

Overall Project Summary and Approach

Nashville has an exceptional opportunity to implement ambitious measures that will achieve significant cumulative greenhouse gas (GHG) reductions by 2030 and beyond. This opportunity will expand our Transportation Demand Management (TDM) Program, Nashville Connector, by implementing an electric-Bike (e-bike) rebate program serving the city of Nashville and Davidson County. This program pursues an innovative approach to mode shift and transportation sector decarbonization that is replicable and be “scaled up” across multiple jurisdictions. The Nashville Department of Transportation and Multimodal Infrastructure (NDOT), in partnership with the Office of the Mayor, seeks a \$2.07 M Climate Pollution Reduction Implementation Grant (CPRG) through the Environmental Protection Agency (EPA) to develop and administer Music City Bike Bucks, an e-Bike rebate program. Together, Nashville Connector and Music City Bike Bucks represent modern, resilient, and complete mobility options. E-bikes are like traditional bicycles but use a motor to make riding easier. E-bikes use rechargeable batteries and are able to travel up to 28 miles per hour. Because e-bikes are able to assist with pedaling, this allows cycling to be more accessible to different levels of bike riders, allows for those commuting on e-bikes to keep up with the flow of traffic, and allows for biking to be a choice mode of travel for longer distances relative to traditional bikes. E-bikes reduce carbon emissions because they use an electric motor in lieu of gasoline and can save riders money that would otherwise be used on fuel and maintenance for a car. In recent years, e-bikes have grown increasingly popular. Due to high demand, the prices for e-bicycles have also greatly increased.

As society progresses towards sustainable and efficient transportation solutions. E-bikes have emerged as a compelling option for many individuals as their primary mode of travel. In recent years, e-bike sales have significantly outpaced all other electric vehicles¹. E-bikes allow travelers to ride their bikes with exerting less physical effort which results in users being able to travel faster and longer and can be equipped so that users can carry cargo and children. This encourages individuals to travel via e-bike to the grocery store, commute to work, and transport children to childcare easily uphill. Combining the convenience of a bicycle with the assistance of electric power, e-bikes offer a practical and eco-friendly alternative to traditional cars and public transportation. With advancements in battery technology, e-bikes provide extended range and faster speeds, making them suitable for commuting longer distances without hassle of parking or traffic congestion. Moreover, their versatility allows riders to navigate urban landscapes effortlessly while reducing carbon emissions and promoting healthier lifestyles. As cities invest in infrastructure to accommodate cyclists and incentivize e-bike usage, the shift towards embracing e-bikes as a primary mode of travel is poised to accelerate, contributing to a cleaner, greener future. Furthermore, when vehicle drivers change their trips to e-bike trips, they take up less space on the road and significantly reduce traffic congestion.

The Nashville region’s Priority Climate Action Plan (PCAP) includes programs and projects (measures) that will achieve or facilitate the reduction of greenhouse gas air pollution. Specifically, strategy 2 and supporting strategy 3 from the PCAP’s transportation and mobility sections include pollution reduction measures which will be implemented through this grant opportunity.

¹ <https://www.nrel.gov/news/program/2023/small-but-mighty-electric-bicycles-can-bridge-the-gap-in-access-to-transportation.html>

Strategy 2: Increase use of alternative modes of transportation with programs, policies and projects that improve existing and expand bicycle and pedestrian infrastructure.	Measure 2.1 - Launch Rebate Program to Incentivize Individuals to Purchase an e-Bike
Strategy 3: Implement travel demand management strategies and expand public transit options to reduce VMT from personal automobile use.	Measure 3.1 - Implement TDM Programming and Expand Transit Options

Downtown Nashville will see a 45% increase in traffic and 40,000 additional workers with 84% of downtown Nashville employees drive to work alone². In 2022, Nashville ranks 24th in congestion in the United States and 131 worldwide with a \$689 cost of congestion per driver. Nashville commuters lost an average of 41 hours because of congestion³. In 2024, Forbes ranked Nashville as the top worst city to commute⁴. Additionally, Nashville's most recent greenhouse gas emissions inventory, completed in 2022 using 2019 data, found that 51 percent of emissions came from the transportation sector. In recent years, NDOT has developed a Transportation Demand Management program to educate commuters and businesses about travel options to encourage mode shifts.

