews with the adminsitrators of other subsidies throughout the US as well as micromobility researchers, and ebike manufacures and distributors.
Data Analysis	• Bike New York leveraged data sets on other subsidy programs throughout the US as well as national ebike pricing trends to inform local program mechanics.
Local stakeholder Engagment	• Bike New York held discussions with public agencies, elected officials, Con Edison and local bike shops. Bike New York also released an on-line consumer survey to gauge interest in the program.
Program Feature Prioritization and Mapping	• Bike New York established a preliminary program framework based on the priorities identified through interviews, data analysis and local discussions wih potential publlic and privae stakeholders.
Preasure Testing	• After establishing an initial program framework, Bike New York presented findings to a range of stakeholders to validate assumptions and update the program structure as needed.

2. Program Overview

What is Ride Clean New York

Ride Clean New York is an incentive program that will educate the riding public and make pedal-assist (class-1) ebikes more affordable for New York City residents in neighborhoods and public housing across NYC. Specifically, the Ride Clean Program will provide approximately 4,000 vouchers ranging between $500 and $1,100 as well as access to specially designed financing options to reduce the upfront cost of purchasing an ebike. *Education is a central feature of this program, including mandatory course requirements and many hands-on opportunities to test and learn how to safely operate and charge ebikes.*

Program Goals

- Increase Access to Safe, Legal Ebikes: Higher purchase cost is a significant barrier to ebike adoption. The Ride Clean program will make UL-certified class-1 (electric pedal assist) ebikes more affordable to New Yorkers; The program will include a significant set aside for qualified low-income individuals and/or NYC Housing Authority (NYCHA) residents as well as those living in less transit dense neighborhoods to ensure that those who stand to benefit most have an opportunity to access the benefits of ebikes. Unlike a rebate or tax credit, the Ride Clean Program will provide a point-of-sale discount enabling New Yorkers to immediately access approved ebike models at a lower cost. Bike New York will work directly with specific manufactures to ensure that Ride Clean-eligible ebike models fall within strict NYC legal guidelines, and maintain a consistent price point so that the subsidy provides an equal impact for all eligible New Yorkers.
- Promote Active Transportation in NYC neighborhoods with less frequent transit service and density: Not all New Yorkers have equal access to public transit, particularly in neighborhoods beyond the catchment areas of terminal subway stations. In addition to low-income and public housing applicants, the benefits of the Ride Clean program will extend to any New Yorkers in target neighborhoods in order to maximize the potential benefits of ebikes in less-transit dense areas of the city.
- Support local bike shops and economic development: This program will facilitate the sale of more than 4,000 ebikes through local brick-and-mortar bike shops. Not only will this stimulate business it will attract new customers to local bike shops both for the sale and ongoing maintenance of ebikes.
- Promote the positive transportation and recreational impacts of ebikes for New Yorkers of all ages and abilities: The Ride Clean Program will combat negative discourse on ebikes by highlighting opportunities to access parks, school, transit and other

destinations in a safe, active manner. Bike New York will feature participant profiles, and openly share data with the City on program performance.

- Educate New Yorkers and policy-makers about Ebike Safety: This program represents a catalytic opportunity to educate policy makers and individual New Yorkers about the classifications, benefits and proper handling – including operation and charging – of ebikes throughout New York City.

Alignment with NYSERDA Clean Mobility Goals

The Ride Clean Program addresses many of the core goals of NYSERDA's Clean Mobility Program. Specifically, the Ride Clean Program will:

- Improve zero-emission connections to public transportation: Subsidizing the purchase of safe, legal ebikes in less transit dense areas of NYC will enable more New Yorkers to bike to transit. In tandem with an expansion of bike parking at transit facilities – as outlined in Extending Transit's Reach: MTA's Strategic Action Plan for Bikes, Pedestrians, and Micromobility – the city is poised to greatly expand active first and last mile connectivity with transit in the outer boroughs.

- Provide options for those who cannot/do not want to own personal vehicles but live in areas with limited public transportation: This ebike subsidy program will specifically prioritize NYC neighborhoods that are "outside" the NYC subway system and experience lower bus frequency. These areas also have large low-income and immigrant populations that do not have the resources for owning a vehicle. (See section 4 for additional details)

- Showcase innovative shared transportation options through planning and demonstration projects: With the majority of the city's efforts focused on supporting safety for commercial cyclists, this will be the first large-scale ebike incentive program focused on general consumer access to ebikes in NYC. When implemented, the Ride Clean Program will be the largest ebike incentive program to date in New York State facilitating the sale of more than 4,000 ebikes in NYC. When launched, the Ride Clean program will also be the first ebike incentive program in the US that prioritizes transit access in its eligibility criteria. Working in partnership with American ebike manufactures, the Ride Clean program will be the first subsidy program in the US to maintain consistent price control, ensuring that every dollar spent on the subsidy provides equal impact. This key and innovative feature of the program will also ensures long-term sustainability by avoiding price fluctuations due to uncertain market conditions and potential tariff impacts.

3. Community Engagement & Literature Review

Findings Overview

- Subsidizing the purchase of ebikes represents the predominate model for ebike incentives in North America.
- Ebike subsidy models are evenly split between post-sale rebates and point-of-sale discounts.
- Due to the popularity of ebike subsidies and issues related to oversubscription and fairness, programs have shifted to a lottery-based applicant selection process rather than a first-come-first serve model.
- The average cost of an ebike in the United States is $1,770, and the majority of units sold are designated as Class-2 models with a throttle and maximum speed of 20 MPH.
- New York City's definition of a class-3 ebike differs from New York State's 3-tiered classification system [and the rest of the bike industry] in that it allows the use of a throttle in tandem with a maximum speed of 25MPH.
- Most ebike incentive programs in New York City have been focused on high-visibility issues related to commercial cyclists but have included rule changes that impact all potential riders as well, such as NYCHA's charging rules and labeling requirements for ebikes.
- Bike shops are crucial partners in subsidy programs as many require purchase at brick-and-mortar retailer.
- The primary concern for bike shops participating in these programs is timely reimbursement with an ideal tolerance of 24-48 hours from filing to reimbursement, and a maximum tolerance of a week.
- The ideal time for engaging bike shops is late fall and winter when operations slow down. In-person engagement is much more effective and must be considered when developing a scope of work.

Methodology

The literature review and community engagement chapter of this report synthesizes insights from a multi-faceted research approach. This methodology section outlines the structured process used to gather qualitative and quantitative data from a diverse group of stakeholders, industry experts, and the public. The four primary components of this research were: 1) a review of existing NYC initiatives, 2) extensive stakeholder interviews, 3) quantitative analysis of ebike subsidy program data, 4) interviews with local bike shops, and 5) a digital consumer survey.

1. Review of Existing NYC Initiatives: A detailed review was conducted of existing New York City initiatives, local laws, and policy documents concerning ebike incentives and safety. This component of the research aimed to establish a foundational understanding of the

current regulatory and policy environment. Key documents analyzed included **Charge Safe, Ride Safe: NYC's Electric Micromobility Action Plan**, produced by the NYC Mayor's Office, and the NYC Comptroller's report on street safety. This review provided context for existing efforts, identified policy gaps, and informed the recommendations for a new subsidy program by ensuring they align with or build upon current city strategies.

2. **Stakeholder Interviews:** To gain a comprehensive understanding of the ebike landscape in New York City and the potential for a new subsidy program, a series of interviews were conducted with more than a dozen key stakeholders. These semi-structured interviews were designed to elicit perspectives on existing infrastructure, policy challenges, market dynamics, and operational best practices. Interviewees were strategically selected from a range of sectors to ensure a balanced and well-informed perspective, including:

    - **NYC Public Agencies:** Representatives from city departments such as the Department of Transportation (DOT) and Con Edison, who provided insights on infrastructure, energy grid capacity, and regulatory considerations.
    - **Elected Leaders:** Staff from the Queens Borough President's office were consulted to understand political priorities, community needs, and potential legislative pathways.
    - **Industry Trade Groups:** Leaders from organizations such as PeopleForBikes and the National Bike Dealers Association were interviewed to gather market intelligence, industry trends, and insights into the supply chain.
    - **Micromobility Researchers:** Academics and researchers specializing in micromobility provided analysis on user behavior, environmental impacts, and best practices from other programs.
    - **Previous Subsidy Administrators:** Individuals who have managed similar subsidy programs in other jurisdictions were interviewed to learn from their operational successes and challenges.
    - **Other Stakeholders:** This group included representatives from community advocacy groups and other relevant organizations.

3. **Micromobility Ebike Incentive Program Data Analysis:** A quantitative analysis was performed on data provided by Portland State University's Transportation Research and Education Center (TREC) on micromobility ebike incentive programs across North America. This analysis aimed to identify key trends, best practices, and performance metrics from existing programs. The data was used to understand program design, eligibility requirements, funding mechanisms, and overall impact, providing a crucial comparative framework for the proposed Ride Clean New York Ebike Subsidy Program.

4. Bike Shop Interviews: Local bike shops serve as a critical link between consumers and the ebike market. Interviews with a selection of bike shops were conducted to understand their perspective on the feasibility of a subsidy program. These conversations focused on their experiences with ebike sales, customer demographics, inventory management challenges, and their capacity to handle a potential increase in demand due to a new subsidy. The insights from these interviews helped to inform the operational design of the program and to ensure its successful implementation from a retail perspective.
5. Digital Consumer Survey: A digital consumer survey was distributed to gauge public interest and identify potential barriers to ebike adoption. The survey was designed to reach a broad audience and included questions covering a variety of issues relevant to the study. The key areas of inquiry included:

    - Bike Trip Frequency: Understanding current cycling habits to determine the potential user base for a new ebike program.
    - Ebike Purchase Propensity: Assessing the likelihood of consumers purchasing an ebike and the factors influencing that decision.
    - Connectivity with Transit: Exploring how ebikes could complement existing transit systems and address the "first and last mile" problem.
    - Interest in an Ebike Subsidy Program: Directly measuring public support and demand for a new financial incentive program.
    - Concerns in Relation to Ebike Ownership: Identifying and categorizing key concerns, such as cost, security, charging, and safety, to inform program design and communication strategies.

New York City Initiatives

As noted, New York City defines ebikes slightly differently than New York State, and the generally accepted classification framework adopted throughout the United States. Specifically, while the definition of class-1 and class-2 ebikes remain generally consistent with best practice (maximum speed of 20 MPH with a pedal assist control mechanism for class-1 models and a throttle for class-2 models), class-3 ebikes in New York City include throttles. This differs from the New York State law, and accepted best practice, that defines ebikes with a similar maximum speed (25-28 MPH), but is pedal assist only without a throttle. This is an important distinction, as NYC is currently the only location in New York State where Class-3 ebikes are allowed to operate, but the legal classification of these units remains out of sync with local law.

Class 3 Ebike Classification Differential			
	People for Bikes (National Best Practice)	New York State	New York City
Max Speed	28 MPH	25 MPH	25 MPH
Pedal Assist	Yes	Yes	No
Throttle	No	No	Yes
Helmet Requirement	No	Yes	Yes

Public Housing residents are an important constituency for ebike adoption, as many units operated by the New York City Public Housing Authority (NYCHA) are situated in less transit accessible locations, and car ownership is low amongst tenants. In 2022, following a string of fatal fires resulting from improper charging of non UL-certified ebike batteries, NYCHA banned the storage and charging of ebikes and their batteries in any NYCHA apartment or common area.[9] In 2024, NYCHA updated these rules to allow legally compliant ebikes to be stored and charged in NYCHA units with specific guidelines. These include:

- Only one battery may be charged at a time, and not within five feet of a radiator or point of egress;
- Batteries may not be charged in common areas unless otherwise noted;
- Batteries must be plugged directly into an outlet and not connected to extension cords; and
- An adult age 18 or over must present and awake while a battery is being charged.[10]

Considering the safety and equity concerns discussed above, the focus of New York City's public and private ebike initiatives has understandably been on commercial cyclists.

