



## **North Carolina Volkswagen Settlement Program**

### **Phase 1**

### **Zero Emission Vehicle Infrastructure Program**

### **DC Fast Charging Stations**

## **Request for Proposals**

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## I. Request for Proposals (RFP) Timeline

- Release of RFP June 17, 2019
- Proposal application available for download July 1, 2019
- RFP application training sessions July 15 – 26, 2019
  - We strongly encourage you to register for the workshop that is closest to your location. Since space will be limited, registration is required. The sessions for Diesel and ZEV will be separate, so if you plan on attending both please register for both. Locations and dates will be posted on our website, [deq.nc.gov/VWsettlement](http://deq.nc.gov/VWsettlement).
- Proposal applications due date September 30, 2019
- Proposal application evaluations Summer/Fall 2019
- Phase 1 project selections Fall 2019
- Grant awards announced Fall 2019/Winter 2020

**Timeline changes:** NCDEQ reserves the right to adjust the dates listed above. Any changes or additional information regarding the RFP schedule, including responses to questions, will be posted on NC VW Settlement RFP website at: <https://deq.nc.gov/VWsettlement-DC-RFP>.

## II. Overview

### Summary

The North Carolina Division of Air Quality (NCDAQ) in the North Carolina Department of Environmental Quality (NCDEQ) is soliciting proposals for participation in Phase 1 of the NC Volkswagen Mitigation Settlement Program. NCDEQ is allocating the full 15% allowed in the VW State Trust Agreement for zero emission vehicles (ZEV) charging infrastructure projects in all three phases (\$4,602,283 each phase) outlined in the [NC Mitigation Plan](#). NCDEQ will allocate 75% (\$3,451,712) of the Phase 1 allocation to DC fast charging infrastructure projects and 25% (\$1,150,571) to Level 2 charging infrastructure projects. The primary goal is to increase use of ZEV's in place of gas-powered cars to mitigate nitrogen oxides, particulate matter and greenhouse gas emissions in the state. To achieve that goal, the program will emphasize adding new ZEV charging infrastructure in underserved areas, extend the existing light-duty ZEV infrastructure across the state, encourage intrastate and interstate ZEV vehicle usage at North Carolina's diverse geographic, historic and tourist attractions and highlight the environmental benefits of ZEVs.

This RFP for the DC Fast Charging Infrastructure Program will assist interested parties in applying for funds to install ZEV DC fast charging infrastructure, as described by the North Carolina VW Mitigation Plan ([deq.nc.gov/VWsettlement](http://deq.nc.gov/VWsettlement)). This document includes information on who may apply for funding, the funding levels, project eligibility, funding priorities for the phase, match requirements, activities eligible for funding, and other information that will help applicants plan their project and submit a competitive proposal application. The DC Fast Charging Infrastructure Program proposal application will be available on the NC VW Settlement webpage, <https://deq.nc.gov/VWsettlement-DC-RFP>.



**All proposal applications must be submitted only by email to [svc.NCVWApplication@ncdenr.gov](mailto:svc.NCVWApplication@ncdenr.gov) no later than 5:00 p.m. Eastern Time on September 30, 2019.**

## Objectives

North Carolina will distribute funds during Phase 1 to facilitate interstate travel with zero emission vehicles. To achieve this goal, Phase 1 funds will support projects to enhance and extend ZEV infrastructure network on high-traffic routes between population hubs. North Carolina’s DC fast charging network currently consists of 48 locations, not including dealerships, totaling 103 active plugs across the state. These stations are predominately located around the state’s population hubs. The network has areas along interstates where DC fast charging infrastructure is needed to support quick charging between the population hubs. Adding new infrastructure in these areas will help to reduce range anxiety for ZEV drivers.

Table 1 below represents segments along interstates and pending interstates where new DC fast charging infrastructure will have the highest priority for Phase 1 of the program. Each has one or more segments where charging infrastructure is needed to enhance the current state ZEV charging network.

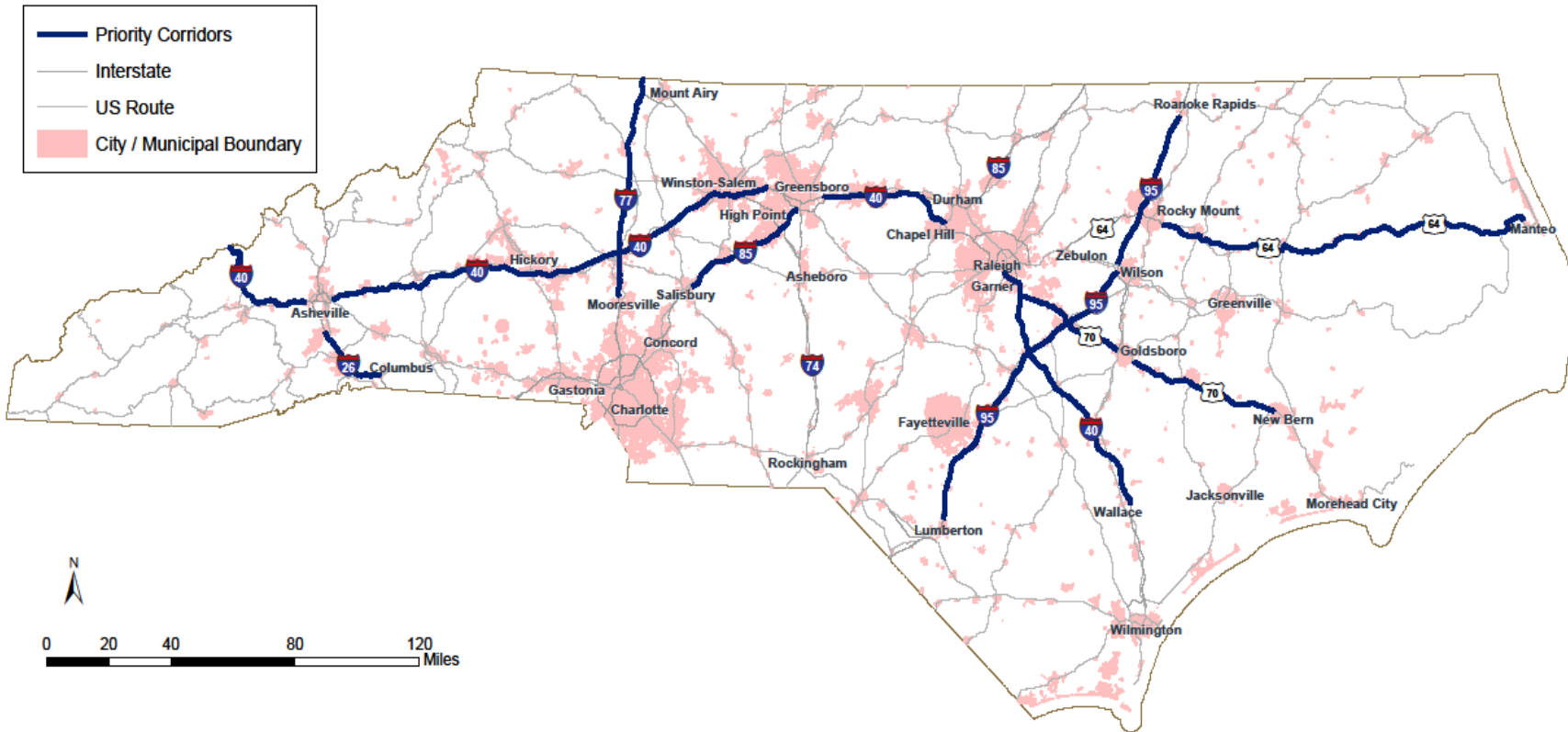
Ideally DC fast charging stations are to be installed at approximately 50-mile increments. Proposal applications for locations in metropolitan areas in the state currently served with DC fast charging infrastructure will receive lower priority for Phase 1 to emphasize the program goal of adding new ZEV charging infrastructure in underserved areas and extending the existing light-duty DC fast charging infrastructure across the state.

