Work Group Plan

Clean Transportation Infrastructure

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Work Group Plan | 3.30.2023

Each Work Group Plan is divided into four main sections, including:

NCCTP Background and Key Recommendations

The background section provides an overview of the stakeholder process that led to the preparation of the North Carolina Clean Transportation Plan (NCCTP). This section summarizes the key recommendations that must occur to collaboratively advance the work of the NCCTP.

Work Group Supporting Strategies

In support of the NCCTP focus areas, the work groups will continue to meet, collaborate and dedicate time and energy to advance the supporting strategies outlined in this plan. This section highlights the specific ways the work group can continue to support the initiatives of the NCCTP and move the work forward. The strategies are organized to reflect the ideas generated by each work group under the four thematic focus areas and include a consolidated list of strategies that reflects the recurring ideas heard from multiple work groups. Individual work group strategies can be found following the consolidated list of strategies.

Work Group Strategy Tables

The strategy tables are a collection of the strategies proposed by the work group during the NCCTP planning process. For every proposed strategy, additional detail is provided on 1) the key stakeholders best positioned to help move the strategy forward, 2) whether the strategy contributes directly or indirectly to equitable outcomes and 3) other beneficial information to consider when initiating the strategy.

Work Group Next Steps

This section provides a general framework for how the work groups can continue to participate in the achievement of the NCCTP goals. The work groups are encouraged to continuously revise and update the work group plans as progress is made.

NCCTP Background and Key Recommendations

Background

The North Carolina Clean Transportation Plan (NCCTP) is a guidance document that provides a coordinated strategy for accelerating decarbonization in the transportation sector. The plan outlines how North Carolina can prepare for a clean transportation future and provide equitable outcomes for everyone. The NCCTP was co-created with local, regional and state agencies; transportation providers; non-profit organizations; social justice and equity focused groups; environmentally focused groups; academic partners; clean cities coalitions; advocacy groups; utility providers; and private companies. While clean transportation efforts are happening all around our state, Executive Orders (E.O.) 80, 246, and 271 all encouraged a more coordinated strategy. In particular, E.O. 246 establishes goals for a 40 percent emission reduction and reaching 1.25 million zero-emission vehicles (ZEVs).

Why We Need a Plan

Transportation Impacts – According to the 2022 North Carolina Department of Environmental Quality (NCDEQ) Green House Gas (GHG) Inventory, transportation emissions in North Carolina accounts for 36 percent of total GHG emission—the largest contributor in the state. 88 percent of these emissions are attributed to on-road vehicles, including passenger cars, delivery vehicles and freight trucks.

Transportation Challenges – Existing transportation system challenges and constraints, such as a rapidly growing population and demographic disparities in transportation availability, must be identified to understand how to equitably achieve reductions in transportation emission.

Transportation Options—The Deep Decarbonization Pathways Analysis demonstrated that a variety of transportation options, including reducing vehicle miles traveled, zero emission vehicles, and decarbonized fuels, can be used together to result in significant greenhouse gas reduction.

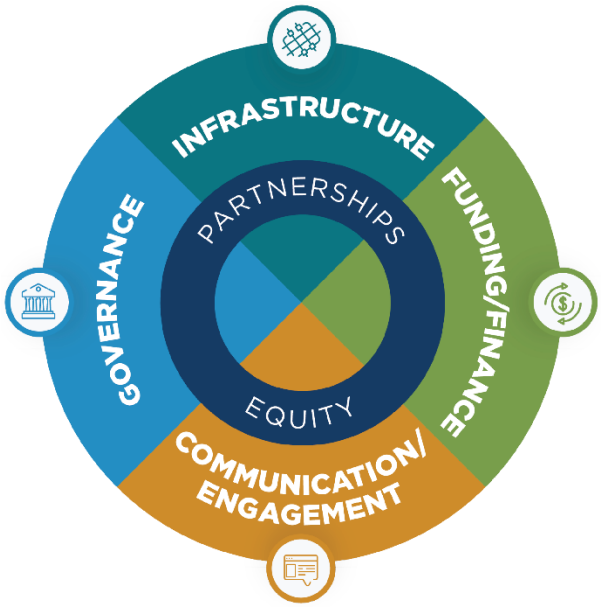
Different Places have Different Needs— Given North Carolina's mix of geographies, our approach to clean transportation must be versatile and include options for rural, suburban and urban places. This requires an integrated strategy that reflects the needs and opportunities of each of these contexts.

New and Emerging Funding—New funding—including federal legislation, such as the Infrastructure Investment and Jobs Act (IIJA) and the Inflation Reduction Act (IRA)—create opportunities to advance clean transportation.

While NCDOT supported the planning process and many of the strategies will require the department's leadership or participation, the NCCTP also offers public and private entities, as well as state, regional and local governments, a roadmap to activities for achieving an equitable clean transportation system for North Carolina. This work group plan represents a specific set of activities that the work group stakeholders might choose to move forward.