Plans & Reports	
Charge Safe, Ride Safe: NYC's Electric Micromobility Action Plan (NYC Mayor's Office)	In 2022, the Mayor assembled an interagency task force to address growing safety concerns relating to micromobility operation and charging. This included 15 agencies - including NYCDOT, the fire department, NYCHA, NYPD – and numerous appointed officials. The report included six concise and direct goals to: 1. Prevent fires

[9] *New York City Housing Authority. (2022, July 7). Notice of rules and regulations change: E-bikes, e-bike batteries, and gas-powered vehicles prohibited in NYCHA buildings [Notice]. https://www.nyc.gov/assets/nycha/downloads/pdf/Notice-of-Prohibition-on%20E-bikes-and-Batteries-7-7-22.pdf*

[10] *New York City Housing Authority. (2024, February 28). New rules regarding electric micromobility vehicles and devices. The NYCHA Journal. https://nychajournal.nyc/new-rules-regarding-electric-micromobility-vehicles-and-devices/*

2. Prevent Crashes
3. Support Delivery workers
4. Promote Sustainability and Access
5. Improve Emergency Response
6. Educate the Public

Each of these goals were addressed in XX strategies, with specific objectives and projects including both ongoing initiatives and future plans.

1. **Support New Yorkers' Transition to Safe Legal E-Micromobility:** this strategy encompassed ongoing efforts – including the development of deliverista hubs, advocating for incentive programs for the purchase of legal ebikes and pilot to install public charging stations on NYCHA properties. In addition to these ongoing initiatives, this strategy calls for:

- A safe equipment access program that helps make micromobility affordable to New Yorkers. The City cites the need for state and federal funding sources for a scaled purchase subsidy, but notes that local initiatives like battery swaps are more feasible.
- The City states its intention to apply for federal funding to expand the NYCHA charging equipment pilot.
- The City commits to experimenting with different technologies to reduce fire risk and make public charging more accessible.
- The City plans to investigate fire mitigation technology from battery-related fires in both residential and commercial settings.

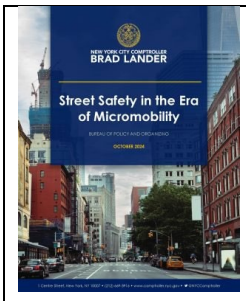
2. Fire Safety and Public Education

- This strategy encompassed ongoing efforts – including more targeted engagement with immigrant and delivery worker communities. Also recommended is expanding battery safety and micromobility charging training for different city stakeholders including child welfare staff, emergency management staff and tenant associations. The city will continue to expand these efforts beyond city staff resources, and work to educate the general public.

3. Regulation and Enforcement

- The cities ongoing initiatives include local laws to increase safety standards for micromobility devices; advocacy with the Consumer Product Safety Commission to take more aggressive action on ebike safety; and ongoing enforcement, and safe disposal of illegal batteries. Planned initiatives include continuation of these objectives, plus additional outreach and enforcement to combat the sale of illegal ebikes and a review of existing fire codes.

	4. Promoting the Growth of Safe E-Micromobility and Cycling • In addition to ongoing expansion of NYC's active transportation infrastructures, for many years NYCDOT has led bike bonanzas and helmet giveaways to educate New Yorkers. In addition to these ongoing initiatives, the plan calls for a pilot to allow Micromobility devices on park drives, more comprehensive roadway design to incorporate micromobility and enhanced bike education programs to include e-bikes.
Safer Charging Safer Deliveries (NYCDOT) 	The Safer Charging Safer Deliveries report provides an overview of the implementation and operation and performance of the City's Public Ebike Battery Charging Pilot to support commercial cyclists. In February 2024, NYC DOT announced the Ebike Battery Charging Pilot, a 6-month program that deployed ebike battery swapping cabinets—provided by Swobbee and PopWheels—and charging docks—provided by Swiftmile—at five locations in upper Manhattan, Lower Manhattan, Downtown Brooklyn and the Brooklyn Army Terminal. NYC DOT recruited 118 food delivery workers with Arrow Model 9 and Model 10 ebikes, offering free charging as an incentive. This pilot yielded several findings, including: • Battery swapping lockers outperformed charging stations by a significant margin with more than 12,000 battery swaps, and only 1,300 charging dock sessions over the course of six months. • There was a 35 percent decrease in at-home ebike battery charging among participants throughout the pilot. • Battery charging options near high densities of restaurants were the most frequently used, with 59 percent of all activity coming from a single pilot location in the East Village. • These services were generally very popular, with the majority of users expressing interest in paying for a monthly subscription to the service following the pilot. These important findings illustrate the potential of publicly available battery charging options, especially for commercial cyclists.
Street Safety in the Era of Micromobility (NYC Comptroller's Office)	In 2024, the NYC Comptroller's office published a report titled Street Safety in the Era of Micromobility. This report documents the dramatic rise of micromobility devices – including ebikes, escooters and mopeds – in relation to the growth of food delivery companies. Noting documented public backlash to growing ebike ridership (and safety concerns related to charging), the focus of the report is the regulatory, infrastructure and enforcement gaps related to micromobility parking and operations as well as recommended solutions. Specific gaps discussed include: • Cost barriers to legal ebikes have created a secondary market for lower cost ebike products without minimum safety standards - this is an



acute issue amongst the estimated 65,000 delivery workers that are majority low-income and/or immigrants.

- The growing use of delivery aps has fueled this dynamic creating a large-scale gig economy with lower wages and limited accountability by the ap companies for the behavior of commercial cyclists.
- The responsibility for enforcing ebikes differs across different agencies, creating a lack of clarity for users and different local stakeholders.
- The current roadway legal framework has not deterred illegal riding practices amongst micromobility operators.
- Ebike charging fires remain an issue in NYC despite changes to the law.
- Active Transportation Infrastructure design and implementation has been outpaced by the dramatic growth in ridership.
- Similarly, the policy framework for regulating micromobility has lagged growing ridership and popularity.

In response to these issues, the report proposes eight general recommendations that relate to ebikes, including:

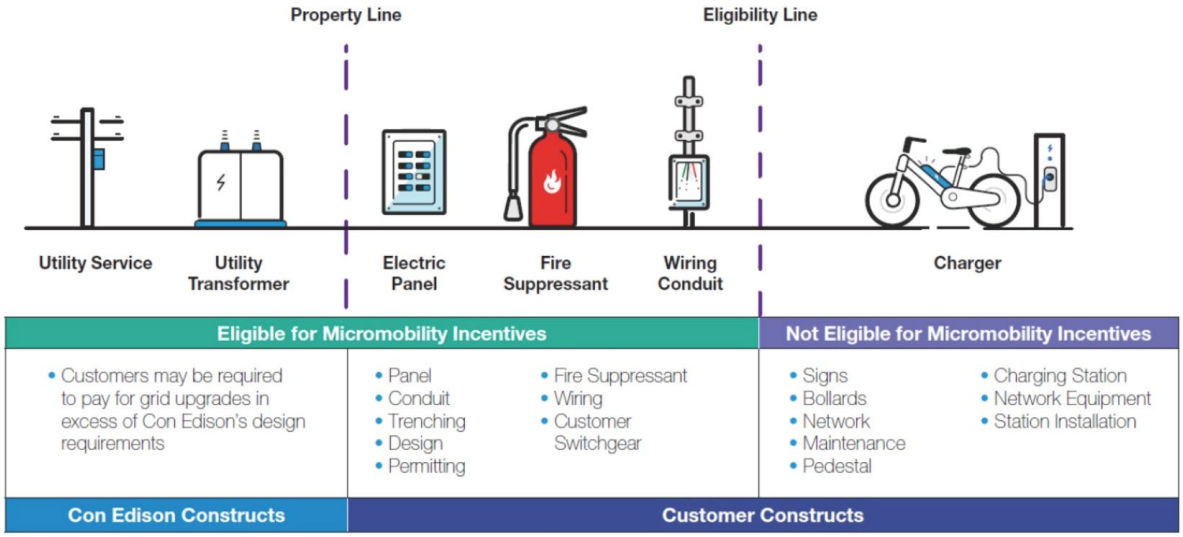
1. **Working at the local, state and federal level to cut off the supply of illegal micromobility devices.** This recommendation proposes an expansion of the local fire department and the Department of Consumer and Worker protection to issue fines, take legal enforcement action and shut down illegal retailers. The report also recommends that the city support federal legislation to end the import and sale of illegal ebikes.
2. **Creating a local licensing program for commercial cyclists.** This includes the development of new data systems to track the movement of goods and commercial operators, as well as a city-funded education and training program for all licensed commercial cyclists. The report also calls for stricter accountability for the app-based delivery companies through regulation of algorithms, and mandatory partnership with city agencies. In order to deter the use of unsafe models, the report recommends significant fines for the disposal of legally seized micromobility units that don't meet standards. The report proposes the construction of delivery hubs in high-volume delivery neighborhoods to provide safe charging and other resources for commercial cyclists. Other measures focus on app companies including stricter penalties for violation and more worker protections.
3. **Requiring restaurants to validate the use of safe, legal devices for their delivery employees.** This recommendation would hold restaurants accountable for ensuring that their delivery employees (not those paid

	via delivery apps) are using safe, legal equipment, with the potential for fines or other punitive measures. 4. **Investing in designated infrastructure and curb management solutions that support micromobility**. This may include and is not limited to wider protected bike lanes, more robust traffic calming measure, dedicated ebike parking, and neighborhood loading zones/freight consolidation centers. 5. **Expand access and affordability of safe, legal ebikes and batteries.** This includes support for a statewide ebike subsidy program as well as battery swaps locally. This aligns with the Mayor's Ride Safe, Charge Safe Action Plan. 6. **Expand safe ebike charging facilities across the City** by expanding the city's initial ebike battery charging pilot in the outer boroughs. 7. **Expanding data systems to track safety, volume and goods.** Many of these strategies echo the mayor's strategic plan for safe charging discussed above.[11]
Initiatives	
Ebike Trade-In Program (NYCDOT)	NYC DOT launched an E-Bike Trade-In Program. The program allows eligible food delivery workers to replace their unsafe devices with certified, high-quality e-bikes and compatible batteries. Eligibility includes: • This program is open to food delivery workers who: • have earned at least $1,500 in the past 12 months as a food delivery worker; • live in one of the five boroughs of New York City; • are at least 18 years of age; and • own and use an eligible mobility device to complete food deliveries. Selected program participants will receive a new certified Whizz Storm 2 e-bike with a spare certified battery in exchange for their unsafe devices and batteries.
Ebike Battery Charging Pilot (NYCDOT)	In 2024 the City launched an ebike battery charging pilot to test different technologies for public charging for food delivery workers. See *Safer Charging Safer Deliveries* report summary above.
E-Bike Battery Swapping and Charging Cabinets on Public Sidewalks (NYCDOT)	This program enables property owners to install public charging stations and battery swapping cabinets in public rights of way. NYCDOT provides revocable consent to property owners following an approval process with up to one year in lead time. Permission for property owners to install cabinets is contingent on compliance with NYCDOT siting requirements.

[11] *Office of the New York City Comptroller. (2024, October 29). Street safety in the era of micromobility. https://comptroller.nyc.gov/reports/street-safety-in-the-era-of-micromobility/*

NYC Parks Electric Micromobility Pilot (NYC Parks and Recreation)	NYC Parks is piloting a rule to allow e-bikes and e-scooters on park drives and greenways. This pilot program is part of the "Charge Safe, Ride Safe" initiative and aims to provide an opportunity for responsible micromobility in parks.