Table 1: Priority Phase 1 DC Fast Charging Infrastructure Areas

Interstate/Pending Interstate	Segments without DC fast charging infrastructure (between destinations)	Approximate length of segment (in miles)	Estimated number of DC fast stations per segment
Interstate 26	Asheville* to Columbus	50	1
Interstate 40	Waterville to Asheville*	60	1
	Asheville* to Greensboro*	170	3
	Greensboro* to Durham*	50	1
	Raleigh* to Wallace*	90	1
Interstate 77	Mt. Airy to Mooresville*	80	1
Interstate 85	Greensboro* to Salisbury*	50	1
Interstate 95	Roanoke Rapids* to Wilson*	60	1
	Rocky Mount* to Lumberton	120	2
U.S. 70 (pending interstate)	Raleigh* to Goldsboro*	50	1
	Goldsboro* to New Bern	60	1
U.S. 64 (pending interstate)	Rocky Mount* to Manteo	140	2
<b>Approximate number of miles and stations</b>		<b>980</b>	<b>16</b>

\*DC fast charging infrastructure currently in place at segment end-point.

## Phase 1 DC Fast Charging Priority Corridors



Map Created By  
NCDOT Transportation Planning Division  
April 2019



## Eligible Applicants

Organizations that own or operate a host site in an eligible location may submit proposal applications for DC Fast ZEV Charging Program. Eligible applicants include:

- a. Incorporated nonprofit – an organization as described in section 501(c)(3) of the Federal Internal Revenue Code of 1954, as amended. The organization must be incorporated under NC law or registered with the NC Department of the Secretary of State.
- b. Public school districts.
- c. Municipal governments and municipal authorities.
- d. NC State government agencies – government owned EV charging projects (state agencies, departments, institutions, universities, and community colleges) are subject to using contractors on the approved on mandatory Statewide Term Contract 691A – Electric Vehicle Charging Station Equipment, Accessories Installation & Infrastructure.<sup>1</sup> Additionally, non-mandatory entities, including schools and local government, that are allowed by general statute may use this contract.
- e. Tribal government agencies.
- f. Metropolitan or rural planning organizations, as defined by the U.S. Department of Transportation at 49 U.S.C. § 5303(b), located in North Carolina.
- g. Businesses – corporations, partnerships, sole proprietorships, limited liability companies, business trusts or other legal business entities incorporated in or registered with the NC Department of the Secretary of State.
- h. Air quality or transportation organizations – Local or regional air quality or transportation organization that
  1. owns or operates a fleet located or operating predominately in North Carolina, or
  2. have partnered with or is acting as a project manager for another eligible entity listed in this section.

## Ineligible Applicants

Organizations that are ineligible for DC Fast ZEV Charging Infrastructure Program include:

- a. Applicants that are currently debarred by the State of North Carolina<sup>2</sup> and/or federal government<sup>3</sup>.
- b. Business not incorporated in or registered with the NC Department of the Secretary of State to do business in North Carolina.
- c. Individuals applying as individuals, not on behalf of an eligible applicant.
- d. NCDEQ may also deem an applicant ineligible because of, but not limited to: environmental compliance issues, labor standards issues, tax status or other such issues.

## Eligible Locations

Locations eligible for DC Fast ZEV Charging Infrastructure Program include:

- a. Publicly accessible government owned property
- b. Publicly accessible non-government owned property

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<sup>1</sup> <https://files.nc.gov/ncdoa/pandc/Documents/StateTermContracts/STC691A/691A.pdf>

<sup>2</sup> North Carolina Department of Administration, <https://ncadmin.nc.gov/government-agencies/procurement/contracts/debarred-vendors>

<sup>3</sup> United States Department of Labor, <https://www.dol.gov/ofccp/regs/compliance/preaward/debarlst.htm>



### III. Funding

NCDEQ plans a phased approach for North Carolina's \$92 million total allocation and will seek additional input and make changes as needed between phases. Each phase is planned with an equal amount of available funding of \$30.68 million. This RFP is for Phase 1 (2018 – 2020) only. Phases 2 and 3 are planned to occur from 2020 to 2024 but may be combined into a single Phase 2 (2020-2024) with a total amount of \$61.36 million available. The first phase of funding represents the beginning step in achieving the multi-year goals for the program.

#### Eligible Mitigation Action Funding Eligibility Requirements

Maximum funding percentages for selected projects is dependent on whether the ZEV infrastructure will be owned by a government or non-government entity, however maximum allowable project funding is not guaranteed. **NCDEQ reserves the right to partially fund a proposal by funding only a portion of a proposed project.** Applicants will be notified of the actual amount awarded for their project. Applicants awarded funding have the option to accept or decline the award.

#### Funding Type

NCDEQ anticipates awarding a total of approximately \$3.5 million for DC fast charging infrastructure for Phase 1. **This is a reimbursement program and award recipients must provide their own funding to cover expenses as they are incurred.** Grant applicants must include a demonstration that the applicant can cover the full cost of the project prior to approval. Selected projects will be reimbursed up to the amount authorized after the awardee submits acceptable documentation to show that eligible expenses have already been paid.

#### Cost Share Requirements

Applicants may request Phase 1 funds to cover the following expenses:

- Up to 100% of the cost to purchase, install and maintain eligible light-duty electric vehicle supply equipment that will be available to the public at a government owned property.
- Up to 80% of the cost to purchase, install and maintain eligible light-duty electric vehicle supply equipment that will be available to the public at a non-government owned property.

### IV. How to Apply

Proposal applications and supporting documentation must be submitted electronically using our downloadable application form, <https://deq.nc.gov/VWsettlement-DC-RFP>. Applicants must completely fill out this application form to be considered for funding. **Incomplete proposal applications will not be considered.** This proposal application and any supplemental information provided will serve as the primary means by which all proposal applications are evaluated and selected. NCDEQ may contact you or your organization for clarification and/or for supplemental information, so please ensure the contact information you provide is accurate; applicants will have 10 business days to respond to any such requests.



This is a competitive application process. **To be considered for funding in Phase 1, completed proposal applications must be received by email no later than 5:00 p.m. Eastern Time on September 30, 2019.** The downloadable proposal application will be available on <https://deq.nc.gov/VWsettlement-DC-RFP>. If you have any questions about this proposal application, please contact NCDEQ at [daq.NC\\_VWGrants@ncdenr.gov](mailto:daq.NC_VWGrants@ncdenr.gov) with subject title line: “ZEV DC Fast RFP” prior to submitting your proposal application and well in advance of the deadline to submit.