Nashville Connector uses proven TDM Strategies to reduce Congestion with a goal of improving air quality. Nashville Connector uses targeted marketing to help engage residents about travel options. Consulting with large employers, the program offers tailored solutions for their employees. The program works with land use planners to ensure new developments incorporate facilities to reduce driving alone. To achieve these goals, we facilitate partnerships with nonprofits and transportation service providers and use technology to encourage mode shift. Incorporating an e-bike rebate program will encourage residents to mode shift. With each vehicle mile converted from driving alone to a mode shift like bicycling, vehicle miles traveled (VMT) is directly reduced. With each VMT reduction, VOC, NOx, CO and PM2.5 emissions are reduced, each reduction having a positive impact on air quality and fewer localized health effects, especially for vulnerable groups.

Description of GHG Reduction Measures

Increasing use of alternative modes of transportation with programs, policies, and projects that improve existing and expand bicycle and pedestrian infrastructure can be achieved through this grant opportunity. This is attainable through the measure of launching a rebate program to incentivize individuals to purchase an e-bike. The estimate of quantifiable GHG emissions reductions through 2030 in the Nashville MSA PCAP is 46,187.24 kg of CO2e/day and 101,150.049 CO2e by 2030.

Demonstration of Funding Need

In 2023, the Metropolitan Council expressed interest in using American Rescue Plan (ARP) Act funds to provide subsidies to residents of Nashville and Davidson County for the purchase of an e-bike⁵. This effort was widely popular among Nashville residents and their representatives. Ultimately Metro did not implement the program due to funding availability of ARP dollars. Metro Nashville has not applied for

² Transportation Consultants, LLC, & KCI Technologies, Inc. (2017, September). *Downtown Multimodal Mobility-Update Technical Memorandum 1: Development of Future Traffic Growth*. Nashville.

³ <https://inrix.com/scorecard-city-2022/?city=Nashville%20TN&index=131>

⁴ <https://www.forbes.com/home-improvement/moving-services/hardest-commutes-in-us/>

⁵ <https://nashville.legistar.com/LegislationDetail.aspx?ID=5991801&GUID=0289E37A-1B53-4F55-A5BF-D80B4BE523CF&FullText=1>

other federal or non-federal funding to implement the Music City Bike Bucks program. The Carbon Pollution Reduction Grant through the EPA provides Metro Nashville through NDOT to implement a e-bike rebate program. Without this grant, it will take multiple budget cycles to implement a program of this scale.

Transformative Impact

Nashville's transportation sector produces significant greenhouse gas (GHG) emissions that contribute to climate change. According to Nashville's 2019 Greenhouse Gas Emissions Inventory, community emissions totaled roughly 11.25 million metric tons – with over half derived from the transportation sector alone⁶. Through the Music City Bike Bucks project, Nashvillians will be further encouraged to mode shift and use electric bicycles rather than internal combustion engine (ICE) vehicles via the accessibility and affordability of an e-bike.

Nashville needs access to sustainable transportation and has established a foundation to support the pursuit of sustainable transportation projects. In February 2022, Metro adopted a resolution to reduce GHG emissions by 80 percent in 2050 from 2014 levels and provided a comprehensive set of strategies and actions to meet the 2050 goal⁷. The Music City Bike Bucks project specifically touches upon the emissions associated with personal vehicles across the Metro Nashville area and aims to significantly reduce GHG emissions in the transportation sector by increasing accessibility and affordability of e-bikes.

An efficient, accessible multimodal transportation system that moves people effectively has the power to transform the quality of life in the Nashville region as well as reducing environmental impacts. Nashville sits in a basin which traps air pollutants, which, according to the EPA, originate mostly in mobile sources such as motor vehicles. The Metro Health Department tracks five pollutants: carbon monoxide, ozone, sulfur dioxide, PM2.5, and PM10. Ground-level ozone and airborne particles pose the greatest threat to human health in Davidson County. Metro health issues an Air Quality Index (AQI) based upon EPA standards Monday through Friday, which helps residents understand the impact that local air quality can have on their health.

Impact of GHG Reduction Measures

According to the EPA, the major GHGs emitted during the combustion of fossil fuels from on-road mobile sources are carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). The proposed e-bike rebate program is expected to reduce these three pollutants by shifting a total of 52 miles per week that are currently being completed by internal combustion engine (ICE) motor vehicles to non-emitting e-bikes. The following table includes the anticipated annual breakdown of e-bike rebates. The technical appendix provides additional details regarding the allocation of these vouchers, as well as other assumptions and data sources used for purposes of estimating GHG emissions and resultant reductions from the program.