In addition to local government initiatives, ConEdison (ConEd) – The City's public utility provider – launched the Power Ready Micromobility Program that provides incentives for both utility-side and consumer installation of safe charging infrastructure. Under this $18 million program, property owners of affordable multi-unit dwellings in disadvantaged communities are empowered to install charging infrastructure such as universal charging docks, and battery charging cabinets. ConEd will cover 100% of the required utility-side upgrades for infrastructure, and 50% of non-end product-related expenses, including building-side conduit, electrical panel work, design, permitting and other electrical upgrades. Property owners are responsible for 100% of the cost of the charger, cabinet or other end-use equipment.[12]



In 2021, the Equitable Commute Project (ECP) connected 17 front-line delivery workers with subsidized ebikes, and additional financing options to further offset the upfront cost of these units. While limited in scope, the ECP also worked with Spring Bank to develop an accessible small-dollar, low-interest loan program that is still available today.[13]

[12] *Consolidated Edison Company of New York. (n.d.). PowerReady micromobility program (e-bikes and scooters).* https://www.coned.com/en/our-energy-future/electric-vehicles/micromobility-infrastructure-incentive
[13] *Equitable Commute Project. (n.d.). The program.* https://www.equitablecommute.org/program

Ebike Incentive Programs in North America

The Transportation Research and Education Center (TREC) at Portland State University maintains an inventory of 170 ebike incentive programs across North America, including 21 in Canada and 149 in the United States. 81 of these programs are currently active, while 24 have closed with the remainder in various stages of planning and approval. There are many different types of programs:

Purchase Subsidy	Purchase subsidies offer discounts to consumers purchasing ebikes, and represent 70% of incentive programs in North America. This can come in the form of a point-of-sale voucher or post purchase rebate.	Denver, CO Cleveland Colorado (Statewide) Minesota (Statewide) California (Statewide)
Sales Tax Waiver	Sales tax waivers make legal ebikes sales tax exempt within the jurisdiction purchased.	British Columbia, CA
Lending Library	These programs make ebikes available to consumers for a pre-set period of time before returning the bike for someone else's use. Lending libraries are often administered in partnership with libraries and/or schools.	Community Pedal Power E-bike Lending Library (Boston, MA)
Ride to Own Programs	Ride to Own programs provide ebikes and safety equipment to participants at no cost. In exchange, program participants participate in community building and education programs.	Ride2Own (Hillsboro, OR; Milwaukie, OR; Parkrose Neighborhood, Portland, OR)
Ebike Loan Programs	Ebike loan programs provide financing for the purchase of qualifying ebikes. This enables consumers to make the upfront purchase and pay off the balance over time.	Clean Energy Federal Credit Union (Englewood, CO) GoGreen Cycle Loan (New York, NY)
Vehicle trade in Voucher	Participants are given a voucher that can be used toward the	Clean Cars for All Program (San Francisco, CA)

	purchase of an ebike in exchange for donation of a car. In some cases, including NYC, programs are designed specifically to enable delivery cyclists to trade in illegal ebike models for legally compliant ebikes.	Clean BC Go Electric Transportation Options Program, British Columbia Ebike Trade In Program (New York, NY)
Tax Credits/Rebates	Ebike proof of purchase can be submitted as a deduction on an itemized tax return.	Internal Revenue Service (Proposed)

Purchase Subsidy Results and Takeaways

The Ride Clean Ebike Incentive Program proposes following a purchase subsidy model. As previously noted, this is the most common type of ebike incentive, comprising 70% of all programs in the US. These programs are very popular with consumers, with most programs reporting rapid oversubscription following launch. There are slightly more post-sale rebate programs, but generally programs are evenly split with point-of-sale discounts.

Discount Type	#	%
Point of Sale Discount	37	46%
Post Sale Rebate	43	54%

While the majority (64%) ebike subsidies offer a flat rate discount roughly 33% of programs offer a variable rate discount with a final cap. Programs in the US offer a wide range of subsidy amounts from $50 to $7,500. 17 Subsidies in the US and Canada offer subsidies for different types of bikes, such as cargo bikes or adaptive vehicles. More than half of subsides that are active, approved or have been previously implemented have included some consideration of income whether as an eligibility requirement, or a qualification option for a higher subsidy. 40% of subsidies without an income requirement have a low-income option. The average subsidy amount for low-income subsidy applicants is $1,084.

Type	#	%	Details
Low Income Qualified	23	29%	10 (43%) of subsidies with low-income requirements have tiers that corelate with higher subsidy amounts.

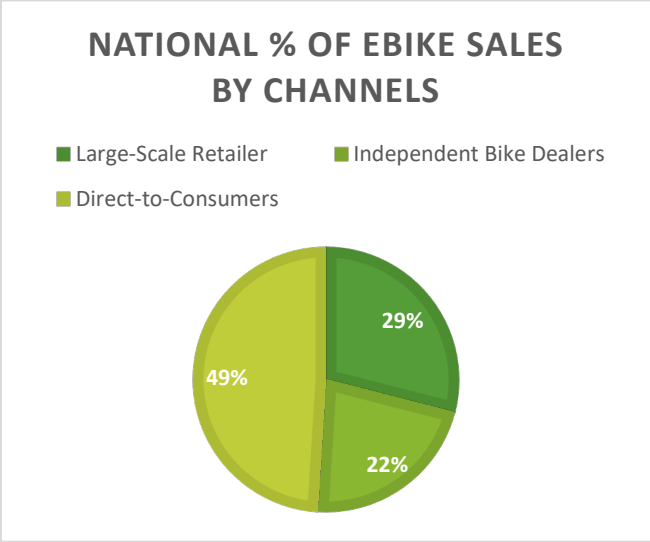
No Income Qualifier	55	70%	22 (40%) of subsidies without a low-income eligibility requirement have low-income option

Ebike Retail Market and Pricing

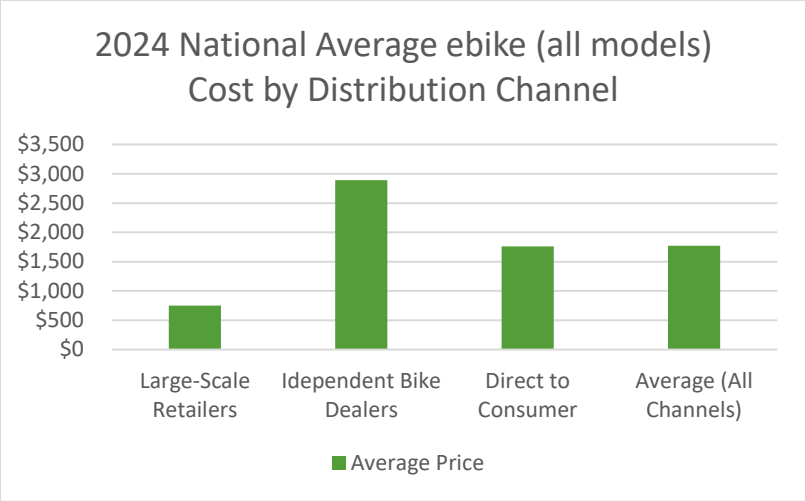
According to People for Bikes (PFB), ebikes are sold through three channels in the US:

- Large-Scale Retailers (Walmart, Amazon, Dick's Sporting Goods, etc.)
- Independent Bike Dealers (bike shops)
- Direct to consumers (Customer buys from brand website, ships directly to their apartment or house)

Nearly half of all ebikes sold in the US are direct to consumer from online ebike sellers.



According to PFB, the majority of ebikes sold in the US today are Class-2 Ebikes consisting of a throttle and a motor rated up to speeds of 18 miles per hour. The average price of an ebike across all classifications and distribution channels is $1,770. While ebikes sold through large-scale retailers tend to be less expensive, bikes are not assembled by skilled technicians and servicing options are limited if available at all. Similarly, while direct to consumer ebike models tend to be less expensive than those sold through independent bike dealers, these units may incur additional costs for shipping and professional assembly upon delivery. Servicing for direct-to-consumer units may only be available at select locations.



The average cost of a class-1 pedal assist Ebike is significantly higher than class 2 throttle ebikes with an average cost of $2,142 across all channels.

Consumer Survey Insights

A 10-question survey was prepared to understand consumer preferences and barriers as it relates to ebikes. The survey, which received more than 50 responses included a variety of questions covering current modes of transportation, ebike ownership and usage, barriers to riding ebikes more often, and factors that would improve the overall cycling experience. The data indicates that a significant number of respondents regularly use traditional bicycles, ebikes, and other modes of transport such as the subway and bus. This suggests that ebikes are used as part of a multi-modal transportation strategy.

Ebike Ownership and Usage

- **Ownership:** A portion of the respondents indicated that they currently own an ebike, demonstrating a growing segment of the population that has already embraced this technology.
- **Reasons for Riding:** For those who own and ride ebikes, the primary reasons cited for their use include **commuting to work**, **running errands**, and for **leisure/recreation**. This highlights the ebike's versatility as both a utility and recreational vehicle. For commuters, ebikes provide a faster and less physically demanding alternative to traditional cycling or public transport, allowing them to navigate traffic and arrive at their destination without being fatigued. For daily errands, the added power of an ebike makes it easier to carry groceries or other items, expanding its utility. On the leisure side, ebikes allow riders to cover greater distances with less effort, making it easier to explore more of the city's parks and paths.

Barriers and Improvements

Respondents were asked to identify both barriers to riding an ebike more often and what would improve their overall cycling experience. The results show a strong overlap between these two categories, with key themes emerging:

- **Safety and Infrastructure:** A top concern for respondents is the **lack of bike lanes or other safe infrastructure**. This is closely tied to a **fear of conflict with cars**, which stems from the perception of danger when sharing roads with fast-moving vehicular traffic. This fear is a major deterrent for both potential and current riders, underscoring the critical need for more dedicated, protected cycling infrastructure to create a safer environment.
- **Cost and Theft:** The **cost/price point** of an ebike, which is often a significant financial investment, and the risk of **theft** are significant deterrents for potential owners and are also seen as major areas for improvement. The high value of ebikes makes them a target for theft, and the fear of losing such a costly item can prevent people from purchasing one or from using it as their primary mode of transportation.
- **Parking:** The **lack of secure bike parking at destinations** was another frequently mentioned barrier and a desired improvement, suggesting that the convenience of e-biking is hampered by the lack of secure storage options. This issue directly connects to the fear of theft, as riders are hesitant to leave their expensive ebikes unsecured for extended periods, limiting where they feel comfortable riding.

Future Ebike Adoption

- **Purchase Likelihood:** Many respondents expressed a high likelihood of purchasing an ebike in the next 12 months, with responses ranging from "Maybe" to "Extremely likely." This sentiment indicates a strong market for ebikes among New Yorkers who are considering their options for personal mobility.
- **Price Point:** The most frequently cited price points respondents are willing to spend on an ebike fall within the **$1,000- $2,500** and **$2,500- $4,000** ranges. This demonstrates that potential buyers are prepared to make a substantial investment, suggesting a market that values quality and performance.
- **Try-Before-You-Buy:** There is strong interest in a 'Try an Ebike' program hosted by Bike New York, suggesting that hands-on experience could be a key driver for future ebike adoption. Such a program would allow potential customers to test the technology risk-free, helping them overcome the high entry cost and initial uncertainty about ebike performance and feel.

The survey data reveals that while there is strong interest in ebikes, concerns about safety, infrastructure, and cost remain significant barriers. The findings suggest that improving protected

bike lanes, ensuring secure bike parking, and offering opportunities for hands-on experience through programs like a 'Try an Ebike' initiative could be effective strategies to encourage wider ebike adoption in New York City.

Insights from Bike shops

In preparing this plan, a short, 10-question survey was developed for distribution to bike shops. This included questions focused on ebike program participation, and price tolerance for subsidy carrying costs. The Bike New York team tried, with limited success, distributing this through a variety of virtual channels including trade groups, and direct email solicitations. In conversations with bike shops and other retail bike industry professionals, the team came to understand that limited response was mainly driven by distribution timing, which coincided with peak season (spring/early summer) for bike shops. The team pivoted to in-person interviews with shop owners and administrators to ensure this demographic could share their insights. This is an important finding in of itself, as it demonstrates the need to budget for a scaled, in-person outreach effort to recruit bike shops for an incentive program of this scale.

Interviews with shop owners overwhelmingly highlighted reimbursement timing as the primary concern. Low profit margins and tenuous cash flow make it exceedingly difficult for bike shops to carry the cost burden of a subsidy. Most shops indicated a need for reimbursement within 24-48 hours of voucher submission. Some shops indicated up to a week of cost-carrying tolerance. This underscores the need for the development of a simple, real-time system for pre-sale voucher verification as well as an intuitive process for submitting reimbursement request. Shop owners also validated industry sales data suggesting that class-2 ebikes were the most frequently sold units with the most availability from distributors.