Key Recommendations

The NCCTP identifies near-term strategies and actions organized around four focus areas: **Infrastructure**, **Funding and Finance**, **Communications and Engagement** and **Governance**. In addition, the NCCTP process identified key partnerships required to accelerate North Carolina's clean transportation transition and elevate the importance of creating equitable outcomes. Key recommendations from the focus areas include:



Create a dedicated clean transportation team—This group will be dedicated to advancing the NCCTP objectives, implementing the plan and tracking progress.

Align statewide policy through an interagency task force—This taskforce will coordinate across state agencies to ensure internal alignment of North Carolina policies and reduce barriers to NCCTP implementation.

Increase equitable outcomes in transportation planning projects—Introducing new opportunities, empowering traditionally underserved communities in transportation decision-making and focusing on maximizing key indicators like improved access will lead to more equitable outcomes.

Ensure access and affordability to clean transportation—Policies and programs that promote access and affordability to clean transportation options will prioritize infrastructure investments for traditionally underserved communities.

Evaluate and update project prioritization programs—Bring opportunities identified in the NCCTP to the existing NCDOT Strategic Prioritization Office (SPOT) work group for consideration in the project evaluation process.

Partner with utilities to promote clean transportation—Partnering with electric utilities to promote clean energy and clean transportation options will ensure we're "energy ready" and will promote effective pricing.

Maximize existing funding to support clean transportation outcomes—Modifying our approach to existing funding programs, such as the Congestion Mitigation and Air Quality (CMAQ), Carbon Reduction Program (CRP) and Diesel Emissions Reduction Act (DERA), can ensure existing dollars do as much as possible to support the clean transportation transition.

Evaluate and apply for new funding that advances clean transportation outcomes—The Inflation Reduction Act (IRA) and Infrastructure Investment and Jobs Act (IIJA) can be used to advance the priority strategies identified in the NCCTP.

Evaluate and deploy clean transportation infrastructure to support all types of fleet vehicles and applications—Investing in zero- and low-emission fueling infrastructure for all types of fleet vehicles makes possible the transition of fleets to clean transportation options.

Expand transportation demand management strategies—Applying transportation demand management programs as described in the VMT reduction toolkit will lessen our reliance on driving and support NCCTP goals.

Establish a coordinated clean transportation communication strategy—NCDOT will seek dedicated funding to support a coordinated communication strategy. Coordinated communications will increase awareness, help align resources and promote partnerships to advance the clean transportation initiative.

Work Groups

The NCCTP planning process was intentionally inclusive. Throughout the NCCTP process, NCDOT was committed to the co-creation of the plan. While NCDOT and the NCDEQ served as support staff to five subject-matter work groups, over 220 state and national stakeholders participated in the process. These volunteer groups were composed of the wide variety of public and private stakeholders listed earlier in this section. The work groups worked collaboratively over six months through a series of meetings to develop ideas leading to the creation of these focused work group plans that address known challenges and leverage opportunities. This allowed the content of the plan to be largely driven by the experience, expertise and perspectives of a variety of interests and allowed participants to explore solution sets without limitations.

This work group plan focuses on the efforts conducted by the clean transportation infrastructure work group. While summaries of all the work groups are included below, the specific challenges addressed by clean transportation infrastructure work group are included at the end of this section.

Light-Duty Zero Emission Vehicles (ZEVs)

These are generally smaller vehicles, including personal cars and trucks that have zero-emission characteristics. These may include vehicles from a range of fuel types, such as electric or hydrogen fuel cell. The focus of this group included:

- Accelerating the pace of transition from conventional gas-powered vehicles to ZEVs.
- Increasing ZEV availability and increasing consumer awareness.
- Advancing ZEV incentives and improving affordability.

Medium- and Heavy-Duty (M/HD) ZEVs

These vehicles are heavier than light-duty vehicles and typically include school buses, public transit buses, freight vehicles and other fleet vehicles. Gasoline- and diesel-powered medium- and heavy-duty vehicles only account for a small portion of registered vehicles, but are responsible for significant greenhouse gas emissions and cause a significant amount of air pollution. The focus of this group included:

- Educating potential users about the unique needs of and supportive infrastructure for M/HD ZEVs.
- Increasing the availability and the pace of adoption of M/HD ZEVs.

Vehicle Miles Traveled (VMT) Reduction

Managing travel demand and reducing vehicle miles traveled on North Carolina roads can be accomplished through a coordinated approach to transit, rail, bike, pedestrian and other non-motorized travel as well as land development considerations. The focus of this group included:

- Advancing the work of the VMT Reduction Task Force.
- Connecting planning efforts related to transit, bike/pedestrian, passenger rail and other non-vehicle transportation modes to clean transportation objectives.

