

# Electric Vehicle & Charging Infrastructure Updates

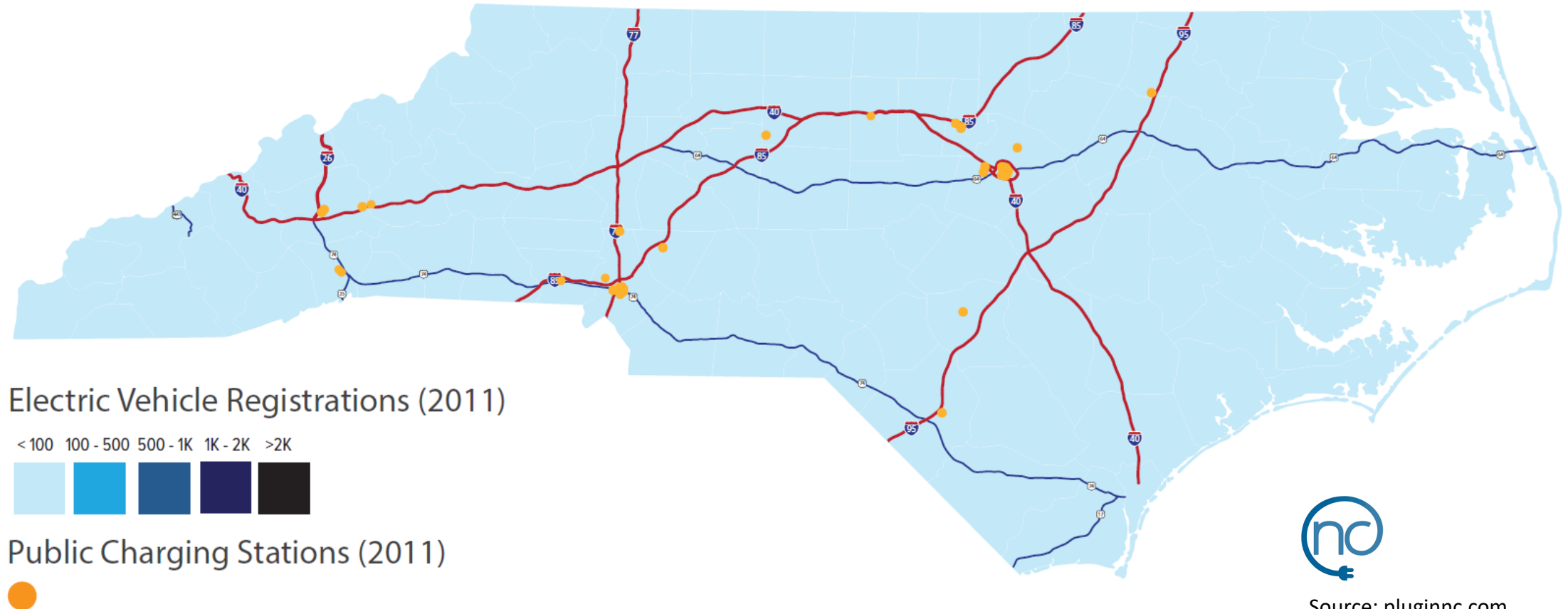
Durham-Chapel Hill-Carrboro Metropolitan Planning Organization (DCHC MPO)