⁶ <https://www.nashville.gov/sites/default/files/2023-03/Greenhouse-Gas-Emissions-Inventory-Presentation-2019.pdf?ct=1677700781>

⁷ <https://nashville.legistar.com/LegislationDetail.aspx?ID=5393859&GUID=4471E711-0361-4489-B8D5-76347758BCOD&Options=ID|Text|&Search=RS2022-1358>

Annual Allocated E-Bike Voucher Assumptions					
Voucher Type	Commuter E-Bike Vouchers per Year		Cargo E-Bike Vouchers per Year		Total Voucher Value per Year
	Number	Value	Number	Value	
Standard	166	\$300	100	\$500	\$200,000
Income-Qualifying	45	\$1,200	33	\$1,400	

Magnitude of GHG Reductions from 2025 through 2030

The anticipated reduction of 60.38 mtCO₂e of emissions is modeled based on the reduction in vehicle miles traveled (VMT) that would occur under the e-bike program from 2025 to 2030. This reduction is an important piece of the regional puzzle for reducing emissions that are influencing global warming and environmental and public health. The durability of the emissions reductions is based upon the assumption that residents will participate fully in the program each year, people will bike the assumed miles per week, and e-bikes stay in working condition for the length of the 5 years.

Cumulative Reduction in GHG Emissions With E-Bike Program (2025-2030)				
Timeframe	Total CO ₂ (mtCO ₂ e) Reduction	Total CH ₄ (mtCO ₂ e) Reduction	Total N ₂ O (mtCO ₂ e) Reduction	Total (mtCO ₂ e) Reduction
2025-2030	57.55	0.88	1.96	60.38

Annual emissions for the reference case (i.e., baseline) scenario and e-bike program scenario are provided in the technical appendix, including absolute reductions, cumulative reductions, and cumulative reductions for the specified timeframe of 2025-2030.

Magnitude of GHG Reductions from 2025 through 2050

The anticipated reduction of 609.67 mtCO₂e of emissions is modeled based on the reduction in vehicle miles traveled (VMT) that would occur under the e-bike program from 2025-2050. Emission reductions include an assumption that ICE vehicle models are slowly replaced by EV models over the timeframe. The durability of the emissions reductions becomes less reliable following the completion of the grant-funded 5-year-program as e-bikes will inevitably be phased out due to the age of the e-bike, need for maintenance, and/or need for battery replacements. Upon the successful completion of the CPRG-funded program, Nashville-Davidson County intends to extend the program using local funding, which may include a battery replacement and/or maintenance voucher to address the durability of the original grant funding's impact. The modeled cumulative reduction in GHG emissions over the course of the 2025-2050 timeframe only considers, however, the original number of e-bikes funded through the grant. Should the program be extended, the reductions will be much greater.

Cumulative Reduction in GHG Emissions With E-Bike Program (2025-2050)				
Timeframe	Total CO ₂ (mtCO ₂ e) Reduction	Total CH ₄ (mtCO ₂ e) Reduction	Total N ₂ O (mtCO ₂ e) Reduction	Total (mtCO ₂ e) Reduction
2025-2050	579.73	9.28	20.66	609.67

Annual emissions for the reference case (i.e., baseline) scenario and e-bike program scenario are provided in the technical appendix, including absolute reductions, cumulative reductions, and cumulative reductions for the specified timeframe of 2025-2050.

Cost Effectiveness of GHG Reductions

To measure the cost effectiveness of the e-bike voucher program, the following formula was used.

Cost effectiveness of GHG reductions = (requested CPRG funding) / (sum of quantified GHG reductions from CPRG funding from 2025-2030)

Cost effectiveness of GHG reductions = \$2,077,033 / 60.38 mtCO₂e

Cost effectiveness of GHG reductions = \$34,399 per 1 mtCO₂e

An additional benefit beyond mtCO₂e saved includes the impact on the perception of e-bikes as a viable, environmentally friendly, cost-effective, and practical mode of transportation. In addition, the anticipated reduction in VMT will reduce Particulate Matter (PM) PM_{2.5}, NO_x, and carbon monoxide (CO), particularly in low-income and disadvantaged neighborhoods.