Fleet Transition

Fleet transition includes ways to switch large fleet operations from gasoline- and diesel-powered vehicles to zero- and low-emission fleet vehicles. The focus of this group included:

- Accelerating the pace at which state and local public entities transition to zero- or low-emission vehicles.
- Working with private entities to transition their fleets to zero- or low-emission vehicles.
- Increasing the number of zero- or low-emission school buses in use.

Clean Transportation Infrastructure

The clean transportation infrastructure work group plan focuses on ensuring electric vehicle and alternative fuel infrastructure. The main objective of the clean transportation infrastructure work group was to identify infrastructure solutions to support the private and fleet transition to low- and zero-emission vehicles (ZEV) in addition to identifying gaps along travel corridors in rural areas.

The NCCTP identifies a set of strategies to continue the work of the clean transportation infrastructure work group with a focus on the following:

- Improving electric vehicle charging infrastructure through existing programs such as the National Electric Vehicle Infrastructure program.
- Improving infrastructure associated with alternative fuels.
- Support future infrastructure improvements through mapping, siting and identification of gaps.

Identified Barriers

Each subject matter work group met six times and discussed the potential objectives, needs and opportunities centered around a series of six cross-cutting themes: equitable access to clean transportation options, education and outreach opportunities, incentives and finance options, transportation influences on public health, economic and workforce development and recommended revisions to NC requirements and guidance. At the outset of this process, the clean transportation infrastructure work group was asked to identify barriers and challenges to advancing clean transportation infrastructure in the state of North Carolina. Through this discussion, the following barriers were identified:

- Expanding infrastructure to support EVs, alternative fuels and reducing VMT.
- Supporting future infrastructure improvements through mapping, siting and identification of gaps.
- Insufficient charging and fueling infrastructure network for all types of vehicles especially in traditionally underserved communities.

The focus of the work groups over the six months was to develop a set of strategies and actions that were needed to overcome these barriers. To maintain the momentum of the work group to identify and overcome barriers, continued support and continued cooperation of work group participants and stakeholders is needed. Maintaining momentum will require a coalition of support and continued cooperation. Therefore, the work groups are expected to continue their collaborations beyond the plan, with a renewed focus on advancing their individual work group plans.

Participants

The NCCTP benefitted greatly from the time and energy provided by its work group members. The following groups, agencies and organizations were represented as part of the clean transportation infrastructure work group.

Advanced Energy Economy
Alliance for Automotive Innovation
Alliance for Transportation Electrification
Associate Public Policy
BETTY (TLG-Alpha)
Blue Ridge Energy
Boss Energy
Brunswick EMC
Centralina Clean Fuels Coalition
Chargepoint
City of Hendersonville Environmental Sustainability Board
City of Kannapolis
City of Raleigh
City of Wilmington
Cyclum Renewables
Dominion Energy
Duke Energy
Enviro Spark Energy
Environmental Justice Policy Advisor
Four County Electric Membership Corporation
Generation180
Haywood EMC
High Country Rural Planning Organization (RPO)
HipHop Caucus
Infosyarchitecture, LLC
Institute for Transportation Research and Education (ITRE)
International Brotherhood of Electrical Workers
Kimley-Horn & Associates
Koulomb
Landis
Metro Mayors
Mid-East RPO
NC Auto Dealers Association
NC Clean Energy Technology Center
NC Conservation Network
NC Dept. of Administration
NC Dept. of Environmental Quality (NCDEQ)
NC Dept. of Transportation (NCDOT)
NC Governor's Office
NC Justice Center
NC Sustainable Energy Association
NCEMC
New Hanover County
Piedmont Electric
Pitstop for the Birds
PlugIn NC
PowerSmiths Socomec Group
Rivian
Roanoke Electric Cooperative
Schneider Electric
Sheetz
Sierra Club
Southeast Energy Efficiency Alliance (SEEA)
Southern Energy Efficiency Alliance
Southern Environmental Law Center (SELC)
Stewart
Strategic International
Sunrun
Surry Yadkin EMC
Triangle J Council of Government (TJCOG)
Volvo
Whitman, Requardt & Associates

Background

North Carolina's transportation system is pivotal to the safe and efficient movement of people and goods. With the transportation sector making up approximately 36 percent of greenhouse gas (GHG) emissions, it is essential to provide and invest in clean transportation infrastructure for people of all ages and abilities, and particularly those communities who have been harmed or underserved by state actions or policies. In this particular context, clean transportation refers to a means of travel that produce low or zero-emission vehicles, energy efficient vehicles and transit and active transportation, including walking and biking.

Aligned Initiatives

North Carolina Electric Vehicle Infrastructure Deployment Plan

The North Carolina Electric Vehicle Infrastructure Deployment Plan is part of the National Electric Vehicle Infrastructure (NEVI) program.[1] The goal of the program is to expand access to affordable, equitable, reliable, and convenient electric charging. The NEVI plan outlines two distinct phases to optimize deployment: 1) building out EV charging stations along alternative fuel corridors (AFCs) as required by federal guidance and 2) identifying opportunities for community-based charging. The NEVI program requires AFCs to have a spacing of 50 miles or less between electric vehicle charging stations within one mile of a corridor. The figure to the right identifies the corridors throughout the state of North Carolina some of which already have NEVI compliant EV charging stations. Through continuous community engagement, NCDOT will partner with local and regional partners to expand infrastructure and increase access to vehicles and charging infrastructure.