Triangle Clean Cities Coalition  
Triangle J Council of Governments

9.14.2022

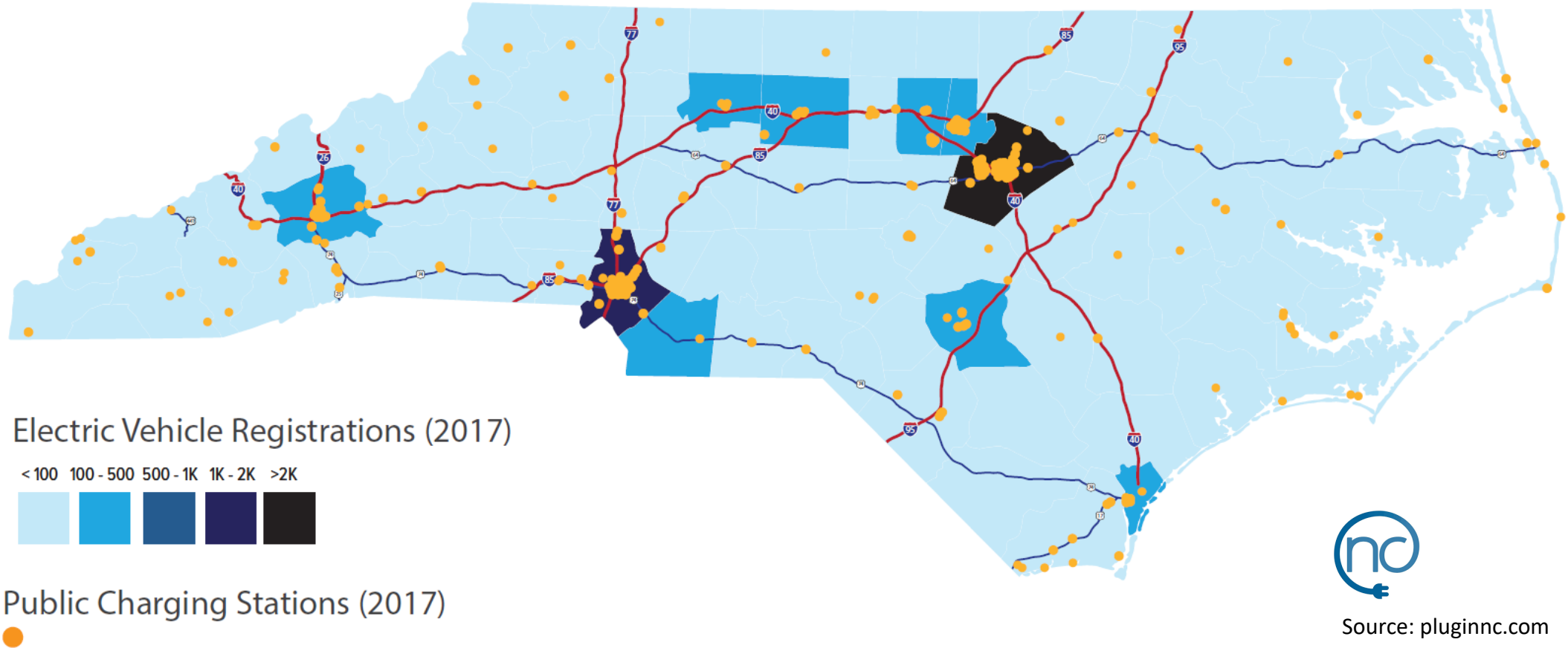


# North Carolina Electric Vehicles & Charging Stations: 2011

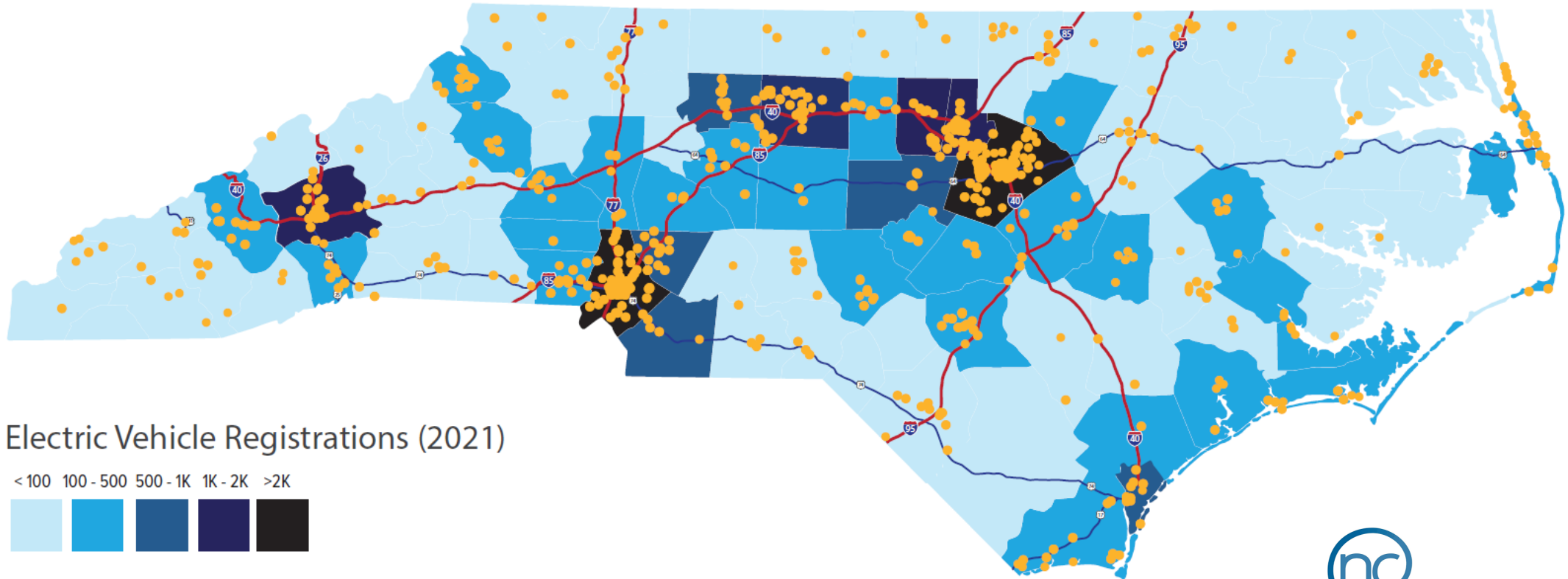


Source: pluginnc.com

# North Carolina Electric Vehicles & Charging Stations: 2017



# North Carolina Electric Vehicles & Charging Stations: 2021



## Electric Vehicle Registrations (2021)

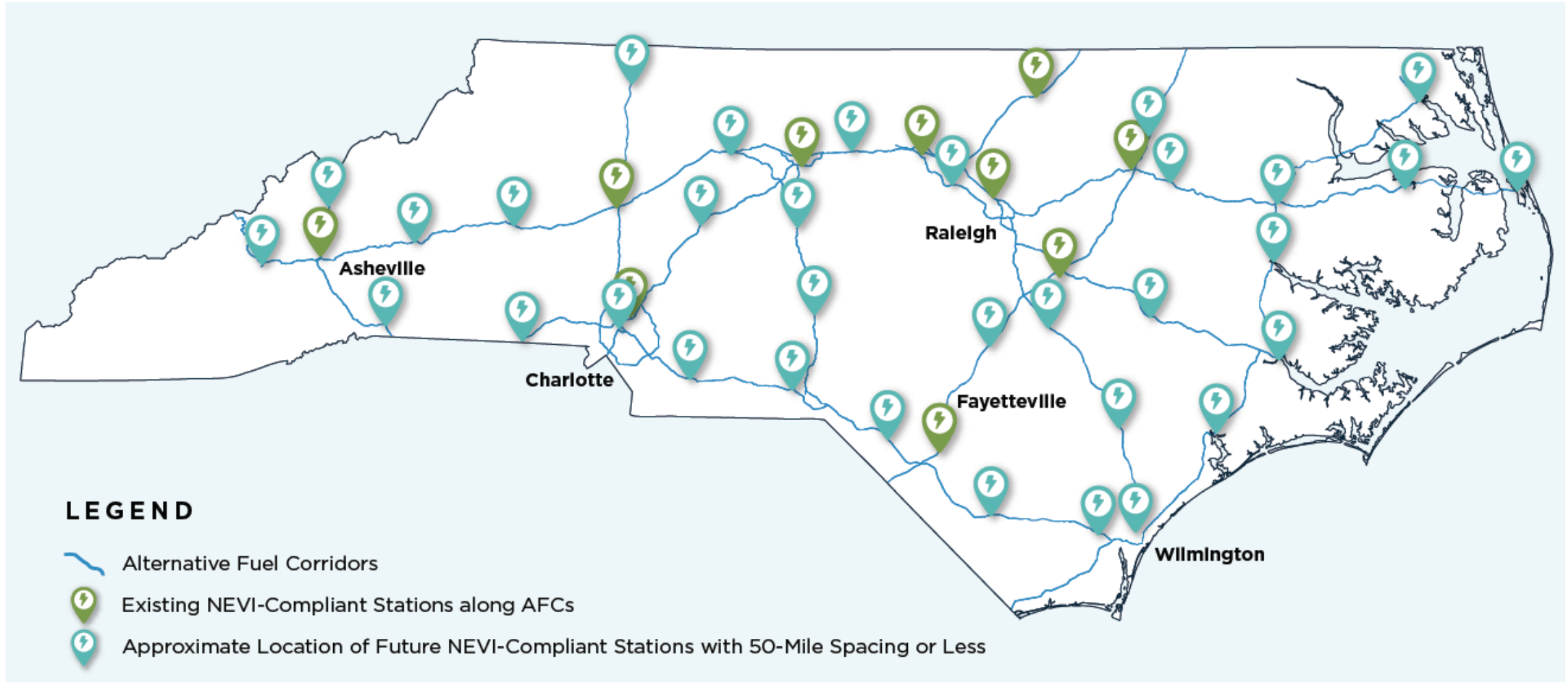
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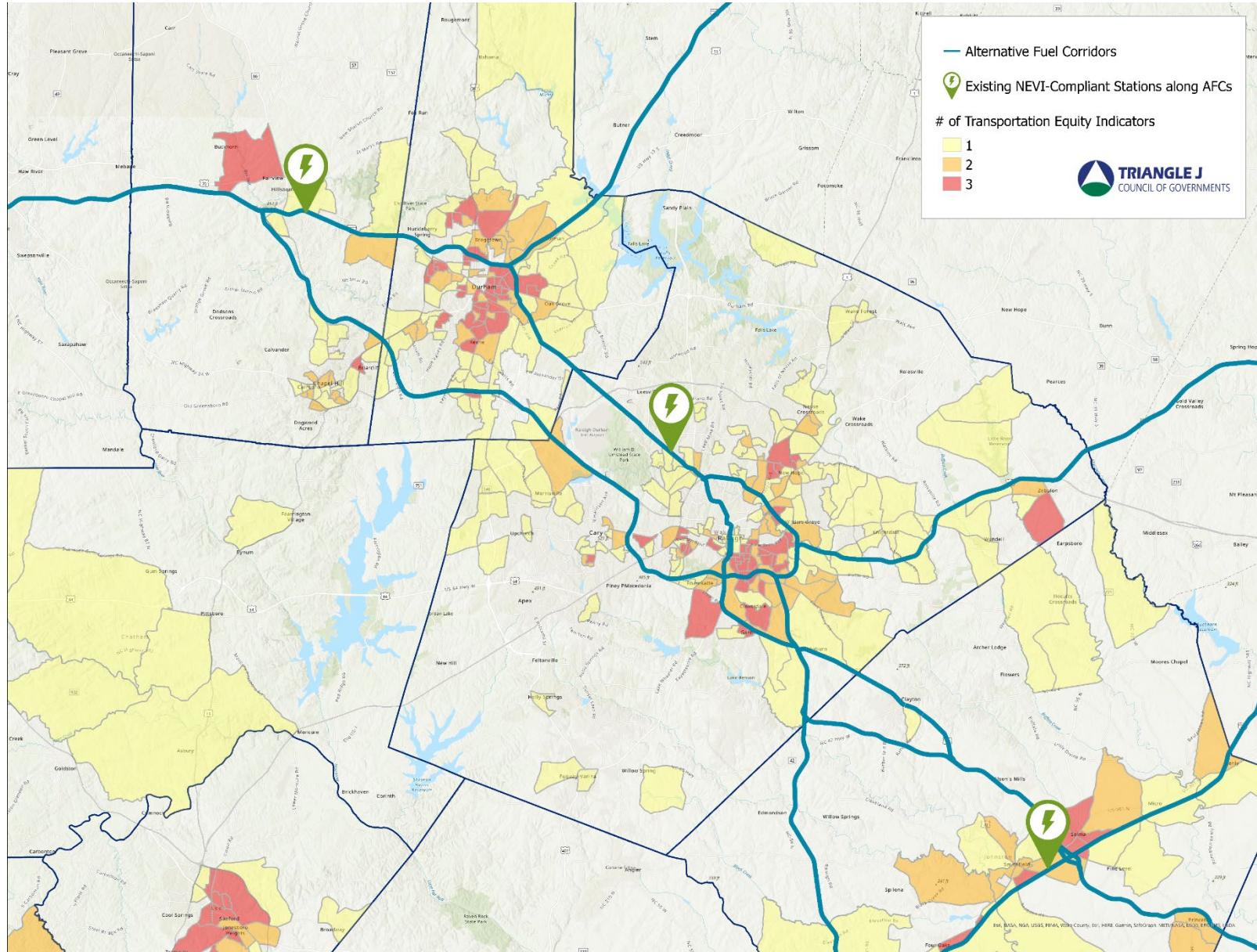
## Public Charging Stations (2021)



Source: pluginnc.com









# Presentation Overview

1. US Department of Energy Clean Cities Program
2. Joint Office of Energy & Transportation – National Electric Vehicle Initiative (NEVI)
3. Bipartisan Infrastructure Law (BIL) Opportunities
4. DRIVE Electric USA Initiative
5. NC Clean Transportation Plan
6. Triangle Electric Vehicle Summit
  - Developing a Framework for Community Engagement