Documentation of GHG Reduction Assumptions

The estimated reduction in GHGs through the e-bike program was calculated using a publicly available tool developed by the Rocky Mountain Institute (RMI) specifically for modeling the impacts of an e-bike voucher program. Outputs from this tool (i.e., gallons of gasoline and VMT per year) were then converted to mtCO₂e of CO₂, CH₄, and N₂O. Key program notes and assumptions for estimating the reduction in GHGs include the following:

- CO₂, CH₄, and N₂O are the only pollutants quantified in this analysis.
- ICE on-road vehicle types modeled to estimate gallons of gasoline and VMT include light-duty vehicles (i.e., pickup trucks and SUVs) and passenger vehicles (i.e., sedans, and hatchbacks). Calculations for VMT only account for trips of 5 miles or less as these are the most likely trips to be replaced with an e-bike trip. The number of vehicles (including the percentage of EVs) and trip lengths were sourced through the tool for Nashville-Davidson County, while the percentage of ICE vehicle types is based on state averages.
- Annual population growth for the projections was calculated to be 1.5% based on Nashville-Davidson County's 2010-2020 Census numbers.
- Heavy-duty, hybrid, and EV emissions are not quantified; however, a progressive replacement of ICE vehicles with EV models is included. These outputs are modeled by the RMI tool.

- Calculations assume 344 vouchers are given out each year (\$200,000) for a total of 1,720 vouchers (\$1,000,000). An assumption is also made that e-bike models are readily available at local bike shops and that there is an unmet demand for e-bike vouchers.
- Half (50%) of the allocated vouchers will be reserved for income-qualifying participants, of which 54% will be allocated for commuter e-bikes and the remaining 46% allocated for cargo e-bikes. For the other half of the vouchers (i.e., non-income-qualifying participants), it is assumed that 50% will be allocated for commuter e-bikes and the other 50% allocated for cargo e-bikes.
- A total of 32 miles per week is assumed for income-qualifying e-bike participants and 22 miles for standard e-bike participants.
- Annual gallons of gasoline and VMT from passenger and light-duty vehicles were converted to kilograms and grams of CO₂, CH₄, and N₂O for the baseline and e-bike program scenarios using EPA Emissions Factors. Pollutants were then converted to mtCO₂e using global warming potential (GWP) factors from the IPCC's Fifth Assessment Report (2013).
- Emissions projections for 2031-2050 use the annual average growth rate of each pollutant for the timeframe 2025-2030 to project emissions. These projections only account for the e-bikes funded by the CPRG.

Full documentation of assumptions and data sources, as well as background calculations and formulas used, can be found in the technical appendix and calculation spreadsheet.

Expected Outputs and Outcomes

NDOT through Nashville Connector has several expected outcomes for the Music City Bike Bucks program. These outputs and outcomes collectively contribute to the overall success and effectiveness of the e-bike rebate program in promoting sustainable transportation and mitigating environmental impacts. Our team will collect the necessary data to help determine the below outcomes. The outcomes will determine the performance measures and plan.

Outputs:

Number of e-bikes purchased with voucher.	Total amount of voucher disbursed.	Demographic breakdown of vouchers distributed.	Geographic distribution of e-bike purchases.
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Outcomes:

Reduction in GHG emissions from the transportation sector.	Decrease in vehicle miles traveled (VMT) and associated congestion.	Increase in active transportation mode share.	Savings in fuel for individuals and communities.	Enhanced mobility and access to transportation options, particularly for income-qualified participants.
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Performance Measures and Plan

NDOT's performance measurement plan for Music City Bike Bucks is important to the success of the entire program. NDOT will regularly review and adjust the performance measurement plan based on feedback, data analysis, and changes in program goals. Using data analysis tools like Replica and trip tracking apps like Strava, NDOT will incorporate data collection in the performance measures and plan.

Performance Measure	Performance Plan	Target Measure
Number of Vouchers Issued	Track the total number of vouchers provided to individuals for purchasing e-bikes.	NDOT will set a 344 e-bike target for the number of rebates to be issued annually.
Emissions Reduction	Measure the reduction in GHG emissions resulting from e-bike adoption compared to traditional vehicles.	NDOT is seeking to reduce 60.38 mtCO₂e of emissions on the reduction in vehicle miles traveled (VMT).
Equity and Access	Evaluate the program's effectiveness in promoting equity and providing access to transportation options for disadvantaged communities	NDOT is committed to distributing at least 40% of the programs benefits to disadvantaged communities.
Customer Satisfaction	Conduct surveys to gauge participant satisfaction with the voucher program and e-bike ownership experience.	NDOT will use the survey data to identify areas for improvement based on feedback.
Mode Shift	Measure the percentage of participants who shift from using cars or other motorized vehicles to e-bikes for their daily transportation needs.	NDOT will set targets for mode shift and track progress towards reducing reliance on cars.