Proposed North Carolina NEVI Program Goals:

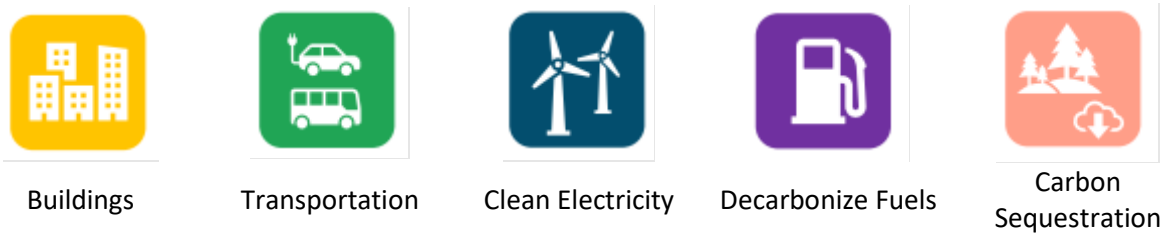
- Build an easily accessible EV charging network.
- Increase overall network reliability.
- Ensure equitable location of EV chargers, particularly in traditionally underserved communities.
- Expand economic and workforce development opportunities.
- Provide reliability during emergency events.

The NEVI program funds will be administered by NCDOT. The clean transportation infrastructure work group will continue to reference the NEVI Plan to align the NCCTP goals with other statewide initiatives.

[1] https://www.ncdot.gov/initiatives-policies/environmental/climate-change/Documents/ncdot-electric-vehicle-deployment-plan.pdf

North Carolina Deep Decarbonization Pathways Analysis

According to the 2022 NCDEQ GHG Inventory, transportation emissions in North Carolina account for 36 percent of total GHG emissions—the largest contributor to GHG emissions in the state.[2] The Deep Decarbonization Pathways Analysis showed that transportation must reduce GHG emissions by between 79 and 87 percent for the state to achieve net zero by 2050.[3] The analysis identified five priority action areas:



While North Carolina can achieve 2030 and 2050 climate targets in multiple ways, the Pathways Analysis highlights the similarities across all scenarios that would benefit the state:[4]

- Accelerate a transition to ZEVs and electric heat pumps in buildings
- Rapidly decarbonize electricity generation by scaling up renewable electricity sources and battery storage
- Encourage high levels of energy efficiency, such as adoption of efficient appliances and vehicles, improvement of building shells and reduction in VMT
- Support commercialization of decarbonized fuels—at minimum—to green hydrogen for industry and large trucks and explore pilots for advancing biofuels using sustainable biomass feedstock
- Reduce non-energy GHG emissions from industry, agriculture, waste and oil and gas systems
- Prioritize sustainable management of natural and working lands to enhance the critical role of carbon sequestration in helping achieve net-zero emissions
- Reduce fuel combustion while decarbonizing the economy to create co-benefits for air quality improvement

The Clean Transportation Infrastructure work group should leverage the findings and strategies in the Pathways Analysis to advance the goals of the NCCTP as they relate to infrastructure.

[2] https://governor.nc.gov/media/3583/open
[3] https://governor.nc.gov/issues/environment
[4] https://governor.nc.gov/media/3572/open

Work Group Supporting Strategies

NCCTP Focus Areas and Work Group Support

While the focus areas, described in the previous section, broadly consider the efforts needed to advance the goals of the NCCTP by the state of North Carolina, the specific ways in which the clean transportation infrastructure work group can engage with the advancement of the NCCTP in the near term are organized below under the four focus areas. A more detailed list of work group strategies can be found in the next section. These supporting strategies can be used in support of the eleven key recommendations that can be found in the NCCTP Summary Report.

Updating Governance Activities

Governance activities include guidance that could occur at any level of government (local, regional, state or federal) including legislation, policy codes, ordinances and mechanisms that promote equitable outcomes.

Achieving the state's clean transportation goals will require revisions to existing policies, requirements, and procedures. Clean Transportation Infrastructure work group members may:

- Partner with investor-owned utilities to promote clean energy and clean transportation options, support fueling infrastructure deployment, encourage consumer and fleet adoption, understand power capacity needs, manage peak loads, and promote effective pricing.
    - Encourage data sharing to understand where charging capacity may be constrained and proactively address these constraints.
    - Encourage futureproofing at new charging station locations (including NEVI sites) to allow for the expedited deployment of infrastructure as the need arises to ensure cost-effectiveness.
- Partner with electric membership co-ops and municipal utilities to ensure statewide access to and funding for clean energy and clean transportation infrastructure and enable equitable consumer and fleet adoption.
    - Provide partnership and technical assistance to secure federal funding and minimize the initial capital expense for infrastructure and vehicle

Enhanced standards and guidance will provide a framework for the transition to clean transportation options. Clean Transportation Infrastructure work group members may:

- Coordinate with all work groups to create a climate, health, equity and VMT reduction rating system for use in planning and analysis.
- Ensure alignment to meet respective work group strategies and ongoing clean transportation infrastructure state initiatives.
- Streamline and expedite review and permitting of charging infrastructure statewide.
- Establish supportive EV make-ready building codes.
- Streamline and expedite charging infrastructure utility interconnection.

