CPRG IMPLEMENTATION GRANTS COMPETITION

COVER PAGE FOR APPLICATION

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| **Applicant Information** | * Department of Energy and Environment * Jenn Hatch, Chief, Green Building & Climate Branch   + (202) 527-1779   + Jenn.Hatch@dc.gov |
| **Type of Application** | * Lead Applicant for Coalition:   + District Department of Public Works   + District Department of Transportation |
| **Funding Request** | * $49,596,031 (Tier D) |
| **Application Title** | * Advancing Environmental Equity: Addressing Air Quality in Ivy City Neighborhood of Washington, DC for Climate and Environmental Justice |
| **Brief Description of GHG Measures** | * Expanding the current residential Curbside Compost Pilot Program citywide and ensure the vehicles that collect the organic waste are electric and have the needed charging infrastructure; * Supporting the electrification of heavy-duty fleet vehicles and equipment by installing 40 Level 3 chargers at municipal fleet fueling sites; * Expanding a small resident-facing e-bike incentive program and launching a related program to support delivery workers and employers’ access electric cargo bikes |
| **Sector(s)** | * Transportation; Waste and Materials Management; Electric Power |
| **Expected Total Cumulative GHG Emission Reductions** | * 2025-2030: 9,836.65 MTCO2e * 2025-2050: 68,063.67 MTCO2e |
| **Location** | * District of Columbia – Ivy City/Brentwood neighborhood |
| **Applicable PCAP Reference(s)** | * [[[District of Columbia PCAP](https://www.epa.gov/system/files/documents/2024-03/dc-cprg-pcap.pdf)](https://www.epa.gov/system/files/documents/2024-03/dc-cprg-pcap.pdf)](https://www.epa.gov/system/files/documents/2024-03/dc-cprg-pcap.pdf) Measure 4 (pg 29): Ensure residents’ daily needs are a safe, comfortable, convenient walk, ride, or roll from their front door, through quality housing in all eight wards that provide housing security for current and future residents in vibrant, accessible neighborhoods; C. Prioritize moving people, not cars. * [[[District of Columbia PCAP](https://www.epa.gov/system/files/documents/2024-03/dc-cprg-pcap.pdf)](https://www.epa.gov/system/files/documents/2024-03/dc-cprg-pcap.pdf)](https://www.epa.gov/system/files/documents/2024-03/dc-cprg-pcap.pdf) Measure 5 (pg 32): Zero emission buses and vehicles move more people and freight with less noise and pollution; A. Accelerate and enable a shift to zero emission transportation, prioritizing buses and trucks * [[[District of Columbia PCAP](https://www.epa.gov/system/files/documents/2024-03/dc-cprg-pcap.pdf)](https://www.epa.gov/system/files/documents/2024-03/dc-cprg-pcap.pdf)](https://www.epa.gov/system/files/documents/2024-03/dc-cprg-pcap.pdf) Measure 6 (pg 36): Accelerate and ensure a circular economy, supporting a zero waste DC and low-carbon choices; A. Reduce first to achieve zero waste. |

**SECTION 1: OVERALL PROJECT SUMMARY AND APPROACH**

The Ivy City/Brentwood neighborhood is a historically Black neighborhood located in the District of Columbia’s Ward 5. It is an EPA Region 3 Priority Engagement Community, as identified by EPA’s cumulative impact analysis, which included demographic, environmental, and public health data, and is a Low-Income Disadvantaged Community (LIDAC) as per the characteristics outlined on pages 11 and 12 of the Notice of Funding Opportunity. The area is significantly impacted by poor air quality from several sources, including heavy traffic from New York Avenue and medium and heavy-duty fleet vehicle emissions from neighboring government vehicle fueling and storage lots. This proposal seeks to meaningfully engage residents in the Ivy City/Brentwood community, reduce emissions, improve air quality, and ensure that LIDAC community members benefit first and foremost from initiatives that reduce climate emissions and improve public health. Building on the successes in Ivy City/Brentwood, the proposed measures in this application will be expanded to other LIDAC communities in the District.

The District of Columbia has set an ambitious goal to be carbon neutral by 2045, and by 2040 for District Government operations. The District will achieve this goal by following a deep decarbonization pathway, prioritizing the reduction of GHG-related consumption first, followed by the electrification of systems currently running on fossil fuels, and ultimately purchasing all electricity from 100% renewable sources. The District is already implementing a host of emissions reduction activities to advance building energy efficiency, local solar development, and light-duty vehicle electrification, with a focus on equitable implementation. These activities provide a solid foundation form which to begin implementation of additional activities, targeting the waste and transportation sectors where funding sources have been limited and where sustained incremental progress is needed in order to build the infrastructure, operational capacity and experience that underpins long-term behavior shifts necessary to scale-up efforts commensurate with our carbon neutrality goals. The measures included in this proposal --addressing emissions from our most polluting fleets, enabling electric alternative transportation for residents and businesses, and creating a pathway for systematic citywide organic waste diversion -- were carefully chosen from the District's PCAP based on their ability to scale-up proven efforts from existing pilot projects, jumpstart actions that will require a long-term transition, and overall offer opportunities to transform operations in the District and inform similar efforts in urban centers nationwide.

The District Department of Energy and Environment (DOEE) is the lead applicant for this proposal as the District’s expert on climate mitigation planning and greenhouse gas reporting. DOEE will serve as the grant manager and advise on equitable engagement and overall project implementation. As coalition members the District Department of Transportation (DDOT) and the District Department of Public Works (DPW) will be the lead implementing agencies. These agencies have committed to signing Memoranda of Understanding (MOUs) by July 1, 2024, to implement the projects outlined in this proposal. This cross-agency coalition effort is an efficient and effective method to accelerate impact, spur innovation, foster synergies, share information, and achieve progress not possible through isolated programs. By engaging with Ivy City/Brentwood, this coalition will create an avenue to collaborate and test best practices through an equity lens for this and other District projects.

1. **Description of GHG reduction measures**
2. Organic Waste Diversion to achieve Zero Waste (Implementing agency: DPW)

The District seeks funding to expand organics collection from the current pilot program (serving 9,000 households), to offer curbside collection for household organic waste equivalent to trash and recycling service. Funding will allow DPW to move composting services from contracts to being housed internally at DPW. By internalizing the organic waste collection process, DPW will be well-positioned to continue the project past the end of the grant period with local funding. With this project, all single-family homes serviced by DPW will have weekly compost collection at the curb. $29,235,480 will be used to internalize the residential organics collection program which includes:

* hiring 79 full-time union-eligible collection crew staff
* hiring 10 full-time HR, management, or other administrative non-union staff
* 27 electric collection vehicles,
* 126,000 outdoor collection bins,
* 76,859 indoor collection bins
* 76,859 bin liners,
* public educational materials

DPW’s Solid Waste Management Administration (SWMA), responsible for the collection and disposal operations of trash and recycling from single-family homes, and Office of Waste Diversion (OWD), responsible for overseeing and coordinating the progress made towards achieving the District’s 80% waste diversion goal, will work collaboratively on program design and equipment and materials procurement. DPW’s Fleet Management Administration (FMA) will support electric vehicle procurement, as noted below. SWMA will create and oversee a new department within its administration to support organics collection. OWD will support this effort by using insights from the agency’s current residential Curbside Composting Pilot Program. Program participation will be prioritized for households in Ivy City/Brentwood, followed by households in the remaining EJ Screen and CJEST LIDAC areas (primarily in Wards 5, 7, and 8). The program will be opt-in for interested participants.   
  
The implementation of this project supports the District’s PCAP Measure 6: Accelerate and ensure a circular economy while supporting a zero waste DC and low-carbon choices (p.36). This measure was selected as a priority because the District must find new and innovative ways to reduce waste to achieve carbon neutrality by 2045 including diverting at least 80% of waste from landfills and incinerators by 2040. The District can reduce carbon and unhealthy air emissions by targeting how waste is handled, from hauling and disposal to material lifecycles. Reducing the overall waste generated in the city is the ultimate goal; however, swift progress to shrink carbon-rich waste streams ripe for recovery must be a first step. Organic waste, including food, leaves, and yard waste is a priority because a 2018 analysis approximates that organics make up 20.1% of the District’s waste stream, but 60% of the emissions from waste when sent to a landfill or incinerator. Addressing this waste stream will bring important services to residents, grow the local economy and workforce, and reduce the District’s environmental footprint. This measure meets the goals of the CPRG program by addressing a sector where reducing emissions is challenging and for which limited other funding is available. Furthermore, this project prioritizes implementation in LIDAC communities, creates quality green jobs for hard-to-employ individuals[[1]](#footnote-2), and addresses inequality of opportunity and income.

This component will be implemented in four phases, aligning with the 5-year timeframe for the project. The phased roll-out starts with Ivy City/Brentwood and expands to serve the entire city by the end of the project period. Major features, tasks, and milestones are listed below.

