

Climate Pollution Reduction Grants – Implementation Grants

Section 1: Overall Project Summary and Approach

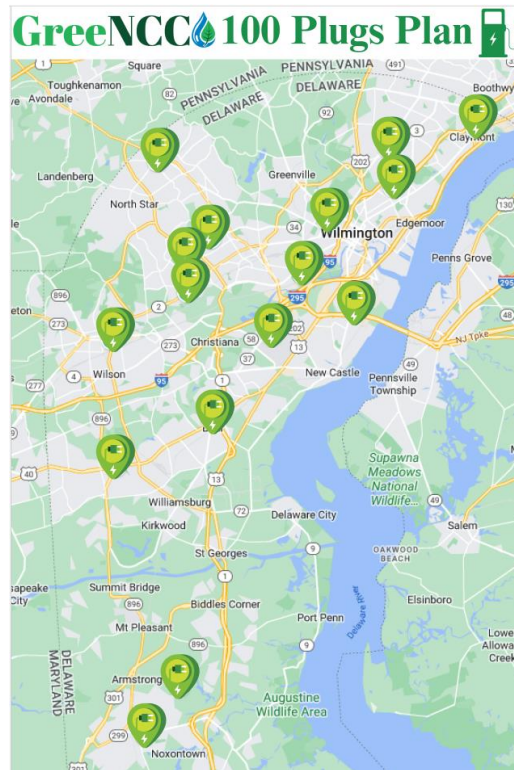
Delaware, as the lowest lying state in the nation, faces considerable vulnerability to the impacts of climate change. Over the past seven years, New Castle County government has taken significant strides to emerge as a frontrunner in the state's efforts to mitigate and adapt to these challenges.

Started in 2018, GreeNCC is a countywide program established to improve the environment and enhance the quality of life for county residents by enacting policies, practices, and legislation to enhance water and air quality, encourage healthy and eco-friendly lifestyles, conserve and protect local habitats, promote smart growth, reduce harmful emissions by promoting renewables and improving energy efficiency. The county has used this initiative to lead by example by expanding green energy usage in county-owned and managed buildings, transitioning the fleet toward electric vehicles, protecting native species at parks and county buildings, expanding land preservation efforts, and examining how each department can be more environmentally friendly.

A significant milestone was achieved through the procurement of a 3-year eREC purchase deal for wind-powered energy, equating to approximately 77% of the total required electricity at all county-owned facilities and 24,425,369 kWh per year. This endeavor garnered recognition from the EPA, positioning New Castle County as a top power partner and ranking 24th nationwide in green energy utilization among local governments.

During this time the County has also aggressively begun to shift to EV usage, with the replacement of twenty-two gas powered fleet vehicles so far and the installation of 24 Level-2 EV chargers at various government-owned buildings. During the month of November 2022, our chargers alone offset 27,732 lbs. of carbon dioxide and saved 1,429 gallons of fuel.

In October 2023, County Executive Matt Meyer announced the county's "100 EV Plugs Plan" to make more than 100 Electric Vehicle (EV) charging plugs available to the public at New Castle County Parks and Libraries ([New Castle County launches "100 EV Plugs Plan" | The Latest from WDEL News | wdel.com](#)). At this time, NCC also received \$498,000 from Energize Delaware to add eight new electric vehicles to the county fleet, two electric lawnmowers to the county parks maintenance equipment, and six charging stations.



*Image 1: Shows intended locations in NCC's 100 Plug Plan. See interactive map here:
<https://www.google.com/maps/d/edit?mid=1n6br6b2V0sUmdUA-LZxZXqhqe0QBYwo&usp=sharing>*

New Castle County will use the funds requested in this CPRG application to continue this momentum and lead by example in EV usage and best practices.

This application offers a unique combination of measures to reduce emissions in our local communities and in county operations. First, installing public electric vehicle charging stations will make electric vehicles more accessible to library and park patrons, who may not have access to EV charging stations at their homes or apartments. Many of the locations of the charging stations, such as the Route 9 Library and Innovation Center and the Claymont Library, will be in or near disadvantaged communities. Not only would this funding complete the county's 100 Plug Plan, but it would also support other state initiatives, such as DelDOT's National Electric Vehicle Infrastructure Plan. As electric vehicles become more accessible and affordable, we need infrastructure to support the transition to these vehicles.

Second, this funding will facilitate the procurement of ten electric lawn mowers and associated equipment to support the county's Public Works park maintenance operations. With a deliberate focus on deploying this electric equipment in parks located near or within disadvantaged communities, this investment will serve to mitigate air pollution in areas historically burdened by disproportionate environmental harm. Addressing environmental justice is a top priority for New Castle County.

Finally, the CPRG funding will also be used to purchase ten electric passenger vehicles for the county fleet and increase charging capacity at the New Castle County Government Center for these vehicles. The county already has twenty-two such vehicles in use, and this grant will allow the county to continue transitioning away from traditional gasoline powered vehicles, setting a positive example for the community.