Modernizing Funding and Finance Programs

These programs include financial resources (public and private), funding programs (ex. State Transportation Improvement Program, grants, municipal Capital Improvement Plans) and financing tools that support equitable outcomes and implementation.

New funding sources will be needed to implement clean transportation options. Clean Transportation Infrastructure work group members may:

- Explore and utilize increased federal funding opportunities for EV charging station deployment.

Technical assistance is essential to support the transition to clean transportation solutions especially for under-resourced communities. Work group members may:

- Assist or support traditionally underserved communities and disadvantaged business enterprises to secure grants to advance clean transportation infrastructure.

Implementing More Clean Transportation Infrastructure

Capital investment resulting in the equitable implementation of increased capacity and connectivity of our transportation system including EV charging, modernization of electric grid, active transportation and transit supportive infrastructure.

Encourage fleet conversion to clean transportation options. Clean Transportation Infrastructure work group members may:

- Work in partnership with fleet transition work group to convert NC public school buses to electric vehicles and supply the necessary charging infrastructure.

A robust and resilient energy grid is paramount to the successful adoption of clean transportation options. Support the advancement of the energy grid with the following strategies:

- Invest in the power grid to accommodate clean transportation adoption and expansion.
- Expand existing utility programs to advance charging infrastructure, including line extensions and alternate fuel source expansions.
- Enhance energy storage infrastructure to support electrification.

The implementation of publicly available charging and fueling infrastructure is essential for support of an expanding zero-emission vehicle fleet. Work group members may:

- Improve Level 3 chargers on the highway network to expand charging opportunities across North Carolina.
- Help plan for additional charging and fueling sites to accommodate higher capacities in support of changing/increasing demand.
- Support implementation of clean transportation infrastructure—including charging and fueling facilities—in traditionally underserved areas, multi-unit dwellings and for consumers lacking off-street parking.
- Assist in the creation of a process for continued statewide planning of clean vehicle charging and fueling infrastructure.

Communicating the Plan Engaging People

Methods to increase equitable engagement and empower public, private, and non-profit effectiveness AND methods to directly engage and involve stakeholders, general public and traditionally underserved demographic cohorts.

A coordinated Clean Transportation Communication Campaign will help achieve statewide objectives through increased understanding and access to information. Clean Transportation Infrastructure work group members may:

- Assist or support the creation of a coordinated statewide communication campaign and web portal with publicly accessible resources and tools for educators and local planners to use for education and planning projects. These resources and tools may include:
    - A clean transportation infrastructure education and outreach toolkit, with model educational curricula and an Activities Guide for equitable engagement.
    - A best practice guide on how to integrate active transportation, transit, and resiliency into electric vehicle charging sites. This guide will be co-developed with the VMT reduction, M/HD ZEV, and fleet transition work groups.
    - A repository of clean transportation infrastructure funding opportunities along with public facing progress reports (dashboards) with clear benchmarks and mechanisms for public feedback.
- Focus on media and education efforts to highlight clean transportation infrastructure benefits to community members and disadvantaged business enterprises.

New training opportunities will accelerate the pace of clean transportation transitions and generate new workforce opportunities. Clean Transportation Infrastructure work group members may:

- Coordinate with the light-duty ZEV, M/HD ZEV, and fleet transition work groups to develop a zero-emission vehicle workforce development strategy. This strategy should aim to provide targeted EV maintenance and electrical infrastructure training programs for traditionally underserved communities. Virtual options should be considered where possible.
    - The clean transportation infrastructure work group will focus on strategizing training programs for electrical infrastructure and maintenance.
- Participate in the identification of resource materials to inform tailored training materials surrounding clean transportation infrastructure.
- Contribute to the development of training materials tailored to traditionally underserved communities.
- Participate in training activities as appropriate.

Accelerating North Carolina's pace of transition to clean transportation options will require state agencies to collaborate with a variety of groups. Clean Transportation Infrastructure work group members may:

- Assist with identifying key partnership opportunities and making connections.
- Work with community based organizations (CBOs) and community champions to help bridge communication gaps and ensure traditionally underserved communities and disadvantaged business enterprises experience clean transportation benefits.
- Assist with connecting key entities with coordinated communication plan opportunities.
- Serve as an ambassador to the NCCTP by representing key messaging at appropriate functions and industry events.