# US Department of Energy Clean Cities Program





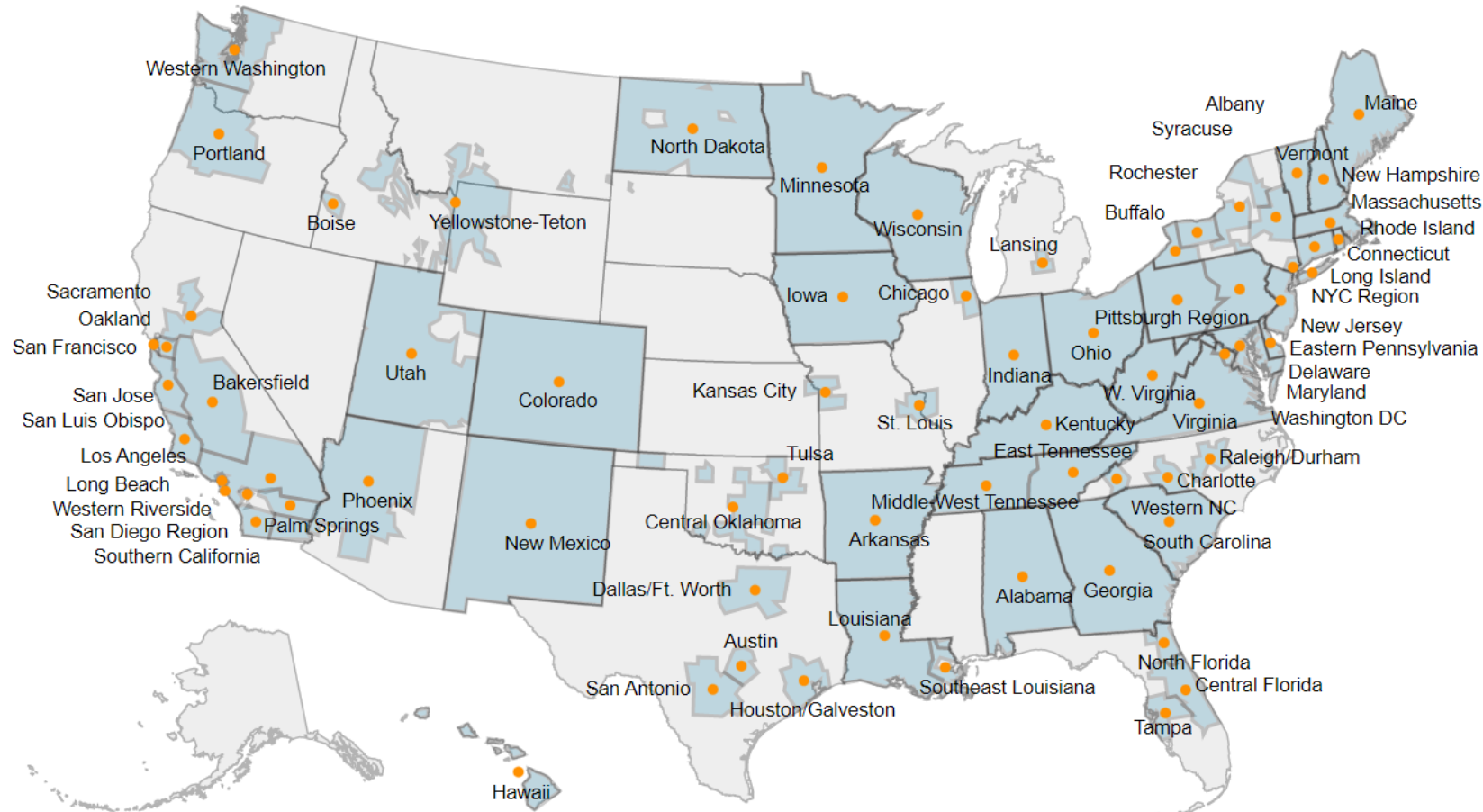
# Triangle Clean Cities

- ▶ Program housed at Triangle J COG
- ▶ Promote domestic alternative fuels and shift away from petroleum use where possible
- ▶ Education and Outreach around:
  - ▶ Alternative and renewable fuels
  - ▶ Idle-reduction measures
  - ▶ Fuel economy improvements
  - ▶ Practice and policy changes
  - ▶ Emerging transportation technologies