Summary of GHG Measures:

Measure 1: Public Charging Stations	Measure 2: Electric Parks Equipment at NCC Maintenance Bases*	Measure 3: EV Fleet Expansion with supporting charging stations and capacity upgrades
<p>13 Level-2 dual port chargers at 5 public libraries and parks (26 plugs).</p> <p>7 Level-3 DC fast chargers at 2 public libraries (14 plugs).</p> <p>Public Charging Stations:</p> <ul style="list-style-type: none"> • Bear Library: 3 Level-2 charging stations. • Claymont Library: 2 Level-3 charging stations. • Route 9 Library: 5 Level-3 charging stations. • Appoquinimink Library: 2 Level-2 charging stations. <ul style="list-style-type: none"> ○ Runs on solar, 3.25kW, 350sq foot solar array. • Banning Park: 3 Level-2 charging stations. • Rockwood Park and Museum: 3 Level-2 charging stations. • Carousel Park and Equestrian Center: 2 Level-2 charging stations. 	<p>10 Toro Electric Ride-On 60in Mowers.</p> <p>5 Electric Hand Equipment (Leaf blowers).</p> <p>5 EV charging trailers.</p> <p> </p> <p>*Priority will be given to parks in low-income disadvantaged communities.</p>	<p>10 EV passenger vehicles (Nissan Leaf/Chevy Bolt)</p> <p>Expand charging infrastructure and charging stations at Government Center and Conner Building*:</p> <ul style="list-style-type: none"> • 5 Level 2 charging stations per location, with capacity upgrades for future expansions. <p> </p> <p>*The Government Center houses our Department of Land Use, where employees such as code enforcement officers regularly use government fleet vehicles. The Conner Building houses the Department of Public works, where all other fleet vehicles reside.</p>

Implementation: Our Public Works team is already dedicated to accomplishing the 100 Plugs Plan, and this funding will allow us to accomplish that goal. They have already procured cost estimates for all these sites, and once contracts are set in motion, it will take 12-18 months for installation. Supply chain delays are always a possibility but are included in the 12-18 month estimate (according to vendors).	Implementation: The Department of Public works will purchase the mowers, leaf blowers, and EV charging trailers, with assistance from the Executive Office. Parkland maintenance already has two electric mowers, and crews are trained in using them. We do not expect any delays in purchasing and distributing the equipment. Anticipated delivery for the mowers is 12-14 months, and the leaf blowers is 6 months	Implementation: Charging station installation and the purchasing of new EVs will be managed by the Department of Public Works. We do not expect supply chain issues to drastically delay the project. Anticipated delivery of electric vehicles is 12-24 months.
PCAP Measure 8. Advance deployment of zero emission vehicles and ZEV fueling infrastructure	PCAP Measure 8. Advance deployment of zero emission vehicles and ZEV fueling infrastructure	PCAP Measure 8. Advance deployment of zero emission vehicles and ZEV fueling infrastructure

Each measure will be carried out by dedicated county employees, many of whom have already overseen the implementation of similar measures. New Castle County is dedicated to our 100 Plugs Plan. The county has allocated almost \$1 million of our capital budget for public chargers at the county's Southern Park, Kirkwood Library, Brandywine Hundred Library, Hockessin Library, and Glasgow Park. We received \$403,038 from the DOE Energy Efficiency and Conservation Block Grant Program for charging stations in Delcastle Park and Woodlawn Library. In addition, NCC also received \$498,000 from Energize DE to expand our electric fleet and pilot our electric mower program.

While we have started down the path of installing public charging stations, electrifying our fleet and maintenance equipment, additional funding is needed from the EPA to expand and accelerate these measures. New Castle County has been dedicated to finding external funding, from state, federal and non-profit sources. This CPRG opportunity will allow us to achieve our 100 plug goal and our goal to expand our electric fleet, and to achieve those goals much more quickly than relying on the county budget. We have explored other grant opportunities and have received some funding (see above). We applied for the Department of Energy's Charging and Fueling Infrastructure (CFI) Grant for charging stations at the Route 9 Library and Innovation Center and the Claymont Library, but did not receive that funding. That funding focused on fast DC charging at locations near major highways.

This CPRG funding opportunity allowed us to think beyond charging stations and evaluate the best possible strategies for electrifying internally in County government in our communities. We

can go beyond what the state and federal government is doing to make fast charging accessible off major highways and take a lead on the community-based electrification that needs to happen.

As described in the community engagement section of this document, the 100 Plugs Plan and electrifying our fleet were ideas that came out of our comprehensive planning process. NCC2050, our comprehensive plan, was adopted in 2022, guided by over two years of public engagement. There were many goals concerning sustainability, environmental justice, affordable housing, and more in this plan. In December 2023, New Castle County hired the first Sustainability Coordinator at the county level in the state. This position was created to lead and implement a county-wide Sustainability Plan. This plan is currently being developed, with upcoming public engagement sessions scheduled in April and May. See plan progress details at: <https://www.newcastlede.gov/2592/Pathway-to-Sustainability>.