Work Group Strategy Tables

Work Group Strategy Tables

Orientation

The following pages contain the proposed strategies identified by the work group. The various strategies listed are not directly endorsed by state agencies and do not necessarily represent a consensus proposal by the work group participants or the NCCTP Advisory Committee. Not all strategies listed are necessarily supported by all work group participants or all members of the NCCTP Advisory Committee. The work group plan organizes and reflects the ideas generated by the work group under the four thematic focus areas: **Governance, Infrastructure, Funding and Finance** and **Communications and Engagement**. The strategies listed in each table are specific to each group's work group plan.

For every strategy, additional detail is provided on 1) the key stakeholders best positioned to help move the strategy forward, 2) if the strategy contributes directly or indirectly to equitable outcomes, and 3) what actions are required to initiate the strategy. The ideas are listed in no particular order.

Example Table

Governance				
ID	**Strategy**	**Key Stakeholders**	**Contributes to Equitable Outcomes**	**Notes**
CTI-1	Create model code language to guide the inclusion of EV charging in public and private projects.	Local Government, NCDOT, Private Developers	Indirect	Support the creation of NC best practices that includes a comprehensive set of best practices and model codes in support of clean transportation goals.

Strategy Table Summary

This work group has identified the following strategies:

17	13	10	16
Governance	Infrastructure	Funding and Finance	Communication and Engagement

Governance				
ID	**Strategy**	**Key Stakeholders**	**Contributes to Equitable Outcomes**	**Notes**
CTI-1	Create model code language to guide the inclusion of EV charging in public and private projects.	Local Government, NCDOT, Private Developers	Indirect	Support the creation of NC best practices that includes a comprehensive set of best practices and model codes in support of clean transportation goals.
CTI-2	Align utility rate policies with strategies to improve efficiency and effectiveness including incentives for off-peak charging and operation of EV charging stations.	Utility Companies, Private Developers, Local Government	Indirect	Assemble initiative leaders to identify potential conflicts and synergies.
CTI-3	Support the creation and promotion of clean transportation workforce development including opportunities for traditionally underserved communities.	NCDOT, Private Entities	Direct	Partner with existing entities to establish training program and market towards traditionally underserved communities.
CTI-4	Create model curriculums on EV and clean energy technology that can be adopted by departments of education, colleges, and universities.	Higher Education, NCDOT	Indirect	Support the creation of NC best practices that includes a comprehensive set of best practices and model codes in support of clean transportation goals.
CTI-5	Add vehicle miles traveled and greenhouse gas reduction analysis to required transportation studies.	NCDOT, Local Government, MPOs/RPOs, Private Developers	Indirect	Revise guidance on transportation planning document to establish guidelines.
CTI-6	Require health impacts to be considered when evaluating and prioritizing funding program projects.	Legislative, NCDOT	Indirect	Define the role and metrics for health associated impacts in evaluation criteria.
CTI-7	Create a climate and health rating system for use in planning and analysis of capital projects and developments.	NCDEQ, NCDOT	Indirect	Adopt a consistent method/tool of addressing climate and health evaluations.
CTI-8	Supplement level of service with vehicle miles traveled and greenhouse gas analyses for capital transportation and land use projects.	Legislative, NCDOT, Local Government, MPOs/RPOs	Direct	Update analysis requirements and evaluation metrics of plans and programs by requiring equity, health, GHG, and VMT considerations.
CTI-9	Standardize state permitting criteria and process for the installation of electric vehicle infrastructure.	Legislative, NCDOT, Local Government	Indirect	This requires revisions to internal procurement practices.
CTI-10	Allow municipalities to establish road designs for state-maintained streets within their jurisdiction to help create safer streets.	NCDOT, Local Government	Indirect	Reduce barriers to implementing complete streets on state-maintained streets.
CTI-11	Modify procurement regulation to allow and encourage electric vehicle purchases (ex: school buses).	Legislative, NCDOT	Direct	Identify legislative and departmental policy barriers and seek appropriate revisions.

Governance

ID	Strategy	Key Stakeholders	Contributes to Equitable Outcomes	Notes
CTI-12	Perform a statewide clean transportation policy diagnostic and modernization effort to ensure alignment across departments and divisions.	NCDOT	Indirect	Inventory and evaluate existing policy to reveal conflicts and modernization opportunities.
CTI-13	Create model ordinance language for medium and heavy-duty vehicle idling.	NCDOT	Indirect	Support the creation of NC best practices that includes a comprehensive set of best practices and model codes in support of clean transportation goals.
CTI-14	Modernize statewide procurement procedures and required specifications to eliminate barriers to/promote electric vehicles.	Legislative, NCDOT	Direct	Identify legislative and departmental policy barriers and seek appropriate revisions.
CTI-15	Incentivize/prioritize the competitiveness of clean transportation infrastructure within existing and emerging funding programs.	NCDOT, Local Government, MPOs/RPOs, Private Developers	Indirect	Identify legislative and departmental policy barriers and seek appropriate revisions.
CTI-16	Develop policies and programs that ensure access and affordability to clean transportation options for traditionally underserved communities.	NCDOT	Direct	Establish an agreed upon approach to equity inclusion and equity outcomes including accountability metrics.
CTI-17	Streamline permitting and ensure consistency and simplicity.	Local Government, Private Developers	Indirect	Coordinate with municipalities to understand needs.