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| **Task #** | **Task Description – Organic Waste Diversion** | **Anticipated Milestone Dates** | **Assumptions** |
| 1 | Community engagement around program design specifics, workforce development, and recruitment opportunities for residents of LIDAC communities | Present – December 2024 | Engagement and feedback is gathered during the current pilot collection program, continuing through December 2024. |
| 2 | Develop program guide and promotional materials | January 2025 – March 2025 | Community engagement around program design specifics will be completed. |
| 3 | Procure Phase One Supplies- 30,967 outdoor collection bins, 16,859 compostable bags, 16,859 indoor collection bins, and 7 electric collection vehicles | October 2024 – September 2025 | It takes one year to prepare procurement documentation, solicit bids, and procure equipment and vehicles |
| 4 | Hire and train 29 new staff | January 2025 – September 2025 | It takes six months to hire and onboard and three months to train new staff to support collection for Phase One (30,000 households) |
| 5 | Educate stakeholders and communities about program. Open and promote registration, prioritizing inclusion of LIDAC communities in Phase One. | April 2025 – June 2025 | Publication of the program guide and promotional materials will be completed |
| 6 | Begin collection service for 30,000 registered households, with preference given to residents of Ivy City/Brentwood (Phase One)  Ramp up participation through 2029 at which point every single-family household will receive an organics collection bin and collection service. | October 2025 – September 2026 | Onboarding and training of new staff and procurement of new vehicles will be completed. |
| 7 | Repeat task # 3-6 for Phase Two   * Procure 28,026 outdoor collection bins, 16,000 compostable bags, 16,000 indoor collection bins, and 5 electric collection vehicles * Hire and train 15 new staff * 50,000 total registered households (20,000 additional households) | October 2025 – September 2027 | Phase Two materials/equipment procurement and hiring to occur during Phase One (October 2025 – September 2026).  Phase Two collections for 50,000 registered households to occur October 2026-September 2027. |
| 8 | Repeat task # 3-6 for Phase Three   * Procure 24,805 outdoor collection bins, 16,000 compostable bags, 16,000 indoor collection bins, and 5 electric collection vehicles * Hire and train 17 new staff * 70,000 total registered households (20,000 additional households) | October 2026 – September 2028 | Phase Three materials/equipment procurement and hiring to occur during Phase Two (October 2026 – September 2027).  Phase Three collections for 70,000 registered households to occur October 2027-September 2028. |
| 9 | Repeat task # 3-6 for Phase Four   * Procure 42,201 outdoor collection bins, 28,000 compostable bags, 28,000 indoor collection bins, and 8 electric collection vehicles * Hire and train 28 new staff * All 105,000 single-family households (35,000 additional households) | October 2027 – September 2029 | Phase Four/Complete city-wide roll out during which every single-family household in the District receives an organics collection bin and collection service.  Phase Four materials/equipment procurement and hiring to occur during Phase Three (October 2027 – September 2028).  Phase Four collections for 105,000 registered households to occur October 2028-September 2029. |

Risks include procurement delays, delays in infrastructure upgrades, supply chain issues, and contractor or vendor performance. Delays in procurement or supply chain issues may impact the District’s ability to procure materials and equipment in the time estimated to complete the tasks in the table above and may delay implementation by three to six months. In the unlikely worst-case scenario, poor vendor performance would cause the District to terminate a vendor’s contract and require a new solicitation and award process which could delay implementation for up to a year. The impacts of these risks could be a three-to-twelve-month delay in full implementation. Additional risks include delays in securing local funding to internalize staff positions, which would slow down the District’s ability to expand the program beyond LIDAC communities to city-wide implementation.

1. Charging to accelerate the deployment of EVs and electric MHDV fleets (Implementing agency: DPW)

The District seeks funding to install 40 Level 3 chargers with 180kWh of power at six existing government fleet fueling facilities located in Ivy City/Brentwood. These facilities house, service, and fuel light, medium, and heavy-duty equipment for government operations. To meet its goal of 100% government fleet electrification by 2040, the District needs the capacity to efficiently charge light-duty and medium/heavy duty electric vehicles (MHDV). Level 3 chargers are needed to maintain the efficiency of government services, especially in agencies with heavy equipment including the Departments of Public Works, Transportation, and General Services. The proposed charging locations are all sited in the Ivy City/Brentwood neighborhood. The following facilities are on one contiguous property with separate addresses, and for the purposes of this grant are known as the “West Virginia Charging Project.”

* 1833 West Virginia Avenue NE
* 1835 West Virginia Avenue NE
* 1827 West Virginia Avenue NE (EV maintenance shop)
* 1725 15th Street NE (Parking Enforcement Management Administration and Solid Waste Management Administration Headquarters)
* 1735 15th Street NE (DDOT-Warehouse)

Because these facilities are central to District fleet operations, the site is ideal for a charging “hub” that will include 25 Level 3 chargers.

Also located in Ivy City is a District fleet facility at 1831 Fenwick Street NE which houses DPW’s Street and Alley Division, a large proportion of the District’s MHDV fleet. The “Fenwick Charging Project” is scoped for 15 Level 3 chargers. and DPW has been working with DGS on the preliminary design and will finalize the exact locations collaboratively.

These facilities also host many of the District’s fleet fueling stations, meaning an easier cultural and workflow transition from fueling to charging. Charging stations will be equipped with the same software technology as the District’s current fuel stations, and staff can use key fobs to initiate charging the same way they use key fobs to activate the gas pump.

DPW’s Fleet Management Administration (FMA) is responsible for repairing and maintaining nearly 3,000 vehicles used for all city services except police, fire, corrections, and schools. FMA fuels approximately 6,000 District Government vehicles, including heavy-duty assets such as school buses, fire and trash trucks, waste reduction material handlers, and street sweepers. FMA will work with the regional electricity utility, Pepco, to permit Level 3 EV chargers at the sites listed, as well as manage the electricity upgrades and charger installation process. The Department of General Services (DGS) builds, maintains, and sustains the District real estate portfolio. FMA will work with DGS to identify locations for charging stations at the designated facilities, then work with the electric utility to determine what electrical upgrades will be needed to power the Level 3 charging stations.

This project component supports the District’s PCAP Measure 5: Zero emission buses and vehicles move more people and freight with less noise and pollution. This measure meets the goals of the CPRG program by addressing the transportation sector, the second largest source of greenhouse gas emissions in the District and the leading cause of poor air quality from District-based sources. The majority of medium and heavy-duty vehicles registered in the District are government-owned and the biggest emission benefits will come from replacing buses, trucks, and other high-capacity, high-mileage, and high-polluting vehicles with electric vehicles in communities with the worst air quality. The District government will continue to electrify its fleet, including DC Circulator buses and school buses and pilot new technologies for heavy-duty vehicles like refuse trucks and street sweepers.

The above priority measure was selected because of its outsized impact on local air quality and the need for planning and infrastructure upgrades to electrify quickly. The project focuses on planning and infrastructure upgrades for which limited other funding is available; however, it will complement funding from the Clean School Bus program, the Diesel Emissions Reduction Act (DERA), and other federal funding sources and make these funding sources more accessible. This project will build on work DOEE has with DPW and DDOT through the Volkswagen, DERA, and other planning projects to ensure that EVs operate on routes in LIDAC communities first, ensuring that they will immediately realize the positive air quality impacts from electrification, enabling the District to equitably add more EVs to its fleet. These GHG emissions reductions will have a lasting impact far beyond the project timeline.

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| **Task #** | **Task Description – MHDV Charging Infrastructure** | **Anticipated Milestone Dates** | **Assumptions** |
| 1 | Conduct site assessments with electric utility and DGSs to determine what electrical upgrades are needed to support Level 3 charging stations | October 2024 – March 2025 | It will take six months for the site assessments |
| 2 | Develop an installation schedule based on results of site assessment | April 2025 |  |
| 3 | Submit an application for services to electric utility and obtain the permits | May 2025 – November 2025 | Estimating it will take six months for the application and permitting |
| 4 | Procure a contract for construction and electrical upgrades. | May 2025 – May 2026 | It will take one year to prepare procurement documentation, solicit bids, and procure service contract. |
| 5 | Procure a contract for the acquisition of 40 charging stations. | May 2025 – May 2026 | It will take one year to prepare procurement documentation, solicit bids, and procure materials. |
| 6 | Implement phased installation schedule with 6-10 chargers at a time using the following steps:  6a. Site preparation and electrical infrastructure installation  6b. Conduct safety inspection  6c. Connect chargers to power source  6d. Test and commission chargers | May 2026 – May 2028 | Estimating 4-6 phases of about 1 year each with staggered start dates totaling 2 years to install all 40 chargers. |
| 7 | Outreach to train District Government employees, both facility staff and drivers, on charger operations. | May 2026 – September 2029 | Ongoing through Task 6 to the end of the grant period |

Risks include procurement delays, delays in infrastructure upgrades, supply chain issues, and contractor or vendor performance. Delays in procurement or supply chain issues may impact the District’s ability to install chargers in the time estimated in the table above. The impact will be a delay in implementation by an estimated three to six months. Infrastructure upgrades or construction vendor performance issues would cause longer delays. In the unlikely worst-case scenario, poor vendor performance would cause the District to terminate a vendor’s contract and require a new solicitation and award process which could delay implementation up to a year. The impacts of these risks could be a three-to-twelve-month delay in full implementation.