Authorities, Implementation Timeline, and Milestones

	2024											
Deliverables												
Grant Submission												
Anticipated Award Announcement												
Issuance of Awards												
Program Setup												
	2025											
Deliverables												
Program Setup												
Procurement												
Community Engagement and Marketing												
Reporting and Monitoring												
	2026											
Deliverables												
Community Engagement and Marketing Campaign												
e-Bike Rebate distribution												
Data Collection												
Reporting and Monitoring												
	2027											
Deliverables												
Community Engagement and Marketing												
e-Bike Rebate distribution												
Data Collection												
Reporting and Monitoring												
	2028											
Deliverables												
Community Engagement and Marketing												
e-Bike Rebate Distribution												
Data Collection												
Reporting and Monitoring												
	2029											
Deliverables												
Community Engagement and Marketing												
e-Bike Rebate Distribution												
Data Collection												
Reporting and Monitoring												

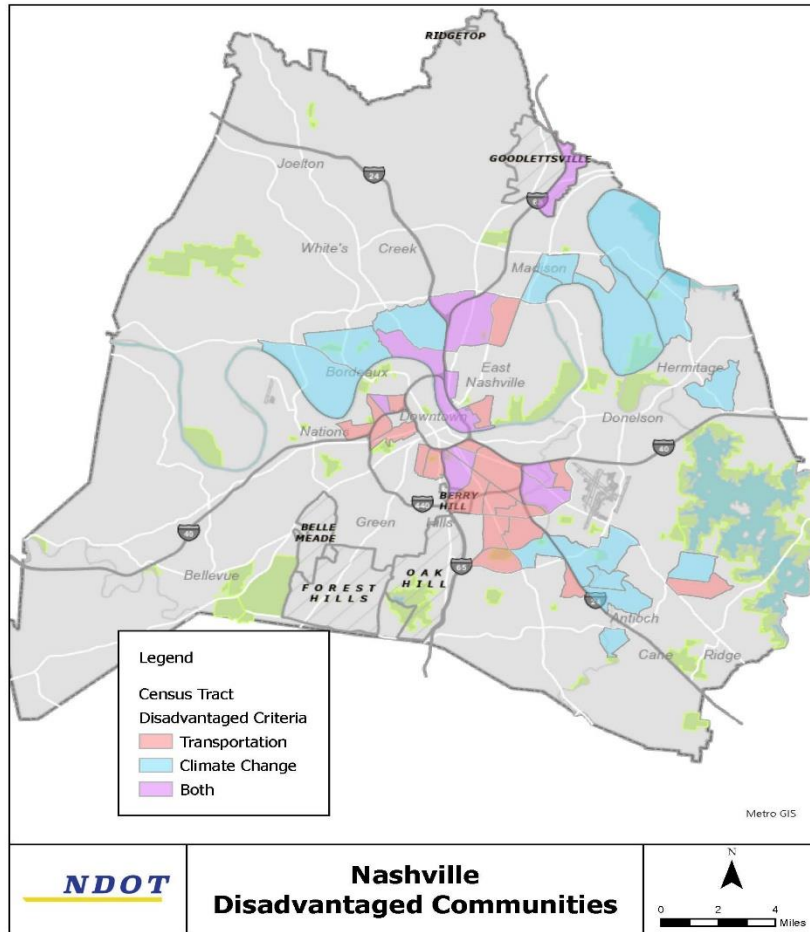
NDOT through Metro Nashville have existing authority to apply for, administer, and subaward federal grants as allowed by the Metro Charter and Tennessee Code Annotated (TCA), which provides sufficient authority for the implementation of the Music City Bike Bucks program and priority reduction measures. NDOT will implement measure 2.1 and 3.1 through our TDM program.