Reducing greenhouse gas emissions is a top priority for the county in the Energy section of the Sustainability Plan, hence why we are proactively applying for this funding. It will help us achieve current and future goals.

In essence, the proposed project serves as a pivotal component of a larger sustainability puzzle, aligning with regional priorities, national initiatives, and community-driven objectives. This project fits the goals of the Priority Climate Action Plan for our region. The plan prioritizes advancing deployment of zero emission vehicles and ZEV fueling infrastructure with the following strategies: Strengthen consumer adoption of electric vehicles, expand charging infrastructure for electric and plug-in hybrid electric vehicles, improve accessibility of low-carbon transportation options for all Delawareans, and promote increased vehicle fuel efficiency and ZEV Program. It also aims to support local communities' enhancement of urban greenspaces and states that counties, school districts, and municipal governments should manage and maintain fleets of vehicles for municipal and district operations.

This proposal also aligns with other national initiatives, including the National Electric Vehicle Infrastructure Formula Program, which “provides funding to States to strategically deploy electric vehicle (EV) charging infrastructure and to establish an interconnected network to facilitate data collection, access, and reliability”¹. This initiative is being led by the Delaware Department of Transportation, and their priority is charging infrastructure on major highways. This project allows us to fill in the gaps in local communities.

This project is also easily replicable and scalable. For instance, if we received partial funding for this project, we would still be able to work towards our goals. Additionally, this project could be replicated in other local municipalities. Overall, these measures reduce GHG emissions in sectors that are often left out of large federal grants. While the county is working with partners to reduce vehicle miles traveled, cars will always be part of our transportation network. We see the value in not only setting an example as a local government through our fleet and parks equipment, but also in removing barriers for county residents to own an electric vehicle.

Section 2: Impact of GHG Reduction Measures

Metric Ton CO2 Emission per Year Comparison (Metric Ton/Year)			
Machine	Machine Type		
	Gasoline	Electric	Emissions Reduction
Fleet Cars	40	10.4	29.6
Mowers	19.33	4.36	14.97
Blowers	6.35	1.45	4.90
Total	65.68	16.21	49.47
EV Charger Reduction	226.13		
2025-2030 CO2 Reduction	1378.04		
2025-2050 CO2 Reduction	6890.18		

Magnitude of GHG Reductions from 2025 through 2030: 1,378 metric tons/year.

Magnitude of GHG Reductions from 2025 through 2050: 6,890 metric tons/year

Cost effectiveness:

Electric Fleet: The upfront cost of a car is relatively the same whether you are purchasing an electric or a gasoline-powered vehicle. However, the cost barrier often comes from ensuring electricity capacity and installing charging stations. According to the Department of Energy's Afleet tool, simple payback on electric vehicle is 9.4 years.

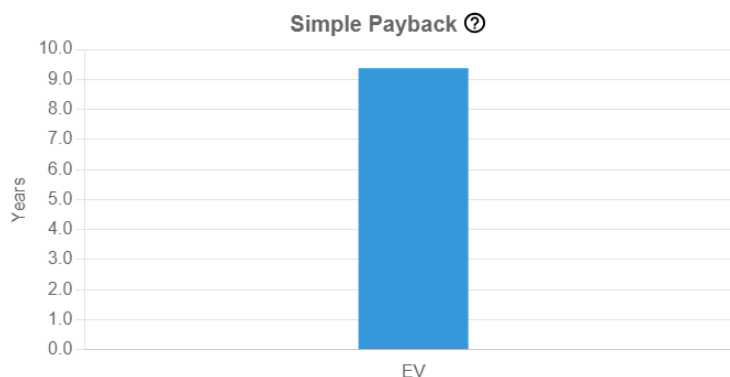


Image 2: US Department of Energy. (n.d.). *Alternative Fuel Life-Cycle Environmental and Economic Transportation (AFLEET) Tool*. Afleet Online.

<https://afleet.es.anl.gov/afleet/>

Simple Payback = (AVF purchase price – baseline purchase) / (baseline annual operating costs – AFV annual operating costs). Annual operating costs = fuel+ maintenance.

Mowers and Leaf Blowers: Simple payback according to the Department of Energy’s AFLEET tool is 2.8 years for leaf blowers. Electric lawn mowers are significantly more expensive than gasoline powered but provide significant emissions reductions.

Chargers: Our public charging stations either breakeven or run at deficit. We try to make charging as affordable as possible.

New Castle County is seeking grant money to utilize new technology to reduce emissions despite there being a higher up- front cost, as we feel a sustainable future is worth it.

Cost effectiveness of GHG reductions = (Requested CPRG funding) / (Sum of Quantified GHG reductions from CPRG funding from 2025-2030)		Column1
Requested CPRG Funding		\$4,636,311
GHG reductions		1378
\$/metric ton		\$3364.52

Documentation of GHG Reduction Assumptions – see Technical Appendix.