1. E-bike Incentive Program Ivy City/Brentwood (Implementing agency: DDOT)

Increasing electric bicycle (e-bike) and electric cargo bicycle (cargo e-bike) adoption in the District will reduce GHG emissions from the transportation sector by empowering more residents to use alternative transportation methods instead of personal or delivery vehicles. Funding from CPRG will expand DDOT’s existing E-bike Incentive Program to help residents and businesses in Ivy City/Brentwood, delivery workers throughout the District, and other transportation-disadvantaged residents learn how to, purchase, securely store, and ride e-bikes. This program will fund e-bike rebates, bike storage, bike helmets, e-bike riding instruction, and job training for e-bike mechanics. DDOT will set aside 25% of resident e-bike vouchers and 50% of business e-bike vouchers for residents and businesses located in Ivy City/Brentwood. This area is located three miles away from any public transit hubs or stations, and residents are more likely to drive alone due to first mile, last mile challenges. Further, Ivy City and Brentwood are bound by multi-lane arterials and lack a high-quality bicycle network, necessitating greater education and outreach to encourage residents to bike. There are planned bicycle infrastructure along Mt. Olivet Road NE that will be completed by 2025 that will expand safe routes and connections to Ivy City.

This measure supports PCAP Measure 4: Ensure residents’ daily needs are a safe, comfortable, convenient walk, ride, or roll from their front door, through quality housing in all eight wards that provide housing security for current and future residents in vibrant, accessible neighborhoods. This measure was selected as a priority because it will prioritize moving people, not cars, provide an accessible and affordable mode of transportation and support the District’s carbon-free goals.

DDOT will design the program; engage with and educate residents, delivery workers, and Ivy City/Brentwood businesses; manage the voucher application process; and monitor program outcomes. DDOT will issue contracts to process voucher payments and design marketing materials.

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| **Task #** | **Task Description – E-bike Incentive Program Ivy City/Brentwood** | **Anticipated Milestone Dates** | **Assumptions** |
| 1 | Engage Ivy City/Brentwood community and conduct needs assessment, particularly for delivery workers and businesses | November 2024 | An update needs assessment will be conducted in Year 3 |
| 2 | Design community engagement, business outreach strategies and education materials | February 2025 |  |
| 3 | Confirm agreements with local bicycle shops (authorized retailers) for participation in the program | February 2025 | This task will be repeated as required (annually) |
| 4 | Contract with a technology vendor for the application portal; design and test expanded voucher application process | April 2025 | Update voucher application process as necessary in Year 2 |
| 5 | Conduct outreach, implement educational activities and seek input, such as learn-to-ride classes and siting for curbside secure bike storage pods | April-June 2025 | Repeat annually |
| 6 | Distribute e-bike vouchers to residents, businesses, and delivery workers, and install curbside storage pods | July 2025 | Repeat annually |
| 7 | Provide ongoing communications, education, and monitoring support to e-bike voucher recipients | July 2025-ongoing | Ongoing through the life of project |
| 8 | Evaluate the impact of e-bike ownership on GHG emissions, transportation mode shift, and business operations through surveying and trip tracking tools | September 2025-ongoing | Ongoing through the life of project |

The fact that there is only one shop in the Ivy City/Brentwood neighborhood is a risk to this project. While not anticipated, if this business closed it would prohibit easy e-bike purchasing for residents. Another potential risk is the time required to secure contracts with a technology vendor and e-bicycle mechanics. However, the District anticipates minimal impact to implementation of the proposed measure as a result of these risks.

1. **Demonstration of funding need**
2. Organic Waste Diversion to achieve Zero Waste

To-date, no federal grant funding has been secured for this measure because there are limited available funding sources. However, the District has applied for federal and private funding to promote waste diversion in the past, including:

* EPA’s FY22 Solid Waste Management Assistance Grants: Awarded $152,000 to develop an organic waste training program for commercial kitchens.
* EPA’s FY23 Solid Waste Infrastructure for Recycling Grant (States and Territories): Awarded $491,000 to conduct a waste characterization study and write an organics management plan.
* EPA’s FY23 Consumer Recycling Education and Outreach Grant Program: Not awarded.

The opportunities listed above, plus opportunities such as USDA’s Composting and Food Waste Reduction (CFWR), are wonderful programs but are not sufficient to support the city-wide roll-out of residential organics collection. The grants are either too small compared to the required investment to roll out city-wide residential organics collection, or the scope of eligible activities is limited to planning, studies, and education activities. DPW secured nearly $4M in local funding to implement a pilot residential compost program in FY24. However, no additional local funding is available to continue or expand the program citywide. With the assistance of CPRG funding, DPW can propel organics collection service out of the pilot phase into a city-wide service, which will be well-positioned to be locally funded once initially established, as start-up costs and program launch are the largest hurdles in developing and sustaining this project.

1. Charging to accelerate the deployment of EVs and electric MHDV fleets

The District has applied for EV charging funding under the U.S Department of Energy’s National Electric Vehicle Infrastructure (NEVI) program. Charging stations eligible for funding under that program must be available to the public and be located along Federal Highway Administration Alternative Fuel Corridors. The charging stations in Ivy City/Brentwood does not meet the NEVI funding criteria.

DPW also participates in Volkswagen/Diesel Emissions Reduction Act (DERA) programs and currently has a DERA grant that is pending to replace heavy duty diesel vehicles with EVs. While charging units are eligible for funding under DERA, the electrical upgrades needed to install Level 3 chargers in existing fueling facilities are not eligible costs. For this reason, previous DERA funding awarded to the District has focused more on B100 alternative fuel for medium and heavy-duty vehicles. To electrify the District’s heavy-duty fleet, and to capitalize on future DERA opportunities, there must be sufficient charging infrastructure to support heavy duty EVs. Funding from this proposal will allow DPW to more aggressively seek out DERA and other funding opportunities under the Inflation Reduction Act (IRA)–such as EPA’s Clean Heavy Duty Vehicles–and other programs to purchase EVs. The District will explore opportunities to pair CPRG or other federal funding with non-federal funding to take advantage of elective pay tax credits for clean vehicles and alternative fuel refueling stations and maximize these EV investments.

DPW has also invested approximately $2 million in EV charging to date and the District has spent over $11.1 million from 2017 to date on procuring 100% electric vehicles.

1. E-bike Incentive Program Ivy City/Brentwood

$800,000 of local operating funds have been secured for a residential e-bike incentive program, but future funding is not guaranteed and if it is secured, more is needed for the current demand for e-bike vouchers. The current voucher limit is $1,500 for e-bikes and $2,000 for cargo e-bikes. This does not fully cover the cost of reputable e-bikes locally available, particularly for cargo models whose average cost is $3,500 for a reputable, UL safety-certified brand. The District’s Racial Equity Impact Assessment (REIA) and review of industry best practices recommend that 100% of the cost of an e-bike should be covered by an incentive for the lowest income residents to make them truly accessible. Funding from CPRG will allow DDOT to raise the voucher values offered to meet the gap between the current vouchers and the total cost of the e-bikes, offering a better, more equitable approach to residents.

DDOT receives Federal Congestion Mitigation and Air Quality (CMAQ) funding from the Federal Highway Administration (FHWA) each year, but this funding is programmed for other transportation demand management (TDM) initiatives and programs and is unavailable to use at the scale proposed for this project. DDOT is exploring applying for USDOT FY22-24 Congestion Relief Program funds in partnership with the Metropolitan Washington Council of Governments but does not anticipate e-bike incentive program funding making it into the final regional proposal due to other priority needs. No other IRA sources of funding are available for e-bikes or alternative transportation and BIL funds to date have limited focus to multi-passenger vehicles, rather than individual transportation options.

1. **Transformative impact**
2. Organic Waste Diversion to achieve Zero Waste

The residential organics collection program funded by CPRG will unlock organics diversion city-wide, including in the commercial sector. Currently, D.C. Code § 8–1031.03 mandates the implementation of three-stream (trash, recycling, organics) source separation from all residential and commercial entities. However, the implementation of organics separation requirements is contingent upon the implementation of residential organics collection by DPW. DPW is actively funding a $4 million pilot program to assess the feasibility of expanding food waste collection to all DPW-serviced households. In just six months of its pilot program (which began in fall 2023), DPW has diverted over 550 tons of food waste from landfill and incineration. The addition of CPRG funding will propel the organics collection service out of the pilot phase and make it a permanent service, launching the required organics separation and diversion city-wide in D.C. Code § 8–1031.03, which will exponentially amplify a reduction in GHG emissions and increase waste diversion outcomes of this project.