Distributor and Manufacturer Insights

The Bike New York team conducted an extensive series of interviews with bike and component manufacturers such as Cannondale and Bosch, as well as independent bike distributors. All manufacturers and distributors validated concerns related to bike shop cash flow and subsidy carrying costs and echoed the need for a 24–48-hour reimbursement turnaround. Distributors and manufacturers provided feedback on various product sourcing models designed to optimize price control and mitigate safety concerns. Several manufactures expressed interest in providing program-specific products at a reduced cost exclusively for subsidized bike fulfillment.

Several distributors also expressed concerns about the optics of subsidies exclusive to low-income individuals. Specifically, interviewees noted that these targeted programs can cultivate a perception of ebikes as exclusively low-income modes of transportation.

Selected Case Studies

California

Funded by the California Air and Resources Board, the California E-Bike Incentive Project is administered by Pedal Ahead – a San Diego-based nonprofit. The initial program was funded to provide up to $1,000 vouchers with two tiers of point-of-sale incentives starting at $1,750 and $2,000 to support the purchase of a new electric bicycle (e-bike). This program is open to adult (18+) California residents that meet with a qualifying household income of 300% of the Federal Poverty Level (FPL) or less. Lower income applicants were eligible for the full $2,000 subsidy amount. In order to promote the use of local bike shops but address consumer preferences for online purchases, subsidies applied to digital orders were only permissible for retailers with a brick and mortar store. In addition to the location of a purchase, eligible bikes were required to have safety equipment such as lights One of the program's initial challenges was a series of technical glitches that led to website portal crashes, lack of access to the application and subsequent frustration among consumers. These issues were exacerbated by a "first-come, first-serve" application system, that was overwhelmed by immense demand leading to frustration among applicants. In response, the program shifted to a lottery-based system to address technical issues and ensure fairness given limited voucher funding. In tandem, program administrators enhanced technical capabilities and website bandwidth capacity.

Colorado

In 2022, the Colorado Air Quality Improvement Investments Act (SB22-193) allocated $12 million to a "community access to electric bicycles" cash fund. This fund, created by the bill, is used to support e-bike ownership or bike share programs, with funds going to local governments, tribal governments or nonprofits. The bill also created a rebate program for low-to-moderate income Coloradans. Eligible applicants – subject to income requirements – pre-applied and present proof of qualification. The program was almost immediately oversubscribed resulting in the sale of approximately 8,000 bikes among a pool of more than 40,000 applicants. As a result, the state added additional funds to the program to provide more people access to the subsidy. While vouchers were initially distributed on a first come, first serve basis, the state pivoted to a lottery system to increase fairness in the face of the program's overwhelming popularity. Beyond the ebike rebate, vouchers included additional funds for the purchase of helmets and other safety equipment. This rebate provided a point-of-sale discount that placed a cost burden on bike shops. This was a major point of concern for shop owners given their narrow cashflow margins. A key point for recruiting bike shop partners was guaranteeing expedited reimbursement – a key feature that arose repeatedly throughout the literature review.

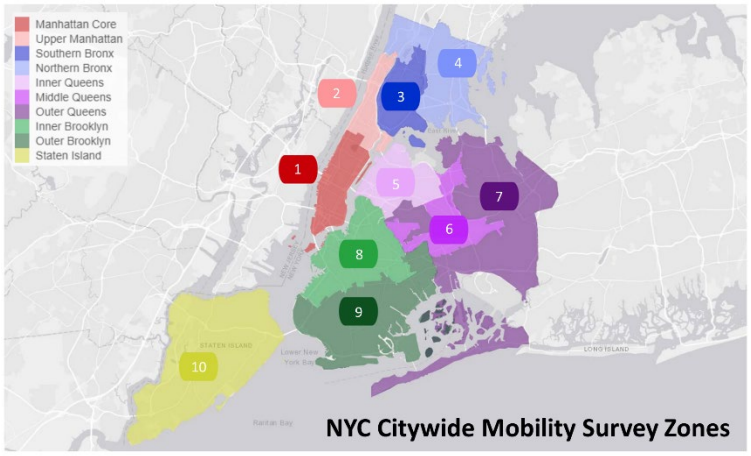
New York State

In 2025, two subsidy programs – in the City of Buffalo and the Village of Ossining - were launched in New York State. Facilitated by Shared Mobility, Inc. with support from NYSERDA, these programs both provided point of sale discount vouchers via a lottery-based participant selection system. The subsidy program in Ossining was funded through NYSERDA's Clean Transportation Prize and will provide 400 $1,000 vouchers. In Buffalo the subsidy program will provide $650 to 75 Buffalo residents. Eligible voucher recipients are required to participate in an ebike safety training course in order to obtain their vouchers.

4. Ride Clean Program Parameters

Eligibility

The Ride Clean Program will be open to all New Yorkers 18 and older throughout the five boroughs with priority voucher set asides for households in areas of the city that are generally "outside" the core subway system, and/or have less frequent bus service. The Ride Clean Program will use NYCDOT's Clean Mobility Survey[14] (CMS) Zones as the basis for prioritized eligibility. Per the CMS zone map depicted here, priority eligibility will generally conform to the following zones and approximate populations[15]:



- Zone 4 – Northern Bronx (709,500 residents)
- Zone 6 – Middle Queens (447,544 residents)
- Zone 7 – Outer Queens (1,025,216 residents)
- Zone 9 – Outer Brooklyn (1,579,000 residents)
- Zone 10 – Staten Island (492,734 residents)

Lottery selection for vouchers may be weighted based on the overall volume of applications across all zones. In addition to theseneighborhoods, New York City Housing Authority (NYCHA) residents will also be eligible for the priority voucher set asides. **The total estimated eligible population for the Ride Clean Program is at least 6 million adult New Yorkers (ages 18+).**

NYCHA Rules Regarding Electric Micromobility Vehicles and Devices

As of February 2024, NYCHA amended their resident rules to allow the storage and charging of legally classified ebikes within NYCHA apartments. The rule bans the use of extension cords for ebike batteries and restricts charging to a single battery in a unit at any given time. Batteries cannot be charged in common areas and must not be located in places that can prevent egress.[16]

NEW YORK CITY HOUSING AUTHORITY

[14] NYC DOT conducts a household travel survey called the Citywide Mobility Survey (CMS) to assess the travel behavior, preferences and attitudes of New York City residents. Survey responses are divided between ten geographic zones across all five boroughs.
[15] Populations are approximate as NYCDOT CMS zones do not conform to standard geographic or administrative designations (with the exception of Staten Island).
[16] https://nychajournal.nyc/new-rules-regarding-electric-micromobility-vehicles-and-devices/

In order to maximize the benefits of the program, only one subsidy will be granted per household. Low-income applicants will eligible for an increased subsidy amount. Subject to change based on future threshold adjustments at the time of program implementation, low-income eligible applicants shall be defined as those earning household income being 80% or less of Area Median Income (AMI).

Subsidy Amount

Bike New York anticipates the Ride Clean Program will facilitate the sale of more than 4,000 ebikes. In alignment with the Ride Clean Program goal to make Ebikes more accessible to New Yorkers, Bike New York aims to reduce the cost of a safe legal ebike to that of a quality pedal bike, and even less for eligible low-income New Yorkers and NYCHA residents. The total value of an ebike subsidy will be divided into two categories as follows:

Subsidy Amount	Anticipated # of Subsidies	Eligibility
$500	2,348	Open to all New Yorkers with priority set asides for low-transit density neighborhoods.
$1,100	1,660	Open to low-income individuals.

The Ride Clean Team determined these subsidies amounts based on the following factors:

- Consumer Cost Reduction: To make the program attractive, the Ride Clean team sought to reduce the cost of an Ebike to that of a quality pedal bike for low-income individuals. In tandem, the Ride Clean team wanted to provide a significant incentive for non-low-income individuals to consider purchasing an Ebike, without over subsidizing the micromobility vehicle.
- Ability to Test and Recalibrate: Bike New York intends to release vouchers in two phases. This will allow the Ride Clean Team to observe program effectiveness and make adjustments moving forward to the subsidy amount before releasing the balance of available funds.
- Avoiding Over-Subsidizing Ebikes: Extensive research into similarly or greater sized subsidy programs indicates that these programs are extremely popular with consistently high demand exceeding supply. This is a primary driver for an industry-wide shift to lottery-based subsidy programs to maximize fairness given the frequency of over subscription. Further insights from peer programs and micromobility researchers indicate that the average subsidy amount- particularly for non-income restricted programs- is derived from

early program successes, and higher than necessary in light of the consistently high demand.

Subsidy Delivery Mechanism & Requirements

The Ride Clean New York Program will utilize a random selection (lottery) process to select participants who will receive an electronic voucher. Any eligible New Yorker can sign up for a chance to receive a voucher, and will be required to review ebike safety information before completing their entry. This voucher can be redeemed for a discount at the point of sale. Ride Clean subsidy vouchers can only be redeemed at brick-and-mortar bike shops in New York City. This policy is intended to stimulate economic growth within the local bike community, and, as important, also provide an ongoing means of servicing subsidized ebikes. In addition, this service requirement will act as a deterrent to using the Ride Clean Incentive for lower quality, and potentially non-legally compliant models that are often purchased online. Restricting the subsidy to bike shops provides an important touchpoint between professional bike retailers and consumers, helping to ensure that New Yorkers select the best model tailored to individual use cases.

Program Operations & Implementation

In alignment with industry best practice, the Ride Clean Program will utilize a lottery-based application system to maximize fairness and reduce oversubscription. Following program setup and bike shop recruitment in Q2 and Q3 of 2026, the Ride Clean Program will release the Ride Clean Program vouchers in two phases:

PHASE 1: Pilot Launch *(Fall 2026)*	Analysis and Program Recalibration *(Winter 2026)*	PHASE 2: Final Voucher Release *(Summer 2027)*
• **The Ride Clean Team will open the lottery.** • **Roughly 1/3 of the available vouchers (approximately $1 million) will be released.**	• Ride Clean debrief of what worked well and what did not • Overview of program performance data • Program updates to address new and ongoing issues	• The Ride Clean Team will market the final wave of voucher releases • Phase 1 applicants will NOT need to reapply. • Remaining $2 million vouchers will be distributed.

Program participants in Phae 1 of the voucher release who are not selected through the lottery will not be required to reapply, and will automatically be entered into the Phase II lottery. Once the Phase II lottery is complete, those that are not selected will receive a notice and be provided with details on Spring Bank's ebike financing options as an alternative.

GoGreen Cycle Loan | Spring Bank, NYC

As a community bank in New York, Spring Bank partners with bike shops across New York City to offer affordable and inclusive bike financing with rates as low as 10.00% APR through their GoGreen Cycle Loan Program. No credit score is required for eligibility. Anyone 18 years or older with a minimum salary of $20,000 can visit any pre-approved bike shops to identify an ebike, and apply for the loan.[17] Additional details on Spring Bank's role on the Ride Clean Team are provided in section 6 below.

Ride Clean Administration Portal

The Ride Clean program will require a proven and robust online portal system to process both lottery applications from consumers and bike shop reimbursement. The portal will also require capacity for high volumes of simultaneous web traffic to accommodate anticipated demand. Bike New York has extensive experience implementing large scale online application systems as the purveyors of the highly popular and always fully subscribed annual Five Boro Bike Tour, the largest cycling event in North America. Each year this event hosts 30,000 cyclists who register online prior to the event. For the Ride Clean Program, Bike New York will partner with the vendor APTIM to customize a portal that meets all of the program requirements. APTIM has a proven track record of managing rebates for over 20,000 e-bikes in more than 8 jurisdictions across the United States, and has built a flexible platform that can be modified to meet all of the Ride Clean Program

[17] *Spring Bank. (n.d.). GoGreen cycle loan. https://www.spring.bank/gogreen-cycle-loan/*

Program Parameters

requirements for consumers and bike shops, as well as support ongoing administrative performance management.