Section 3: Environmental Results

Expected Outputs and Outcomes:

The expected outputs and outcomes for this project are multifaceted and aimed at significantly reducing Greenhouse Gas emissions while also promoting sustainable practices in our community. Firstly, with the installation of 13 Level-2 dual port chargers at 5 public libraries and parks, totaling 26 plugs, and 7 Level-3 DC fast chargers at 2 public libraries, the accessibility and convenience of electric vehicle charging infrastructure will be greatly enhanced. This initiative will encourage the public to adopt electric vehicles, thereby reducing emissions from traditional gasoline-powered vehicles.

Second, the expansion of charging infrastructure at the Government Center and Conner Building, coupled with the purchase of ten EV passenger vehicles for the county fleet, will hasten the transition towards electric vehicles within the local government operations, leading to reduced emissions and lower carbon footprints.

Finally, the procurement of ten Toro Electric Ride-On 60in Mowers, 5 Electric Hand Equipment, and 5 EV charging trailers underscores a commitment to sustainable landscaping practices. By deploying electric lawn care equipment and providing charging solutions, the project aims to reduce emissions associated with traditional gas-powered landscaping equipment, particularly in disadvantaged communities where parks often serve as vital communal spaces. In addition to greenhouse gas emissions, reducing the use of gasoline also reduces other pollutants, such as carbon monoxide, nitrous oxides, particulate matter, volatile organic compounds, and sulfur oxides. Overall, these

initiatives collectively contribute to a greener and more sustainable future for the county, demonstrating a proactive approach towards combating climate change and fostering environmental stewardship within the community.

Fortunately, we already have some outputs and outcomes from our current public charging stations, located at five county facilities. In the last year, they have:

- Reduced 51,836 lbs. of CO2.
- Saved 235 barrels of oil.
- Saved 9872 gallons of fuel.
- Saved consumers \$10,855 in fuel savings.

Performance Measures and Plan:

- If awarded, we plan to track Greenhouse Gas emissions in multiple ways:
 - a. Track electric vehicle usage in county operations. Measure the reduction in fuel costs, maintenance expenses, and emissions associated with the fleet's operations.
 - b. Using software that monitors our chargers, track the usage metrics of the installed charging stations, including the number of charging sessions, duration of sessions, and energy consumed.
 - c. Acquire feedback from parks crews and community members on the effectiveness of electric parks equipment.
 - d. Track usage of electric parks equipment.
 - e. Quantify the environmental benefits of the project in terms of reduced air pollution and noise pollution.

Authorities:

This project, if awarded, will be led by a team of New Castle County employees, including, but not limited to, representation from Department of Public Works, Parks Division, the Department of Communities Services, Libraries Division, and the Executive Office. We will also need to coordinate with our library managers and parks crews. All charger installations will be contracted out. All our price estimates are from Blink, a fair bid vendor through our Sourcewell Bid with purchasing, however standard procurement procedures will be followed for implementation (see Section 5: Jobs).

Implementation Timeline:

- 2024 – 2025: Finalize contract with EPA and secure contractor for charging station installation.
- 2025 – 2026: Purchase electric vehicles, lawn mowers, leaf blowers, and physical charging infrastructure. Manage the capacity upgrade and charger installations at locations.
 - Public Charger installation is estimated to take 12-18 months to be completed, according to vendor.
 - After purchasing, anticipated delivery is as follows:

- Mowers: 12-24 months
 - Leaf Blowers: 6 months
 - EVs: 12-24 months
- 2026-2030: Collect data on usage rates of public chargers and government fleet. Report to EPA as indicated.
- 2030-2050: Continue regular data collection, reporting and sustainability plan updates.

Section 4: Low Income and Disadvantaged Communities

Community Benefits:

Delaware is the lowest lying state in the country and is continuing to experience subsidence. New Castle County is the most populated county in the state, with an incredibly diverse population. Climate change will and already is impacting our communities inequitably. Residents are already dealing with flooding, industrial pollution, homelessness, extreme heat, and poverty.

A large portion of this application centers on bringing resources and reducing pollution in disadvantaged communities. Overall, the projects in this application reduce greenhouse gas emissions, which long term will help reduce the impacts of climate change on vulnerable communities. A national effort, made possible by this funding, can help limit sea level rise, extreme heat days, and the number of extreme storms that impact us nationally and locally. While some of this application's focus is on general GHG reduction in the county (such as our fleet upgrades), a lot of our focus is on bringing those reductions in emissions and air pollution to the communities that need it most.

Two of our potential charging stations are in "Disadvantaged Communities" according to CEJST. First is the Route 9 Library and Innovation Center, which is in a Qualified Census Tract (QCT) 10003015502, located in New Castle, DE. This area has many challenges, including proximity to heavy industry, flooding, and poverty. Another of our potential charging station locations is Banning Park, which is in QCT 10003012900. Most of our other charging locations are located near disadvantaged areas or areas that have a score of 80% or higher in the Supplemental Demographic Index. These include Claymont Public Library, Rockwood Park and Museum, Carousel Park Equestrian Center, and the Bear Library. The recently constructed Appoquinimink Library does not fall near a QCT, but its site was chosen to be easily assessable by lower income neighborhoods in Middletown. Please see attached list of Climate and Economic Justice Screening Tool (CEJST) Census tract IDs or EPA's EJScreen Census block group IDs for each community that may be affected by a proposed measure.