The District supports expanding collection service beyond a pilot and adding additional organic materials collection, such as yard waste into the program but startup costs have remained a barrier to expansion. CPRG funds will provide the jumpstart necessary to launch a city-wide residential organics collection program to better serve residents. DPW currently offers twelve food waste drop-off sites that operate for just four hours per week; moreover, only eight are year-round, excluding the service for people who work on weekends, do not have access to transportation, or are immobile. While these sites collect over 300 tons per year on average, the introduction of the Curbside Composting Pilot Program has made residential food waste collection more equitable, boosting access for those not able to visit the drop-off sites and increasing diversion of food waste from residents by 68.5% from 2022 to 2023. Based on results from a February 2024 survey on existing food waste diversion rates, DPW estimates that city-wide roll-out will provide an additional 96,000 residents with access to free and significantly more convenient food and yard waste collection that will potentially divert 22,587 tons of organics annually. The District will monitor the program and serve as a best practice resource for a citywide rollout of an organics diversion program regionally and nationally.

1. Charging to accelerate the deployment of EVs and electric MHDV fleets

The emissions reduction potential for medium and heavy-duty vehicles (MHDVs) including school buses, fire and trash trucks, street sweepers and snowplows is significant. There are over 400 heavy duty assets in DPW’s fleet. MHDVs are some of the most important vehicles to transition away from internal combustion engines due to their outsized impact on air pollution (including NOx and PM2.5 emissions), and the potential to unlock significant GHG emissions reductions. CPRG funding will reduce key barriers to electrifying DC government’s vehicle fleets such as upfront cost and the limitations of advanced charging capacity. Yet, in 2023, DPW procured its first electric street sweeper and has procured a total of 24 EVs in FY24 to date, including 17 Ford Maverick Hybrid EV pick-up trucks. While procuring electric MHDVs is becoming increasingly feasible, more Level 3 chargers are needed. This transformational infrastructure asset which will make it feasible to electrify the District’s MHDV fleet assets. The District’s Level 2 chargers output 7.7kW of power and can take over 24 hours to charge a heavy duty asset (220kW battery). The proposed Level 3 chargers could output 180kWs of power, charging the same asset in about one hour. Level 3 charging stations are ideal for a government fleet as they provide substantial energy quickly, reducing vehicle downtime and increasing productivity. Additionally, Level 3 chargers offer greater flexibility in charging schedules, leading to operational cost savings and improved efficiency

1. E-bike Incentive Program Ivy City/Brentwood

Passenger vehicles account for approximately 17% of GHG emissions in the District. Mode shift to e-bikes will mitigate a portion of these emissions. The Electric Vehicle Incentive Cost and Impact Tool[[2]](#footnote-3) estimates that an average e-bike voucher of $1,500 (the current level of the voucher for income-qualified residents for a standard e-bike) within a budget of $2 million will yield over 1,300 e bikes used. From this estimate, the District will spend $2 per kg CO2 saved and save a total of 1.1 million kg CO2 per year – equivalent to 123,776 gallons of gasoline. This is a conservatively low estimate, as it assumes just 15% of rebate recipients’ driving trips are substituted with e-bike trips and all the e-bikes have the lowest fuel economy. Qualitative and quantitative data collected during this expansion will improve further implementation of this GHG-reducing program. Data collected and lessons learned from this program can be shared with other jurisdictions seeking to implement or replicate an e-bike incentive program.

**SECTION 2: IMPACT OF GHG REDUCTION MEASURES**

1. **Magnitude of GHG Reductions from 2025 through 2030 (Estimated Emissions Reductions)**

The table below provides estimates of the emission reductions in metric tons of carbon dioxide equivalent (MTCO2e) anticipated from implementing the proposed measures. A short description of the impacts of these measures follows and the underlying methodologies, assumptions, and calculations used to generate the estimates included in this section can be found in the supporting Technical Appendix to the application.

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| **Sector** | **Project** | **Cumulative GHG emission reductions (MTCO2e)** | |
| **2025–2030** | **2025–2050** |
| Waste | Organic Waste Diversion | 6,416.33 MTCO2e | 40,313.89 MTCO2e |
| Transportation | EV Charging Stations | 420.32 MTCO2e | 12,749.78 MTCO2e |
| Transportation | E-Bike Incentive | 3,000 MTCO2e | 15,000 MTCO2e |
| **Total** | | 9,836.65 MTCO2e | 68,063.67 MTCO2e |

1. Organic Waste Diversion to achieve Zero Waste: 85,508.88 tons of food and yard waste is estimated to be diverted between 2025 and 2030. Between 2025 and 2050, DPW estimates diverting a total of 537,253.88 tons of food and yard waste. The annual estimated organic household waste diverted is 430.23 pounds per year. This estimate assumes medium participation and generation based on the District’s 2017 Compost Feasibility Study and a benefit-cost analysis conducted during the development of the Zero Waste DC Plan in 2022. the District estimates it will need 27 electric collection vehicles once the program is at fully rolled out. The number of collection vehicles was estimated using the EPA’s 2016 Volume-to-Weight Conversion Factors for Solid Waste, which determined the amount of food waste that can be collected, and, in turn, the number of households that can be serviced per route by each collection vehicle. The benefits of expanding service using all-electric vehicles compared to adding more diesel collection trucks are GHG savings and reduced criteria air pollutants. Charging to accelerate the deployment of EVs and electric MHDV fleets
2. Charging to accelerate the deployment of EVs and electric MHDV fleets: By 2030, approximately 500 new electric vehicles will be supported by new Level 3 chargers. The District currently owns 225 electric vehicles. Concern about adequate charging station availability has slowed the procurement of new electric vehicles. So far, in FY24, the District has only purchased 24 electric vehicles out of 128 vehicle acquisitions. Adding charging capacity will increase the rate at which the District transitions fleet assets to electric vehicles. Currently, the District owns 1,814 light-duty vehicles, 359 medium-duty vehicles, and 680 heavy-duty and off-road assets. The District’s light-duty fleet is averaging 600,000 gallons of fuel annually post-pandemic. In calendar year, District fleet vehicles traveled approximately 821,961 miles. Chargers installed through this program will enable the District to procure and charge at least 32 MHDV fleet vehicles in the next 5 years as part of the proposed residential organics collection program.
3. E-bike Incentive Program: Estimates for GHG reduction impacts are conservative. The [scenario used](https://www.efficiencyvermont.com/Media/Default/docs/white-papers/efficiency-vermont-electric-bike-white-paper.pdf) assumes e-bikes will replace only 15% of car miles and uses low-efficiency e-bike fuel economy. CO2 emissions reductions were generated from the Electric Vehicle Incentive Cost and Impact Tool, hosted by Portland State University’s [Transportation Research and Education Center (TREC)](https://trec.pdx.edu/).
4. **Magnitude of GHG Reductions from 2025 through 2030 (Durability of Reductions) 2025-2030 and 2025-2050**

Cumulative emissions reductions from the proposed projects are attributed to increased diversion of organic waste from incineration and landfill, emissions avoided from deploying all-electric collection trucks instead of traditional diesel vehicles, increased charging capacity to accelerate deployment of EVs and reduced passenger vehicle miles traveled due to increased e-bike adoption.

The durability of short-term reductions (2025-2030) will be ensured because the projects will employ equipment and vehicles with average useful lifespans of 8-15 years. The collection vehicle and EV charging infrastructure will be backed by warranty and/or repair and maintenance plans in the short term. The e-bike program includes repair and servicing activities that will help realize GHG reductions and increased accessibility of the incentive program. The District will monitor and evaluate the projects with key performance indicators (see Section 3b), which include collecting data specific to reporting on the emission reductions achieved and their durability.

The durability of emissions reductions to 2050 will be similarly monitored and tracked. The useful life of vehicles and charging infrastructure will necessitate replacement before 2050. The investments made with CPRG funds will catalyze the shift in the District’s fleet operations, making it highly likely that vehicles and chargers will be replaced with equipment of equal or better performance at the end of useful life, especially given the District’s commitment to a zero-emission fleet by 2040. Therefore, these benefits are anticipated to be sustained in the long term. E-bikes will also need to be replaced in the long term. Individual ownership offers less certainty for lasting reductions, but the program is designed to support bike ridership education, repair and maintenance programs and bike storage. In the short term, there is also a complement of strategies aimed at making the District increasingly welcoming for cyclists. In that context, it is anticipated that e-bikes will also be replaced with comparable equipment and that e-bike miles traveled will continue to grow as infrastructure continues to offer safe and comfortable routes. The continued evolution of e-bike technology, offerings, and infrastructure to support alternative modes of transportation will help amplify the benefits from the CPRG-funded project over time.