# Triangle Clean Cities

<https://cleancities.energy.gov>

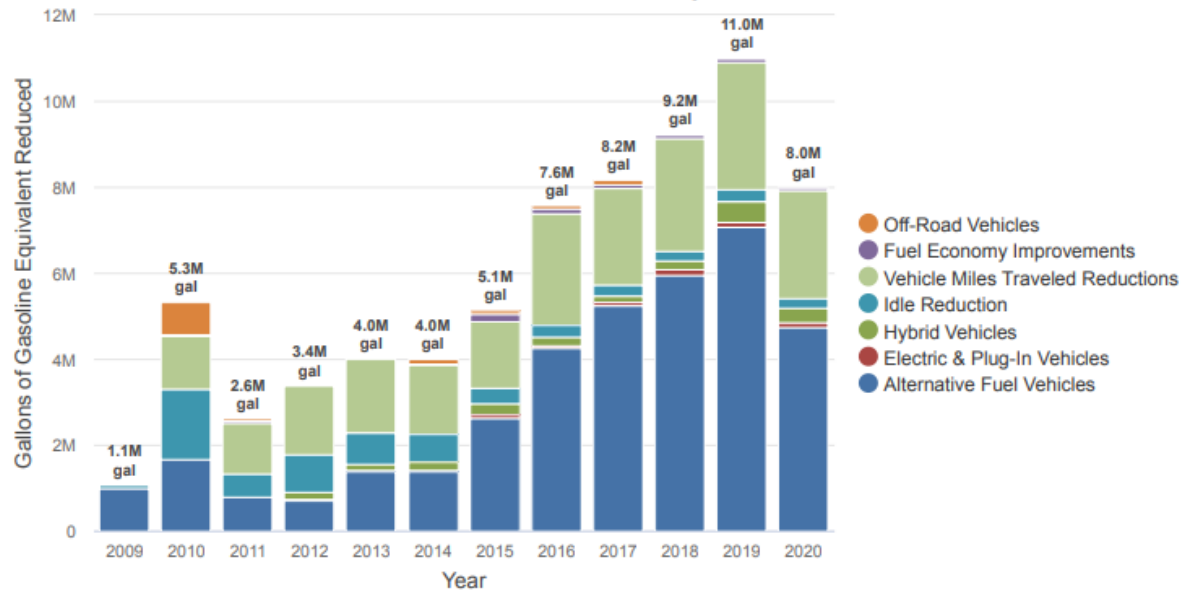


# Triangle Clean Cities Coalition

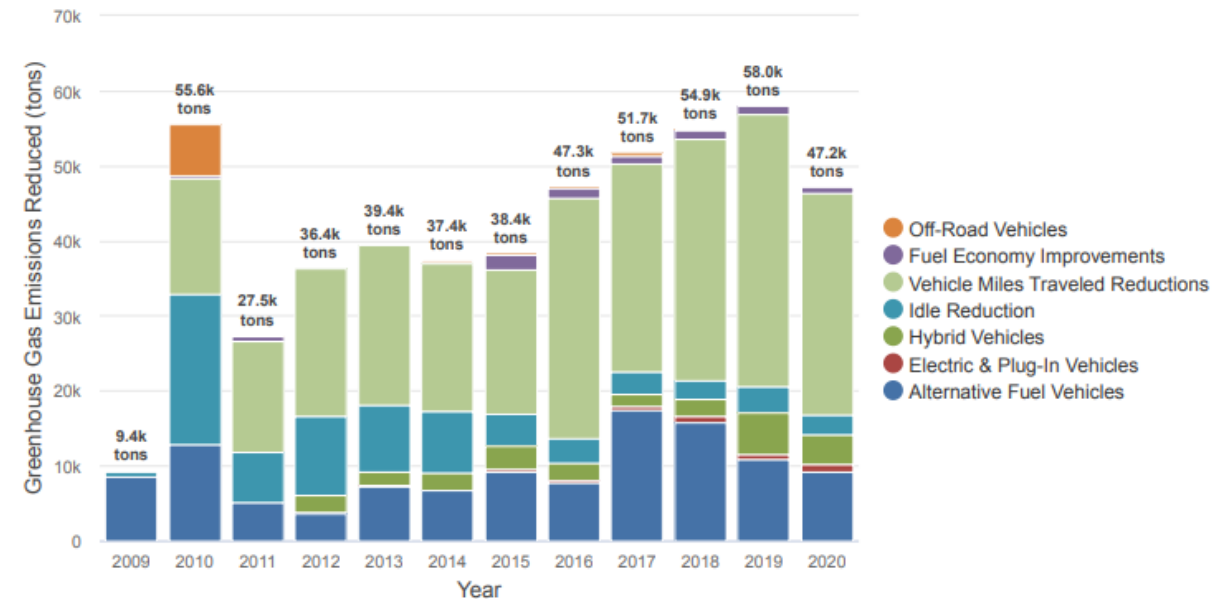


## ► Impact

### Historical Gallons of Gasoline Equivalent Reduced



### Historical Greenhouse Gas Emissions Reduced



# National Electric Vehicle Infrastructure (NEVI) Formula Program

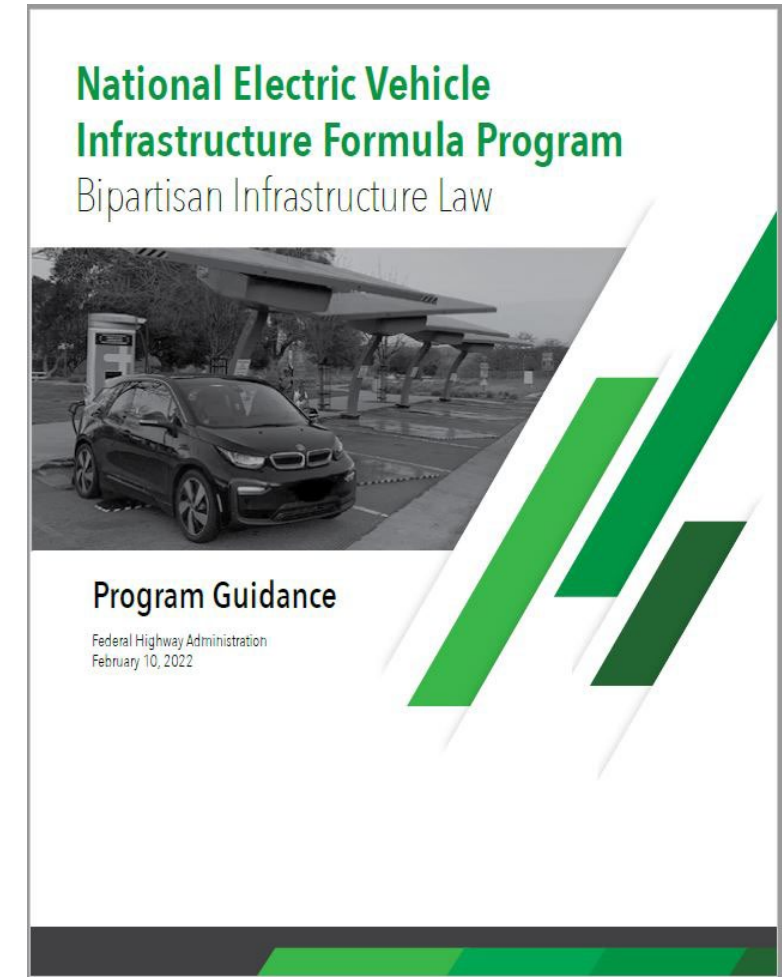






# NEVI Formula Program—Overview

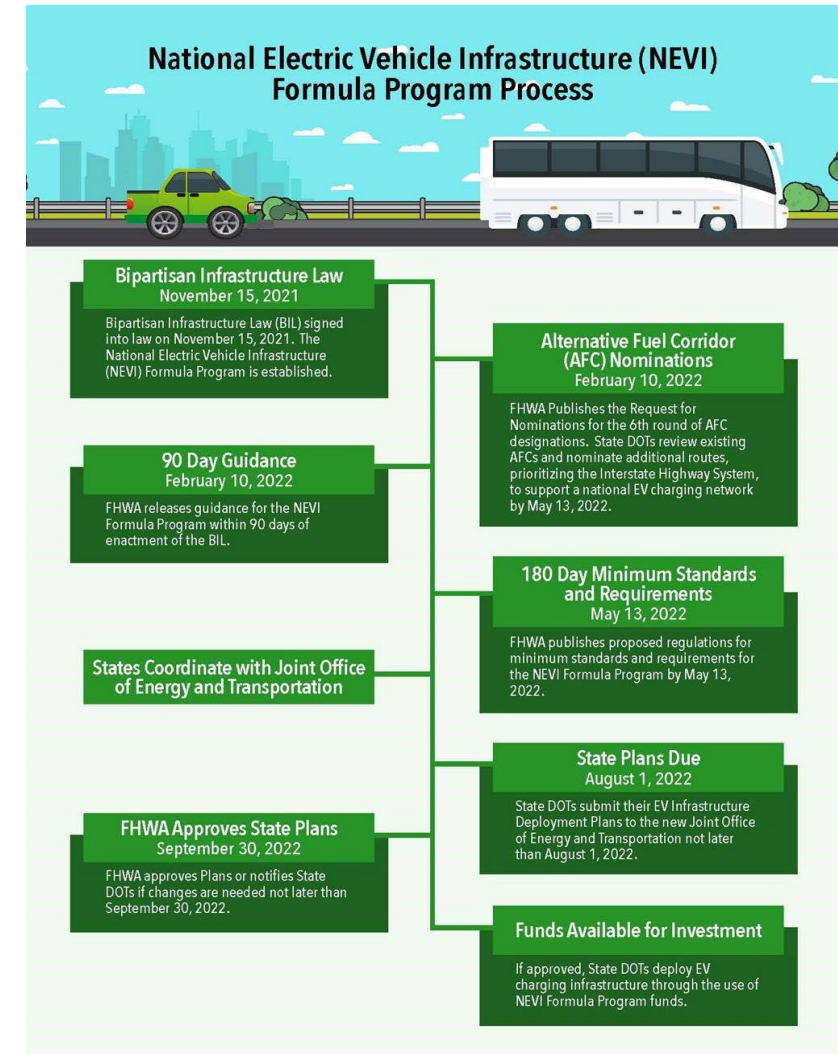
- The purpose of the \$5B NEVI Formula Program is to provide dedicated funding to States to **strategically deploy electric vehicle charging infrastructure** and to **establish an interconnected network to facilitate data collection, access, and reliability**.
- EV charging infrastructure deployed under this program must provide **a seamless customer experience** for all users through a **convenient, reliable, affordable, and equitable** national EV charging network.
- The State EV Infrastructure Deployment Plans created and updated under the NEVI Formula Program **are the building blocks that will facilitate this national EV charging network**.



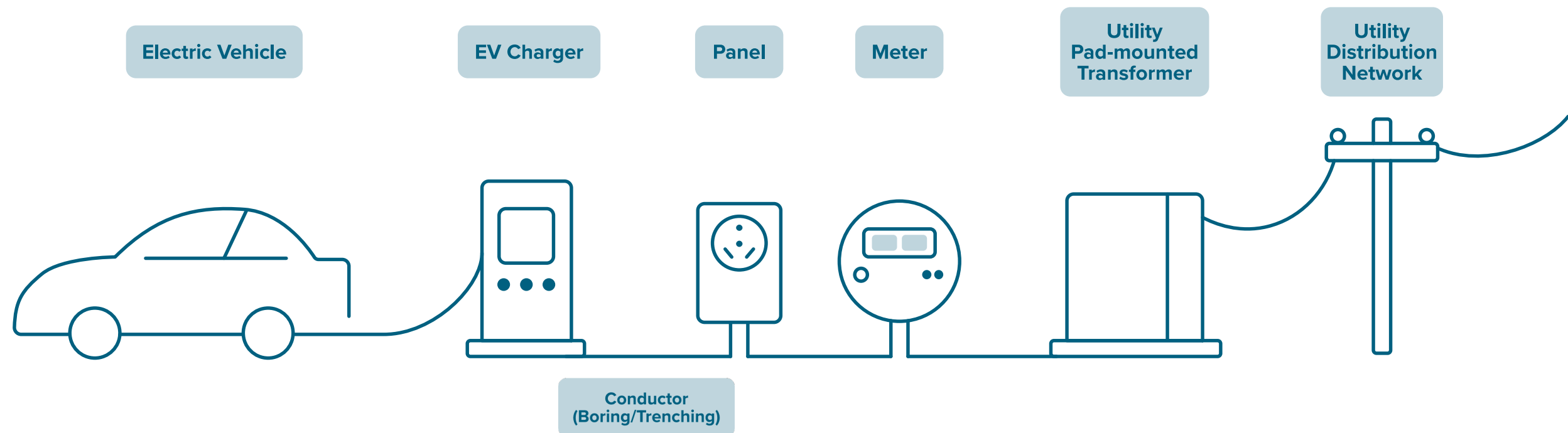


# NEVI Formula Program

- **Feb. 10:**
  - NEVI Program Guidance
- **May 13:**
  - 180 Day Minimum Standards and Requirements proposed regulation published
  - Round 6 Nominations Due
- **Aug. 1:** State Plans Due
- **Sept. 30:** FHWA approves State Plans



# NEVI FUNDING ELIGIBILITY



## PLANNING

- Where do stations go?
- How many stations do we need?

## SITE DESIGN & OPERATIONS

- Capital expenses for EV chargers
- Operations and maintenance
- Traffic control devices

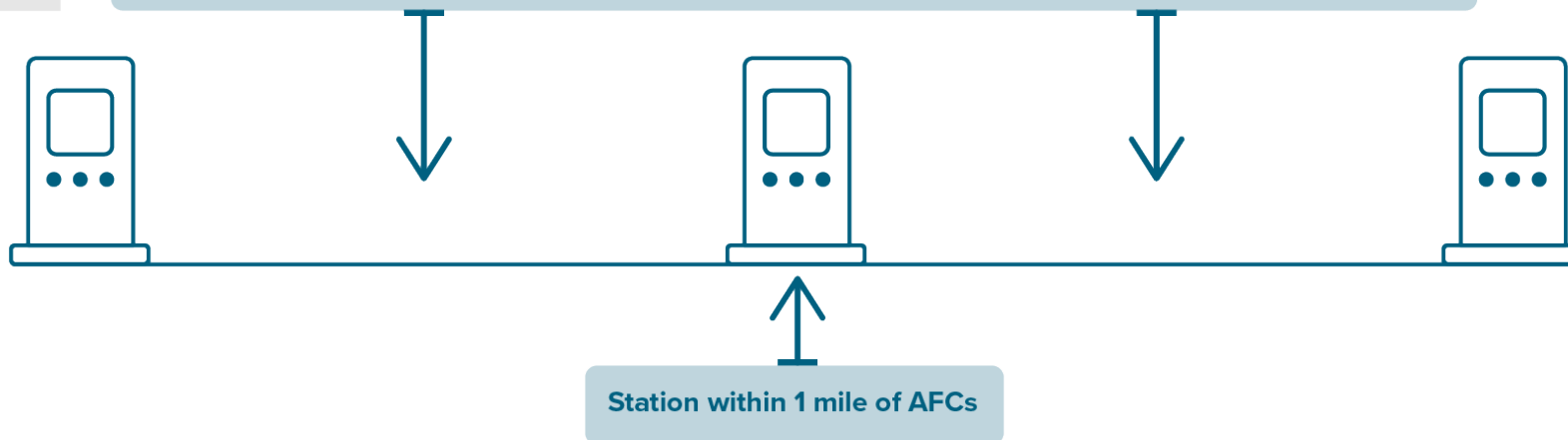
## UTILITY UPGRADES

- On-site utilities
- Limited off-site utility improvements

# NEVI STATION CRITERIA

## PHASE 1: AFC charging

50 miles or less spacing between stations along Alternative Fuel Corridors (AFCs)



## PHASE 2: Community-based charging

After 50 miles spacing is met,  
stations can be placed along any public  
road on a site that is publicly accessible



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## Southeast Alternative Fuel Corridor Initiative

The locations of charging and refill stations for various alternative fuel types in the Southeast can be seen in our interactive maps.