Overall, we intend to place these charging stations at libraries and parks to increase accessibility to EV charging infrastructure, especially for those who might live in an apartment or townhome and lack the infrastructure to charge at home. Currently, electric vehicles and gas-powered vehicles are similar in price, and there are a lot of new state and federal programs to subsidize the cost of an EV. A huge barrier to owning an EV can be the money or space needed to have at-home charging. It also connects residents to the many programs and resources that exist in our

libraries and parks. As the county addresses sustainability holistically in our upcoming NCC Sustainability Plan, accessible charging infrastructure is essential.

Additionally, our electric parks equipment will be utilized by a new Route 9 parks crew. While CPRG funding will not be used to specifically create jobs, we will be using these funds for equipment to supplement our previous efforts to increase park maintenance in low-income disadvantaged communities. The additional Park crew is being funded by the county's American Rescue Plan Act State and Local Fiscal Recover Funds (SLFRF). New Castle County listened to the concerns of residents in the Route 9 corridor area, who wanted better maintained and safer greenspace, and sought funding to improve park infrastructure and increase the level of maintenance. This crew would utilize electric lawn mowers and leaf blowers, which not only reduce greenhouse gas emissions, but eliminate air pollutants such as carbon monoxide, nitrous oxides, particulate matter, VOCs, and sulfur oxides caused by parks maintenance. The county has already purchased two electric mowers using funding from Energize Delaware, and they have been shown to be functional and easy for staff to operate.

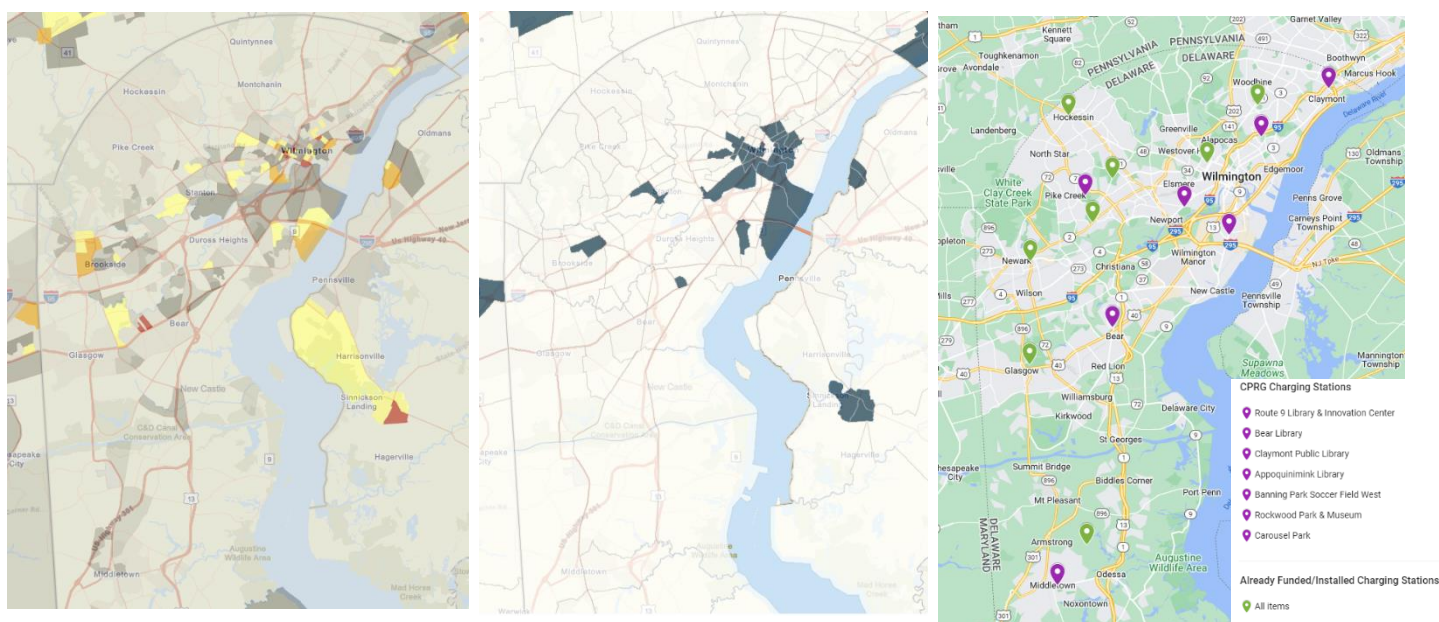
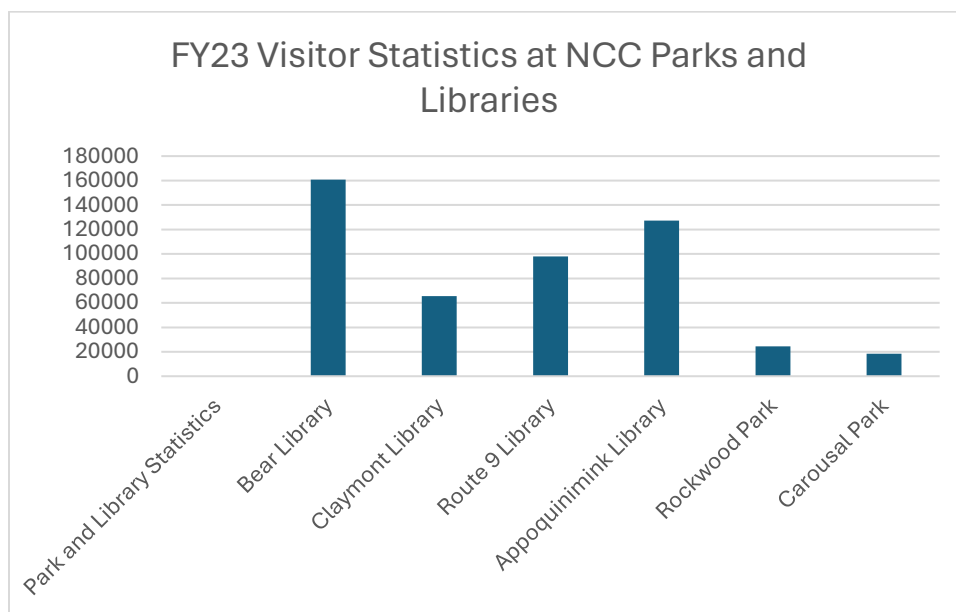