1. **Cost Effectiveness 2025-2030**

Cost-effectiveness of proposed measures are calculated below for 2025 – 2030, and 2025-2050 as total CPRG funding request / MTCO2e saved. Actual cost effectiveness may be higher than the figures below as these represent conservative estimates. Increased availability of and market for EVs, efficient yielding charging infrastructure, and reduced installation costs or accelerated installation may decrease the cost per ton of GHG reduction. Similarly, the market for e-bikes will continue to evolve, e-bike availability will increase, and costs for e-bikes will decrease. These factors along with information targeted to residents in LIDAC neighborhoods that demonstrate e-bike need may enable DDOT to support an equity-centered and efficient program at a lower voucher dollar value, allowing the program to support more vouchers and adding to vehicle miles traveled (VMT) savings.

|  |  |  |  |
| --- | --- | --- | --- |
| **Project** | **GHG Reduction 2025–2030** | **$ / MTCO2e 2025-2030** | **$ / MTCO2e 2025-2050** |
| Organic Waste Diversion | 6,416.33 MTCO2e | $4,564 | $726 |
| EV Charging Stations | 420.32 MTCO2e | $18,701 | $617 |
| E-Bike Incentive | 3,000 MTCO2e | $4,150 | $830 |
| Average | 9,836.65 MTCO2e | $5,042 | $729 |

**SECTION 3: ENVIRONMENTAL RESULTS – OUTPUTS, OUTCOMES, AND PERFORMANCE MEASURES**

1. **Expected Outputs and Outcomes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project | Outputs | Outcomes | Performance Measures | Reporting Method and Frequency |
| Organic Waste Diversion | • 89 new employees working in green jobs (79 union-eligible)  • 105,000 bins collected weekly  • 27 electric collection vehicles purchased  • 261,075 sign-up mailers, 4,000 promotional flyers, 96,074 welcome packets, 255,000 educational brochures, 5,000 “Oops Tags” developed and distributed.  • Community engagement meetings | • Increased economic opportunity for new employees hired  • Increased staff capacity to implement GHG reduction measures  • Reduced trash volume, reducing costs and emissions for refuse transport and disposal  • Demonstrated progress toward 80% waste diversion goal as program scales to 22,587 tons of organics diverted annually  • Increased community knowledge about organic waste collection and composting  • Increased participation in the program | • Total # of employees hired and trained, including # who are District residents  • Total and geography-based participation (LIDAC community impact)  • Total tons of organic waste collected by geographic area  • Contamination rates  • VMT from organics collection vehicles | • [Annual Solid Waste Diversion Progress Report](https://dpw.dc.gov/wastediversionreport)  • Daily collection crew reports via routing software.  • Monthly contamination reports based on daily collection crew reports on a spreadsheet showing location-based contamination rates.  • Existing pilot reporting to continued inducing participation rates and satisfaction surveys. |
| EV Charging for MHDV Fleet | • 40 Level 3 charging stations installed  • 6 District fueling sites equipped with Level 3 chargers | • Increased rate of procurement for EVs for District fleet demonstrating progress toward goals of 50% fleet electrification by 2030 and 100% by 2040  • Increased access to charging and decreased charging times for District fleet  • Reduced exposure to hazardous air pollution and unhealthy ambient air quality from diesel fleet vehicles  • Changing attitudes by normalizing and encouraging electrification of MDHV vehicles  • Increased staff capacity to implement GHG reduction measures | • Total # Level 3 chargers installed  • Charging stations will be able to report on the following:  • Total electricity outputs  (by timeframe)  • Total # charging session  (by timeframe)  • Total # unique vehicles supported by charger  • Usage rate (by which we can estimate emissions avoided) | • Reported by location and in-service date, annually  • Ongoing collection, annual trends at minimum |
| E-bike Incentive Program | • 3,000 e-bike vouchers for residents deployed (25% set aside for Ivy City/Brentwood residents)  • 500 e-bike vouchers for delivery workers deployed  • 500 e-bike vouchers for businesses (50% set-aside for Ivy City/Brentwood)  • 12 secure bike storage pods installed  • 2,500 helmets distributed  • 500 residents taught how to ride an e-bike  • 250 workers trained on e-bike maintenance, sales, and operations (50% set-aside for Ivy City/Brentwood)  • 1 technology platform developed  • 1 contract for e-bike resident voucher program outreach  •1 contract for delivery worker e-bike program outreach | • Improved first-mile, last-mile transportation access and options for residents in transit-poor neighborhoods  • “Likely improved transportation access and quality of life outcomes for BIPOC residents able to purchase an e-bike or e-cargo bike through the incentive program”[[3]](#footnote-4)  • Increased economic opportunity and cost savings for delivery workers using e-bikes  • Lower fleet and maintenance costs for the businesses using e-bikes  • Increased job skills of bicycle sales staff and mechanics  • Increased sales at local bicycle retailers | • # e-bike voucher applications (by type, geography)  • # e-bike voucher redemptions (by type, geography)  • % of trips converted from passenger vehicle to e-bike  • Patterns of e-bike usage  • # workers trained (by geography)  • Business improvements realized, such as fleet maintenance cost reductions | • Ongoing collection via application portal and tracking software, annual  • Ongoing collection via OpenPATH trip-tracking application, including number of rides taken, minutes biked, total number of miles biked, and average miles biked. The data will be analyzed by geography  • Estimated monthly VMT reduction from tracking application  • Collected from businesses and aggregated annually |

1. **Authorities, Implementation Timeline, and Milestones**

DPW is the lead authority for the collection and removal of all solid waste from residential households with three or fewer dwelling units per DC Municipal Regulations 21 DCMR § 700.8.

In March 2023, the City Administrator ordered the establishment of a Transportation Electrification Working Group (Order 2023-1) with the authority to facility and oversee the implementation of:

1. The District’s Transportation Electrification Roadmap
2. Clean Energy DC Omnibus Amendment Act of 2018 (D.C. Law 22-257; DCR 1344)
3. Climate Commitment Amendment Act of 2022 (D.C. Law 24-176; DCR 9919)

In this order, DPW is designated as an agency member of the Transportation Electrification Working Group and the lead agency for the District’s motor vehicle fleet, including direct authority to install electric vehicles chargers on District-owned and District-administered property.

The District Department of Transportation (DDOT) has the authority, role, and responsibility to implement an e-bike incentive program through D.C. Act 25-249 enacted on October 11, 2023, the “Electric Bicycle Incentive Program Amendment Act of 2023.”

DOEE will serve as the grant manager and advise on equitable engagement and overall project implementation.

A detailed timeline for implementing each GHG reduction measure, along with milestones, can be found in section 1a.

**SECTION 4: LOW-INCOME AND DISADVANTAGED COMMUNITIES**

1. **Community benefits**

Climate Ready DC, the District’s official climate change adaptation plan, demonstrates that vulnerability to climate change is not evenly distributed across the District. Individuals who are most vulnerable to climate change are those who are more sensitive to events like heatwaves and those who have less capacity to adapt and respond to the stresses caused by climate change. Climate Ready DC identifies high levels of unemployment, poverty, obesity, and asthma, as well as a large elderly population as characteristics of communities especially vulnerable to current and future climate impacts. The Ivy City/Brentwood neighborhood is an EPA Region 3 Priority engagement community in addition to being a LIDAC area. This community was identified by EPA’s cumulative impact analysis, which included demographic, environmental, and public health data. The area is especially impacted by poor air quality from several neighboring sources, including heavy traffic from New York Avenue NE and medium and heavy-duty fleet vehicle emissions from neighboring government vehicle fueling stations and storage lots. Ivy City/Brentwood is covered under census track IDs 11001009102; 11001009102; and 11001008804 – all of which are LIDAC communities.   
  
DOEE has been engaging with this community through several avenues, including a 2022 community walk that highlighted major concerns: air quality affecting health, especially among children; persistent odors from nearby businesses and diesel vehicles; unsafe traffic conditions exacerbated by large trucks; and pervasive noise pollution. Residents emphasized the urgent need for solutions to these pressing environmental and safety issues, advocating for cleaner air, improved traffic management, and measures to mitigate unpleasant smells and noise disturbances.   
  
This proposal leads with addressing emissions and realizing co-benefits in this neighborhood, and aspects of the proposal expand to eventually encompass all other LIDAC communities (see attachments for a comprehensive list), and in some cases the city more broadly (for example, through city-wide organics collection and a 100% electric government fleet). Ivy City/Brentwood is the first neighborhood where the program will be implemented to ensure that air quality and other benefits will be achieved there first. Feedback and evaluation from this aspect of the program will ensure that the remaining project tasks are tailored to the needs of LIDAC residents as implementation expands over time and locations.

DOEE, DPW, and DDOT will collaborate on tracking the expansion of the organics program, installation of charging stations, and distribution of e-bike vouchers in and near identified LIDAC census tracts to quantify reduction in GHG emissions, co-pollutant emissions, and other community benefits. Coalition partners will include the results of these assessments in semi-annual reports to the EPA and make the information publicly available. The plans to assess, quantify, and report benefits are outlined below.