**Projects initiated prior to submitting a proposal application are not eligible for funding. Project initiation activities that may disqualify a proposal application include ordering equipment, hiring a contractor or vendor to complete the project. Submittal of a proposal application is not a guarantee that a proposed project will be funded.**

Awarded applicants must:

- Submit copy of signed host site agreement and site map to NCDEQ 60 days after award notification and acceptance.
- Procure DC fast charging equipment, take delivery and install before end of contract date.
- Agree to keep the ZEV infrastructure operational in North Carolina for a minimum of five years.
- Provide all required documentation required for reimbursement.
- The grantee or designee must provide the state with usage data quarterly.
- Maintenance costs should be explained in the cost share ratios and will be used in the project selection process.

## Host Site Agreements

Negotiation of host site agreements are the responsibility of the awardee. Copies of host site agreements must accompany the signed acceptance grant award letter and returned to NCDEQ. Host site owners (if not the awardee) must provide NCDEQ written assurance that each station will remain at the site and operational for a minimum of five years.

## Project Awards

Applicants selected for funding shall have two years to complete their project from the date of a signed executed contract with NCDEQ. If an application shows that the project cannot be completed in two years, it will not be selected for funding. If, after two years, a project has not been completed, funds will no longer be guaranteed for the project and the applicant will need to reapply.

## Public Data

All proposal applications and supporting documentation are public record per North Carolina General Statutes §132-1, except for “confidential” or “trade secret” data as defined and classified in North Carolina General Statutes §66-152(3) and must be indicated as such by the applicant at the time of the initial proposal application submittal.





## V. Eligible Project Criteria

Increasing investments in light-duty ZEV infrastructure will result in emission reductions associated with increased ZEV adoption and usage. However, to avoid double-counting emission benefits associated with vehicles, this plan will not quantify direct NO<sub>x</sub> reduction benefits.

### Eligible Project Types

- Light-duty electric vehicle supply equipment: commercial grade DC fast charging equipment 50kW or higher (or analogous successor technologies) located in a public place.

### Eligible Expenditures

- 50kW or higher DC fast charging station infrastructure
- Utility equipment upgrades such as transformers and utility extensions up to \$15,000 per charging station
- Conduit, cable/wiring, electrical service box disconnect addition
- Concrete or asphalt addition or replacement
- Signage
- Bollards
- Paint stripping and stenciling of the station parking spaces
- Permit costs including engineering and site design costs
- Labor for researching and securing the host site, directly related to the acquisition, site design and engineering, installation, commissioning or activation, and maintenance
- Shipping of equipment
- Maintenance and warranty costs for the DC fast charging equipment

### Ineligible Expenditures

- Purchase or rent real estate
- Used, refurbished, or remanufactured equipment
- Capital costs such as construction of buildings, parking facilities, etc.
- Any expenses incurred before the grant contract is fully executed including applicant's expense for preparing the eligibility and cost proposals
- Bad debts, late payments, finance charges or contingency funds, interest, and investment
- Attorney fees
- Administrative costs
- Internet or cellular connection service costs
- Lobbying, lobbyists, and political contributions
- Mark-up on purchases and/or subcontracts
- Taxes, except sales tax on eligible equipment and expenses
- Activities addressing permit fees
- Activities addressing enforcement actions that involve a financial penalty
- Level 1 and 2 charging station infrastructures
- Hydrogen fuel cell vehicle supply infrastructure and equipment
- Paper studies or research projects (e.g., a study which assesses the cost and feasibility of electric vehicle charging station installations along certain regions/corridors)
- Surveys to determine interest in the installation of electric vehicle charging stations along a corridor

- Proposals for any type of vehicle demonstration or demonstrations of existing technologies for public outreach/education
- General maintenance (i.e. maintenance other than of the supply equipment) not covered under warranty or service agreement.
- Charging infrastructure installations at a workplace not accessible to the general public.
- Charging infrastructure installations at a multi-unit dwelling.

## VI. DC Fast Charging Station Installation Requirements/Workplan

The proposal application must address the following charging station installation requirements. Charging station host site locations **do not need** to be fully secured prior to application submission. Providing additional project information beyond these requirements is encouraged. The site map will include demonstration of compliance with the station requirements below. **This grant cannot be used to fund the purchase, rent or lease of real estate.**

1. Host site selection
  - a. Proposed host site location information.
    - (1) Host site name(s) and address(es). Host sites must be located within the state of North Carolina to be eligible.
    - (2) Letters of commitment from the charging station host sites must be included.
  - b. Describe work/collaborations with interested utilities, local business, cities, counties or other entities.
  - c. Utility notification: Coordination with the local utility to determine site locations that factor in proximity to electrical service and any necessary distribution system upgrades required.
  - d. Locations: Charging station host sites must be at increments of 50 to 100 miles along highways with a maximum distance of five miles off the exit. The site must be accessible to the general public for users 24-hours per day/seven days per week, have dusk to dawn lighting and be within a short walking distance, not to exceed a quarter mile, to retail or service establishments such as restaurants, coffee shops, convenience stores or tourism destinations.
2. Host site details:
  - a. Geographic Positioning System (GPS) coordinates of proposed station location.
  - b. Site details such as lighting and parking.
3. Sustainable business model: a detailed explanation of the business model towards ensuring sustainability of the charging station(s) must be provided.
4. Equipment requirements: Describe procurement, installation, activation/commissioning and testing of DC fast charging stations that meet equipment requirements below. Describe whether station will be single or dual port station installation (allowing one car to charge at a time or two cars simultaneously) and kW output.
5. Ongoing services:
  - a. Customer service: a toll-free phone number for customer support service must be clearly posted on or near the installed DC fast charging stations. When a station user calls the phone number, they must obtain immediate access to assistance. Proposal applications must address customer support service that is accessible and responsive 24-hours, seven days a week within the plan.

- b. Networking: The installed fast charging stations must connect to a network by wired ethernet, Wi-Fi or cellular connection. Proposal applications must address networking and how the service will be maintained within the workplan.
  - c. Data capture: Each charging station should provide the following information for each charging transaction, at each charging location:
    - (a) Charging data such as date and time of usage (start and stop time) and accurate utilization rates;
    - (b) Total kWh and total kW draw;
    - (c) Total dollar amount charged to the user;
    - (d) Station status and health in real time;
    - (e) Malfunction or operating error; and
    - (f) Full site level usage report presented quarterly to NCDEQ.
6. DC fast charging installation requirements: List as tasks the planned procurement, installation, activation or commissioning and testing of DC fast charging stations that meet equipment requirements.
- a. Parking spaces: A minimum of two concrete or asphalt pad parking spaces and ample real estate upon which to create parking spaces for a least one additional fast charging station in the future is required.
  - b. Bollards: placement of bollards to protect the station equipment (if stand-alone charging station). Any stand-alone charging station bollards should be 3 to 4-foot high with concrete footings placed to protect the fast chargers from accidental impact.
  - c. Permits:
    - (1) Local electrical permits must be secured, and regulations followed for the DC fast charging station installations at the host site.
    - (2) Conduit and an electrical service box of adequate size and disconnect capacity that will allow additional electrical cable to be run to the site for potential future installation of two additional DC fast charging stations or a higher-powered DC fast charging equipment must be included as part of the installation.
    - (3) Any other permits required by federal, state or local governments must be secured.
    - (4) Environmental impact studies as required by federal, state or local ordinances or regulations must be completed.
  - d. American with Disabilities Act (ADA) compliance: Charging stations must make every effort to be ADA compliant and follow all applicable laws, ordinances, regulations and standards. ([www.afdc.energy.gov/uploads/publication/WPCC\\_complyingwithADArequirements\\_1114.pdf](http://www.afdc.energy.gov/uploads/publication/WPCC_complyingwithADArequirements_1114.pdf)).
  - e. Future proofing: Conduit and an electrical service box of adequate size and disconnect capacity that will allow additional electrical cable to be run to the site for future expansion of either two additional 50 kW charging stations or a higher power station up to 400kW must be included in the installation.
  - f. Signage: Complies with all applicable local, state, and/or federal laws, ordinances, regulations and standards.
    - (1) The grantee's contractor should be responsible for coordinating with the appropriate local agencies and the North Carolina Department of Transportation (NCDOT) for directional signage on and along roads and highways near the charging station. The signage must be consistent with the Manual on Uniform Traffic Control Devices for Streets and Highways, published by the United States Department of Transportation, and any