Infrastructure

ID	Strategy	Key Stakeholders	Contributes to Equitable Outcomes	Notes
CTI-18	Convert NC public school buses to EVs and supply the necessary charging infrastructure.	NCDPI	Indirect	Coordinate with School Districts to achieve fleet transition and identify necessary infrastructure locations.
CTI-19	Allocate NEVI funding for utility-based make ready programs.	NCDOT, Private Developers	Indirect	This will require public and private investment and the identification of appropriate funding sources.
CTI-20	Improve Level 3 chargers on highway network to expand charging opportunities to a greater geography.	NCDOT, Private Developers	Indirect	Identify critical areas along transportation corridors to place Level 3 charging opportunities.
CTI-21	Improve Level 2 chargers on commercial properties, multifamily housing, and at workplaces to provide availability for charging while vehicles are parked.	NCDOT, Private Developers	Indirect	Partner with developer to identify potential areas for Level 2 chargers.
CTI-22	Support public and private utilities to make increased investments in line extensions.	Utility Providers, Local Government, NCDOT	Indirect	Identify infrastructure in need of repair or maintenance; identify areas where improved infrastructure is essential.

Infrastructure

ID	Strategy	Key Stakeholders	Contributes to Equitable Outcomes	Notes
CTI-23	Support public and private utilities to make increased investments in make ready programs.	Utility Providers, Local Government, NCDOT	Indirect	Continue to coordinate with utility providers.
CTI-24	Support public and private utilities to make increased investments in on-billing financing.	Utility Providers, Local Government, NCDOT	Indirect	Continue to coordinate with utility providers.
CTI-25	Support public and private utilities to make increased investments in rate demand reform.	Utility Providers, Local Government, NCDOT	Indirect	Continue to coordinate with utility providers.
CTI-26	Prioritize statewide implementation of broadband infrastructure.	NCDOT	Indirect	This action requires continued leadership.
CTI-27	Promote and incentivize increased solar/battery capacity as part of an overarching electric supply/transmission strategy.	Private Developers, Utility Providers	Indirect	Identify funding programs to incentivize research.
CTI-28	Partner with railroads and Amtrak to electrify rail lines and expand passenger service.	Amtrak, Local Government, NCDOT	Indirect	This will require public and private investment and the identification of appropriate funding sources.
CTI-29	Invest in improved transit and safe and active transportation infrastructure to reduce reliance on single occupancy vehicles.	Local Government, Transit Agencies, NCDOT, MPOs/RPOs	Indirect	This act has both policy and funding implications.
CTI-30	Incentivize multi-family housing charging solutions.	Private Developers, Local Government, NCDOT	Indirect	This will require public and private investment and the identification of appropriate funding sources.

Funding/Finance

ID	Strategy	Key Stakeholders	Contributes to Equitable Outcomes	Notes
CTI-31	Provide stipends, tax benefits, or other support for traditionally underserved communities to affordably own EVs.	NCDOT, Local Government, MPOs/RPOs	Direct	Investing in traditionally underserved areas to enhance conditions and offer emerging opportunities that result in more equitable outcomes.
CTI-32	Prioritize traditionally underserved communities for EV funding.	NCDOT	Direct	Establish new ideas to make projects that benefit vulnerable communities competitive within existing funding programs.
CTI-33	Identify effective funding and strategies to promote small business electrification.	NCDOT, Local Government, MPOs/RPOs	Indirect	This topic should be researched and considered in NC as a potential method to incentivize clean transportation options.
CTI-34	Track fund recipients/outcomes to help with future prioritization of most effective recipients/approaches.	NCDOT	Indirect	
CTI-35	Enable fleets and workplaces to receive funding for on-site behind the fence infrastructure for fleet charging.	Fleet Owners/Operators, NCDOT, Utility Providers, Local Government	Indirect	
CTI-36	Explore and utilize increased federal funding opportunities for EV fleets and charging station deployment.	Local Government, Fleet Owners/Operators, NCDOT	Indirect	

Funding/Finance

ID	Strategy	Key Stakeholders	Contributes to Equitable Outcomes	Notes
CTI-37	Develop a robust funding strategy that leverages federal funding and private sector partnerships and grants.	Private Developers, Local Government, NCDOT	Indirect	This topic should be researched and considered in NC as a potential method to incentivize clean transportation options.
CTI-38	Create an NC Clean Energy Fund to help clean infrastructure projects with gaps in funding.	Legislative	Indirect	This topic should be researched and considered in NC as a potential method to incentivize clean transportation options.
CTI-39	Transition from a fuel tax to a vehicle use tax to fund transportation.	Legislative	Indirect	This topic should be researched and considered in NC as a potential method to incentivize clean transportation options.
CTI-40	Create a state carbon tax to serve as a new revenue source and reward the use of clean vehicles.	Legislative, NCDOT	Indirect	This topic should be researched and considered in NC as a potential method to incentivize clean transportation options.

