

# powerNC

*Providing Opportunities for Workforce development  
and Energy Readiness in North Carolina*

## PROJECT READINESS AND ENVIRONMENTAL RISK



IN PARTNERSHIP WITH

**STEPS4GROWTH & NC COMMUNITY COLLEGE SYSTEM**

**USDOT Charging and Fueling  
Infrastructure Grant  
APPLICATION  
JUNE 2023**



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The Project is technically feasible with low levels of environmental project risk. The North Carolina Department of Transportation (NCDOT) will serve as both the Charging and Fueling Infrastructure (CFI) 2023 Applicant and Recipient. As such, NCDOT will be responsible for administering the grant if selected for award and will provide project management and oversight of project delivery. As the project sponsor, NCDOT will apply its experience completing Federal discretionary grant projects and executing the State's Electric Vehicle (EV) Infrastructure Deployment Plan to successfully deliver **Providing Opportunities for Workforce development and Energy Readiness in North Carolina (powerNC, or "the Project")**. Should the Project be approved for CFI grant funding, NCDOT is ready for obligation as soon as the necessary documentation is executed.

## PROJECT DELIVERY

If awarded, NCDOT would finalize a series of two-party agreements with each participating community college (CC) in coordination with the development and execution of the grant agreement with the Federal Highway Administration (FHWA). These agreements will contain provisions for each step of the project delivery process and will stipulate that each participating school maintain and operate the new EV charging stations according to the applicable standards of 23 Code of Federal Regulations (CFR) 680, for a period of no less than 5 years from the initial date of operation.

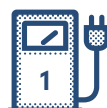
To deliver the project, NCDOT will leverage an alternative delivery method such as a design-build or public-private partnership (P3) to streamline project delivery while promoting collaboration between all project partners. NCDOT will manage the project and seek a statewide contract with one or more private entities to complete development phase activities and/or install the Project's EV charging stations through a full and open competition consistent with the standards of 2 CFR § 200.319 and § 200.320, 23 CFR § 635, and 23 CFR § 636. NCDOT will collaborate closely with Successful Training and Effective Partnerships for Growing Regional Opportunities in the Workforce To Harness the NC Clean Energy Alliance (STEPS4GROWTH), the North Carolina Community College System (NCCCS), the local energy provider for each school, and any selected private entities to complete powerNC's development phase and construction activities. Broader coalitions of economic development agencies, non-profits, and educational agencies will be formalized to implement the Project's educational programming and community engagement activities.

## PROJECT SCHEDULE

NCDOT anticipates obligating funds well in advance of the obligation deadlines for both Fiscal Year (FY) 22 and FY 23 CFI funds, as shown in the project schedule. Upon obligation of funds, NCDOT will work collaboratively with the participating CCs, STEPs4GROWTH, and any contracted private entities to complete development phase activities (including engineering and design work, environmental review, and financial analysis), and the procurement and installation of EV charging stations for all 10 participating CCs concurrently. However, individual CCs may have slightly different schedules and milestone dates, depending on the complexity of each CC's improvements and local construction schedules.

## 23 CFR PART 680 COMPLIANCE

NCDOT and its Project partners have a thorough understanding of the National Electric Vehicle Infrastructure (NEVI) program requirements for the charging stations deployed under the Project. All the Project's Level 2 EV charging stations will have a minimum of 4 ports, meet NEVI power level requirements, and be ENERGystar certified. All EV charging stations will provide a contactless payment method that accepts major credit and debit cards and allow users to make payments through either an automated toll-free phone number or a short message/messaging system. Payment methods will be accessible to persons with disabilities, will not require a membership, will provide clear pricing, will not affect the power flow to vehicles, and will provide access to Limited English Proficient (LEP) populations. Additionally, there will be public transparency in how the price is determined and set for EV charging at each CC. Lastly, the Project will



## Project Schedule

Milestone	2024				2025				2026			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
CFI Milestones	•		•				•					
Community Engagement												
Siting and Design												
Environmental Review												
Procurement and Contracting												
Integration with Vocational Training (2 Semesters)												
EV Charging Station Installation												
CFI Roundtable					•		•		•		•	
Data Submittals			•	•	•	•	•	•	•	•	•	•
	Assume Award				Grant Agreement Executed				Obligation Deadline (September 30, 2025)			

Note: Operational Period 2027-2031

meet all applicable interoperability, customer data privacy, cybersecurity and charging network connectivity found in the final rule, and all signage installed as part of the Project will comply with the Manual on Uniform Traffic Control Devices (MUTCD) and 23 CFR part 750. Charging data will be submitted to FHWA quarterly in accordance with § 680.112, and any data related to maintenance and repair cost or participation in any State or local business opportunity certification programs will be submitted annually.