Image 3: Map 1 and 2 are from EPA's EJ Screen and the Climate and Economic Justice Screening Tool, showing the Social Demographic Index and the Justice 40 CEJST mapping layers. [Map 3](#) indicates the potential charging station locations included in this application and charging stations the county has already received funding for.

While these maps are a helpful indicator of environmental justice, New Castle County recognizes that there can be limitations. Our libraries and parks are spread across the entire county, and oftentimes are on the border of what EJ Screen considers a disadvantaged community. As a

supplemental tool, New Castle County also references the Delaware Department of Natural Resources and Environmental Control's EJ Area Viewer. This tool allows you to view EJ Screen data, as well as DelDOT's Equity Focus Areas and Limited English Neighborhoods.

The following graph shows estimated visitor statistics from the locations of the public charging stations proposed in this application. For parks data, these numbers represent participation in scheduled programs at each park. However, it does not capture general park users, walkers, etc., as county parks do not require entrance fees and so entrances are not monitored.



Community Engagement:

Community engagement and feedback has always been an integral part of planning at New Castle County. In 2022, New Castle County completed its Comprehensive Plan. County employees conducted robust public engagement over the span of two years for the plan. All our efforts to increase access to charging stations, electrify our fleet, and electrify our parks crews, stemmed from feedback gathered during that process.

Robust Public Engagement

2,000+ Planning Board Public Hearing mailings	141,284 social media impressions	123,070 newsletters in annual sewer bills
370 people attended 4 “Let’s Talk” virtual workshops fall 2020	40+ youth participants via the Youth Planning Board (now recruiting for its 3 rd class!)	900+ responses to multiple surveys
701 registrants for 3 virtual Public Forums (November 2020, July 2021, December 2021)	837 people attended five “Deep Dive” virtual workshop sessions in Spring 2021	12+ community meetings held Fall 2021 - Winter 2021
88 Stakeholder Advisory Committee & Interagency Work Group members	130 written public comments received and reviewed	56,343+ visits to NCC2050 website

Image 4: Robust Public Engagement graphic from [NCC2050 \(arcgis.com\)](https://ncc2050.arcgis.com).

The county also requires Sub-Area Plans. The endeavor to bolster the Route 9 corridor is largely spearheaded by the Route 9 Monitoring Committee—a collective comprising local residents and professionals entrusted with executing the Route 9 Master Plan. Most of the Route 9 corridor is identified as Level 1 and Level 2 investment areas by the state of Delaware and are top priorities for growth and reinvestment.

Community engagement efforts will persist, particularly as New Castle County undergoes the drafting phase of its Sustainability Plan. This forthcoming plan serves as an instrumental implementation framework for the multifaceted objectives outlined in the comprehensive plan. Already, we have held three external stakeholder meetings for the Sustainability Plan and have scheduled three public meetings for April 24th, May 1st, and May 8th, 2024. Achieving our 100 Plugs Plan, reducing greenhouse gas emissions, and reducing impacts on disadvantaged communities are already a top priority in the plan, which is why we are proactively applying for funding.

Section 5: Job Quality

The measures described in this application are not expected to create new job opportunities directly. Project management and purchasing will be handled by current county employees and installation of charging stations will be contracted out. New Castle County has had a long practice of hiring and maintaining a diverse workforce, most of whom are represented by local unions. New Castle County provides comprehensive benefits to employees and follows the merit system.