Communication/Engagement

ID	Strategy	Key Stakeholders	Contributes to Equitable Outcomes	Notes
CTI-41	Fund the creation of clean transportation workforce training and apprenticeship programs.	NCDOT, Educational Institutions	Indirect	Identify dedicated funding source, create content for training programs, and partner with higher education groups.
CTI-42	Educate people on the ease of accommodating EV charging in their everyday routines.	Local Government, MPOs/RPOs, NCDOT	Indirect	Create communication information and strategy to disseminate content.
CTI-43	Develop educational materials detailing the benefits of reduced maintenance for EVs.	NCDOT	Indirect	Identify target stakeholder groups for educational materials.
CTI-44	Identify EV myths and counteract via educational campaigns.	NCDOT	Indirect	Leverage existing networks and organization to promote shared understanding and effective engagement.
CTI-45	Provide educational outreach about EV benefits and availability across statewide public outreach efforts.	State Government, NCDOT, Educational Institutions	Indirect	Leverage existing networks and organization to promote shared understanding and effective engagement.
CTI-46	Provide EV infrastructure training programs (IBEW), made available virtually and in person to make process as seamless and flexible as possible.	State Government, NCDOT, Non-Profits	Indirect	Create future web interface that provides consistent/easy access to reach a wide audience.
CTI-47	Utilize electrical training programs, union apprenticeships (EVITP), and various IBEW programs as pipelines to good paying EV installation jobs for workers in traditionally underserved communities.	State Government, NCDOT, Non-Profits	Direct	Investing in underserved areas to enhance conditions and offer

Communication/Engagement				
ID	Strategy	Key Stakeholders	Contributes to Equitable Outcomes	Notes
				emerging opportunities that result in more equitable outcomes.
CTI-48	Seek out listening and engagement opportunities with traditionally underserved communities.	Local Government, MPOs/RPOs, NCDOT	Direct	This is a critical ingredient of a coordination communication strategy.
CTI-49	Conduct engagement using multiple forums, including webinars, workshops, and demonstration events.	Local Government, MPOs/RPOs, NCDOT	Indirect	Identify consistent message to communicate with the public. Municipalities and MPOs/RPOs should be encouraged to create a "local" spin on information.
CTI-50	Collect information from early adopters to share how they went electric and the benefits.	Local Government, MPOs/RPOs, NCDOT	Indirect	Create a targeted survey and identify stakeholders to provide feedback.
CTI-51	Engage with first responders on EV infrastructure safety.	First Responders, Municipalities, MPOs/RPOs, NCDOT	Indirect	Create a targeted survey for first responders or facilitate focus groups with first responders.
CTI-52	Create a concise and easy to understand narrative about the benefits of EVs.	Local Government, MPOs/RPOs, NCDOT	Indirect	Identify the key myths to demystify.
CTI-53	Provide information on availability of chargers through education campaign.	Local Government, MPOs/RPOs, NCDOT	Indirect	Identify charging locations in relation to community or area.
CTI-54	Create a statewide awareness program and partner with existing community-based organizations (CBOs) to ensure awareness by traditionally underserved communities.	CBOs, NCDOT	Direct	This is a critical ingredient of a coordination communication strategy.
CTI-55	Customize engagement content to align with specific audiences.	Local Government, MPOs/RPOs, NCDOT	Direct	Identify specific needs of different audiences. Consider facilitating focus groups to understand specific, community concerns.
CTI-56	Sustain stakeholder coordination beyond the development of the NCCTP.	NCDOT		Identify meeting schedule for Work Group members and report out annually.

Next Steps

Next Steps

This work group plan offers the beginnings of what will be an ongoing effort to carry forward the goals of the NCCTP. The work groups are anticipated to continue their work beyond completion of the NCCTP. The following actions act as the preliminary steps for work groups:

- The newly proposed NCDOT Clean Transportation Team will serve as a resource to all five work groups.
- The work group will choose a chair from among its members.
- The work group will establish a calendar for Work Group Plan activities.
- The work group will identify an agreed upon schedule for meeting (early expectations include meeting on a quarterly basis.
- The work group will solidify work group membership, which may extend beyond previously engaged work group members to include additional individuals or groups.
- On occasion, the work group will provide continued leadership for combined work group activities.
- Given their priority, the work group will develop an approach for supporting the NCCTP focus areas and provide updates to the NCDOT Clean Transportation Team and Interagency Task Force for annual reporting purposes.