Consumer Experience

Applicants will enter their information into a simple and intuitive online portal designed by Ride Clean Program partner APTIM (See section 6). Those that enter an address outside the target geography will be determined to be ineligible and be directed to Spring Bank's ebike loan program as an alternative means to purchasing an ebike. Eligible applicants will then select if they intend to enter the general lottery or low-income lottery. Criteria for entry into the low-income lottery is discussed in detail later in this narrative. The lottery will remain open a minimum of one week and may extend up to 30 days depending on the volume of applications. Between the time of lottery entry and eventual selection, participants will receive mandatory education about ebike operation and safety that will be disseminated and documented via one of two methods pending the outcome determined during the system design phase:

Option 1: Built-In Application Video	Option 2: Prescheduled Classes
Before submitting their lottery entry, participants will be required to watch a mandatory 5-10 minute video on ebike safety as described below. The application will not be able to proceed until the video has finished playing, and users will be required to acknowledge their understanding of the material provided. Once acknowledged, the applicant can submit their lottery entry. The video will be available in multiple languages.	Bike New York will preschedule a series of its existing virtual 'Introduction to ebikes' classes and allow participants to sign up for daytime or evening sessions directly in the lottery application process. Participants who attend the webinar will receive a certificate of completion which will be submitted with the required documentation for selected lottery applicants.
While the delivery mechanism may differ, both options will provide the same basic information including: • *Ebike classifications and related laws in NYC;* • *Tips for buying a bike (identifying uses, sizing, accessories, etc);* • *Basic ebike operations (Starting/stopping, scanning, signaling, etc.);* • *Charging safety best practices; and* • *NYC resources available to riders.*	

While option 1 is preferred, the final method for this mandatory education requirement will be determined during the project development phase based on the Ride Clean Program portal's technical capabilities and available budget. Participants will be randomly selected and be

prompted to upload verification documents for those respective tracks. Verification will include two forms of proof of address for all applicants, and tax returns and/or NYCHA lease for low-income applicants. Once verified, users will receive their voucher electronically. Each voucher will include a unique identification number with redemption instructions as well as with additional information on Spring Bank's ebike loan program to further reduce the upfront cost. Participants can bring their vouchers to participating bike shops and receive an immediate discount off the price of an ebike.

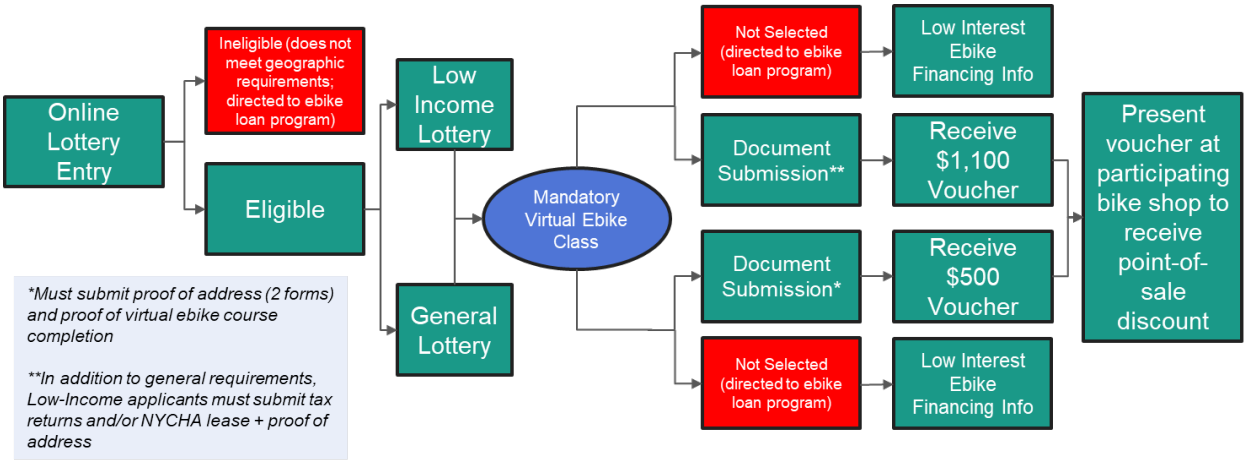


Figure 2. User experience flow chart.

Participants who are not immediately selected to receive vouchers for the lottery will be placed on a waitlist. This waitlist will remain valid until all participants have been verified and vouchers have been redeemed. If a lottery participant fails to submit documentation within seven days, a new participant will be randomly selected from the waitlist. The waitlist will remain active after the first phase of vouchers has been redeemed. Participants on the waitlist will be automatically considered for the second phase of voucher releases. After the first phase of vouchers has been redeemed, waitlisted applicants will receive an email indicated their status, as well as instructions including next steps.

Bike Shop Experience

Bike shops will receive the voucher from customers at the time of sale. Bike shop employees will enter the unique voucher code into an online Ride Clean Portal that will provide immediate validation and enable the transaction to take place. Bike shop employees will then initiate the sale with the prescribed discount and retain the voucher. After the sale, bike shop owners will submit the voucher and proof of purchase into the portal designed and managed by APTIM.

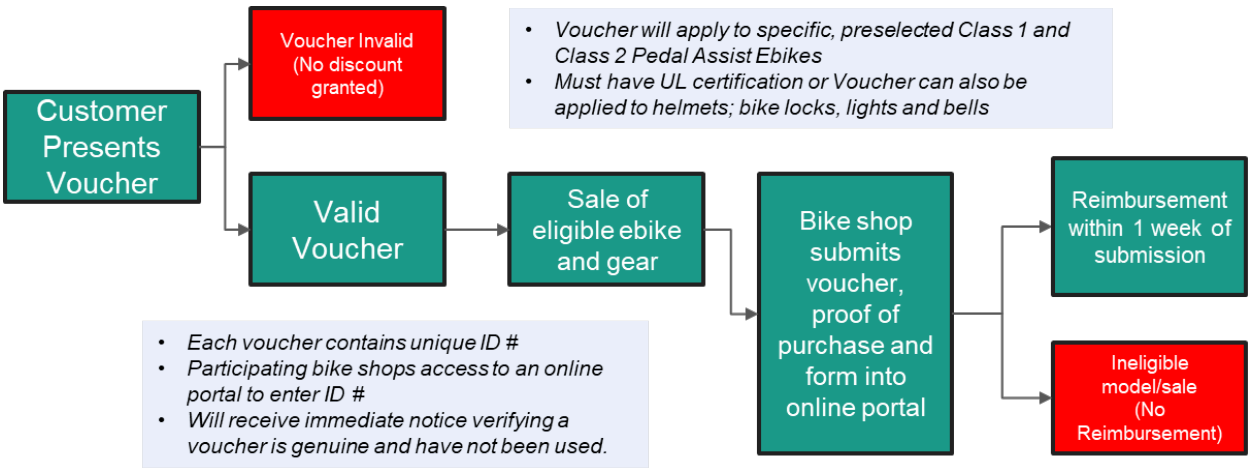


Figure 3. Bike shop experience flow chart.

Bike Sourcing Model

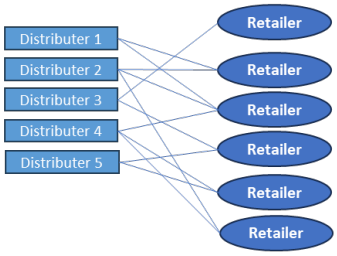
The Bike New York Team evaluated several models for sourcing and approving safe legal ebikes for the program in order to maximize the benefits of each subsidy dollar, and also to address potential and emerging barriers. These include ebike cost uncertainty due to ongoing tariff negotiations as well as price fluctuations for finished products delivered by manufactures and disseminated by participating individual bike shops in NYC. Virtually every public ebike rebate or subsidy program in North America uses what the Bike New York team has termed a "free market" model. This means that any ebike that falls within the program guidelines – and is often preapproved by program administrators with participating bike shops – is eligible for reimbursement. While simpler to administer, this model does little to maintain consistent pricing amongst eligible ebikes, and crucially for NYC, provides minimal opportunities for purchasing guidance and education.

Based on discussions with distributors, manufacturers and bike shops, the Ride Clean team developed a simple direct sourcing model to address each of these issues. Through this approach, Bike New York will issue a request for proposals (RFP) to identify 3-4 American manufacturers to work with for this ambitious program. Each selected vendor will make two models of Ebikes- a hybrid model and an accessible step through frame option- available for the program at a pre-negotiated price point consistent across each vendor. Vendors will also be required to fulfill bikes with pre-approved safety and program branding decals. This model has several benefits including:

- Maximizing price control and education opportunities;
- Guaranteeing product quality, battery safety, component quality and availability; and
- Enabling the Ride Clean Team to tap into each distributor's existing network of retail bike shops in the city, reducing recruitment challenges.

Free Market Model

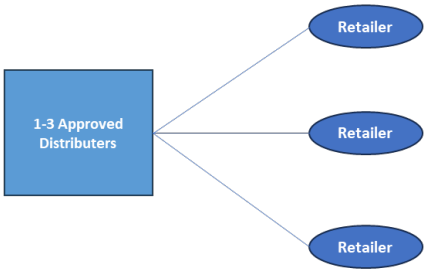
- *Any eligible ebikes from participating bike shops are eligible*
- *Participating bike shops must pre-register qualifying ebike models with program administrator*



Pros	Cons
- *Simpler model* - *A lot of precedent* - *Easier for existing ebike retailers to participate* - *Expands consumer choice*	- *Significant pricing variations* - *Requires additional bike shop preapproval steps* - *Places product research burden on consumers*

Direct Sourcing Model

- *RFP process to identify 1-3 approved distributors/manufacturers*
- *Administrator negotiates consistent price points for 2-3 universal ebike frame types*
- *Selected manufactures/distributors work with existing network of retailers/bike shops to sell bikes*



Pros	Cons
- *Complete price control* - *Reduce bike shop recruiting burden for program administrator* - *Reduces storage issues* - *Opportunity for customized / branded ebikes*	- *Distributor conflicts* - *Potential bike shop friction* - *Extra procurement step in program setup*

Future Considerations

The Ride Clean team investigated many subsidies across North America and identified potential opportunities to consider in future iterations of the Ride Clean New York Program. These include:

- Different Incentives for a wider variety of bikes: In alignment with other precedent incentive programs in North America, future iterations of the Ride Clean Program may include a greater variety of eligibility tiers to extend the subsidy to additional types of ebikes. For example, a long-tail cargo bike may be eligible for a greater subsidy in a future effort.

CASE STUDY | City of Denver

The City of Denver offered a baseline $400 purchase incentive to any resident, and $1,200 for low-income individuals. Program applicants purchasing cargo bikes were eligible for an additional $500 for cargo bikes to offset the higher costs of these models.

- Gear Incentives: Many subsidies include an additional amount of money available for safety equipment such as helmets, locks, lights and other gear. While The Ride Clean Program

Voucher will not preclude the purchase of safety equipment with a bike, the cost will not be absorbed by the voucher discount in order to maximize the number of Ebikes we get into the NYC transportation environment.

- Consideration for Conversion Kits: Future iterations of the Ride Clean Program may consider conversion kits as a low-cost opportunity to extend the reach and value of an ebike incentive in New York. These kits enable consumers to attach a mechanism to a pedal bike that effectively transforms it into a pedal assist and/or throttle controlled ebike. These units can be considered permissible as long as they meet battery certification requirements, and the end result of the conversion is a bike that meets the legally classified ebike typologies. These conversion kits range in cost from $250 to $1,000 – significantly less expensive than a brand new ebike, enabling a public subsidy to reach more New Yorkers while mitigating some consumer concerns around weight and storage. Despite this opportunity, challenges remain that preclude their inclusion in the initial launch of the Ride Clean Program. Many of these products are sold online directly to consumers, bypassing local bike shops. As a result, improper installation, or installation on a bike in need of professional maintenance, may pose safety risks for cyclists and other roadway users. In addition, it is unclear how these devices will be maintained over time, and what costs may be associated with repairs above and beyond routine bike maintenance. While these units present a potential opportunity, further investigation and iteration is needed to address these challenges before integrating them into the proposed or future Ride Clean Program.