supplement to that Manual adopted by the North Carolina Department of Transportation. Workplan budgets must include the cost of four roadway signs (2 on the corridor and 2 at the end of the exit ramp in each direction) purchased from NCDOT at a cost of \$150 each.

- (2) On-site signage: Identifies to the approaching driver from every ingress, that the host site has charging station(s); and the location(s) of the charging station(s). Workplan budgets must include the cost of on-site signage.
  - (a) “Electric vehicle parking only” signs are required on each side of each charging station along with “electric vehicle parking only” stenciled graphics on each stripped parking pad.
  - (b) On-site signage must include the following language, “This project made possible with a partnership with the State of North Carolina”.
- g. Maintenance: The fast charging station unit is required to have a minimum five-year warranty. Proof of the charging station equipment warranty must be submitted to NCDEQ. Annual maintenance of the charging stations as per the original manufacturer recommendations is required. All fast charging stations must continually be in full-working order to the extent possible. Should repair be necessary, service must be contacted within 24-hours and the station up and fully operational within 48 to 72 hours to ensure a 95% annual uptime guarantee. Proof of the charging station equipment warranty and a maintenance plan must be submitted to NC DEQ prior to project completion as a condition of rebate reimbursement approval.
- h. Payment options: The DC fast charging stations have the option either to require payment or not require payment from users. Payment options are at the discretion of the grantee who will operate and maintain the stations. Should payment be required to access and use the charging stations, it must be Payment Card Industry compliant to allow use of a credit or debit card. Stations may also offer additional payment methods including subscription methods, smart cards, or smart phone applications. Real-time pricing and fee information shall be displayed on the unit, payment screen or associated phone application.

## Equipment Requirements

Each station must offer both Charge de Move (CHAdeMO) and Society of Automotive Engineers Combined Charging System (SAE CCS) charging protocol connectors. The charging system must have the ability to reduce power output to be compatible for use by all EVs.

All charging station equipment must come with a minimum of a five-year warranty and meet the following minimum requirements for safety testing by a Nationally Recognized Testing Laboratory (NRTL) recognized by the Occupational Safety and Health Administration (OSHA). The equipment must be listed and labeled as required by North Carolina General Statutes Chapter 66, Article 4 – Electrical Materials, Devices, Appliances and Equipment, the National Electrical Code (NEC) Section 625.5 and be Federal Communication Commission (FCC) compliant.

DC fast charging stations shall be certified to one of the following options:

1. Underwriters Laboratories (UL) 2594 (Standard for Electric Vehicle Supply Equipment). DC fast charging systems shall be certified (listed and labeled) to UL 2202 (Standard for Electric Vehicle (EV) Charging System Equipment).



2. International Electrotechnical Commission (IEC) 61851-23, IEC 62196 and IEC 61000 EMC standards. These charging stations must be certified (listed and labeled) with Edison Testing Laboratories (ETL).
3. An equivalent nationally recognized testing laboratory certification. Supporting evidence must be provided.

## Equipment Physical Appearance and Design

1. Electric Vehicle Supply Equipment (EVSE) Enclosure: The EVSE enclosure must be constructed for use outdoors in accordance with UL 50E (Enclosures for Electrical Equipment, Environmental Considerations) Type 3R exterior enclosure or equivalent.
2. Environmental: The EVSE must be capable of operating without any decrease in performance over an ambient temperature range of 0 to 122 degrees Fahrenheit with a relative humidity of up to 100%.
3. Cord management system: The EVSE must incorporate a cord management system or method to eliminate potential for cable entanglement, user injury or connector damage from lying on the ground.

## VII. Renewable Energy Certificates

A renewable energy certificate (REC) is a tradable market instrument that represents the generation of one megawatt-hour (MWh) of electricity from a renewable energy resource. Purchasing RECs gives companies, institutions, and individuals a simple way to offset their environmental footprint and support clean energy. When you purchase RECs, you are purchasing the renewable attributes of energy generated by a renewable energy resource such as wind, solar, moving water (hydropower), organic plant and waste material (biomass) and the earth's heat (geothermal). These sources of power are "renewable" because they are constantly replenished—there is no shortage of sunlight or wind, for example.

Applicants can receive additional bonus points on their application by purchasing RECs to offset their energy purchases but must provide a detailed description of their plans and how the RECs will be provided. Applicants must also provide a signed copy of an agreement to purchase RECs and document the percent of RECs purchased that will offset the total energy purchased for each host site.

### How to buy RECs

Customers may purchase RECs either directly from the electric power supplier (if offered) or online from a third party. Any REC percentages must extend over the minimum warranty period required by the RFP which is five years.

## VIII. Proposal Application Review Process

A combination of evaluation factors will be considered during the proposal review process, NCDEQ will consider the overall cost effectiveness and the potential for early implementation and completion of each application. Proposal applications will be selected for funding based on a set of criteria reflecting funding priorities for the program. These factors will guide NCDEQ in giving priority to projects that perform the highest overall. Although cost-sharing/matching is not required as a condition of eligibility under this competition, NCDEQ will evaluate proposal applications based on a leveraging criterion.

Leveraging is generally when an applicant proposes to provide its own additional funds/resources or those from third party sources to support or complement the project they are awarded. Any leveraged funds/resources, and their source, must be identified in the proposal application. Leveraged funds and resources may take various forms.

Voluntary cost share is a form of leveraging. Voluntary cost sharing is when an applicant voluntarily proposes to legally commit to provide contributions to support the project when a cost share is not required. Applicants who propose to use a voluntary cost share must include the contributions for the voluntary cost share in the project budget. If an applicant proposes a voluntary cost share, the following apply:

- A voluntary cost share may only be met with eligible and allowable costs.
- The recipient may not use other sources of federal funds to meet a voluntary cost share unless the statute authorizing the other federal funding allows.
- The recipient is legally obligated to meet any proposed voluntary cost share that is included in the approved project budget. If the proposed voluntary cost share does not materialize during grant performance, the NCDEQ may reconsider the legitimacy of the award and take appropriate action as authorized.