The implementation of Music City Bike Bucks will follow a carefully structured timeline with key milestones to ensure its success. Initially, the program will undergo program setup, including stakeholder consultation, policy formulation, and partnership establishment with bike retailers in Nashville. Following this, the program will be officially launched, accompanied by a comprehensive marketing and outreach campaign to raise awareness, and encourage participation. Simultaneously, the application process and rebates will be disbursed. Concurrently, data collection will be established to track program metrics and evaluate performance against the performance measurement plan. As the program progresses, ongoing monitoring and reporting will occur, with periodic reviews to assess effectiveness, address challenges, and make any necessary adjustments. Below is a schedule of the anticipated timeline subject to award issuance. The period of performance will be from 2025 through 2029.

Low-Income and Disadvantaged Communities

The goals set forth in Executive Order 14008, which aims to deliver forty percent of the overall benefits of relevant federal investments to disadvantaged communities. Implementation of an e-bike rebate program will provide benefits to low-income and disadvantaged communities. To identify disadvantaged communities within Nashville, NDOT underwent a review of the Environmental Justice Screening and Mapping Tool (EJScreen), and the Climate and Economic Justice Screening Tool (CEJST). Nashville-Davidson County has a large population of low-income and disadvantaged communities with 38% of total population identified as LIDAC.

NDOT is committed to Justice40 and will be providing **at least 40%** of the program's benefits to residents in the transportation and/or climate change disadvantaged census tracts. Below shows the census tracts for disadvantaged transportation and climate change. In addition, the program will distribute **at least 40%** to income qualifying participants.



Community Benefits

The implementation of Music City Bike Bucks rebate program offers multifaceted community benefits that extend beyond individual users. By incentivizing the adoption of e-bikes, communities can experience reduced traffic congestion, leading to smoother traffic flow and less wear on road infrastructure. Additionally, the program promotes cleaner air and reduced GHG emissions, contributing to improved public health outcomes and a more sustainable environment. Moreover, increased e-bike usage fosters a culture of active transportation, encouraging residents to engage in physical activity while commuting, which can lead to long-term health benefits and decreased healthcare costs. Furthermore, by providing vouchers and promoting access to e-bikes in disadvantaged communities, the program promotes equity and enhances mobility options for residents across socioeconomic backgrounds. Overall, the community benefits of an e-bike rebate program are far-reaching, positively impacting both

the environment and well-being of residents while fostering a more inclusive and sustainable transportation system.

Implementing Music City Bike Bucks throughout the county, including disadvantaged communities, can have several benefits that **improve access to resources and quality of life** for all members of Nashville. Some of these benefits include:

- **Increased access to transportation:** E-bikes are becoming increasingly popular due to their environmental and health benefits and lower operating costs. By providing vouchers for e-bikes, it becomes easier for people to own and use e-bikes. This can provide people with more reliable and affordable transportation options, which can improve access to jobs, healthcare, education, and other resources.
- **Improved air quality:** E-bikes emit fewer pollutants and greenhouse gases than traditional gas-powered vehicles. By encouraging the use of e-bikes, the program can help reduce air pollution and mitigate the effects of climate change. This can lead to improved health outcomes and a cleaner environment for everyone in the city, but especially those in disadvantaged communities who may be more susceptible to the negative impacts of climate change and pollution, such as respiratory problems, heart disease, and extreme weather events, and long-term health and economic impacts.
- **Economic benefits:** The program can help support local businesses and create job opportunities in the purchase of e-bikes and management of the of the program. Additionally, e-bikes are cheaper to operate and maintain than gas-powered vehicles, which can save individuals and families money in the long run.
- **Community empowerment:** By focusing on distributing e-bikes equitably, the project can help reduce disparities in access to resources and transportation options among disadvantaged neighborhoods and other underserved communities. This can improve the overall quality of life for all members of the city by promoting greater social equity and inclusion.

Community Engagement

Education and outreach will be important in implementing the voucher program. NDOT will work in low-income and disadvantaged communities to promote this opportunity and achieve our performance goals. To do this, NDOT will partner with community-based organizations (CBOs) with expertise in e-bikes and related equipment to conduct county-wide education and outreach on the Music City Bike Bucks rebate program. Our outreach will include community events to promote electric bicycles (including electric bicycle demonstration). NDOT will develop a strategy to support organizations and groups that are representative of disadvantaged or low-income communities to provide education, technical assistance, ride opportunities, etc. NDOT will develop a strategy to engage disadvantaged or low-income communities through activities relevant to the community being served, and through the use of culturally appropriate outreach and education materials in the language(s) commonly spoken within the community.