Timely Bike Shop Reimbursement

Bike Shops are essential stakeholders in the success of the program. As noted in section 3, the Ride Clean Team found that the number one issue for bike shops is timely reimbursement for voucher discounts on ebike sales, with an ideal turnaround window of 24-48 hours and a maximum carrying cost tolerance of one week. During the pre-program launch recruiting phase, participating bike shops will be encouraged to sign up for direct deposits via ACH payment to expedite payment processing. From an administrative perspective, the Ride Clean Team at Bike New York will require cash liquidity of $1-2 million once the vouchers are released to guarantee timely reimbursements for bike shops. The Ride Clean Team has identified a preferred method and three alternatives to address this issue:

- PREFERED: Clean Mobility Grant Funds in Escrow: If successful in obtaining Clean Mobility Demonstration Phase funding, the preferred option would be for NYSERDA to release a portion of grant funds to be held in escrow during the Phase 1 voucher release. The Ride Clean team can draw on these funds as reimbursement requests begin processing. This will enable Bike New York to maximize reimbursement turnaround time for bike shops and reduce the cost burden for Bike New York as a 501c3 nonprofit organization with limited

ongoing liquidity. Holding funds in escrow also reduces risk to NYSERDA, by ensuring that funds are not accessible by the contractor until required for reimbursement.

- Alternative Option 1: Establishing a Line of Credit: Bike New York will work with Spring Bank – a B-Corp Community Benefit Bank with existing ebike financing programs – to open a $1 million line of credit (LOC). Bike New York will draw on this LOC to fulfill reimbursement requests, and then submit invoices to NYSERDA for demonstration fund reimbursement. While this option does address cashflow needs for bike shop reimbursement, it opens Bike New York up to potential financial liability in the form of interest accrued on the LOC. Bike New York would need to work in close coordination with NYSERDA to ensure timely reimbursement and avoid incurring potentially large and ongoing interest charges.
- Alternative Option 2: System Vendor Carrying Cost: The Ride Clean team will partner with APTIM to oversee the backend system that will process both consumer-side voucher applications and bike shop reimbursement submissions. In collaboration with BNY, the team will set a carrying cost price ceiling based on available liquidity. Due to financial limitations and risk, this scenario would likely require at least two additional voucher releases outside the two that are planned, and extend the program later into the planned completion by the Fall of 2027. While this option was discussed, it will require contractual commitment and may increase vendor cost because of the financial risk burden.
- Alternative Option 3: Private Sponsorship: Bike New York has a long history of obtaining and managing private and philanthropic sponsorship. In exchange for preapproved marketing assets integrated into program materials, Bike New York may have the option to draw on private sponsorship to obtain additional cash to support subsidy operations. This option comes with the highest degree of uncertainty, and will require additional time for outreach and marketing. It may also limit the size of voucher releases depending on the degree of sponsorship. This method will likely require the integration of branded assets throughout the program.

Mitigating Oversubscription & Maximizing Affordable Ebike Access

A random selection (lottery-based) application system will mitigate oversubscription concerns that have plagued other programs and have led to both technical and optical challenges. In addition to this core program parameter, Ride Clean NY will also have additional measures designed to address these issues. Specifically:

- Voucher Expiration: Vouchers will have a 45-day expiration from the time of their initial issue. This ensures that ebike purchases are timely and enables the program to proceed efficiently while maximizing fairness and eliminating the potential for unused vouchers.
- Multi-Phase Voucher Release: The Vouchers will be released in two phases. The first phase will serve as a pilot, enabling the Ride Clean Team to make adjustments based on changing

program needs. Any issues that arise during the first phase can be addressed prior to the release of second phase vouchers.

- Access to Ebike Financing: Even with the subsidy, the remaining cost of the ebike may still present a barrier to purchasing an ebike. All voucher recipients will receive information about accessing a specially designed low-interest loan. Developed by Spring Bank, this unique loan product is specifically designed for the purchase of an ebike with no credit score requirements and a low interest rate, and no prepayment penalties. Information on this loan program will also be made available to those that are not selected through the final lottery process to provide all program participants with an avenue to purchase ebikes.

Customer Service

With oversight from Bike New York and UCS, APTIM will be primarily responsible for capturing and responding to customer service requests. This process will begin before the program launches with a detailed list of potential Q&As based on both APTIM's experience with other ebike incentive programs, and the unique features of the Ride Clean Program in a large metropolitan area. APTIM will have a core Ride Clean NY Program team in place internally to manage day to day system operations. Once the program launches, APTIM will utilize a flex staffing model allowing them to draw on their larger team to handle high volumes of customer support requests and validate documentation once participants are randomly selected to receive vouchers. Customer service support will be available to program participants through a variety of channels, including voice calls, email and online chat.

5. Education and Engagement

With the largest urban bike education program in the country - serving more than 30,000 New Yorkers with free classes each year - Bike New York is uniquely positioned to educate the general public, elected officials and law enforcement about ebike safety and overall community benefits. Bike New York is already working diligently to ensure New Yorkers have access to ebike education through its free course titled "Ebikes 101: Introduction to ebikes." This 90-minute virtual course is taught by a live instructor and covers a variety of topics including an overview of e-bikes, a buyer's guide, tips for safe battery handling and rules and etiquette. At the onset of the Ride Clean Program, Bike New York will update this course with information about the incentive, as well as in-depth content on more advanced topics such as best practices for pairing your ebike with public transit, speed control and maintenance. In addition, the Ride Clean Program will launch a suite of new educational assets and strategies including mandatory education program requirements, expanding bike education centers, ebike popup demonstrations and ebike group rides.

Mandatory Education Requirements

Mandatory education requirements are a centerpiece of the Ride Clean ebike Incentive program. All lottery entries will require applicants to view and/or participate in mandatory education activities related to ebike operation and safety. This may take the form of a multilingual video and/or a scheduled class with an instructor pending budget and technical capabilities. This course will cover basic information about New York City's ebike classification system, NYC traffic rules, basic ebike handling tips and what to consider when buying an ebike. Participants will not be able to complete their Ride Clean NY lottery entry without this key education touch point.

CASE STUDY: Ride2Own Mandatory Education Requirements

Ride2Own is a yearlong pilot in several Oregan communities that provides a pathway to free e-bike ownership. In addition to accessing a free e-bike, participants receive free safety gear essentials; free maintenance and tune ups; community building and collaborative miles challenges; and the opportunity to inform decision-making for future transit and street infrastructure investments. In exchange for the ebike, participants agree to attend four bicycle education workshops, track bike rides, complete four interviews with the project team and commit to riding regularly.[18]

RIDE 2 OWN
e-bike program

Expanding Bike Education Centers

Bike New York currently has 12 bicycle education centers in parks across all five boroughs. Each of these centers includes a fleet of pedal bikes and safety equipment and are used to facilitate free

[18] *The Street Trust. (n.d.). About the pilot. Ride2Own. https://www.ride2own.org/about-the-pilot*

hands-on basic bike handling, as well as more advanced streets skills classes for children and adults throughout the spring, summer and fall seasons. In addition to these existing facilities, Bike New York will use program funds to upgrade existing and launch new bicycle education centers throughout the city. In addition to the existing pedal bikes, Bike New York will acquire an ebike education fleet comprised of 35 ebikes to be dispersed across each of these locations. These bikes will be used to facilitate ebike demonstrations in parks and other key destinations, and be available at select bike education centers enabling participants in Bike New York's in-person classes to test out an ebike during regularly scheduled programs.

Popup ebike demonstrations

The Ride Clean Program will include a series of weekend ebike demonstration pop-ups in parks throughout the City leading up to the phase 1 lottery launch. This will enable New Yorkers to try out Class 1 ebikes in a safe, controlled environment free from traffic. In addition to pop ups, ebikes will be available at select bike education centers enabling participants in Bike New York's in-person classes to test out an ebike.

Ebike Group Rides

Bike New York has vast experience hosting group rides. Bike New York will develop and lead a series of weekend ebike group rides in the Ride Clean target geographies. These rides will serve as an opportunity for active recreation and guided education on safe ebike operation from a trained instructor.

Stakeholder Engagement

Robust, inclusive stakeholder engagement is an essential component of the Ride Clean Program to establish program buy-in and help shift public perceptions of ebike safety. The Ride Clean Team has already conducted extensive outreach with public agencies, bike shops and elected officials throughout the planning process to ensure that the program meets the needs of New Yorkers and addresses public policy concerns. At the onset of the project, the Ride Clean Team will reconvene many of these stakeholders to form an official Stakeholder Advisory Committee for the program including NYCDOT, Con Edison, Spring Bank, representatives from each of the Borough Presidents offices, and others. This stakeholder advisory committee will meet periodically throughout the program to provide feedback on program deliverables, assist in promotional efforts and coordinate voucher releases. In addition to the committee, stakeholder engagement will be driven by several factors, including:

Program Website: The Ride Clean Team will establish a program website with preliminary information about the program that includes goals, intended outcomes and safety resources, along with an FAQ providing a. a detailed set of questions and answers (Q&A) for program participants.

Social Media & Media Database: The Ride Clean program will benefit from Bike New York's well established and distributed social media and newsletter assets that reach tens of thousands of New Yorkers in order to promote the program and help solicit participants. In addition to Bike New York's grassroots connections program management partner Urban Cycling Solutions (UCS) – the team responsible for the largest statewide survey of cyclists ever conducted in the US – will activate and engage its own extensive network of public and private stakeholders throughout NYC in the early outreach phase of the Ride Clean Program.

6. Program Performance Management

The success of the Ride Clean Program will serve as a test case for other large-scale subsidies at both the local and state levels in New York. As such, the Ride Clean Program will be evaluated with a robust performance management framework to provide real-time tracking of all program activities. There will be several channels for collecting data:

Program Sign Up Form	Bike Shop Voucher Submission Portal	Voluntary Participant Tracking (VPT)	Post Purchase Participant Survey
•Capture participant demographics; location; ride frequency and other information.	•Caputure purchase experience; additional safety gear purchased with the ebike; questions from customers.	•Leverage voluntary app data to capture ebike utilization after the purchase.	•Follow up on sign up form data points; identify changes in ridership behavior.

Program Sign Up Form

Participants signing up for a chance to participate in the Ride Clean Program will be required to fill out an online form and answer a series of demographic questions. In addition to basic eligibility information, the sign-up form will include a series of questions related to ebike propensity, current transportation choices and impressions of safety for active modes.

Bike Shop Voucher Submission Portal

Similar to the participant sign up form, participating bike shops will have access to the Ride Clean portal to enter vouchers for reimbursement. This will enable Ride Clean to track bike shop performance and collect other information related to voucher utilization.

Voluntary Participant Tracking Program

The Ride Clean Program will have a Voluntary Participant Tracking (VPT) program to track the utilization of subsidized ebikes. This program will use the National Renewable Energy Laboratory's (NREL) OpenPATH mobile app platform to track participant transportation choices in real time and measure their associated energy use and carbon footprint. The app uses accelerometer data and machine learning to automatically generate a daily participant trip diary by mode. Participants have the opportunity to review and validate data at the end of the day and provide nuanced details (such as indicating use of an ebike instead of a pedal bike).

The VPT program will be strictly voluntary, but in an effort to expand participation the Ride Clean team will explore opportunities to incentivize participation, including a competition and prizes.

Post Purchase Program Survey

After vouchers have been utilized, the Ride Clean program participants will receive a virtual follow up survey. This will contain question on mode shift and ebike utilization since the purchase of the ebike.

Ride Clean Partner Data Sources

In addition to these primary data sources, the Ride Clean Program will work with program partners to identify other relevant data points and program impact. For example, Bike New York will work with Spring Bank to track ebike loan referrals from the program, including those that utilize financing in tandem with vouchers, and those that do not but still obtain a loan.