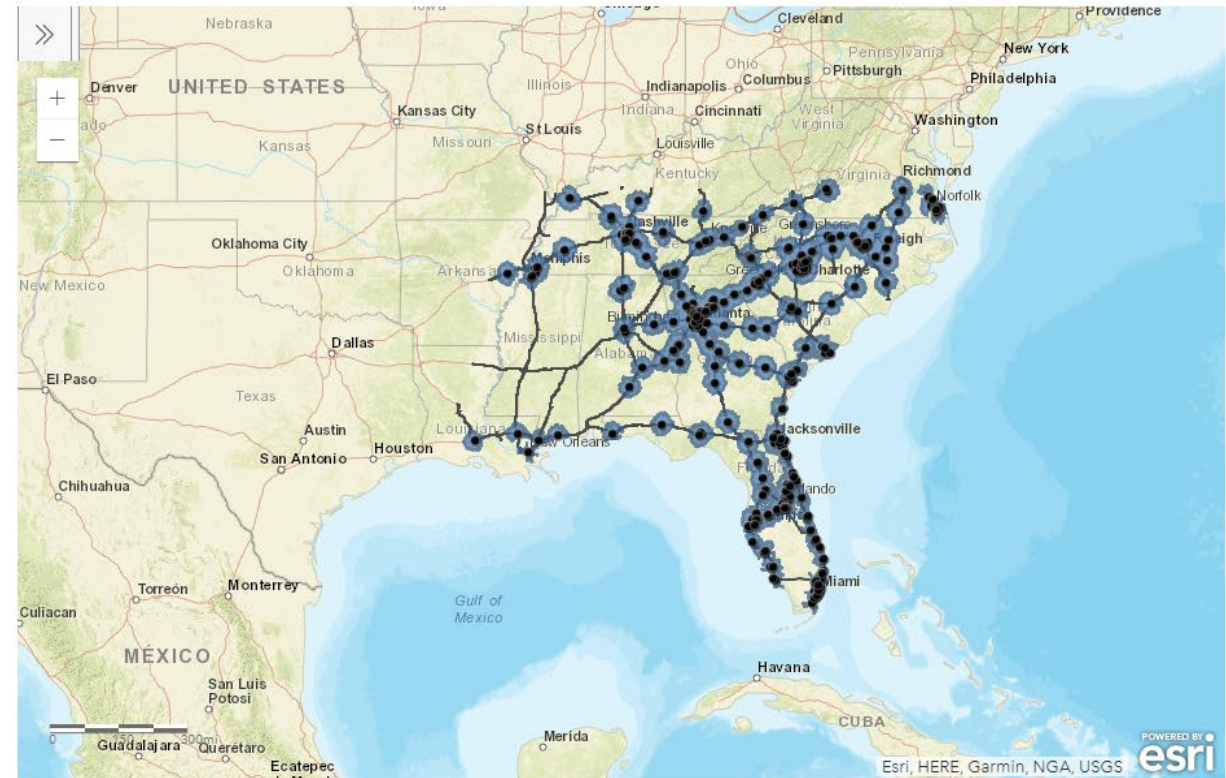
These fuels include:

Electric (EV), liquefied petroleum gas (LPG), liquefied natural gas (LNG), compressed natural gas (CNG), E85, and biodiesel.

Electric stations seen on right.

 [Learn More](#)

[https://www.fhwa.dot.gov/environment/alternative\\_fuel\\_corridors/](https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/)  
<https://afdc.energy.gov/laws/11675>







Alternative Fuel Corridors

Highway System

Fatal Crashes

2020 Census & Equity Analysis

MPO & Air Quality

Border Flows / FAF4

Find Map

Find Location

Points Of Interest Map

Print Map

Print Table

Download Table

Email Page

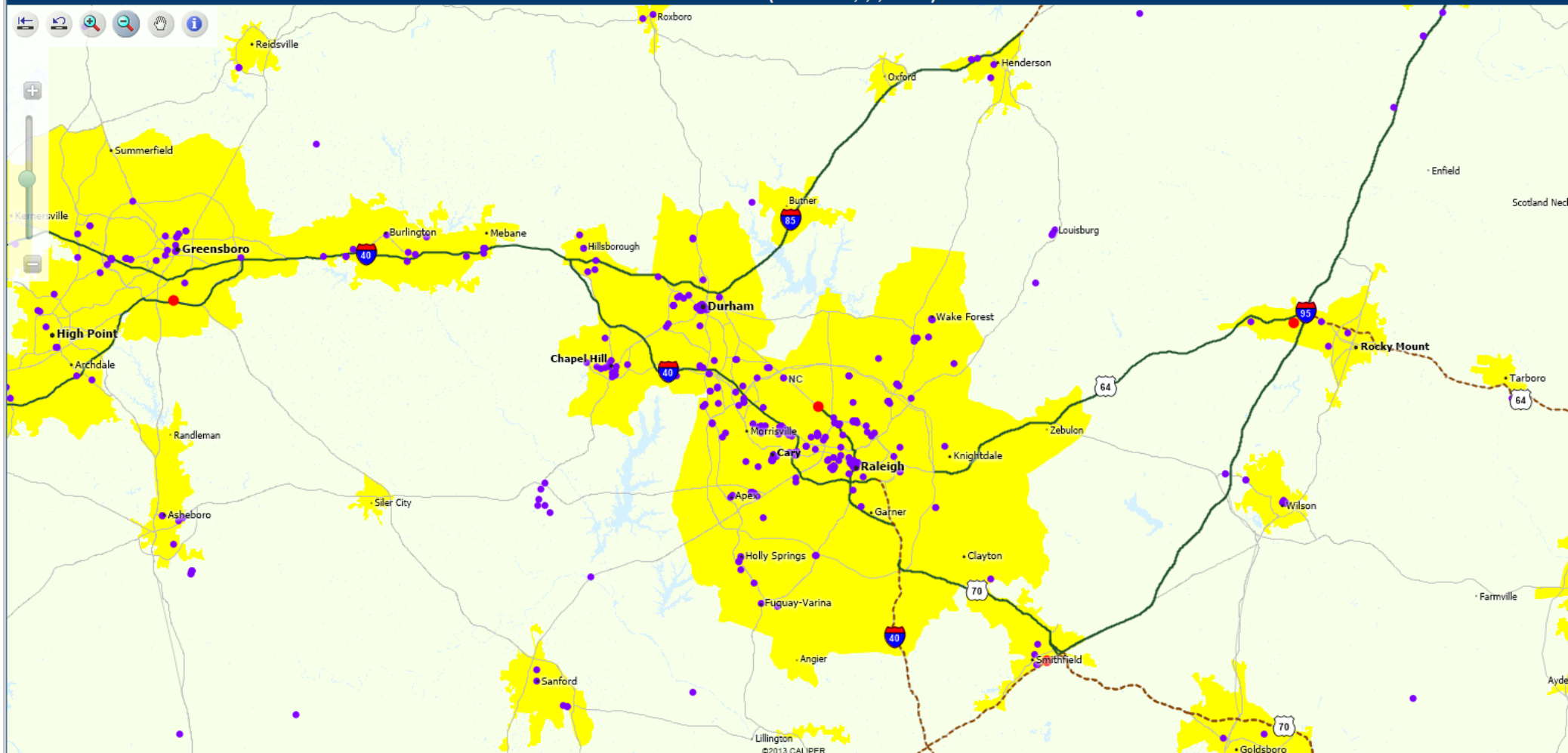
Accessible Version

Downloads

Project Equity-STEAP

What's New

### Electric Vehicle (EV-Round 1,2,3,4 and 5)



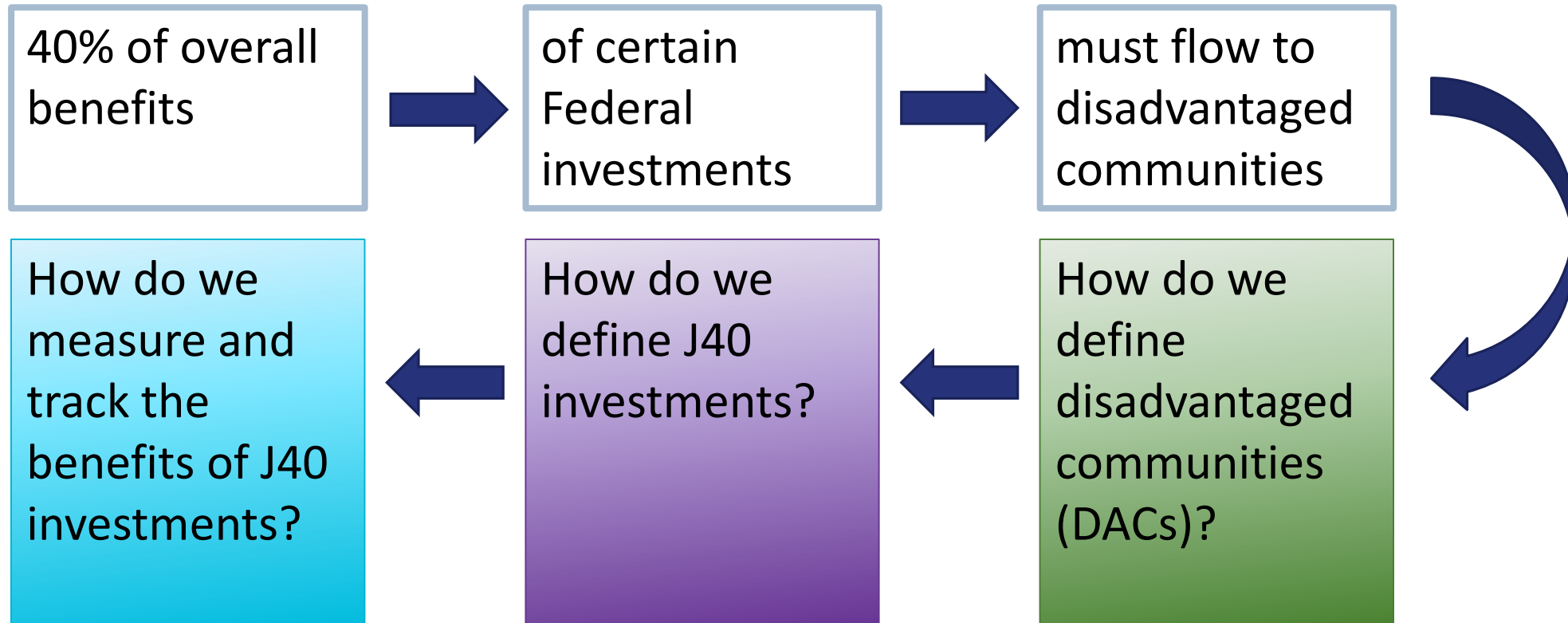
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Show	Labels		
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<input type="checkbox"/>		2045 FAF4 Truck Volume	
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<input type="checkbox"/>		BLM Land	
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<input checked="" type="checkbox"/>		Electric Fast Charging Station	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	FHWA Adjusted Urban Area	
<input type="checkbox"/>		Forest Service	
<input type="checkbox"/>		MPO Boundary	
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<input type="checkbox"/>		NHS Intermodal Facility	
<input type="checkbox"/>		National Park	
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<input checked="" type="checkbox"/>		Populated Place	
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<input type="checkbox"/>		Public Rest Area	
<input checked="" type="checkbox"/>		State (2010)	
<input type="checkbox"/>		Tribal Lands	
<input type="checkbox"/>		Wildlife Refuge	