NDOT will incorporate both traditional community engagement and pop-up engagement. Our goal is to reach every community that is interested in participating in the program. We will attend events like the Juneteenth ride, Tour de Nash, Bike to Work Week, and Open Streets events to educate, promote, and facilitate participation in the Music City Bike Bucks program. NDOT will also have pop-up outreach events at Plaza Mariachi, Casa Azafran, Southeast Community Center, etc.

Job Quality

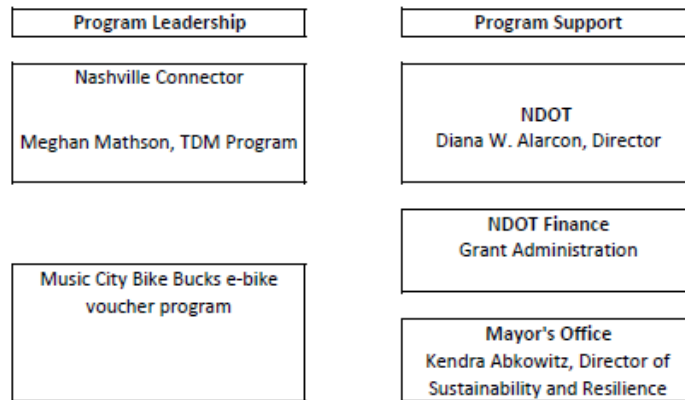
Job quality and creation are essential components of e-bike rebate programs, contributing to both economic growth and social well-being. By incentivizing the adoption of e-bikes, this program stimulates demand for e-bike manufacturing, sales, and servicing, thus creating employment opportunities across various sectors. In addition, this program will generate business opportunities for all fourteen existing local brick-and-mortar bike shops in Nashville. This program will participate with any bike shop located brick-and-mortar within Nashville-Davidson County. This program will benefit the many small businesses and create job opportunities for the program. Furthermore, this opportunity promotes the employment and workforce training within the transportation and urban planning sectors. This program is proposing hiring a planner to support the implementation and management of the Music City Bike Bucks program. Finally, NDOT is committed to promoting good-paying jobs and labor standards that prioritize employee rights. The Metro Government labor policy ensures that employees have the freedom to join a union and engage in collective bargaining without fear of reprisal. NDOT recognizes the importance of entrepreneurship in creating high-paying jobs and plans to collaborate with universities and community colleges to help workers develop their skills and entrepreneurship abilities in the industry sectors. NDOT has established a Handshake Account in coordination with Metro's Human Resources (HR) department, which will target colleges and universities nationwide, aiming to connect with potential candidates from all backgrounds.

Programmatic Capability and Past Performance

NDOT has programmatic capabilities including organizational capacity, expertise, and resources available to effectively implement and manage this program. NDOT's team has robust capabilities encompassing various aspects, including policy development, outreach and marketing, application processing, data management, monitoring, and evaluation. NDOT will successfully leverage these capabilities to streamline operations, maximizing outreach and participation, ensure transparency and accountability, and achieve our desired outcomes.

The department is led by Diana Alarcon, CAPP who has overseen the transformation of the department to a high achieving department of transportation with an emphasis on safety, complete streets, and modernization. Specifically, the program and grant administration process will be through NDOT's TDM program, Nashville Connector. Currently NDOT has three employees managing and expanding Nashville Connector. The program is led by Meghan Mathson who has over seven years in implementing transportation demand management programs and policies. Joining Meghan's team, we have our TDM Planner, Valeria Martinez. Val supports the implementation of NDOT's TDM program by engaging stakeholders, employers, organizations, and developers. Val has three years of experience in planning and urban affairs. In addition, Dahlia Grub serves as a planning technician for NDOT. Dahlia provides technical assistance for Nashville Connector. Dahlia has one year of experience in environmental planning.

Supporting the Nashville Connector team, NDOT has a staff member dedicated to grant coordination and multiple finance team members with experience in grant administration. Finally, supporting the program will be Mayor Freddie O'Connell's office through the Director of Sustainability and Resilience, Kendra Abkowitz, PhD, MBA.