1. Organic Waste Diversion to achieve Zero Waste

The District has provided equal opportunity to single-family households to participate in the pilot program for residential organics collection, but there is room for improvement. The program could provide greater access to residents and more equitable opportunities for participation. A city-wide residential organics collection program will be designed to give every single-family household in the District the opportunity to divert food and yard waste at the curb for free on a weekly basis., To get there, the approach will be phased, adding more households each year until all single-family homes are provided with an organics collection bin in 2029. DPW plans to establish a weighted registration process so households in Ivy City/Brentwood, followed by households in the remaining EJ Screen and CJEST LIDAC areas (primarily in Wards 5, 7, and 8), will be given priority over those in less vulnerable areas of District first. Additionally, the greenhouse gas emissions reductions resulting from organics collection serve a role in safeguarding some of the city’s most at-risk residents from the adverse effects of climate change. Redirecting more of the District’s food and yard waste away from landfills and incinerators will reduce emissions from disposal sites and those caused by transportation to the sites. These reductions will help mitigate the District’s contribution to climate change and other air pollution that have a disproportionate impact on the District’s and the region’s most vulnerable residents. DPW will track the number of households participating and the tonnage of organics collected in and near the identified LIDAC census tracts to quantify the reduction in GHG emissions.

Additional benefits to neighborhoods include the public health benefits of reducing rat activity and the corresponding risk of vector-borne disease transmission. Containerizing organics, including food scraps, in hard-sided, latching bins reduces vermin activity by cutting off their food supply.

The District also anticipates workforce development and job creation benefits for residents of LIDAC communities – including those with barriers to employment – which are discussed in more depth in section 5.

The project does not anticipate disbenefits from this project: while the proposed 27 electric collection vehicles would be additional to DPW’s current operations, the impact on local traffic is estimated to be minimal and though there may be more vehicles, the EVs will reduce contribution to local air and noise pollution.

2. Charging to accelerate the deployment of EVs and electric MHDV fleet

Ivy City/Brentwood exists at the confluence of compounding air quality challenges, perhaps chief among them pollution from MHDV fleet vehicles. The installation of a government fleet charging stations enables the adoption of electric MHDV and thereby addresses a primary local environmental concern.   
  
In 2017 (the most recent non-pandemic year comprehensive data is available), the total amount of NOx emitted in the District was 4,802 tons ([EPA National Emissions Inventory – DC)](https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data). On-road vehicles were the largest source of NOx emissions, emitting 2,288 tons or 47 percent of total NOx emissions. One component of NOx is NO2. Breathing air with high levels of NO2 can irritate airways. Such exposures over short periods can aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing, and difficulty breathing). Longer exposures to high levels of NO2 may contribute to the development of asthma and increase susceptibility to respiratory infections. NOx emissions also lead to higher ozone levels. Breathing ozone can cause chest pain, coughing, throat irritation, and airway inflammation, harm lung tissue and reduce lung function. Ozone also exacerbates bronchitis, emphysema, and asthma. The Ivy City/Brentwood community, as well as many other LIDAC areas in the District, has a higher prevalence of asthma and other respiratory illnesses compared to the national rate. The pediatric asthma emergency room visit rate for Ivy City/Brentwood was 306/10,000 in 2016, compared to 0/10,000 in 8 of the District’s 29 zip codes (D[C Health Equity Report, 2018](https://app.box.com/s/yspij8v81cxqyebl7gj3uifjumb7ufsw)). Ward 5, which encompasses Ivy City and Brentwood neighborhoods, also has a high asthma rate for adults – 18.6% report having ever been diagnosed with asthma, compared to the national average of 13% ([DC Behavioral Risk Factor Surveillance System](https://dchealth.dc.gov/service/behavioral-risk-factor-surveillance-system); [American Lung Association](https://www.lung.org/research/trends-in-lung-disease/asthma-trends-brief/trends-and-burden)). This charging project will reduce 4,788lbs of NOx annually according to AFLEET (see Technical Appendix, attached), or 2.2 tons annually, in LIDAC communities. It will also directly reduce PM2.5 (34lbs annually) and PM10 (37lbs annually), both of which also aggravate respiratory illnesses like asthma and lead to respiratory and pulmonary illness.

This initiative not only facilitates the uptake of electric vehicles within government fleets but also sets a precedent for broader adoption by MHDV fleets operating in the neighborhood, fostering a cleaner and healthier environment for residents. As the charging facilities expand to other LIDAC areas, similar benefits will be realized as vehicles pollute less and make less noise.

To monitor air quality improvements, DOEE will leverage its extensive and expanding air monitoring network. DOEE is currently building out a low-cost sensor network that will measure particulate matter and gaseous pollutants. Several sensors will be placed in the network in the Ivy City community by calendar year 2025.

DOEE may also leverage its EPA Competitive ARPA Community Monitoring Grant to monitor progress. Using the $500,000 award, DOEE will work with environmental justice community groups to install three air quality bench monitors and tell the community stories of the impact of air quality on these communities. There has been an outsized interest in placing a monitor in the Ivy City/Brentwood neighborhood, and DOEE anticipates a bench monitor will be placed in this neighborhood in 2025, provided there is an available location and continued resident interest. The community engagement around this project would also provide additional avenues for the community to understand their air quality, impacts of climate emissions reduction projects, and provide opportunities for feedback on the CPRG project. The monitoring will provide data on criteria and other air quality pollutants including NOx and PM2.5.

3. E-bike Incentive Program  
  
Prioritizing mode-shift and other improvements in areas most in need of service ensures equitable access to essential resources and opportunities. As discussed above, the Ivy City neighborhood is located three miles away from any public transit hubs or stations, and residents are more likely to drive alone due to first mile, last mile (FMLM) challenges. This means there are very limited transit options within a mile (walking distance) of their residence, resulting in increased single-occupancy vehicle use and traffic congestion. E-bikes, which address some FMLM challenges, can create more connected communities and allow for better access to living-wage jobs, schools, and other community needs.   
  
According to the District's Council Office of Racial Equity, who conducted a racial equity impact assessment of the District's existing program, "[the program] will likely improve transportation access and quality of life outcomes for Black, Indigenous, and other residents of color that are able to purchase an e-bike or e-cargo bike through the incentive program."

Conversions of driving trips to biking trips will reduce GHG emissions and other harmful air pollutants across the District, but with specific set-asides for the Ivy City/Brentwood neighborhood, we will realize a greater impact on emissions reductions in this overburdened community. Last-mile delivery emissions can be as much as 50% of the total delivery carbon emissions according to a [report](https://stand.earth/our-work/campaigns/deliver-change/) published by the Clean Mobility Collective and Stand.earth in 2022. E-bikes and other electric and right-sized urban delivery solutions can have a positive impact on decarbonization of goods delivery by replacing heavier or oversized vehicles for last-mile deliveries in urban areas. Climate charity Possible’s [2021 study](https://static1.squarespace.com/static/5d30896202a18c0001b49180/t/61091edc3acfda2f4af7d97f/1627987694676/The+Promise+of+Low-Carbon+Freight.pdf) showed that cargo bikes are 1.61 times faster than vans at delivering goods in London, and over 98 days the cargo bikes saved 3,896kg of carbon emissions and over 5.5kg of nitrogen oxides compared to vans.

E-bike incentives stimulating sales at participating District bicycle shops may increase the employment of bicycle sales staff and mechanics. Employees of these businesses will learn new skills such as operating and maintaining cargo e-bikes. Participating delivery workers will have a greener, quicker, and cheaper transportation option over driving. Participating businesses will lower fleet costs and maintenance costs, and potentially lower employee healthcare costs.

To continually monitor the benefits of the program DDOT will employ the National Renewable Energy Laboratory’s OpenPATH trip-tracking application. This application will track e-bike trips taken by e-bike voucher recipients, including delivery workers, residents, and employees, and analyze the GHG emissions savings depending on which mode the e-bike trip replaced. DDOT will educate voucher recipients on how to download, enroll in, and use OpenPATH.

1. **Community engagement**

DPW and DDOT have thoughtfully tailored the implementation of these measures to include feedback from LIDAC community members so that projects not only consider social, health, economic, and other cross-sectional issues but actively seek to address inequities in the District. Specifically, DPW is addressing feedback from District residents (collected during a series of 20 community engagement meetings in 2022) that food waste collection programs to be more wide-spread and accessible. This feedback was especially strong in Wards 7 and 8 (majority LIDAC communities). Through these community engagement meetings, DPW has established and grown relationships with community members and organizations in LIDAC communities who will continue to be consulted during program design and execution.