## IX. Project Scoring Criteria

A 100-point scale will be used to evaluate eligible proposal applications. Projects may receive an additional 10 bonus points for using renewable energy. Scores will be used to develop final recommendations. Urban/suburban projects and rural projects will be ranked separately. Proposal applications will be evaluated and ranked according to the following criteria:

<p>Cost Effectiveness (VW\$ funded per NOx tons reduced): cost effectiveness is based on applicant provided information and if applicable, matching funds. Under this criterion, projects are ranked from most cost effective to least cost effective (i.e. \$/amount of NOX reduced per year). Urban/Suburban projects and Rural Projects will be ranked separately.</p> <ul style="list-style-type: none"> <li>• Top 20%: 20 points</li> <li>• Next 20%: 15 points</li> <li>• Next 20%: 10 points</li> <li>• Next 20%: 5 points</li> <li>• Last 20%: 0 points</li> </ul>	20
<p>Distance off interchange: Ranked highest to lowest; based on proposed site location from interchange.</p> <ul style="list-style-type: none"> <li>• Less than 2 miles: 15 points</li> <li>• 2 to 3 miles: 10 points</li> <li>• Over 3 miles but less than 5 miles: 5 points</li> <li>• Over 5 miles: 0 points</li> </ul>	15
<p>Distance to other DC fast charging sites: How many miles to existing DC fast charging sites (not including dealerships or Tesla Supercharger locations) along interstate to project area? DC fast charging site data used from U.S. Department of Energy, Alternative Fuels Data Center<sup>4</sup></p> <ul style="list-style-type: none"> <li>• Over 100 miles: 25 points</li> <li>• 99 to 51 miles: 20 points</li> <li>• 50 to 26 miles: 15 points</li> <li>• Less than 25 miles: 5 points</li> </ul>	25
<p>Environmental Justice</p> <ul style="list-style-type: none"> <li>• See Appendix B for county scores and a detailed description of how county scores are determined.</li> </ul>	10
<p>Traffic Density of location: Annual Average Daily Traffic (AADT) of the proposed project area. (See AADT map in Appendix C)</p> <ul style="list-style-type: none"> <li>• 90,001 – 195,000: 15 points</li> <li>• 42,001 – 90,000: 10 points</li> <li>• 1,600 – 42,000: 5 points</li> </ul>	15
<p>Accessibility and proximity to amenities: Distance to amenities such as restrooms, food, local restaurants, and retail shopping</p> <ul style="list-style-type: none"> <li>• Onsite: 15 points</li> <li>• Less than ¼ mile from amenities: 10 points</li> <li>• ¼ mile from amenities: 5 points</li> </ul>	15
<p><b>Total Points</b></p>	<b>100</b>
<p><b>Bonus Points</b></p> <p>Renewable Energy Certificates: Percentage of electricity to power the DC fast charging station for five-years.</p> <ul style="list-style-type: none"> <li>• 100%: 10 points</li> <li>• 51 – 99%: 7.5 points</li> <li>• 26% – 50%: 5 points</li> <li>• 1 – 25%: 2.5 points</li> </ul>	10
<p><b>Maximum Points Achievable</b></p>	<b>110</b>

<sup>4</sup> U.S. Department of Energy, Alternative Fuels Data Center, [https://afdc.energy.gov/fuels/electricity\\_locations.html](https://afdc.energy.gov/fuels/electricity_locations.html)

## X. Reimbursement Process

Grant payments will be disbursed as **reimbursements after the work is completed, verified and approved**. Verification will occur via site visits by NCDEQ staff to photograph the completed installation. Evidence of a minimum five-year warranty for the station equipment and a service contract to provide annual maintenance for five years will be required prior to payment disbursements. Requests for reimbursement can occur after each individual station is installed or after all stations are installed for multi-station projects. Before reimbursement, awardees must submit the information listed below after project completion. After NCDEQ approval of the final documentation, NCDEQ will process the application for payment. Required documentation:

- Provide a signed payment request, on letterhead, for the amount to be reimbursed (a template will be available on the website, <https://deq.nc.gov/vw-settlement/forms>);
- Copies of detailed invoices of all eligible project costs;
- Proofs of payment of all eligible project costs associated with the project;
- Photos of each EVSE unit (one photo of the installed EVSE and one photo of the EVSE serial number);
- Certification that the station infrastructure is fully operational;
- Proof of charging station equipment warranty and a maintenance plan;
- If Renewable Energy Certificates are used, a signed copy of the purchase agreement for the duration of the warranty of the equipment.
- Payee contact information.

All EVSE station installation work must be completed by end of contract date. All documentation required for reimbursement should be completed and submitted to the NCDEQ as soon as possible, but no later than the date specified in the contract with NCDEQ.

## XI. Reporting Requirements

### Semiannual Reporting Requirement

All project award recipients will be required to submit semiannual reports on the status of their project to NCDEQ until the final project report is submitted. Semiannual reports must be submitted to NCDEQ within 14 days after the end of each reporting month (June 30 and December 31). Failure to submit required reports will result in NC DEQ suspending the acceptance of any new applications from the applicant. A template for the semiannual report will be provided on the website, <https://deq.nc.gov/vw-settlement/forms>.

### Final Report Requirements

Grantees are required to submit a final project report to NCDEQ. A template for the final project report will be made available on the website, <https://deq.nc.gov/vw-settlement/forms>.

### Quarterly Charging Station Utilization Reporting Requirements

All award recipients will be required to submit EVSE usage information quarterly for five years beginning the first quarter after project completion. Quarterly reports will be submitted to NCDEQ within 14 days after the end of each quarter. Reporting quarters end March 31, June 30, September 30 and December 31. Failure to submit quarterly reports is considered a violation of the terms and conditions of



the signed contract. Additionally, acceptance of new applications from the recipient will be suspended. Once the awardee corrects the failure to submit quarterly reports the suspension will be lifted.

The reporting information submitted to NCDEQ will identify the previous three months of EVSE utilization data. The following information will be requested from each host site. Report quarterly usage, and operations data from VW funded sites to include but not limited to the following:

- Summary Report per EVSE:
  - Location: site name, EVSE ID number, address, city, zip, county,
  - Operational uptime,
  - Number of charge events,
  - Number of unique vehicles,
  - Average charge time per event (mins),
  - Average kW per charge event,
  - Total kW consumed,
  - Gallons of gasoline and/or diesel fuel displaced,
  - Estimated cumulative miles driven from charge and
  - Estimated cumulative gallons of gasoline and/or diesel fuel displaced.
- Details per charging event:
  - Location: site name, EVSE ID number, address, city, zip, county,
  - Charge event date time,
  - Time charging,
  - Length of time connected,
  - kW provided,
  - Vehicle make, and model year (on events where available).

The EV Utilization Quarterly Report template is available on the NC VW Settlement webpage, <https://deq.nc.gov/vw-settlement/forms>. NCDEQ will notify grantees of changes to the quarterly report submittal process 90 days prior to the required submittal.

## XII. Program Contact Information

Inquiries related to the project requirements, application, application requirements, and other aspects of this RFP should be directed to: [Daq.NC\\_VWGrants@ncdenr.gov](mailto:Daq.NC_VWGrants@ncdenr.gov).



## Appendix A: Urban/Suburban and Rural County Designations in North Carolina

The Rural Center has defined the counties in North Carolina based on population densities as either urban, suburban, or rural. The Rural Center uses the following definitions in classifying counties:

Rural: There are 80 counties with population densities of 250 people per square mile or less, according to 2014 U.S. Census population estimates. These counties are home to a little more than 4 million people (41% of the state population).

Regional city or suburban counties: There are 14 counties with population densities between 250 and 750 people per square mile. These counties account for 2.4 million people (25% of the state population).