Past Performance

Moreover, past performance plays a crucial role in demonstrating the effectiveness and impact of implementing a federally funded grant program. Metro and, more specifically, NDOT, has significant experience working with federal agencies through numerous formula and discretionary grant programs. Among the more notable recent grant partnerships include:

- Successful completion of a Vision Zero Action and Implementation Plan in 2022 using \$470,000 of a \$1,500,000 Congestion Mitigation and Air Quality (CMAQ) grant. The grant program was delivered under budget.
- Development of a Metro Nashville Connector Transportation Demand Management (TDM) program in 2022 using the remainder of the \$1.5 million in CMAQ grant funding. The program was delivered under budget and received a second CMAQ grant award for three years of operation.
- A \$1.5 million Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD) Grant in 2022 for the Charlotte Avenue/Dr. Martin L King, Jr. Boulevard Transit Headways and Congestion Management project. This project is conducted in partnership with the Tennessee Department of Transportation (TDOT) and is currently on schedule.
- A \$3.4 million CMAQ grant in 2022 to develop and operate the Nashville Traffic management Center (TMC) for three years.
- A \$200,000 grant from TDOT, combined with \$400,000 in local funds and \$400,000 in Federal Transit Administration (FTA) Section 5307 funds, for Connect Downtown—a joint project between NDOT, WeGo Transit, the Downtown Partnership, and TDOT to address mobility and traffic congestion in the downtown core. This project was delivered on budget and was completed earlier this year.

As demonstrated by its successful track record of completing federally funded projects, NDOT does not anticipate any cost overruns on this project. In the unlikely event that a cost overrun occurs, NDOT has the financial and staff capacity to absorb it. By continuously building and leveraging programmatic capabilities and learning from past performance, the Music City Bike Bucks e-bike rebate program can adapt and thrive in meeting the evolving needs and challenges of promoting sustainable transportation.

Reporting Requirements

NDOT is committed to documenting various aspects of program implementation, outcomes, and financial utilization. Along with all EPA programmatic reporting requirements, NDOT will provide information on voucher distribution, purchases, program impact, equity and access. By documenting and reporting on the aspects, Music City Bike Bucks can track progress, measure effectiveness, and demonstrate accountability to stakeholders, ultimately contributing to the success and sustainability of the program.

Expenditure of Awarded Funds

This proposal is to use \$1,000,000 of the requested EPA CPRG funds to provide vouchers to residents of Nashville and Davidson County for the purchase of an e-bike. NDOT will administer this program through Nashville Connector and will contract with a third party to assist with the administration. NDOT will work to implement this program within the first year and begin administering e-bike vouchers throughout the performance period. Two types of rebates would be available:

Voucher Type	e-bike	e-cargo bike
Standard	\$300	\$500
Income-Qualified	\$1200	\$1400

Income-Qualified Voucher Individuals with a household income below 80% of the Area Median Income of Nashville and Davidson County or below 200% of the relevant federal poverty level. Applicants would be required to submit an application for a rebate. This application would require proof of residency of Nashville and Davidson County and proof of income if applying for an Income-Qualified Voucher. All applicants must be 18 year of age or older.

Vouchers will be limited to one per person. The voucher must be used to purchase a new e-bike from a participating bike shop. The rebates would be available for all classes of e-bikes, as defined by Tennessee Code Annotated § 55- 8-301:

Class 1	an electric bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of twenty miles per hour (20 mph).
Class 2	an electric bicycle equipped with a motor that may be used exclusively to propel the bicycle, and that is not capable of providing assistance when the bicycle reaches the speed of twenty miles per hour (20 mph).
Class 3	an electric bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the bicycle reaches the speed of twenty-eight miles per hour (28 mph)

E-bikes purchased through this program must have two or three wheels and fully operable pedal. The electric motor must be 750 watts or less and cannot be gas-powered. Full-suspension mountain bikes are excluded from the program. There is no minimum or maximum purchase price. E-cargo bikes must have an extended frame designed to carry additional people or cargo. E-cargo bikes must meet all of the following criteria:

Designed to carry one or more passengers in addition to the rider OR designed to carry heavier or bulkier loads than a traditional bicycle can carry	Bike has an extended frame (long tail, long john, Bakfiet or box bike)	Bike's extended frame has a published cargo load carrying capacity of at least 100 lbs.
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The rebate must be redeemed at a participating bike shop. Metro will partner with all bike shops in Nashville and Davidson County. The bike shops must have a brick-and-mortar location in Nashville and Davidson County and must sell e-bikes that meet the criteria above and provide on-site sales, service, and repair of e-bikes. In addition to the \$1,000,000 reserved for voucher distribution, NDOT will fund personnel, administration, and outreach and education through the grant.