Additionally, in alignment with its environmental sustainability goals, the County has created a new Small Business Enterprise (SBE) Program to support greater economic sustainability within its business community. Staffed with a dedicated SBE Coordinator well-versed in procurement, business development, and supplier diversity, the SBE Office mission is to support capacity-building among small, diverse businesses, through collaboration with internal and external stakeholders, to increase the pool of vendors and contractors ready, willing, and able to be

referred and awarded County contracts. In the context of a successful grant application, the SBE Coordinator will work directly with County staff involved in grant-supported procurement, to connect SBEs (deliberately inclusive of Disadvantaged, Minority and Women Business Enterprises), for bidding on such contracting opportunities. The SBE Coordinator drives the County's good faith efforts to diversify its spending by knowing which SBE vendors and contractors are ready willing and able to compete and perform on these contracts and referring them for due consideration under County Procurement Code.

Section 6: Programmatic Capability and Past Performance

Past Performance:

Energize Delaware: Nonfederal grant awarded in 2023.

- Energize Delaware Grants for Local Government EV Fleets
- Description: New Castle County was awarded \$498,000 to add eight new electric vehicles and two electric lawn mowers to the county fleet, with six charging stations to support them.
- Contact: Drew Slater 1-302-883-3048 ext. 102, 1-302-388-9575 (c), Drew.Slater@deseu.org, www.energizedelaware.org.

Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant:

Federal award of \$23 million, notified in 2023. New Castle County is currently finalizing the agreement with the Federal Highway Administration.

- Project Title: Newport River Trail
- Description: the project will fund the construction of an approximate 2-mile, ADA accessible, shared-use path connection between the Town of Newport and the Jack A. Markell Trail in Wilmington, Delaware.
- Administrator: Federal Highway Administration
- CDFA number: 20.933
- Contact: Dan Montag, Sr. Area Engineer/Major Project Manager, US DOT Federal Highway Administration, Delaware Division
- Phone 302-734-1719; daniel.montag@dot.gov

Reporting Requirements:

Energize Delaware requires annual usage reporting, i.e., annual vehicle mileage, charging hours/kWh, etc., which is outlined in the grant contract.

RAISE Grant: Because the grant agreement has not yet been executed and we have not yet expended funds for the covered phase of construction, we have not yet been required to report on our progress. However, our administration has an excellent track record of quarterly and annual reporting to the US Treasury on both CARES Act and American Rescue Plan Act (ARPA) State and Local Fiscal Recovery Funds (SLFRF) expenditures, since 2020.

Staff Expertise:

New Castle County is the northernmost and most populous county in the state of Delaware, United States. It encompasses urban, suburban, and rural areas, including the city of Wilmington, which is the largest city in Delaware. For more information on our departments, please visit our website: <https://www.newcastlede.gov/>.

Multiple staff members across departments have collaborated on the GreeNCC initiative, the 100 Plugs Plan and the implementation of EV purchases and charger installation to date. Staff members who will be involved in the implementation of projects supported by this funding proposal include:

Name	Title	Department	Staff Expertise and Role
Kristie Arlotta	Sustainability Coordinator	Executive Office	Expertise in sustainability planning, project management, greenhouse gas emissions. Will manage the project and work with partners within and not within the county to ensure timeline is met and expectations are being met.
Aundrea Almond	Chief of Staff	Executive Office	Expertise in submitting and managing federal grants, as well as NCC's past, present and future green initiatives.
Michael Bowser	Executive Assistant IV	Department of Public Works	Expertise in development and implementation of sustainability initiatives. Administers NCC's existing charging station network.
Paul Frese	Internal Services Manager	Department of Public Works	Oversees the purchase and maintenance of NCC's fleet of over 2000 vehicles and pieces of equipment, including electric vehicles and mowers.
Nick Mancari	Chief of Building Operations and Maintenance	Department of Public Works	Expertise in property and project management and is currently overseeing NCC capital project to install Level-2 charging stations at four new libraries and parks.

Section 7: Budget

The proposed budget of **\$4,636,311** is allocated towards three key initiatives aimed at promoting the adoption of electric vehicles (EVs) and supporting sustainable practices within our community. Each allocation is strategically designed to address different aspects of the EV ecosystem, including infrastructure development, fleet expansion, and operational efficiency enhancements.

Our 100 Plugs Plan and the electrification of our fleet have been a top priority of New Castle County for multiple years. Hence, our budget is based off recent and accurate cost estimates. Additionally, in 2021 NCC commissioned an electrical capacity study to determine feasibility of charging stations and capacity upgrades needed in government facilities. All cost estimates and the capacity study are attached in the *Other Attachments Form*.

1. **Public Charging Stations (\$2,588,811):** This allocation focuses on the installation of public charging infrastructure across our community, specifically targeting high-traffic areas such as public libraries and parks. The deployment includes:
 - 13 Level-2 dual port charging stations at five public libraries and parks, providing a total of 26 charging plugs. This setup aims to cater to the increasing demand for EV charging facilities in recreational and educational hubs, ensuring accessibility and convenience for EV owners. Each charging station, with the necessary equipment, costs **\$7308.75** (see pricing breakdown below). 13 Level-2 chargers will cost an estimated total of **\$95,013.75**.