Urban: There are six counties with population densities between 750 and 1,933 people per square mile. These counties account for 3.3 million people (34% of the state population).

Using the Rural Center classification for counties, urban counties account for the largest population of subject VW vehicles with 41% of the total. Rural counties account for 32% of the vehicles and regional city or suburban counties account for 27% of the VW vehicle population.

Table A-1 is a list of all 100 North Carolina counties with their designation based on the above definitions.

Table A-1: County Classifications in North Carolina

County Name	County Classification
Alamance	Suburban
Alexander	Rural
Alleghany	Rural
Anson	Rural
Ashe	Rural
Avery	Rural
Beaufort	Rural
Bertie	Rural
Bladen	Rural
Brunswick	Rural
Buncombe	Suburban
Burke	Rural
Cabarrus	Suburban
Caldwell	Rural
Camden	Rural
Carteret	Rural
Caswell	Rural
Catawba	Suburban
Chatham	Rural
Cherokee	Rural

Table A-1: County Classifications in North Carolina

<b>County Name</b>	<b>County Classification</b>
Chowan	Rural
Clay	Rural
Cleveland	Rural
Columbus	Rural
Craven	Rural
Cumberland	Suburban
Currituck	Rural
Dare	Rural
Davidson	Suburban
Davie	Rural
Duplin	Rural
Durham	Urban
Edgecombe	Rural
Forsyth	Urban
Franklin	Rural
Gaston	Suburban
Gates	Rural
Graham	Rural
Granville	Rural
Greene	Rural
Guilford	Urban
Halifax	Rural
Harnett	Rural
Haywood	Rural
Henderson	Suburban
Hertford	Rural
Hoke	Rural
Hyde	Rural
Iredell	Suburban
Jackson	Rural
Johnston	Rural
Jones	Rural
Lee	Rural
Lenoir	Rural
Lincoln	Suburban
McDowell	Rural
Macon	Rural
Madison	Rural
Martin	Rural



Table A-1: County Classifications in North Carolina

<b>County Name</b>	<b>County Classification</b>
Mecklenburg	Urban
Mitchell	Rural
Montgomery	Rural
Moore	Rural
Nash	Rural
New Hanover	Urban
Northampton	Rural
Onslow	Rural
Orange	Suburban
Pamlico	Rural
Pasquotank	Rural
Pender	Rural
Perquimans	Rural
Person	Rural
Pitt	Suburban
Polk	Rural
Randolph	Rural
Richmond	Rural
Robeson	Rural
Rockingham	Rural
Rowan	Suburban
Rutherford	Rural
Sampson	Rural
Scotland	Rural
Stanly	Rural
Stokes	Rural
Surry	Rural
Swain	Rural
Transylvania	Rural
Tyrrell	Rural
Union	Suburban
Vance	Rural
Wake	Urban
Warren	Rural
Washington	Rural
Watauga	Rural
Wayne	Rural
Wilkes	Rural
Wilson	Rural

Table A-1: County Classifications in North Carolina

<b>County Name</b>	<b>County Classification</b>
Yadkin	Rural
Yancey	Rural

## Appendix B: Environmental Justice Scoring

The Environmental Protection Agency defines environmental justice (EJ) as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.” (US EPA). Historically, people of color and people of low-income, along with other vulnerable populations, have been disproportionately exposed to harmful pollutants.

NCDEQ has developed a quantifiable Social Vulnerability Index (SVI) using statistical and GIS methods to show which counties in North Carolina have the highest concentrations of particularly vulnerable populations. This SVI was developed using datasets from the US Census Bureau and the NC Department of Commerce.

Table B-1: Data Sources

Description of Dataset	Year	Source
American Community Survey 5-Year Estimate	2016	US Census Bureau
North Carolina Development Tier Designations	2018	NC Department of Commerce

The American Community Survey data was reclassified by creating four “bin” ranges for each demographic group. This was done by separating the data into quartiles and assigning a value of 1 to 4. The NC Department of Commerce sorts counties into three distinct county tiers based on average unemployment rate, median household income, percentage growth in population, and adjusted property tax base per capita. The forty most distressed counties are considered Tier 1, the 40 counties which are identified as mildly distressed are Tier 2, and 20 least distressed counties are Tier 3. To add this data into the overall vulnerability index in a meaningful way, the inverse of the county tier number designations was used to give Tier 1 (most distressed) a designation of “3”, and so on and so forth. To create the final vulnerability index, the American Community Survey data was summed (1, 2, 3 or 4) for each county along with the inverse of the NC Department of Commerce County Tier rankings to create resulting totals for each county. Then the resulting totals were placed into their own quartile bins and assigned a final EJ score of 1 to 4.

Mobile NOx emissions in tons per year from the 2014 National Emissions Inventory (Version 2)<sup>5</sup> were arranged from highest to lowest and divided in the quintiles and points were assigned to each of the quintiles, found in Table B-2.

Table B-2: Points Assigned for Mobile NOx Quintiles

Mobile NOx Emissions (tons per year)	Percentile	Points
0 - 131	0-20 % rank	0
132 - 270	21-39 % rank	1
271 - 435	40-59 % rank	2
436 - 771	60-79 % rank	3
772 +	80-100 % rank	4

<sup>5</sup> <https://www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data>

There are a few incidences where the SVI did not accurately correspond to the tier county designations and the concentration of some demographic groups in the region. Therefore, to assign a score, the final SVI scores were weighted at 1.5 and the Mobile NOx Bin scores weighted at 1. The scores were summed by county. The final county scores are found in Table B-3.

Table B-3: Final Scores by County

2014 NEI County NOx Emissions (Tons)	County	Classification	Mobile NOx Bin	SVI	EJ Final Score
874.2	Alamance	Suburban	4	2	7
132.1	Alexander	Rural	1	2	4
50.5	Alleghany	Rural	0	4	6
157.2	Anson	Rural	1	3	5.5
122.8	Ashe	Rural	0	2	3
102.6	Avery	Rural	0	2	3
243	Beaufort	Rural	1	3	5.5
143.8	Bertie	Rural	1	4	7
221.5	Bladen	Rural	1	4	7
659.2	Brunswick	Rural	3	1	4.5
1651.8	Buncombe	Suburban	4	1	5.5
524.4	Burke	Rural	3	2	6
1088.2	Cabarrus	Suburban	4	1	5.5
318	Caldwell	Rural	2	2	5
72.8	Camden	Rural	0	1	1.5
294.9	Carteret	Rural	2	1	3.5
142.7	Caswell	Rural	1	2	4
771.8	Catawba	Suburban	3	2	6
448	Chatham	Rural	3	2	6
148.3	Cherokee	Rural	1	3	5.5
81.1	Chowan	Rural	0	4	6
52.9	Clay	Rural	0	2	3
656.1	Cleveland	Rural	3	1	4.5
423.5	Columbus	Rural	2	4	8
422.6	Craven	Rural	2	2	5
1575.8	Cumberland	Suburban	4	3	8.5
205	Currituck	Rural	1	1	2.5
315.7	Dare	Rural	2	1	3.5
855.3	Davidson	Suburban	4	2	7
438.5	Davie	Rural	3	1	4.5
465.6	Duplin	Rural	3	3	7.5
1382.3	Durham	Urban	4	2	7
274.5	Edgecombe	Rural	2	3	6.5
1218.2	Forsyth	Urban	4	3	8.5
275.2	Franklin	Rural	2	2	5
1182.7	Gaston	Suburban	4	1	5.5
70.1	Gates	Rural	0	2	3