One participant in Ward 7 noted in a February 2024 Feedback Survey, “I think the program is great and super convenient. I have seen our trash waste decrease due to composting. I am not sure what I would do now if the program went away...it really has changed how we do things food waste wise and has made it so easy for us.” Another participant in Ward 5 noted, “I absolutely LOVE having curbside compost and have been so happy with the pilot program- I hope it continues. It has also been great to walk around my neighborhood and see so many bins out- seems like a lot of others are using it as well. Great job to your team and thank you providing this service!” While participant feedback was not collected based on LIDAC areas, Wards 5, 7, and 8 encompass majority EPA-defined LIDACs. DPW will continue to collect feedback through surveys and conduct additional community engagement such as focus groups and presentations and participate in community events in these areas. DPW also plans to conduct a Racial Equity Impact Assessment (REIA) to guide the agency in addressing racial equity across development, implementation, and evaluation of the organics collection program.

The District’s Transportation Electrification Roadmap, an encompassing plan regarding electrification of the transportation sector, relied on stakeholder feedback to understand community needs, including those of LIDACs. Equitable outcomes and stakeholder engagement is a priority during the Transportation Electrification Roadmap’s development and implementation. Various methods of engagement have been employed to ensure the inclusion of the District’s multiple interests including surveys, stakeholder feedback grounds, emailed input, and external meetings. In the Roadmap’s stakeholder engagement results (Appendix A), stakeholders’ input includes strong support for electrifying public heavy-duty fleet and focusing deployment in these areas will directly address environmental justice and the effects of transportation-related emissions on the most vulnerable. Past projects, like DERA and Volkswagen-funded electrification have been successful at ensuring electric vehicles operate first on routes in traditionally disadvantaged communities.

DDOT will conduct in-person and digital outreach to communities, particularly in Ivy City/Brentwood, soliciting feedback, informing them about the program, assisting with the voucher application process, and training on how to ride e-bikes though a contract. DDOT will also work with the Ivy City Small Area Plan stakeholders to choose sites for secure bike parking and identify businesses to work with for e-bike fleets. DDOT will survey recipients before and after their e-bike purchase to assess program effectiveness and receive feedback. DDOT will incorporate that feedback and lessons learned about e-bike adoption in future funding rounds.

DDOT uses a robust equity assessment process every budget cycle to consider potential impacts on historically under-resourced groups during the development and implementation of programs or services and how they adhere to DDOT's Equity Statement, Mission, and Vision. The local, current version of the District E-Bike Rebate Program (FY24) received a 3.0/3.0 in the assessment. Additionally, it received dozens of supportive comments in the public hearing for the bill that created the current program – from parents, to business owners, to workers.

DDOT has extensive experience in managing community-focused programs. As an example, DDOT’s 13-year-long goDCgo program is an initiative to promote, educate, and encourage sustainable transportation for the District’s residents, employees, and visitors. goDCgo has multi-year relationships with hundreds of large employers to support them through the process of behavior change in their employees’ commutes. goDCgo ensures the long-term sustainability of outcomes by carefully tracking and managing relationships, being in constant communication through webinars, emails, 1:1 meetings, phone calls, and marketing campaigns about our programs, and offering value-add resources for free such as how-to-guides, bike classes, and maps.

**SECTION 5: JOB QUALITY**

This program will create quality jobs for people who were formally incarcerated. According to the Department of Justice’s Bureau of Justice Statistics, an estimated 60% of all individuals remain unemployed one year after they are released from incarceration. DPW is a second-chance employer that makes a significant impact by building on the strengths and assets of returning citizens. Unemployed returning citizens are at a greater risk of reoffending compared to employed ex-offenders. Recidivism is higher for these individuals primarily because they have difficulty finding a job and are left without health care and other benefits. It is well documented that Black, Indigenous, and people of color (BIPOC) are overrepresented in the nation’s criminal justice system and are incarcerated at a higher rate than other individuals. This leads to significant grace and gender disparities for unemployed formerly incarcerated individuals who are available to work but are unable to find secure jobs based on their past incarcerations. DPW is honoring its commitment to District residents by hiring returning citizens forquality good paying union jobs with benefits and training operating heavy-duty machinery and other equipment that requires technical skills. Additionally, as a second-chance employer of hard to employ individuals, DPW participates in several programs including:

* The Project Empowerment program[[4]](#footnote-5) with the Department of Employment Services (DOES) which provides supportive services, adult basic education, job coaching, employability and life skills, limited vocational training, and job search assistance to residents living in areas with high unemployment and/or low income.
* An apprenticeship program with DOES for mechanics at DPW’s Fleet Management Administration (FMA). The average age of DPW mechanics is 60 years old and the agency is facing many retirements in the next five years. DPW is looking at additional programming to encourage a new generation of skilled mechanics, plus helping existing employees reskill and pivot towards electric vehicles and charging maintenance.

DPW estimates 89 government jobs will be created through the residential organics collection and electric vehicle charging projects. Of those jobs, 79 will be union eligible.

The E-Bike Incentive Program will generate increased demand for products at local bike shops around the city, increasing demand for highly skilled e-bike mechanics and sales workers. This program will provide funding for the training of existing and prospective workers through a contract with bicycle mechanics and a local bicycle advocacy organization and include collaborations with local labor organizations. Delivery workers who receive an e-bike voucher will have a greener, quicker, and cheaper transportation option than driving, bringing greater financial security.

**SECTION 6: PROGRAMMATIC CAPABILITY AND PAST PERFORMANCE**

1. **Past Performance**

Department of Public Works’ (DPW) pilot programs: In the July of 2023 a, contractor was selected to provide residential food waste collection service after several years of research and planning. The new Curbside Composting Pilot Program was opened sign-ups for up to 12,000 single-family households across the District’s eight wards. Approximately 9,000 single-family households signed up and were provided with informational welcome packets. From August 2023 to October 2023, DPW and its contractor began phasing in delivery of material and equipment and providing collection service to the participating households. Under the Pilot Program, each household will receive one year of weekly food waste collection service and one 5-pound bag of finished compost for their participation.    
  
This pilot program has greatly increased access to food waste diversion opportunities for District residents. Itis providing critical lessons for the launch of the District’s future city-wide residential organics collection. For example, 550.6 tons of food waste have been collected and diverted from landfills and incineration. There is currently a 69.22% participation rate among residents in the program, higher than other jurisdictions in the DC area, which tend to maximize participation at about 25%. Based on a February 2024 participant feedback survey, 97% were satisfied with the quality of collection services.

Across calendar years 2023 and 2024, DPW anticipates spending a total of $5,047,579 across three categories for the existing pilot program:

* Collections, Hauling, and Processing through a contractor: $4,268,003
* Materials and Equipment (Bins and Compostable Bags): $682,680
* Outreach and Education Materials: $96,896

The District has also installed 295 Level 2 chargers and two Level 3 chargers, investing $2,108,336.38 of capital funding for these projects at 13 locations across the District. DPW’s Fuel Management Officer managed the project. On average, Level 2 charger projects required three months for planning and six weeks for installation. The District has worked with the energy technology company [Powerflex](https://www.powerflex.com/) to procure and install the chargers. The District also installed two 50kWh Level 3 chargers in February 2024 – one each at two separate District fleet facilities. The Level 3 charger projects required 12 weeks for planning, 20 weeks for procurement, and six weeks for installation. That timeline for the Level 3 installation was shorter than anticipated for the electric vehicle charger installation proposed for funding in this application because no electrical upgrades or construction was required , as the chargers were lower amperage and only one charger was installed at each facility.

District Department of Transportation’s (DDOT) pilot program: The Capital Bikeshare (CaBi) for High School students pilot program, managed by goDCgo, provided free CaBi memberships for high school students at four District of Columbia Public School (DCPS) locations. goDCgo selected four DCPS high schools with a large student population receiving free or reduced lunch. The program’s goals were:

1. Educate students aged 16 and up (11th and 12th grades) about bike safety, bike laws, rules of the road, and how to use the Capital Bikeshare system; and
2. Distribute free annual CaBi membership codes, helmets, and CaBi keys to students upon completion of bike safety presentation. goDCgo hosted 12 on-site certification and sign-up events at schools and designated a new School Transportation Coordinator at each school site.

Of 175 available codes, goDCgo distributed 154 codes, which 87 students redeemed. The CaBi trip data collected as of June 21, 2023, showed 1,336 rides taken, 19,560 minutes biked, and 960 miles biked. Of the 87 students who redeemed codes, 62 students took at least one CaBi ride and 25 students did not take any rides. Of the students who took at least one ride, the average number of rides was 29, the median was 15, and mode was 1. Four students took more than 100 rides.

The Capital Bikeshare (CaBi) for High School pilot program was funded through federal Congestion Mitigation and Air Quality Improvement (CMAQ) funding with a total budget of $7,000 (of which $5,500 went to bicycle helmets).