[Redraw Map](#)

[https://www.fhwa.dot.gov/environment/alternative\\_fuel\\_corridors/maps/](https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/maps/)



# Justice40 Initiative Applies to Clean Transportation Investments



Justice40 Initiative established 1/27/21 with [EO 14008 on Tackling the Climate Crisis at Home and Abroad](#)

VTO/Clean Cities identified as a Justice40 Pilot Program in July 2021 [Interim Implementation Guidance for the Justice40 Initiative](#)

# Clean Cities

## Energy and Environmental Justice (EEJ) Initiative



Provide Clean Cities Coalitions training, resources, and funding to pursue EEJ activities

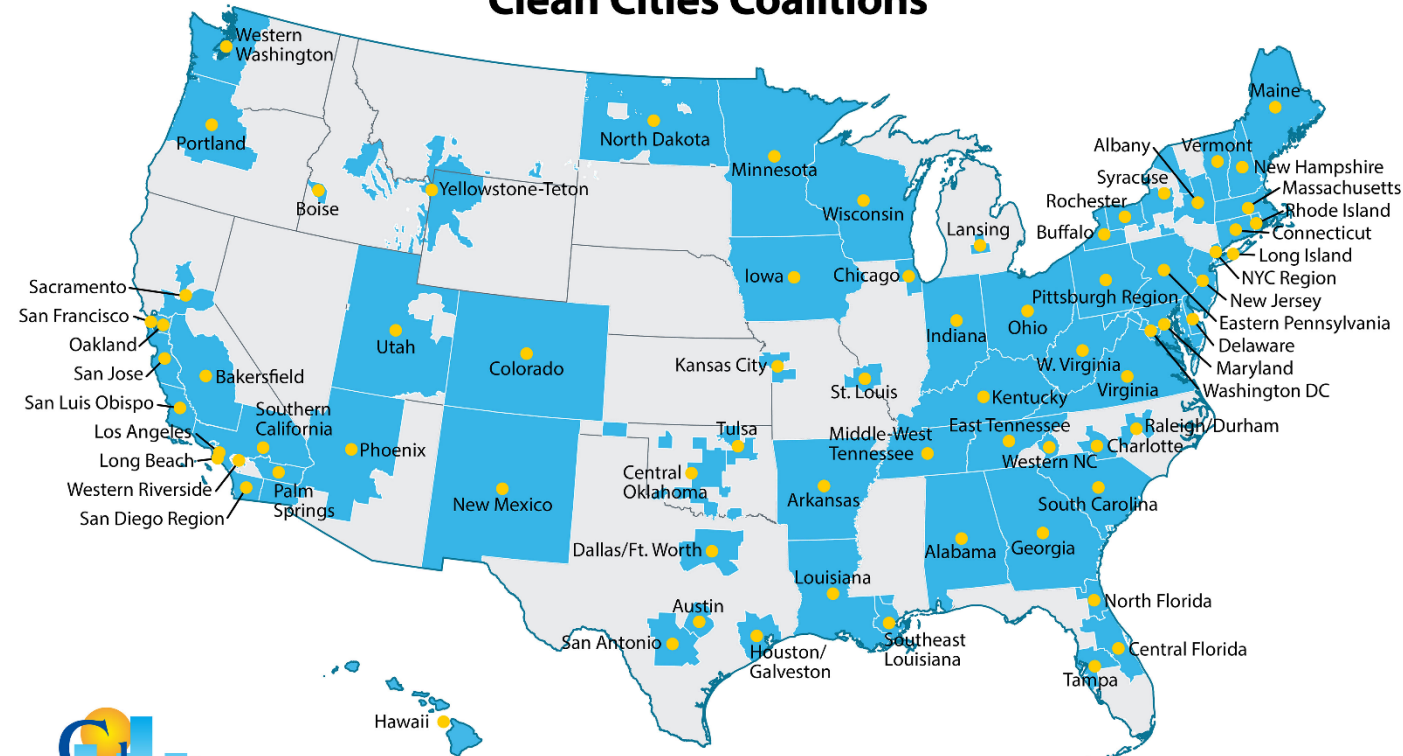


Benefit DACs through capacity building, community engagement, technical assistance, and training



Develop best practices for future Clean Cities EEJ activities.

### Clean Cities Coalitions



Map Date: 2/3/22



# DOT/DOE Joint Interim Definition of Disadvantaged Communities (DACs) and EV Charging Justice40 Map (released 2/10/22)



## ANL EV Charging Equity Considerations Webpage



RESEARCH WORK WITH US COMMUNITY ABOUT US

### Electric Vehicle Charging Equity Considerations

Ensuring investments in electric vehicle charging benefit disadvantaged communities

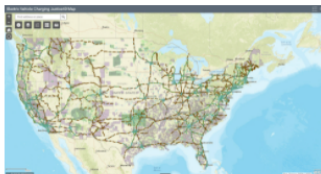
#### Electric Vehicle Charging and the Justice40 Initiative

Many of the burdens from the transportation and energy systems have been historically and disproportionately borne by disadvantaged communities. Unequal distribution of benefits from the transportation and energy systems has prevented disadvantaged communities and minority-owned and women-owned businesses from realizing equitable benefits from these systems, while other historic barriers to transportation have made facilities inaccessible to individuals with disabilities. For these reasons, it is important to emphasize equity considerations when planning investments in electric vehicle charging stations and avoid exacerbating existing disparities in the transportation system.

The Justice40 Initiative, established in January 2021 by [Presidential Executive Order 14008](#) on [Tackling the Climate Crisis at Home and Abroad](#), states a goal that at least 40 percent of the overall benefits of certain Federal investments flow to disadvantaged communities (DACs). The [Interim Implementation Guidance for the Justice40 Initiative](#), released in July 2021, identifies clean transportation as a Justice40 covered program and identifies access to electric vehicle charging stations as an example benefit of a covered program.

#### Electric Vehicle (EV) Charging Justice40 Map Tool

Consistent with the [Justice40 Interim Guidance](#), U.S. Department of Transportation (DOT) and U.S. Department of Energy (DOE) developed a joint interim definition of disadvantaged communities (DACs) for the National Electric Vehicle Infrastructure (NEVI) Formula Program. The joint interim definition



Electric Vehicle Charging Justice40 Map displays DOE/DOT interim guidance disadvantaged communities.

ES Division	
About ES	>
Capabilities	>
Research	>
News	
Events	
Publications	>

SHARE



#### PROJECT INFORMATION

Funding: U.S. Department Of Energy, Office Of Energy Efficiency And Renewable Energy

#### CONTACT US

If you have questions on the joint interim definition of disadvantaged communities, please contact [doe-dot.jo.ta@nrel.gov](mailto:doe-dot.jo.ta@nrel.gov).

#### RELATED ORGANIZATIONS

Energy and Global Security

## EV Charging Justice40 Map



# Bipartisan Infrastructure Law (BIL) Opportunities







# BIL Opportunities

## Federal Highway Administration (FHWA) Carbon Reduction Program (CRP)

	FAST Act (extension)	Bipartisan Infrastructure Law (BIL)				
Fiscal year (FY)	2021	2022	2023	2024	2025	2026
Contract authority	---	\$1.234 B*	\$1.258 B*	\$1.283 B*	\$1.309 B*	\$1.335 B*

\*Calculated (sum of estimated individual State Carbon Reduction Program apportionments)

- Provides funds for projects designed to reduce transportation emissions, defined as carbon dioxide (CO<sub>2</sub>) emissions from on-road highway sources
- Advanced truck stop electrification systems; public transportation
- Acquisition, installation, or operation of publicly accessible electric vehicle charging infrastructure or hydrogen, natural gas, or propane vehicle fueling infrastructure
- Purchase or lease of zero-emission construction equipment and vehicles, including the acquisition, construction, or leasing of required supporting facilities
- More information: [https://www.fhwa.dot.gov/bipartisan-infrastructure-law/crp\\_fact\\_sheet.cfm](https://www.fhwa.dot.gov/bipartisan-infrastructure-law/crp_fact_sheet.cfm)



# BIL Opportunities for Rural America

## **DOT Rural Electric Mobility Infrastructure Toolkit (with technical support from the DOE Office of Energy Efficiency and Renewable Energy, Vehicle Technologies Office):**

- DOT has released an online toolkit that provides a free, one-stop resource to help rural stakeholders scope, plan, and fund EV charging infrastructure.
- Toolkit includes technical resources from the DOE Vehicle Technologies Office on electric vehicle basics, considerations for developing electric vehicle infrastructure, connecting with local Clean Cities coalitions to facilitate infrastructure deployment, and locating existing electric vehicle infrastructure.
- The toolkit is currently available at [www.transportation.gov/rural/ev/toolkit](https://www.transportation.gov/rural/ev/toolkit).



# BIL Opportunities for Rural America

## **New Mobility Services in Rural America:**

- Working with several rural communities across the country to conduct pilot demonstrations of new mobility technologies, such as electric vehicles for carsharing and first-last mile microtransit.
- Projects are broadening the transportation choices for rural areas to provide affordable and efficient access to these services with solutions responsive to local needs.

## **Electric Vehicle Charging Community Partner Projects:**

- Accelerating the adoption of electric vehicles and supporting infrastructure through community-based public-private partnerships that prioritize underserved communities.