Table B-3: Final Scores by County

<b>2014 NEI County NOx Emissions (Tons)</b>	<b>County</b>	<b>Classification</b>	<b>Mobile NOx Bin</b>	<b>SVI</b>	<b>EJ Final Score</b>
41.5	Graham	Rural	0	3	4.5
422.5	Granville	Rural	2	1	3.5
124.7	Greene	Rural	0	4	6
2498.9	Guilford	Urban	4	2	7
459.7	Halifax	Rural	3	4	9
528.9	Harnett	Rural	3	2	6
650.7	Haywood	Rural	3	1	4.5
619.9	Henderson	Suburban	3	1	4.5
98.7	Hertford	Rural	0	4	6
162.8	Hoke	Rural	1	3	5.5
30.2	Hyde	Rural	0	2	3
1429.5	Iredell	Suburban	4	1	5.5
301.4	Jackson	Rural	2	2	5
1624.9	Johnston	Rural	4	1	5.5
101.7	Jones	Rural	0	4	6
281.8	Lee	Rural	2	2	5
270	Lenoir	Rural	1	3	5.5
389.7	Lincoln	Suburban	2	1	3.5
177.8	Macon	Rural	1	3	5.5
162.4	Madison	Rural	1	1	2.5
158.7	Martin	Rural	1	4	7
518.7	McDowell	Rural	3	2	6
5162.6	Mecklenburg	Urban	4	1	5.5
70.3	Mitchell	Rural	0	3	4.5
237	Montgomery	Rural	1	4	7
364	Moore	Rural	2	2	5
852.7	Nash	Rural	4	3	8.5
768.7	New Hanover	Urban	3	1	4.5
179.5	Northampton	Rural	1	3	5.5
821.3	Onslow	Rural	4	2	7
1218	Orange	Suburban	4	1	5.5
65.2	Pamlico	Rural	0	2	3
191.3	Pasquotank	Rural	1	2	4
493.4	Pender	Rural	3	1	4.5
82.7	Perquimans	Rural	0	2	3
145.7	Person	Rural	1	2	4
627.6	Pitt	Suburban	3	2	6
342.4	Polk	Rural	2	1	3.5
843.9	Randolph	Rural	4	2	7
294.7	Richmond	Rural	2	4	8
1019.7	Robeson	Rural	4	4	10
458	Rockingham	Rural	3	3	7.5
993.7	Rowan	Suburban	4	1	5.5
324.6	Rutherford	Rural	2	3	6.5

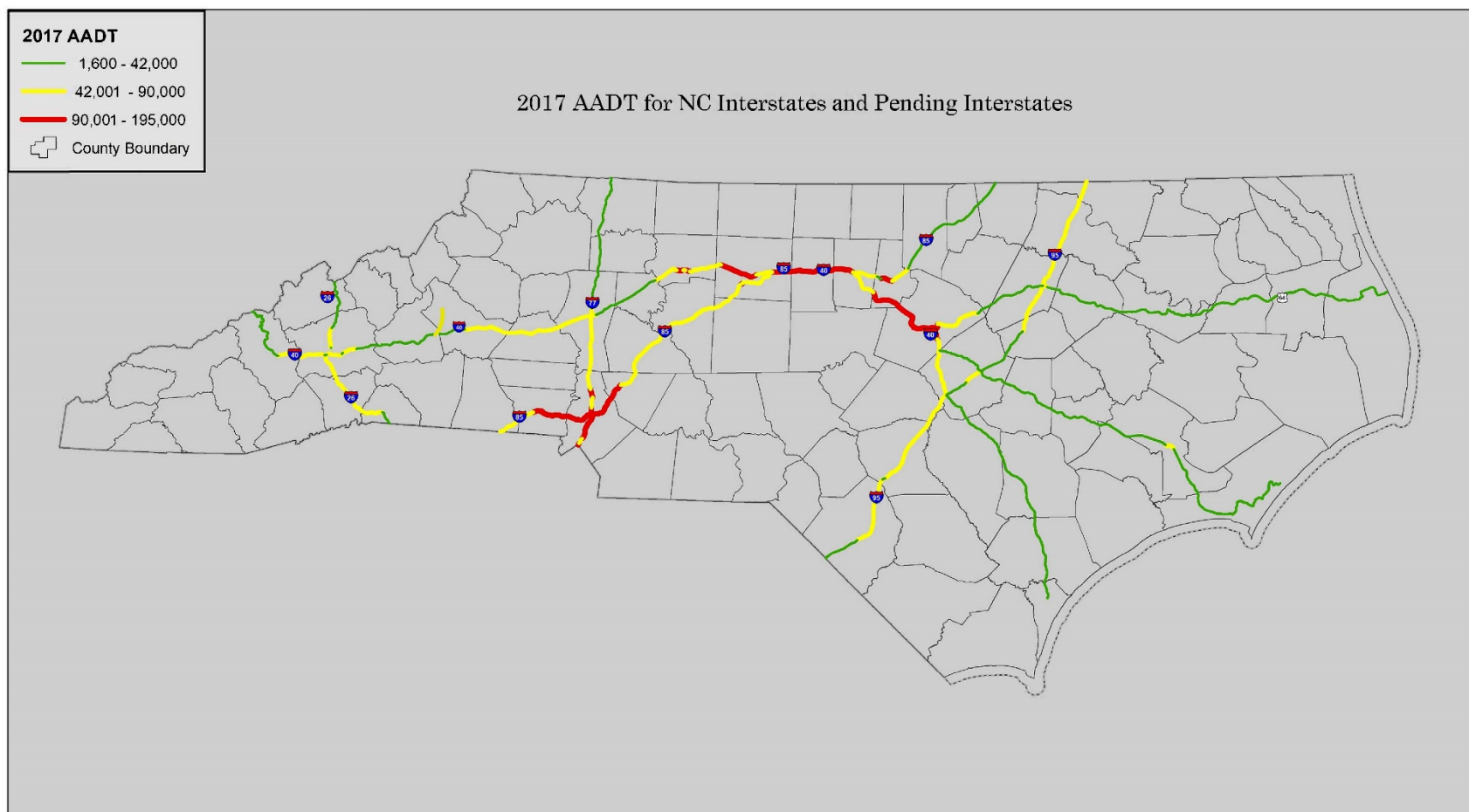


Table B-3: Final Scores by County

<b>2014 NEI County NOx Emissions (Tons)</b>	<b>County</b>	<b>Classification</b>	<b>Mobile NOx Bin</b>	<b>SVI</b>	<b>EJ Final Score</b>
435.2	Sampson	Rural	2	4	8
190.7	Scotland	Rural	1	4	7
302.9	Stanly	Rural	2	1	3.5
204.8	Stokes	Rural	1	1	2.5
745.4	Surry	Rural	3	3	7.5
129.1	Swain	Rural	0	3	4.5
131.1	Transylvania	Rural	0	1	1.5
44.2	Tyrrell	Rural	0	4	6
922.7	Union	Suburban	4	2	7
303.2	Vance	Rural	2	4	8
3953.2	Wake	Urban	4	1	5.5
189.2	Warren	Rural	1	4	7
85.1	Washington	Rural	0	4	6
276.9	Watauga	Rural	2	1	3.5
492	Wayne	Rural	3	2	6
358	Wilkes	Rural	2	2	5
558.2	Wilson	Rural	3	4	9
471.6	Yadkin	Rural	3	3	7.5
98	Yancey	Rural	0	2	3

## Appendix C: 2017 Annual Average Daily Traffic Map

Annual average daily traffic (AADT) is the total volume of vehicle traffic on a highway or road for a calendar year divided by 365 days. AADT is a useful and simple measurement of how busy a road is. The map below shows the AADT for the priority areas for Phase 1.