Key Performance Indicators

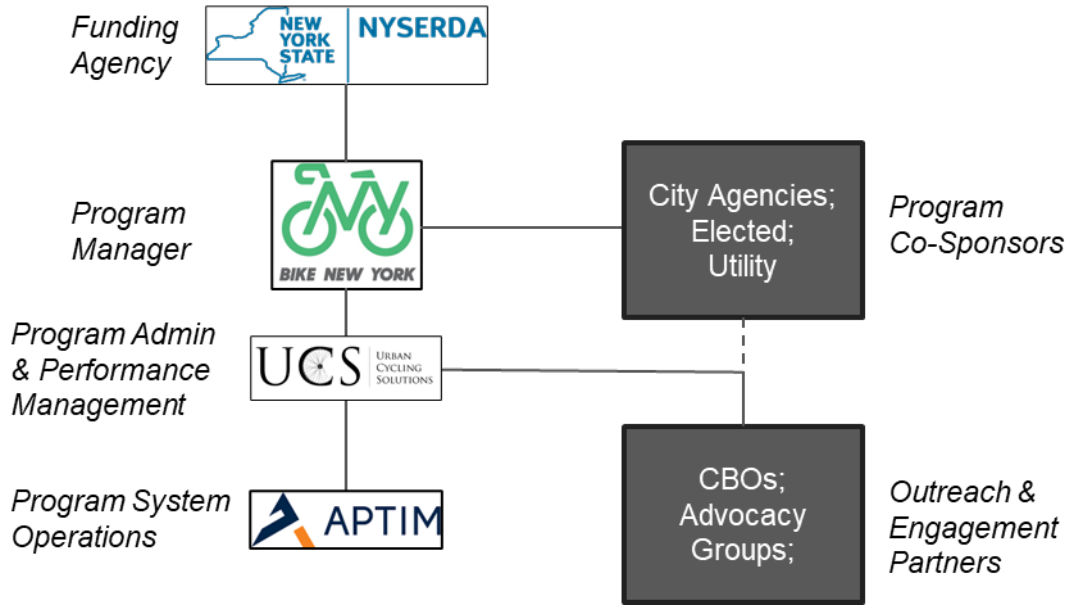
The following metrics will be used to evaluate the program.

Metric	Description	Data Source
# Total program applicants	How many people signed up for a chance to receive a voucher via random selection?	Lottery Sign up Form
# of applicants by geographic zone	How many participants entered the random selection process from each geographic zone.	Lottery Sign up Form
# of NYCHA applicants in target geographic zones	How many participants live in NYCHA apartments within the geographic zones	Lottery Sign up Form
# of NYCHA applicants outside target geographic zones	How many participants live in NYCHA apartments outside the geographic zones	Lottery Sign up Form
# of low-income applicants	How many applicants meet the low-income criteria	Lottery Sign up Form
% of dropped entries	How many randomly selected voucher recipients do not follow through on their application.	Lottery Sign up Form
# of ebike loans generated from the program	How many ebike loan referrals follow through with obtaining a loan.	Spring Bank Data
# of ebike loans obtained in tandem with Ride Clean Vouchers	How many randomly selected voucher recipients obtain a loan to cover the remaining cost of an ebike?	Spring Bank Data

Pre-Program Applicant bike trip frequency	How frequently do applicants ride a bike for any purpose?	Lottery Sign up Form
Applicant bike ownership	How many applicants currently own a pedal bike?	Lottery Sign up Form
Intended ebike uses	For what purposes do New Yorkers plan to use an ebike if they receive a voucher (e.g. commuting, recreation, groceries, childcare, other)	Lottery Sign up Form
# of miles of trips on subsidized ebikes	How many miles have program participants traveled using ebikes purchased with a Ride Clean Program Voucher (broken down by borough).	Voluntary Participant Tracking Program
# of participants in voluntary program tracking	How many program participants choose to sign up for the voluntary participant tracking program.	Voluntary Participant Tracking Program
Average # of trips per subsidized ebike per day	On average, how many trips are taken on Ride Clean subsidized ebikes per day	Voluntary Participant Tracking Program
# of participants that bike more after purchasing an ebike	How many Ride Clean program participants report increased ride frequency after purchasing a subsidized ebike.	Post Purchase Ebike Survey

7. Project Team

With anticipated finical support from NYSERDA Clean Mobility Program Demonstration Phase funding, The Ride Clean New York Team will be led by Bike New York with program management and operations support from Urban Cycling Solutions and APTIM. In addition to the core project team, Ride Clean will include essential program partners including Spring Bank, New York City Department of Transportation, Con Edison and a set of community-based organizations throughout the five boroughs. Detailed description of the core team and partners is provided below.



Core Program Team

Bike New York is the ideal lead for Ride Clean New York bringing more than two decades of experience developing and implementing citywide bicycle education programs, as well as deep relationships with public agencies and grassroots CBOs across NYC. Bike New York is a 501c3 nonprofit organization dedicated to promoting bicycling. BNY's proven pragmatic approach to bicycle safety and advocacy - via hands-on education for consumers, retailers and policy makers alike- provides an ideal platform for launching Ride Clean within a political and transportation landscape where ebikes are under intense scrutiny from local government agencies and the general public. In addition to national leadership disseminating bike education, BNY has extensive experience managing large-scale events and bicycle related transactions during its signature event and fundraiser, the Five Boro Bike Tour, Americas largest cycling event. Each year BNY manages the registration process and customer service for 30,000 participants.

Urban Cycling Solutions (UCS) will support Bike New York with program and performance management throughout each phase of the Ride Clean Program. UCS brings the Ride Clean team an extensive portfolio of project management experience and industry leading subject matter expertise in micromobility and active transportation policy. In addition to traditional project experience, UCS has a strong track record of catalyzing and managing innovative bicycle mobility initiatives across NYS such as:

- New York Cycling Census – the largest statewide survey of cyclists ever conducted in the United States.
- The Long Island Greenway – a 175-mile extension of the Empire State Trail from Battery Park across
- Enabling legislation and plan development for **"Extending Transit's Reach"** the MTA's first ever strategic action plan for bicycles, pedestrian and micromobility
- Development and Implementation of New York State's first official Active Transportation and Complete Street training curriculum for municipal planning boards and elected officials.
- Overhaul and reimaging of the Long-Range Active Transportation Plans for MPOs across the state including NYMTC, CRTC and UCTC.

APTIM will lead the Ride Clean Program's Operations and Customer Service. APTIM is the nation's leader in e-bike rebate program implementation, overseeing some of the largest and most popular e-bike incentive programs in the country, including for the City and County of Denver, which has been deemed the "best program" by Bicycling Magazine. APTIM brings the requisite e-bike administration experience, digital infrastructure, delivery team, dedication to customer service and support and expertise in application review and payment processing to support e-bike programs of all sizes. To date, APTIM has processed more than 29,000 e-mobility rebates and launched eight large e-bike rebate programs across the US. APTIM has a proprietary software platform for managing ebike subsidies and is the only firm in the United States to have managed a random selection ebike subsidy program at scale.

Program Partners

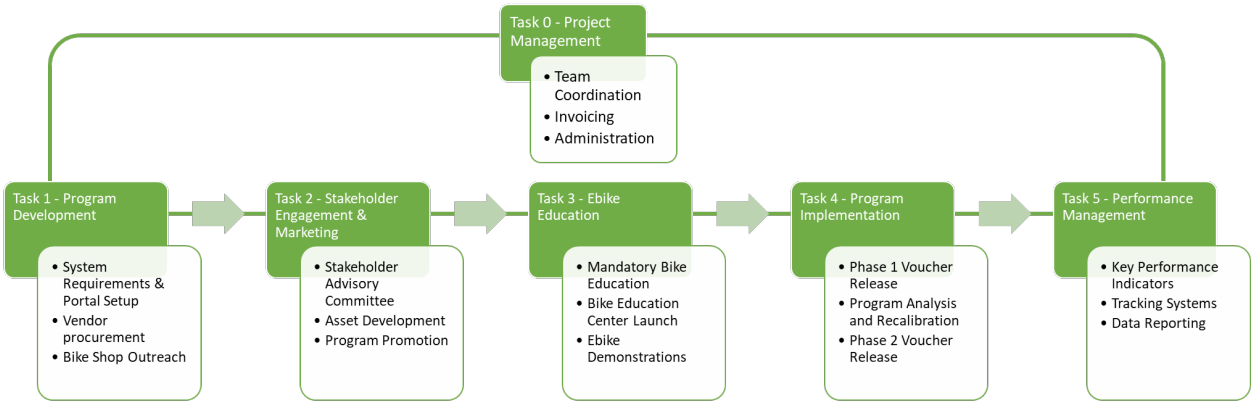
The Ride Clean Team will capitalize on established communication channels and cross promote existing Ebike programs through vital program partners. As part of the program's focus on micromobility education, Ride Clean will consolidate and amplify existing Ebike resources for consumers - such as Spring Bank's Low interest Ebike loan program- and amplify them among all program participants, including those that are not randomly selected to receive a voucher. While

the complete list of program partners will continue to evolve as the program develops, the initial team includes the New York City Department of Transportation, ConEd, Spring Bank, the Borough Presidents Offices and individual bike shops.

8. Program Development Workplan

Overview

The Ride Clean Program workplan involves five interrelated tasks bounded by consistent project management best practices as described below.



Task 0 – Project Management

Project Team Coordination: At the onset of the project, Urban Cycling Solutions will set up and facilitate a project kickoff with the core project Team including Bike New York and APTIM. At the project kickoff meeting, UCS will provide a detailed run through of the project schedule and deliverables as well as the establishment of a standing biweekly project management meeting. This 30–45 minute check-in will serve as a forum to discuss administrative milestones, upcoming stakeholder engagements, any potential roadblocks and deliverables status in relation to the overall project schedule.

File Sharing and Quality Control: To facilitate collaboration and sharing of deliverables, UCS will establish a Google Drive-based shared folder to enable the core project team to freely share files, data and draft deliverables.

Task 1 – Program Development

This task is centered on defining and building the technical platform for the program.

System Requirements: Bike New York, Urban Cycling Solutions, and APTIM will work together to define system requirements based on the program parameters outlined in the report. These will be documented in a technical memo, organized by program phases like participant sign-up, education requirements, eligibility review, and voucher reimbursement.

Platform Integration & Testing: APTIM will integrate these requirements into its e-bike subsidy platform. Bike New York will then conduct internal testing of the system before a small external group is recruited for beta testing

Task 2 – Stakeholder Engagement and Marketing

Bike shop engagement – In tandem with task 1, Bike New York will develop an request for proposals to identify up to three bicycle manufacturers. Through this competitive procurement process, Bike New York will select supplier partners to provide quality ebikes for the program. Bike New York will then work with each of these suppliers to conduct outreach with their existing retail bike shops as program participants. Ultimately Bike New York will create a list of participating bike shops and hold trainings to help retailers prepare for the program.

Consumer engagement and partner messaging – Bike New York will develop a variety of digital and print marketing materials to promote the program. These assets, including newsletter articles, social media posts, a webpage, and brochures, will be available in multiple languages. The public engagement will kick off with a press release, followed by the distribution of all other assets

Task 3 – Ebike Education

Mandatory Education Implementation: During the system development phase, Bike New York and Urban Cycling Solutions will work with APTIM to determine the most technically feasible method for delivering the mandatory education requirement. This may involve an in-system video or a class sign-up option. The team will then move forward developing assets for the final delivery method whether it be a video, or a series of online classes.

Material Development & Promotion: Bike New York will leverage its extensive knowledge of e-bike safety to develop the materials for this education requirement. Leading up to the program launch, Bike New York will also schedule and promote e-bike demonstration pop-ups in parks, group rides, and a combination of virtual and in-person "ebike 101" classes.

Task 4 – Program Implementation

The purpose of this task is to open the program to consumers and distribute vouchers via the lottery system. The voucher release will occur in two phases with a period for analysis and program recalibration as described below.

4.1 Phase 1 Voucher Release

- **Lottery Launch:** Approximately $1 million in vouchers will be released in this first phase. The lottery will open to the public after an intensive marketing campaign and media announcement targeting the general public and specific groups like NYCHA residents. The

lottery will be open for a minimum of one week and up to 30 days, with adequate staffing from Bike New York, UCS, and APTIM for customer service.