## **Assistance for Rural County Transition to New Transportation Fuels:**

- Developing models for facilitating the uptake of new transportation fuel choices in rural underserved communities.

All funding opportunities and timelines are listed at <https://eere-exchange.energy.gov>.

# DRIVE Electric USA

US Department of Energy



# DRIVE Electric USA

[www.driveelectricusa.org](http://www.driveelectricusa.org)



**DRIVE ELECTRIC**  
— **USA** —

Plug-in nc

1. Partnership across 14 states to develop statewide, branded EV initiatives
2. ETCleanFuels is the Prime
3. **Clean Cities coalitions leaders** that partner with electric utilities, state agencies, NGOs, municipalities and more to develop sustainable partnerships to advance EV efforts into the foreseeable future
4. **Seven “Priority Areas” of work** that each state is undertaking:
  - 1) Building statewide, branded initiatives – *Develop a statewide Roadmap or Plan*
  - 2) Consumer Education & Chapter Development
  - 3) Engaging Electric Utilities & Regulators
  - 4) EV Charging Infrastructure and Planning
  - 5) Educating State & Local Government Officials
  - 6) Dealer Engagement – *Develop “Certified EV Dealer” Programs*
  - 7) Fleet Engagement & EV Adoption





# DRIVE Electric USA

[www.driveelectricusa.org](http://www.driveelectricusa.org)

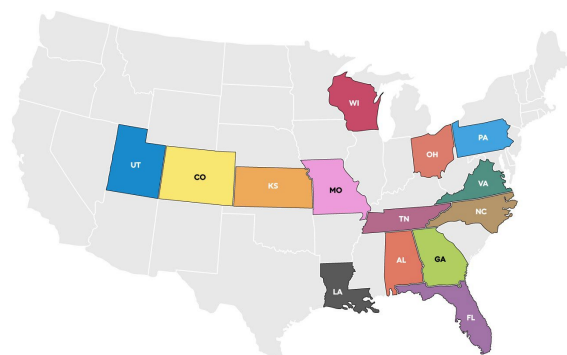


**DRIVE ELECTRIC**  
**USA**

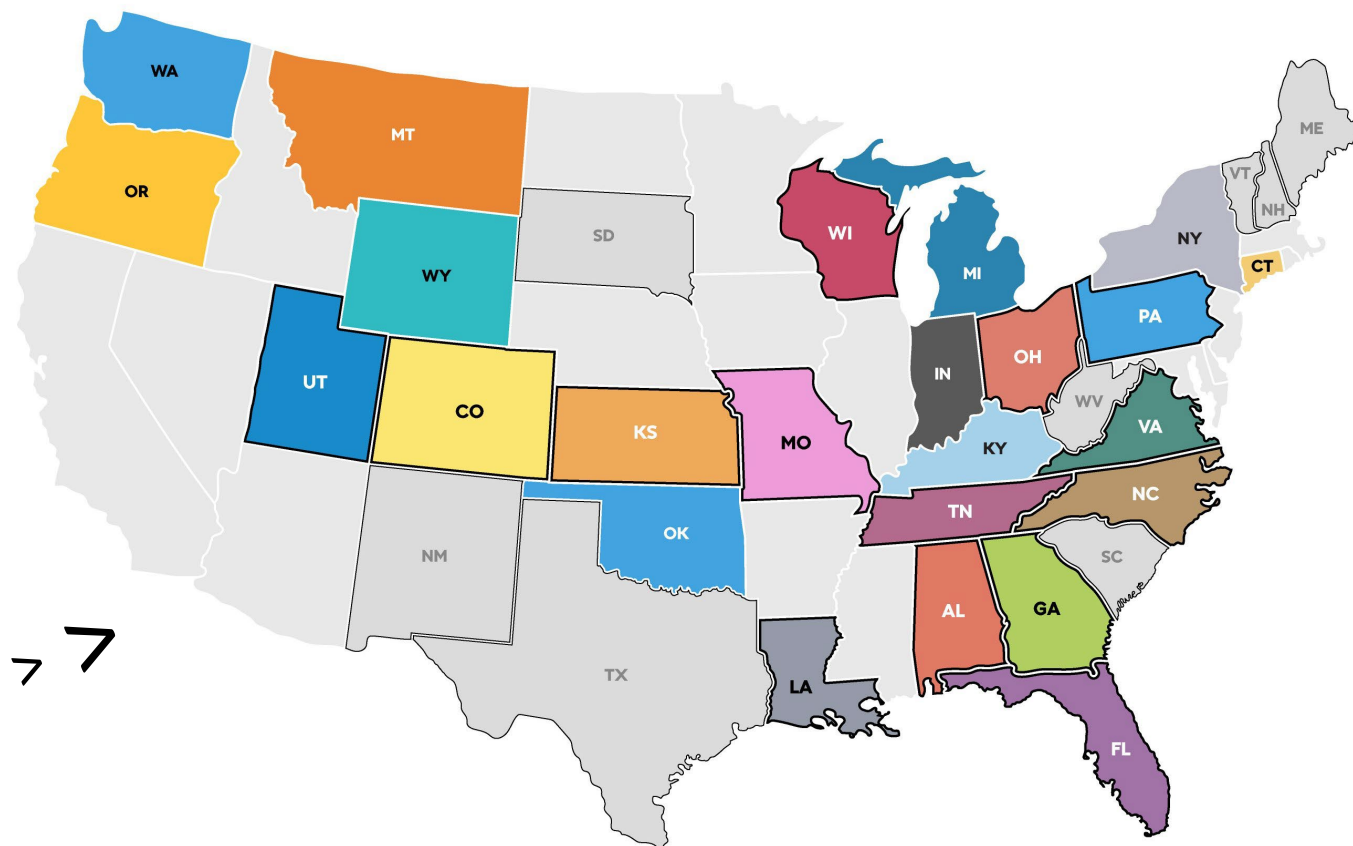
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*Project started with intent to grow the involvement by other states and seek additional funding.*

1. 14 original states – *black borders*
2. 10 states have signed MOU to join effort – *no borders*
3. 8 states interested – *light gray*



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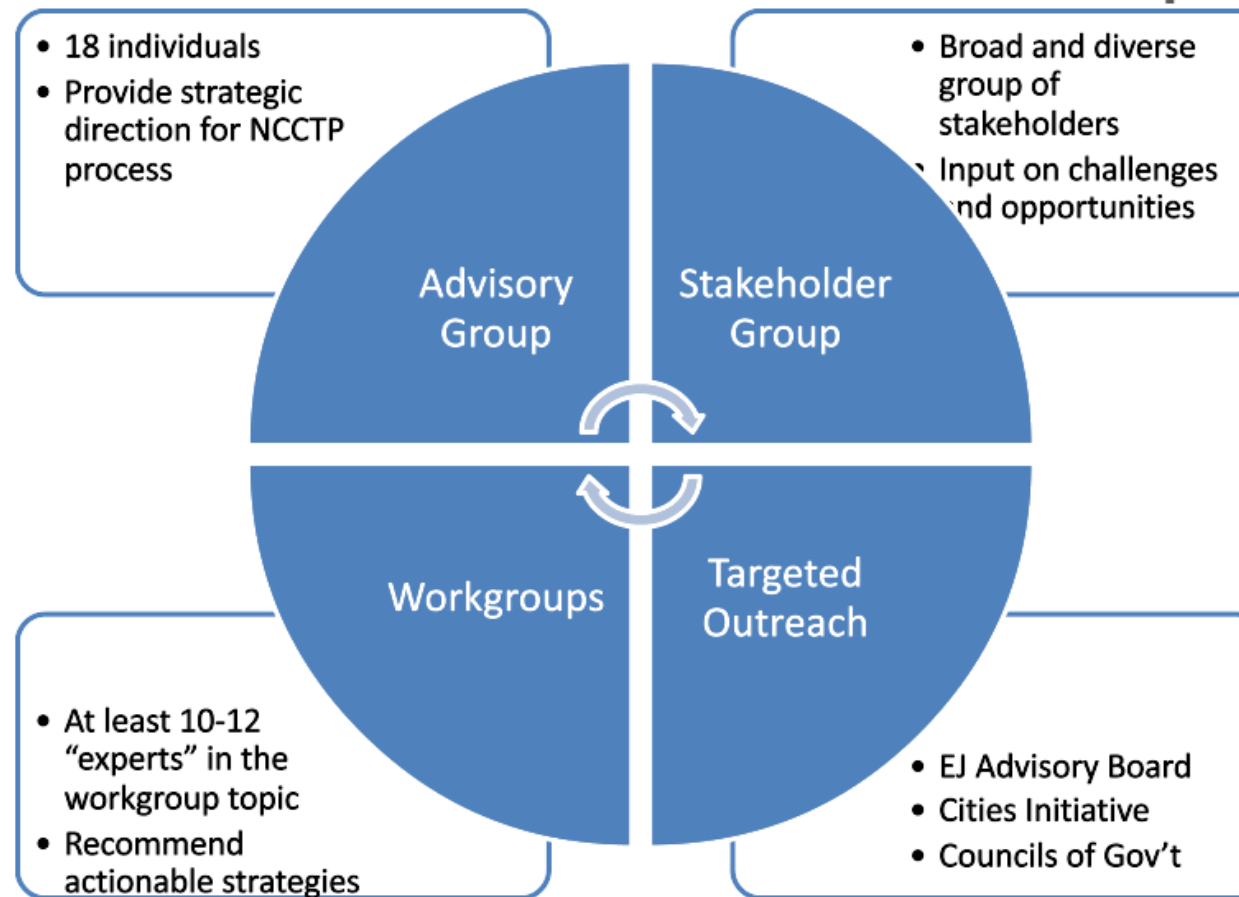


# NC Clean Transportation Plan





# NC Clean Transportation Plan





# NC Clean Transportation Plan

## ZEV Plan 2.0

- Focus on light duty vehicle transition
- Vehicle availability and consumer education
- Incentives and affordable financing options