Estimate per one Level-2 Dual Port Charging Station:

Product / Service Item	Description	Product ID	MSRP	Sourcewell Discount	Sourcewell Price
Series 880 Charging Station w/ One Year Full Service - w/ CC	Series Plus (80 Amp), 18ft cable, Dual EV Charging Station, credit card reader with mounting device and one year of Full Network Service and Full Replacement Warranty Coverage	L2-880-Full1-18-CC	\$8,740.00	25%	\$6,555.00
Pedestal (S7/S7+/S8/S8+)	Single pedestal for SC748, SC780, SC848, SC880	L2-PM-S7-S8	\$205.00	25%	\$153.75
Cable Management System Dual	SemaConnect Cable Management System with dual lanyards	L2-CMS-D-S5678	\$600.00	0%	\$600.00
Total					\$7,308.75

- 7 Level-3 DC fast chargers installed at two public libraries, facilitating rapid charging capabilities for EV users, particularly those in need of quick recharges during their visits to community spaces or those stopping off the highway. Each

charging station, with the necessary equipment, costs **\$156,391.00**. 7 Level-3 DC fast chargers will cost an estimated total of **\$1,094,737**.

Estimate per one Level-3 DC Fast Charger (Dual Plug)

DCFC Products							
Mfg	Model	Description	Part #	Prev MSRP	MSRP	Discount	Sourcewell
Tellus	HPC-360-480-2	360 kW DCFC - 500 Amps / 1,000 V with Liquid Cooled Connector CCS1 & CCS1, simultaneous charging, 4G Modem	01-0599		\$ 169,990	10%	\$ 156,391.00

- Installation costs are provided by cost estimates from Blink Charging Turnkey EV Installation. Cost estimates will be attached to the Other Attachments form. Specific breakdowns of capacity upgrade and installation estimates for two locations, the Route 9 Library and Innovation Center and the Claymont Library, were prepared by Blink; see attached. Total contractual cost for installation of Level 2 and 3 chargers is estimated to be **\$1,399,060**.
2. Electric Parks Crews at NCC Maintenance Bases (**\$527,500**): This allocation is dedicated to enhancing operational efficiency and reducing the environmental footprint of maintenance activities within our parks. The allocation includes:
 - Establishment of Electric Parks Equipment at NCC Maintenance Bases, equipped with sustainable electric equipment and vehicles to perform various maintenance tasks.
 1. Procurement of ten Toro Electric Ride-On 60in Mowers (\$42,000 each) and five sets of Electric Hand Equipment (\$1500 each), enabling efficient and eco-friendly park maintenance operations. In total this will cost **\$427,500**. Mower cost estimate attached.
 2. Acquisition of five EV charging trailers to support the charging needs of electric maintenance equipment, ensuring uninterrupted service delivery across different park locations. In total this will cost, at \$20,000 each, **\$100,000**.
 3. EV Fleet Expansion (**\$1,520,000**): This allocation aims to expand our fleet of electric vehicles, coupled with the necessary charging infrastructure upgrades to support their operation. The allocation includes:

- Enhancement of charging infrastructure at Government Center and Conner Building (where our Land Use and Public works fleet reside), incorporating five Level 2 charging stations per location, with scalability for future expansions to accommodate the growing EV fleet. This is estimated to cost **\$1,100,000**. This estimate was concluded from our Electrical Capacity Study completed by DEDC, LLC. When this was completed in 2021, construction estimates for the Government Center and Conner Building were \$916,555. With predicted cost increases from 2021 to 2025, we estimated it to be \$1,100,00.
- Acquisition of ten EV passenger vehicles, such as Nissan Leaf or Chevy Bolt, to augment our existing fleet with eco-friendly alternatives, reducing emissions and promoting sustainability in government operations. At approximately \$42,000 each, 10 EVs will cost **\$420,000**. See attached quote for one Nissan Leaf.

Overall, this budget reflects our commitment to fostering a sustainable transportation ecosystem and promoting environmentally responsible practices within our community. By investing in EV infrastructure, fleet expansion, and operational efficiency enhancements, we aim to pave the way for a cleaner, greener future while meeting the evolving needs of our residents and stakeholders.

Budget table attached: Budgetcalcs_NewCastleCounty

Expenditure of Awarded Funds:

In our experience it takes 10-18 months from contract execution to project completion for EV charging installations. Electric Vehicle supply has been a challenge in the past, but we anticipate quickly encumbering the funds and ordering Nissan Leafs or equivalent through our vendors, with anticipated delivery in 12-24 months. The same applies for procuring the electric mowers, 12-24 months. Electrical hand tool procurement is 6 months.

An experienced team of county employees will perform regular check-ins with vendors to ensure equipment delivery and installations are staying on track.

Reasonableness of Costs

See attached cost estimates.

References:

1. US Department of Energy: <https://afdc.energy.gov/laws/12744>