### REQUIRED APPROVALS

PowerNC has received support from the North Carolina Office of the Governor and other state and local agencies and organizations representing suburban, urban, and rural regions of the State. Letters of support have been provided on the Project website from these organizations and the CCs included in the application. NCDOT will work collaboratively with NCCCS, appropriate Rural Planning Organizations (RPOs) or Metropolitan Planning Organization (MPOs), as well as the NCDOT State Transportation Improvement Program (STIP) Unit to amend

their respective Transportation Improvement Projects (TIPs) and subsequently add the Project to the STIP upon notification of the award.

### STATE AND LOCAL APPROVALS

No legislative approvals are required to complete the Project, and all EV charging stations will be installed in fully constructed public parking lots on CC campuses where no right-of-way (ROW) acquisition will be required. Beyond the National Environmental Policy Act (NEPA) process described below, there are no Federal requirements affecting state or local planning for the Project.

### NEPA AND PERMITTING REQUIREMENTS

This project is anticipated to be processed as a Category 1 CE, pursuant to the 2017 Programmatic Agreement between the FHWA, North Carolina Division, and NCDOT Regarding the Processing of Actions Classified as a CE for Federal-aid Highway Projects (amended 2019), which authorizes NCDOT to approve the documents without additional FHWA coordination or approval. The Project's EV charging stations and associated utility



improvements will be located and designed so as not to impact streams or wetlands, nor will the Project impact threatened and endangered species. Furthermore, the Project will avoid siting charging stations in flood-prone and frequently inundated areas, in accordance with the Federal Flood Risk Mitigation Standard (FFRMS) as updated by Executive Order (EO) 13690. Environmental conditions at each site will be further evaluated during project development, and NCDOT will coordinate with appropriate regulatory agencies to avoid or minimize impacts.

## EQUITY AND ACCESSIBILITY REQUIREMENTS

The Project partners thoughtfully and intentionally identified the participating CCs to direct the Project's activities to disadvantaged and underserved communities. NCDOT will work closely with the participating CCs and the contracted private entities to site each EV charging station with due consideration to the mobility and safety needs of all users. Further discussions of how powerNC meets the CFI program's equity and accessibility requirements can be found in the **Project Overview, Safety, Equity, Community Engagement, and Justice40,** and **CFI Program Vision** sections.

## PUBLIC ENGAGEMENT

Throughout the development and construction phases of the project, NCDOT and STEPs4GROWTH will perform robust public outreach in the communities served by the participating CCs. Their goal will be to publicize the availability of new EV charging stations and generate interest in the clean vehicle vocational training and workforce development programs at the participating CCs, with particular attention to K-12 and non-traditional students (see **Project Overview**). Feedback gathered from these events will inform the implementation of additional educational activities, job placement, and support services in the workforce development activities at each participating CC that are responsive to community needs.

During Project implementation, NCDOT will convene a CFI roundtable consisting of representatives from NCDOT, STEPs4GROWTH, NCCCS, and participating CCs to promote sharing of lessons learned (especially from participating CCs that currently operate EV charging stations), best practices, and programs in both rural and urban contexts. Participation in the NCDOT CFI roundtable is required of participating CCs to help ensure CCs across the State will move forward together.

## DISADVANTAGED BUSINESS ENTERPRISE (DBE) PARTICIPATION

NCDOT and its partners will seek to maximize DBE participation when implementing powerNC. NCDOT routinely contracts DBEs for transportation projects and conducts quarterly DBE outreach to highlight future projects and to encourage participation. For Federal FYs 2022-2024, NCDOT has set a DBE goal of 13 percent, where 10.8 percent is anticipated to be through race conscious measures and 2.2 percent is expected to be through race neutral measures. NCDOT is considering using alternative contract delivery methods to construct the Project and promote DBE utilization by allowing NCDOT to score respondents on their DBE participation plan and work to maximize participation from design through construction.