**b. Reporting Requirements**  
DOEE has ample experience managing federal grants of this caliber. DOEE has received over $57.7 million in EPA Clean Water Construction grants over the past 12 years and has successfully implemented over 60 projects that improve water quality in the District. DDOT similarly has received approximately $34 million in EPA Clean Water Construction grants. The Federal Highway Administration recognizes DDOT as a State Department of Transportation, and DDOT has significant experience managing and executing federal grant funds. DDOT anticipates receiving roughly $220 million in federal formula funding in FY 2024 in addition to several discretionary grant awards. DOEE, DPW, and DDOT will execute this award successfully and meet all federal requirements of this program. Additional examples are listed below:

|  |  |  |
| --- | --- | --- |
| Grant Name | Weatherization Assistance Program (WAP) | *Performance*  DOEE has been improving the safety, comfort, and energy efficiency of income-qualified homes since the program’s inception. DOEE provided measures and services to 402 low-income households in FY20, 490 in FY21, and 558 in FY22 by blending various funding sources. Program staff closely follow the US DOE-approved State Plan and the Residential Services Division Operations Manual.  *Reporting*  Quarterly reports have been timely, and the WAP program is expected to meet its outcomes and outputs for homes served this fiscal year. |
| Grant Number | DE-EE0009979 |
| Federal Agency | U.S. Department of Energy |
| Grant Period | FY 22 – FY 27 |
| Amount | $3,399,281.45 |
| CFDA | 81.042 |
| DOEE Contact | Cara Wattanodom |
| Grant Name | Childhood Lead Poisoning Prevention and Surveillance of Blood Lead Levels Program | *Performance*  In FY 2021, 13,477 District children recorded having at least one BLL test result. In FY 2022, 14,742 children were tested for lead poisoning, and 14,537 of those children were not found to have EBLLs. In FY 2021 and FY 2022, DOEE found no major issues with compliance in the reporting of test results by laboratories, healthcare providers, and healthcare facilities.  *Reporting*  DOEE issues annual Childhood Lead Screening reports.  The reports reflect this priority with information about the implementation of the Childhood Lead Exposure Prevention Amendment Act of 2017, effective September 23, 2017 (D.C. Law 22-21; D.C. Official Code § 7-2051). Annual performance reports, quarterly extracts of surveillance data variables submissions, evaluation and performance measurement plan, data management plan, federal financial reports, final performance and financial reports, and payment management system reporting to CDC. |
| Grant Number | NUE2EH001463 |
| Federal Agency | HHS Centers for Disease Control and Prevention |
| Grant Period | FY 21 – FY 26 |
| Amount | $600,000 |
| CFDA | 93.197 |
| DOEE Contact | Amber Sturdivant |
| Grant Name | DC WIIN Grant | *Performance*  EPA WIIN 2015 funds assisted DC Public Charter School Board in removing lead from identified drinking water sources and remediation at 139 campuses and assisted the Department of General Services with removing lead from identified drinking water sources and remediation at 118 public schools and 72 recreational centers.    Between January 6 and September 23, 2022, DOEE inspectors collected 1,262 drinking water samples from 156 Facilities, including 1,024 samples from 109 child development centers, 132 samples from 25 child development homes, and 106 samples from 22 expanded child development homes. In 2022, childcare facilities installed 81 new faucet-mounted filters, 1,687 replacement filters, and replaced 25 faucets that were incompatible with the faucet-mounted filters.    *Reporting*  Semi-annual and annual performance reports, annual federal financial reports, and quality assurance project plans submitted to EPA. |
| Grant Number | 96391201 |
| Federal Agency | U.S. Environmental Protection Agency |
| Grant Period | FY 21 – FY 25 |
| Amount | $2,260,220 |
| CFDA | 66.443 |
| DOEE Contact | Lakisa Blocker |

Examples of discretionary federal grant awards that DDOT has successfully managed including:

|  |  |  |
| --- | --- | --- |
| Grant Name | TIGER | *Performance:* USDOT TIGER grant was secured for construction of the Anacostia Riverwalk Trail ‐ Kenilworth Gardens Section. The project extends the trail south from the end of the Bladensburg Path (on the DC border and Prince George’s County, MD, along the east bank of the Anacostia River) to the existing path terminus under the Benning Road Bridge, a distance of approximately 3.9 miles. Between December 2013 and October 2016 DDOT managed the construction of the trail including pavements, structures, landscaping, and wayfinding signs. The project reached substantial completion in October 2016 and the project was closed out in October 2017.   *Reporting:*  DDOT reported on agreed baseline performance measures established in the grant agreement: Average Daily Bicycle and Pedestrian Counts, Annual Non-Vehicle Crash Rates by Type and Severity, and Annual Recreational Trips. Additionally, DDOT was designated as the lead agency, and completed the required TIGER Grant Agreement. Interim Project Performance Measurement Reports were submitted annually for a period of five years following Project completion. |
| Grant Number | 4T84XX04 |
| Federal Agency | USDOT |
| Grant Period | FY13 - FY16 |
| Amount | $10,000,000 |
| CFDA | 20.205 |
| DDOT Contact | Ravindra Ganvir |

**c. Staff Expertise:**

Anthony Crispino is the Deputy Director of Operations for the Department of Public Works, overseeing a $449 million portfolio for the District of Columbia’s solid waste, parking enforcement, and fleet operations. Mr. Crispino is the driving force behind the agency’s initiative to electrify its fleet assets and led the installation of the District government’s first Level 3 charging station and introduced 3 electric street sweepers in daily operations. An attorney by training, Mr. Crispino has spent his career in public service working to improve operational efficiency and effectiveness.

Jason Nordt is the Fuel Management Officer for the Department of Public Works’ Fleet Management Administration. In this capacity, he is responsible for the fuel needs of the District-wide fleet including managing a $20 million fuel budget. Mr. Nordt also has over a decade of on-the-ground experience as a District motor vehicle operator. Because of this background, he is able to apply the lens of end-users to his strategic planning duties as he prepares the District’s fleet to transition away from fossil fuel internal combustion engines towards electric powered vehicles.

Rachel Manning is a Program Analyst with the District of Columbia’s Department of Public Works Office of Waste Diversion where she leads the Curbside Composting Pilot Program., She coordinated the procurement, assembly and delivery of the bins, created and distributed outreach materials, and developed and maintains the data collection process and evaluates performance. Prior to the Pilot’s launch, Ms. Manning led community engagement for the development of the Zero Waste DC Plan. In this role she organized community outreach that provided the District with valuable feedback and input on community perspectives and desires into each action of the Plan.

Tonya Majette is the Program Analyst for the Solid Waste Disposal Division in the Department of Public Works. In this role, Ms. Majette leads policy and program analysis for the waste disposal and transfer operations at the District’s two transfer stations. As an expert in solid waste regulation and legislation in the District, Ms. Majette partners closely with the Office of Waste Diversion on waste diversion initiatives including strategic planning for organic waste diversion and management.

Anna Chamberlain is the Associate Director of the Planning and Sustainability Division at DDOT, where she leads a diverse 42-member Division team on multimodal planning, transportation demand management, environmental compliance, and livability projects. She provides strategic direction to improve efficient operations of programs such as the District E-Bike Incentive Program, Capital Bikeshare, and goDCgo. She leads division coordination with other agencies on environmental compliance, National Electric Vehicle Infrastructure (NEVI) plan, multimodal planning, design, and implementation of safety and mobility enhancing projects.

Katy Lang is the Transportation Planner for Transportation Demand Management (TDM) at DDOT, where she leads the District’s TDM program and services with a goal of reducing vehicle miles traveled, reducing greenhouse gas emissions, and achieving <25% commute trips by driving alone in the District. Other programs under her portfolio include goDCgo, parking cashout, and FY24 District E-Bike Incentive Program. For the e-bike program she created SOPs and implementation documentation, a user-tested application platform, marketing and outreach materials, briefing materials, a process to collect and evaluate e-bike trip data, and an outreach plan to residents.

Jenn Hatch is the Chief of the Green Building and Climate branch in DOEE’s Urban Sustainability Administration. She manages the team leading the District’s strategy for advancing equitable climate action. She has conducted the annual GHG inventory since 2017 and leads annual reporting on the District’s climate progress to a host of external networks including C40 Cities, the Global Covenant of Mayors for Climate & Energy and CDP. She provides management oversight for several grants, including the CPRG Planning Grant for the District of Columbia. As the grant manager, she will ensure timely reporting and financial management, and will provide strategic guidance on implementation, GHG reporting and equitable engagement.

1. DPW is a second chance employer which provides employment opportunities for people with criminal records. [↑](#footnote-ref-2)
2. McQueen, M. (2022). The Electric Vehicle Incentive Cost and Impact Tool [Online resource] Portland State University Transportation Research and Education Center. Retrieved from: https://trec-pdx.shinyapps.io/incentive-impact-tool/ [↑](#footnote-ref-3)
3. Council of the District of Columbia Office of Racial Equity analysis available here: https://lims.dccouncil.gov/downloads/LIMS/52283/Other/B25-0115-REIA\_B25-0115\_E-Bike\_Rebate\_Hearing.pdf?Id=159809 [↑](#footnote-ref-4)
4. * See <https://does.dc.gov/page/about-project-empowerment>

   [↑](#footnote-ref-5)