- **Lottery Selection:** Once the lottery closes, the Ride Clean Team will randomly select applicants using the online portal and send them a message with instructions for the next steps.
- **Document Submission:** Selected participants will have one week to submit required documentation through the online portal. Automated reminders will be sent to those who haven't submitted their documents within a week. If documents are not submitted within two weeks, another lottery entrant will be selected to take their place.
- **Verification and Voucher Distribution:** The Ride Clean Team will manually review the submitted documents to verify residency and income requirements. Approved participants will receive their voucher via email, which will also include e-bike selection recommendations and safety reminders.
- **Voucher Reimbursement:** Upon completing a purchase, participants will provide their voucher to the bike shop. Bike shops will then submit the vouchers and proof of purchase through the program portal within 24 hours for real-time reimbursement. Shops will be encouraged to sign up for ACH payments to expedite the process.
- **Phase 1 Closeout:** Bike New York and APTIM will resolve all remaining customer service issues and ensure all Phase 1 vouchers are distributed and reimbursed. Any unredeemed vouchers will be canceled and reallocated to Phase 2. A survey will be sent to participating bike shops to gather insights for program recalibration.

4.2 Data Analysis and Program Recalibration

- **Phase 1 Data Analysis & Lessons Learned Report:** Following the closeout, UCS and APTIM will compile program data, including customer service reports, demographics, voucher performance, and bike shop feedback. The team will hold a work session to identify successes and issues, and then devise solutions. A revised set of system requirements will be developed to address any issues.
- **Phase 2 System Updates:** All revised system requirements will be adjusted in the vendor portal and in marketing assets. An independent team will retest any digital system updates to ensure they function properly before the Phase 2 launch.

4.3 Phase 2 Voucher Release

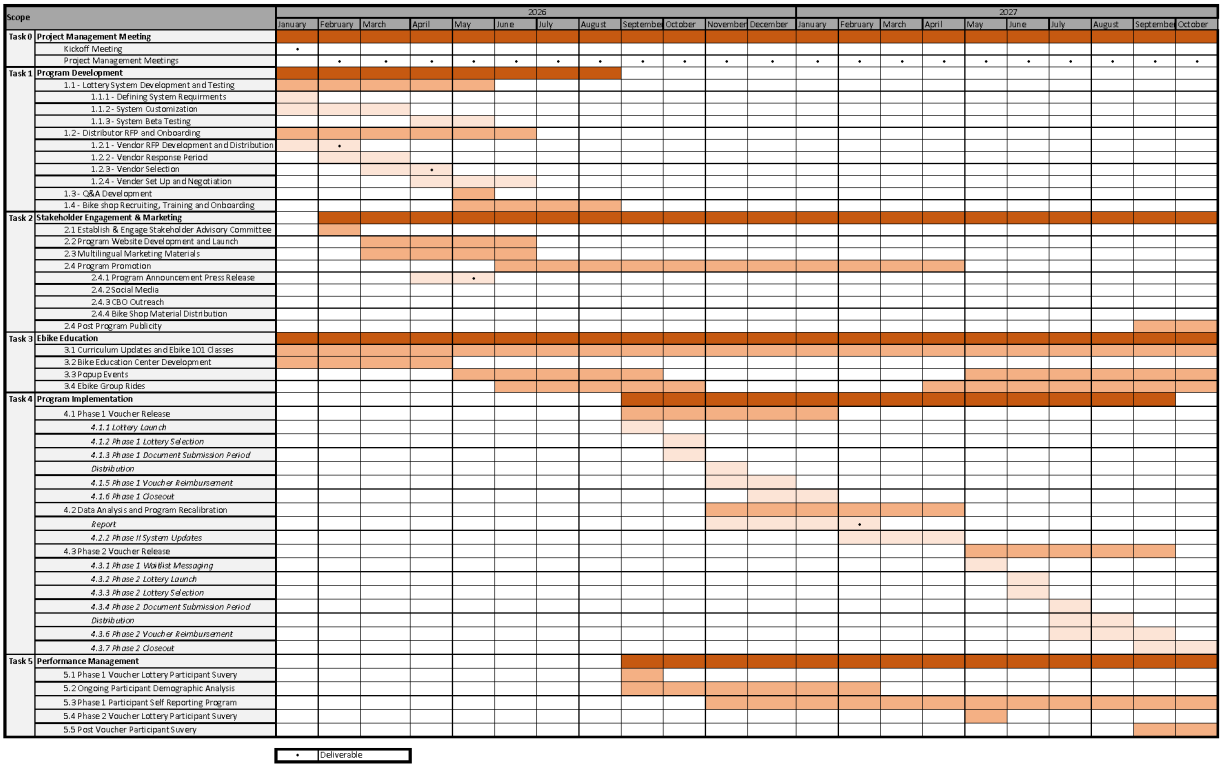
- **Phase 1 Waitlist Messaging:** Bike New York will email participants not selected in Phase 1 to inform them that they are still eligible for Phase 2 vouchers, with an intended distribution date. They will not need to reapply.

- **Phase 2 Lottery Launch:** The lottery will open to the public again, following a similar marketing campaign to Phase 1. Phase 1 applicants who were not selected will not need to reapply.
- **Subsequent Phase 2 Steps:** The remaining steps—Lottery Selection, Document Submission, Verification and Voucher Distribution, Voucher Reimbursement, and Closeout—will follow the same workflow as Phase 1, with weighting adjustments based on demographic data if needed (e.g., increasing selection in a borough that had low participation in Phase 1).

Task 5 – Performance Management

- **Surveys:** Data will be collected from a sign-up form, which will ask demographic questions and inquire about current transportation habits and safety impressions. A post-purchase survey will also be distributed to participants to gather information on mode shift and e-bike utilization.
- **Voluntary Tracking Program:** A Voluntary Participant Tracking (VPT) program will be implemented using the National Renewable Energy Laboratory's (NREL) OpenPATH mobile app. This app uses accelerometer data and machine learning to automatically generate a trip diary by mode, measuring energy use and carbon footprint. The program will explore incentives to encourage participation.
- **Reporting:** The program's success will be measured using key performance indicators (KPIs) and data from various sources, including the lottery sign-up form, the bike shop voucher portal, the VPT program, and partner data sources like Spring Bank. These KPIs will track metrics such as total applicants, number of applicants by geographic zone, number of low-income and NYCHA applicants, and average number of trips per subsidized e-bike per day.

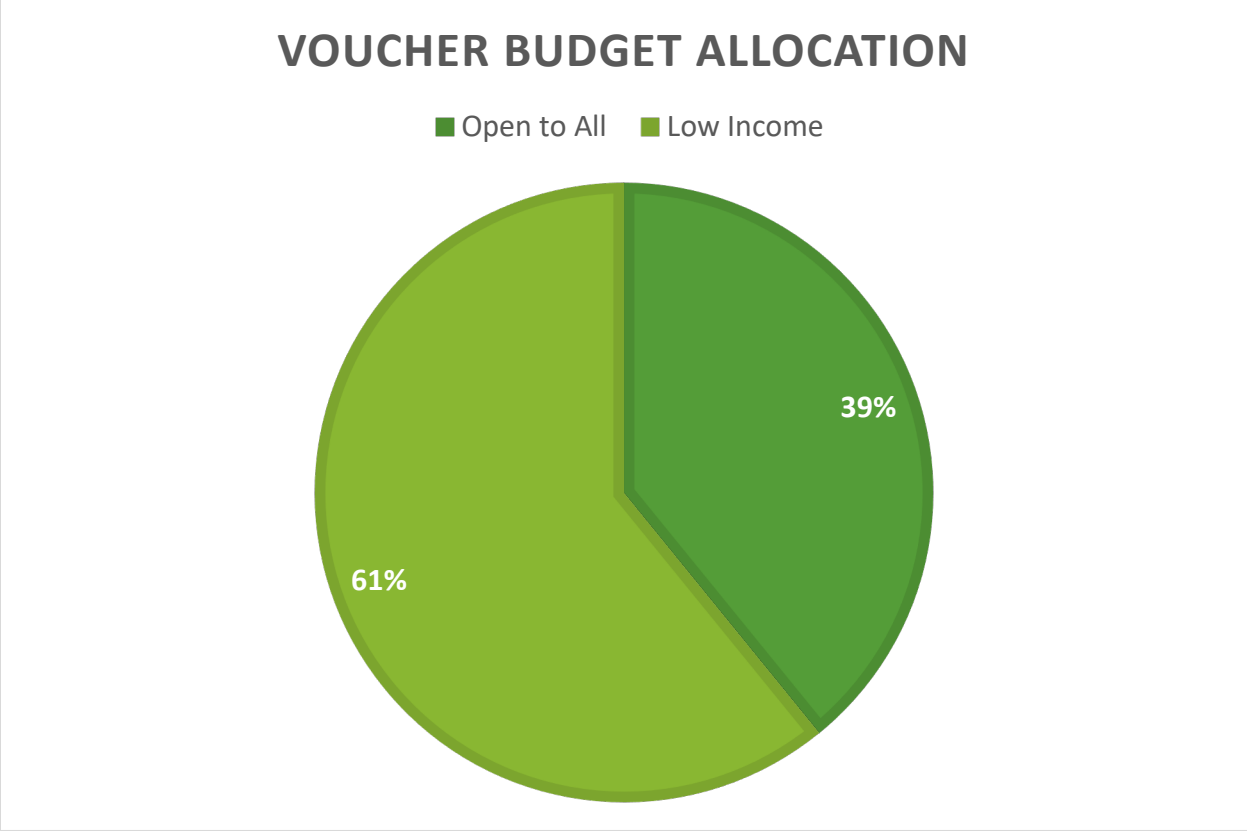
Project Schedule



9. Program Budget

The total budget for the Ride Clean Program is $3,897,595. Pending application, evaluation and award, The Ride Clean Program will be powered by a $3 Million Clean Mobility Program Demonstration grant. Bike New York will provide $897,595 of required cash and in-kind matching funds. The entirety of NYSERDA's $3 million contribution will be directly passed on to consumers in the form of a project 4,008 Ebike subsidy vouchers. Bike New York's contribution will be used to fund the program's education, administration and operational components.

The majority (61%) of the $3 million budget available for vouchers will be allocated to low-income applicants (Those with household incomes 80% or lower than the Average Median Income); 39% of the budget will be allocated to any randomly selected applicant.



Program Administration

The entirety of Bike New York's required grant cost share for the Clean Mobility Demonstration Grant will be used to fund the administration of the program. This includes the vendor cost for APTIM to manage operations, system development and customer service staffing as well as combined program management costs for Bike New York and Urban Cycling Solutions. The budget also includes $160,000 to procure materials (storage containers, bikes, safety equipment and tools), and launch five new bicycle education centers in the target geographies. Given the scale of

the program, Bike New York has allocated a significant budget to develop and distribute quality marketing and education materials. This may include but is not limited to an informational video, multilingual marketing fliers – for bike shops and consumers – bike decals, helmets and other assets. Additional details have been prepared in a separate budget document.

10. Conclusion: Moving Forward with Ride Clean NY

Ride Clean New York is a program designed to provide a multi-dimensional solution to New York City's emerging, and increasingly complicated micromobility landscape. With a focus on education and individual consumers this program directly addresses ebike safety concerns and accessibility issues. Ultimately, this program will:

- Set a New Standard for Safety in a landscape where unregulated lithium-ion batteries, and higher speed throttled devices have caused significant safety concerns. Ride Clean New York takes a proactive stance. By mandating the sale of low-speed UL-certified pedal assist (class-1) ebikes and requiring safety education for all participants, the program creates a safer ecosystem for both riders and the community. This "safety-first" requirement serves as a blueprint for how municipalities can encourage micromobility without compromising public safety.
- Bridge crucial transit gaps across the five boroughs by prioritizing ebike access for "first and last mile" connectivity. This point-of-sale subsidy transforms ebikes from luxury items into essential tools for connecting New Yorkers with the subway and bus network. This ensures that the benefits of clean mobility reach those who stand to gain the most in terms of time savings and economic opportunity.

Ultimately, Ride Clean New York is not just about putting more ebikes on the road; it is about decarbonizing the city's transportation network while simultaneously addressing systemic inequality. It positions New York City as a leader in ebike safety and micromobility.