## M/HD ZEV Action Plan

- Builds off the multistate M/HD MOU
- Environmental Justice outreach to impacted communities
- Includes low-carbon fuels

## Fleet Transition Plan

- Public entities (state and local fleets)
- Private entities
- School buses

## VMT Task Force

- Builds off existing VMT Task Force
- Includes transit, bike-ped, passenger rail and other non-vehicle transportation modes

## Clean Transportation Infrastructure

- EV Charging Infrastructure
- Alternative fuels infrastructure
- Includes mapping, siting and identification of gaps



# NC Clean Transportation Plan

- Tentative Engagement Schedule (Year 1)

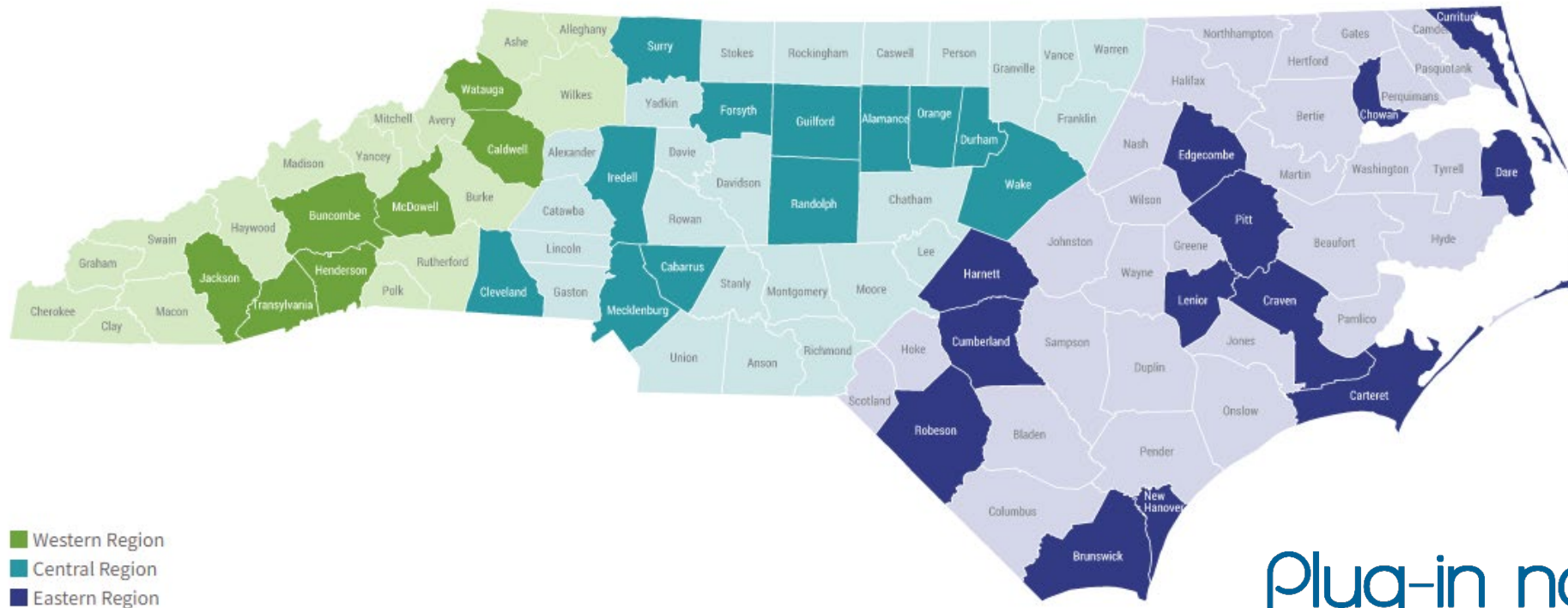
Anticipated Date	Milestone
Jan - July 2022	NCCTP stakeholder engagement Targeted NEVI outreach to key partners Launch NCDOT NEVI program webpage and initial survey
August 2022	Plan Submitted to Joint Office
September 2022	Plan to be approved by Joint Office
Fall 2022	Virtual Public Information Sessions to confirm Year 1 priorities Targeted in-person listening sessions Educational events, surveys, community events
Winter 2022/2023	Development and public review of Phase 1 solicitation Virtual Public Information Session for Phase 1 solicitation Publish Solicitation for Phase 1 Corridors
Spring 2023	Award contracts for Phase 1 solicitation Public Information Sessions to Set Priorities for Phase 2





# NC Clean Transportation Plan

- Fall 2022 – Spring 2023 | EV Planning & Community Engagement



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<https://pluginnc.com/current-members/>

# Triangle EV Summit

## Developing a Framework for Community Engagement





# Summit Objectives

1. Provide “Open House” Platform for Regional Coordination
  - *Provide opportunities for communities in North Carolina to learn about electric vehicles, charging infrastructure and provide feedback for the state’s work in coordination with the NC Clean Transportation Plan and National Electric Vehicle Initiative (NEVI).*
2. Develop Community Engagement Framework
  - *Clearly communicate what communities can expect from NEVI formula funded efforts to ensure understanding of the state’s proposed activities as directed by planning approved by FHWA.*
  - *Gather consistent feedback on existing plan and begin to consider desired priorities for community-based opportunities in future years.*



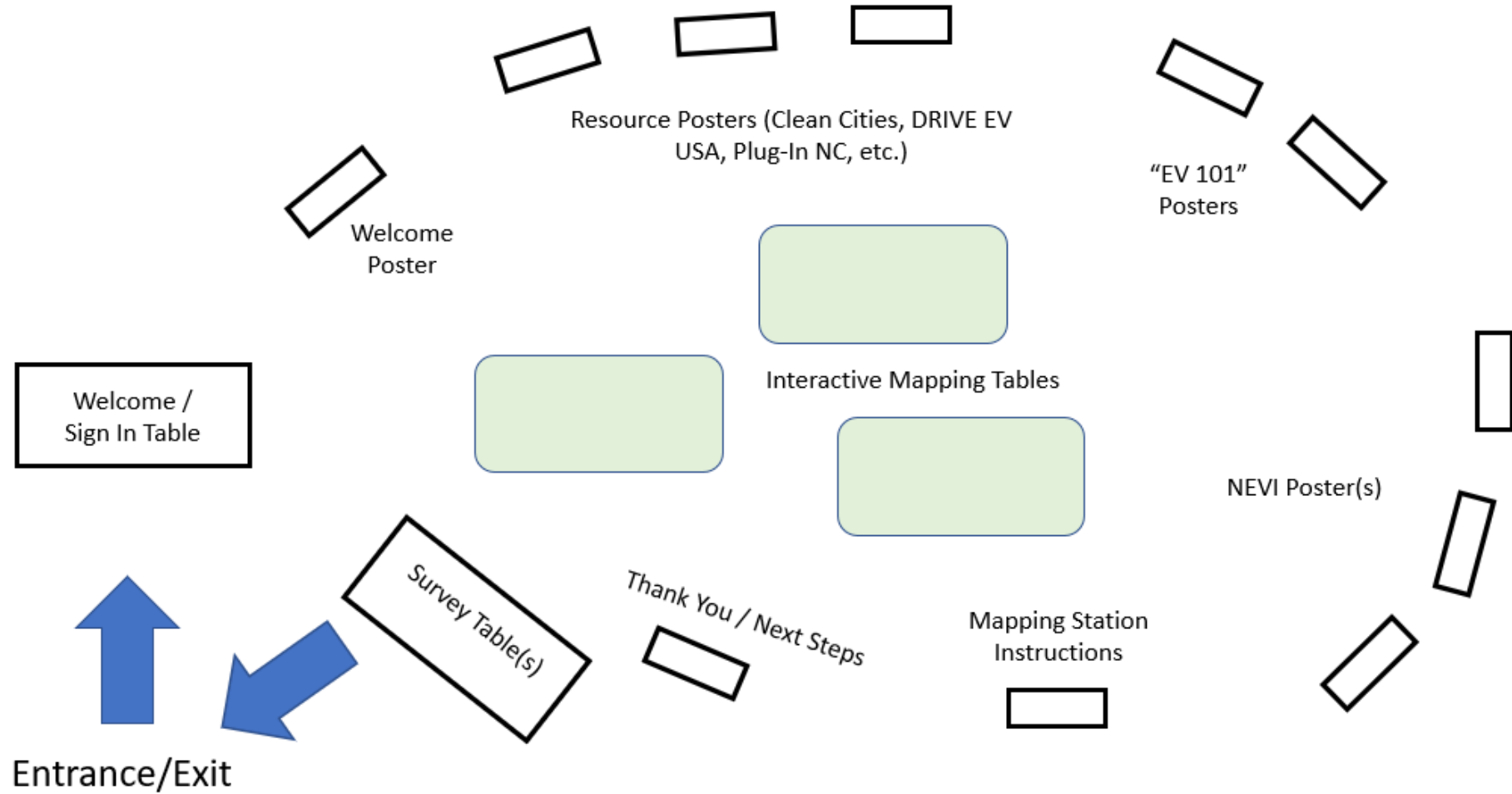
# Summit Objectives

## Proposed Engagement Framework

- *2-hour public “drop-in” open house format*
- *Pre-registration not required*
- *Poster session with staff available for guidance/questions*
- *Interactive mapping station(s) with staff available for guidance/questions*
- *Community-based opportunities survey station (digital and hard-copies available)*



# Summit Objectives







# THANK YOU!

YOUR FEEDBACK IS IMPORTANT

- ✓ Please complete the surveys provided
- ✓ Sign-Up for future events
  - Virtual Public Information Sessions
  - Targeted In-Person Listening
  - Community & Educational Events
  - Local EV Clubs and Chapters
- ✓ Let us know how we can improve!



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DRIVE ELECTRIC USA



# Contact Information



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