## Appendix D: Acronyms and Abbreviations

ADA	Americans with Disabilities Act
GIS	Geographic Information System
GPS	Geographic Positioning System
EVSE	Electric Vehicle Supply Equipment
FCC	Federal Communications Commission
EMC	Electric Motor Cars
ETL	Electrical Testing Laboratories
EV	Electric Vehicle
IEC	International Electrotechnical Commission
kW	Kilowatt
NCDAQ	North Carolina Division of Air Quality
NCDEQ	North Carolina Department of Environmental Quality
NEC	National Electrical Code
NRTL	Nationally Recognized Testing Laboratory
NO <sub>x</sub>	Oxides of Nitrogen
OSHA	Occupational Safety and Health Administration
REC	Renewable Energy Credit
RFP	Request for Proposals
SAE	Society of Automotive Engineer
UL	Underwriters Laboratories
USEPA	United States Environmental Protection Agency
VW	Volkswagen
ZEV	Zero-Emissions Vehicle

## Appendix E: Definitions

### AC Charging

The majority of ZEV charging is done with AC voltage at Level 1 (120 volts or normal household current) or Level 2 (240 volts or an electric dryer power equivalent). AC charging is typically more cost effective for the equipment and installation and takes advantage of longer dwell times to provide lower power to a ZEV over a longer period of time. AC charging is an excellent solution for residential, workplace, multi-unit dwelling and other longer-term parking situations like hotels and municipal or airport parking garages.

### DC Fast Charging

Direct current charging for electric vehicles allows for higher charging speeds, as DC current can be supplied directly to the electric vehicle's battery at power levels normally higher than AC charging. The higher the DC power supplied, the faster the electric vehicle can be charged, provided the vehicle is designed to handle such power.

### CHAdeMO

A DC fast charging standard first developed in Japan for the Japanese market and capable in the United States of charging the Nissan Leaf, Kia Soul and Mitsubishi iMiEV.

### CCS (Combined Charging System)

CCS is a DC fast charging protocol that is SAE certified and featured on vehicles produced by GM, BMW, Volkswagen Group, Ford and a number of other automakers headquartered in Europe and the United States. The "combined" term designates the CCS capability to incorporate the Level 2 (J1772 standard) plug and DC fast charging connector into the same larger plug.

### Dwell Time

The term for the amount of time a ZEV is parked in a location. The longer the "dwell" time, the longer it is parked.

### Government

Government shall mean a state or local government agency (including a school district, municipality, city, county, special district, transit district, joint powers authority, or port authority, owning fleets purchased with government funds), and a tribal government or native village. The term 'State' means the several States, the District of Columbia, and the Commonwealth of Puerto Rico.

Government may include any of the following entities:

1. Public school districts,
2. Municipal governments and municipal authorities,
3. Other NC state agencies,
4. Tribal government agencies,
5. Local, regional or multi-state air quality or transportation organizations,

6. Metropolitan or rural planning organizations, as defined by the U.S. Department of Transportation at 49 U.S.C. §5303(b), located in North Carolina, and

#### Higher Power DC Fast Charging

New technology developments will feature 150 kW to 450 kW or more of charging power, capable of adding electricity to a new generation of longer-range ZEVs at a rate of between 9 and 19 miles per minute. The new chargers designed under CCS protocol will be available in 2018, utilizing primarily “kiosk” designs, meaning the power electronics and other important components are housed outside the charger itself in an easier-to-service box in a separate location. Not only will these new chargers deliver higher charging power, the 350 amps of current they use will necessitate the use of liquid-cooled charging cables to present an easier-to-handle, thinner cable with which customers will be able to charge their vehicles.

#### Level 2 Charging

Level 2 charging is a form of AC charging that provides 240V like what an electric dryer or oven uses. It goes through a box and a cord that improves safety by waiting to send power to the plug until it’s plugged into an EV. Level 2 allows for a wide range of charging speeds, up to 19.2 kW or about 70 miles of range per hour of charging.

#### OCPP

The Open Charge Alliance (OCA) is a global consortium of public and private electric vehicle (EV) infrastructure leaders that have come together to promote open standards. OCPP is the protocol they have developed to provide powerful, open, and interoperable communication between the different ZEV charging infrastructure companies, hardware and network.

#### Plug-and-charge

Plug-and-charge is part of the latest revision of the CCS combo standard, featuring the IEC/ISO 15118 standard which prescribes the means by which a charger and network can identify and authenticate a specific vehicle to allow for a charging session automatically, by simply “plugging in”, without the need for supplemental membership cards or fobs.

#### Proprietary/Non-Proprietary Charging Connector and Protocol

A non-proprietary connector is not privately-owned or controlled and is thus easily available as a standard and does not require extensive development to be ready for application. Both CHAdeMO and CCS combo are non-proprietary DC fast charging protocols. A proprietary charging connector is a connector and charging network that is exclusively accessible to one brand of vehicle or type of user.

#### Renewable Energy Certificate<sup>6</sup>

"Renewable energy certificate" means a tradable instrument that is equal to one megawatt hour of electricity or equivalent energy supplied by a renewable energy facility, new renewable energy facility, or reduced by implementation of an energy efficiency measure that is used to track and verify compliance with the requirements of this section as determined by the

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<sup>6</sup> NC General Statute 62-133.8(a)(6), [https://www.ncleg.gov/EnactedLegislation/Statutes/PDF/BySection/Chapter\\_62/GS\\_62-133.8.pdf](https://www.ncleg.gov/EnactedLegislation/Statutes/PDF/BySection/Chapter_62/GS_62-133.8.pdf)

Commission. A "renewable energy certificate" does not include the related emission reductions, including, but not limited to, reductions of sulfur dioxide, oxides of nitrogen, mercury, or carbon dioxide.

### Zero Emission Vehicle (ZEV)

Under Appendix C, the following three vehicle types are considered Zero Emission Vehicles:

1. An on-road passenger car or light duty vehicle, light duty truck, medium duty vehicle, or heavy duty vehicle that produces zero exhaust emissions of all of the following pollutants: non-methane organic gases, carbon monoxide, particulate matter, carbon dioxide, methane, formaldehyde, oxides of nitrogen, or nitrous oxide, including, but not limited to, battery electric vehicles ("BEV") and fuel cell vehicles ("FCEV");
2. An on-road plug-in hybrid electric vehicle ("PHEV") that is similar to a hybrid but is equipped with a larger, more advanced battery that allows the vehicle to be plugged in and recharged in addition to refueling with gasoline. This larger battery allows the car to be driven on a combination of electric and gasoline fuels; or
3. An on-road heavy-duty vehicle with an electric powered takeoff.

ZEVs do not include: zero emission off-road equipment and vehicles; zero emission light rail; additions to transit bus fleets utilizing existing catenary electric power; or any vehicle not capable of being licensed for use on public roads.