Existing EV charging station at Wake Technical CC


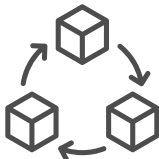





# ASSESSMENT OF PROJECT RISKS AND MITIGATION STRATEGIES

The Project Team has identified the following potential risks and corresponding mitigation strategies to implement the project on schedule and within budget. NCDOT, who

will administer the project, will leverage its extensive experience completing other Federal discretionary grant projects to reduce and mitigate risk.

## Potential Risks

Risk	Explanation	Mitigation
<b>Site Conditions</b> 	<ul style="list-style-type: none"> <li>Site conditions vary across the participating schools. For example, in more rural areas of the State, there may be a need for more extensive electric service equipment, grid upgrades and enhanced wireless cellular coverage needed for data transmission.</li> <li>Unforeseen utility relocation costs could increase overall project costs.</li> </ul>	<ul style="list-style-type: none"> <li>Development phase activities will identify cost effective sites and methods to deploy project.</li> <li>Advanced hardware and software technologies will be employed where feasible to balance load when multiple ports are operating simultaneously, to ensure demand does not exceed supply. This will allow all four ports to operate simultaneously and prioritize charging at the highest power level possible without exceeding the available supply.</li> </ul>
<b>Supply Chain</b> 	<ul style="list-style-type: none"> <li>Material shortages and inflation are causing volatility in materials, construction, and labor costs.</li> <li>Based on current economic conditions, significant delays in procuring the Project's 20 EV charging stations and completing any needed electrical service equipment and grid upgrades may occur.</li> </ul>	<ul style="list-style-type: none"> <li>The Project budget includes a 25 percent contingency to account for uncertainty in construction and labor costs.</li> <li>The Project can use North Carolina state-term contracts that include pre-negotiated prices for EV charging stations and other project components.</li> <li>The Project's EV charging stations will be procured at beginning of project, prior to development phase activities to prevent schedule delays resulting from materials shortages.</li> </ul>

Risk	Explanation	Mitigation
<p><b>Qualified Technicians of EV Infrastructure</b></p> 	<ul style="list-style-type: none"> <li>Labor shortages for supportive industries like electricians and installers could contribute to further delays of equipment installation.</li> <li>NEVI requires that the workforce installing, maintaining, and operating the chargers has appropriate licenses, certifications, and training. NCDOT/Office of Civil Rights (OCR) is the lead agency for this in the NEVI Plan.</li> </ul>	<ul style="list-style-type: none"> <li>NCDOT and STEPs4GROWTH will provide educational resources and job placement assistance to expand the labor pool for well-paying careers in the clean vehicle sector.</li> <li>The Project will contribute to the training and certification of technicians and engineers who are well-qualified to install, maintain, and repair EV charging stations.</li> </ul>
<p><b>Payment Methods</b></p> 	<ul style="list-style-type: none"> <li>The traveling public increasingly demands reliable and innovative payment options, while low-income, unbanked, and underbanked populations face financial barriers to EV adoption.</li> <li>NEVI Standards and Requirements include reliability standards and inclusive, innovative payment approaches</li> <li>NEVI Standards and Requirements specify allowable uses of income derived from the operation of the Project's EV charging stations.</li> </ul>	<ul style="list-style-type: none"> <li>All EV charging stations deployed will comply with NEVI requirements.</li> <li>The Project will use a competitive contracting process that encourages bidders to utilize innovative payment methods.</li> <li>In consultation with the participating schools, the Project will explore including EV charging fees in tuition or parking fees for students and teachers.</li> <li>The two-way agreements between NCDOT and each participating school will ensure that any user fees are affordable, and that any income derived from these fees is used in accordance with applicable law.</li> </ul>
<p><b>Safety Risks and Considerations</b></p> 	<ul style="list-style-type: none"> <li>The deployment and operation of EV charging stations carries certain safety-related risks for users and the public, such as shock, burns, electrocutions, fire hazards, and conflicts between travel modes.</li> </ul>	<ul style="list-style-type: none"> <li>The Project will provide safety benefits for all users and avoid negative safety impacts by procuring EV charging stations that meet the safety standards of 23 CFR § 680 and by ensuring the siting and design elements of each EV charging station follows US Department of Transportation's (USDOT's) Safe Systems Approach to reduce conflicts between modes.</li> </ul>

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