



Department of  
**Environment &  
Conservation**

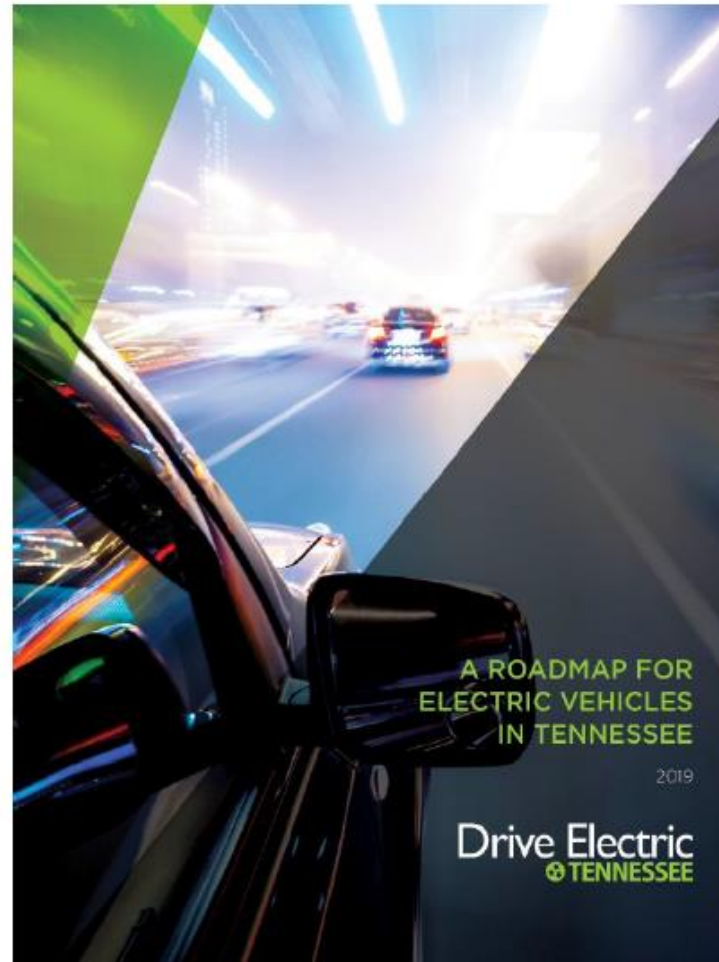
**Smoky Mountains Mobility Conference**  
October 2024



# Drive Electric TN

## A Roadmap for Electric Vehicle in Tennessee

In 2019, TVA brought together a broad coalition of EV stakeholders from across the region to identify local market barriers slowing EV adoption and chart a course to remove those barriers



### Opportunity Areas

Charging Infrastructure

Vehicle Availability

Innovative & Supportive Policies

Consumer Awareness & Education

# Drive Electric TN

[EV 101](#)[ABOUT DET](#)[GET INVOLVED](#)[NEWS & EVENTS](#)[RESOURCES](#)[CONTACT US](#)[DET SHOP](#)

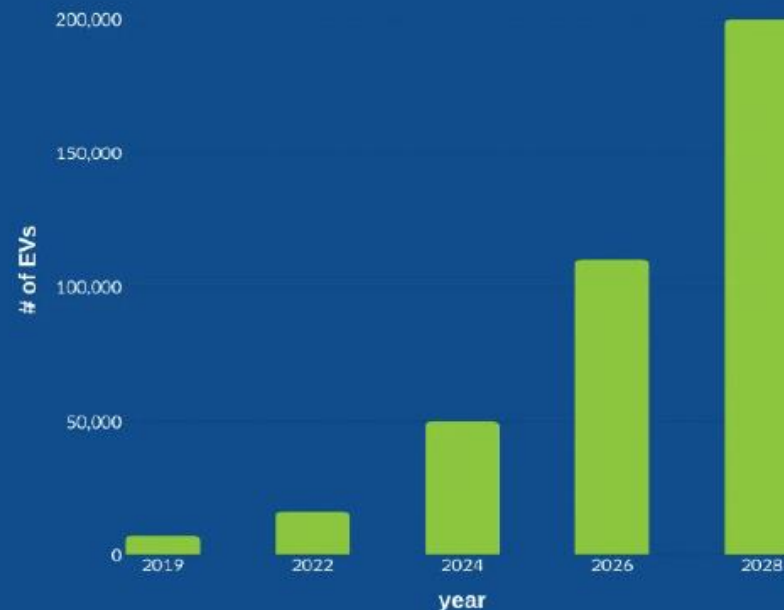
WE WANT TO SEE

*200,000* electric vehicles

ON TENNESSEE'S ROADS

*by 2028*

As described in our Mission, there were less than 5,000 light-duty plug-in EVs on Tennessee roads in 2017. DriveElectricTN aims to increase this number to at least 200,000 EVs by 2028.



INFRASTRUCTURE



AWARENESS



POLICIES &  
PROGRAMS

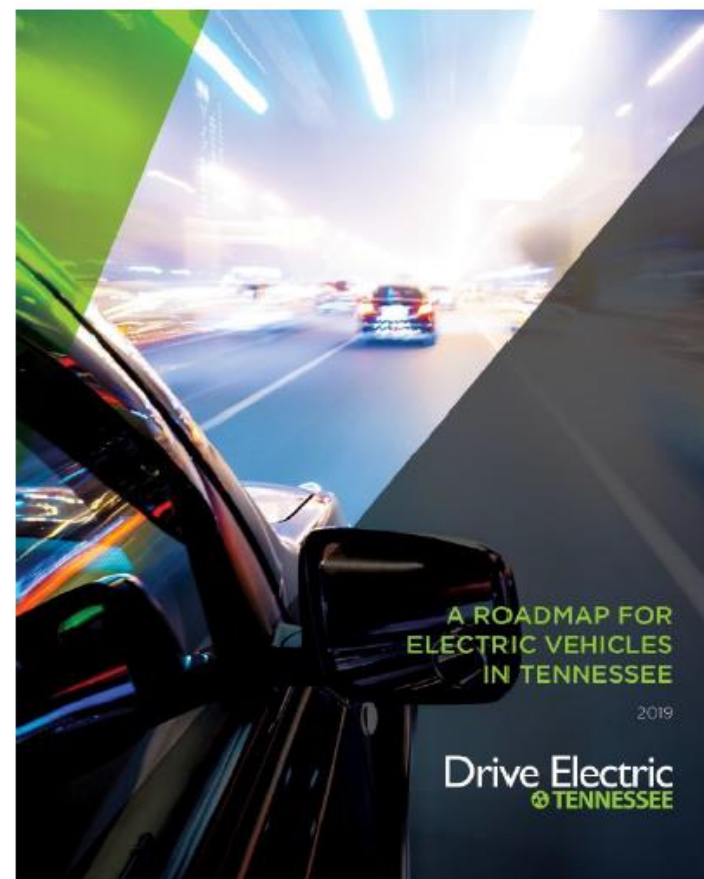


# Drive Electric TN

How did we get here?

## Roadmap for Electric Vehicle in Tennessee

The 2019 Roadmap identified various Goals, Initiatives, and Projects across the four Opportunity Areas that would help develop Tennessee into a southeast leader in EV adoption



**THE PLAN**  
**PROJECT DEVELOPMENT**

In total, 15 initiatives and 48 projects were developed across the 4 Opportunity Areas. The success of the Drive Electric TN Roadmap depends on the successful implementation of these initiatives and projects.

**48**

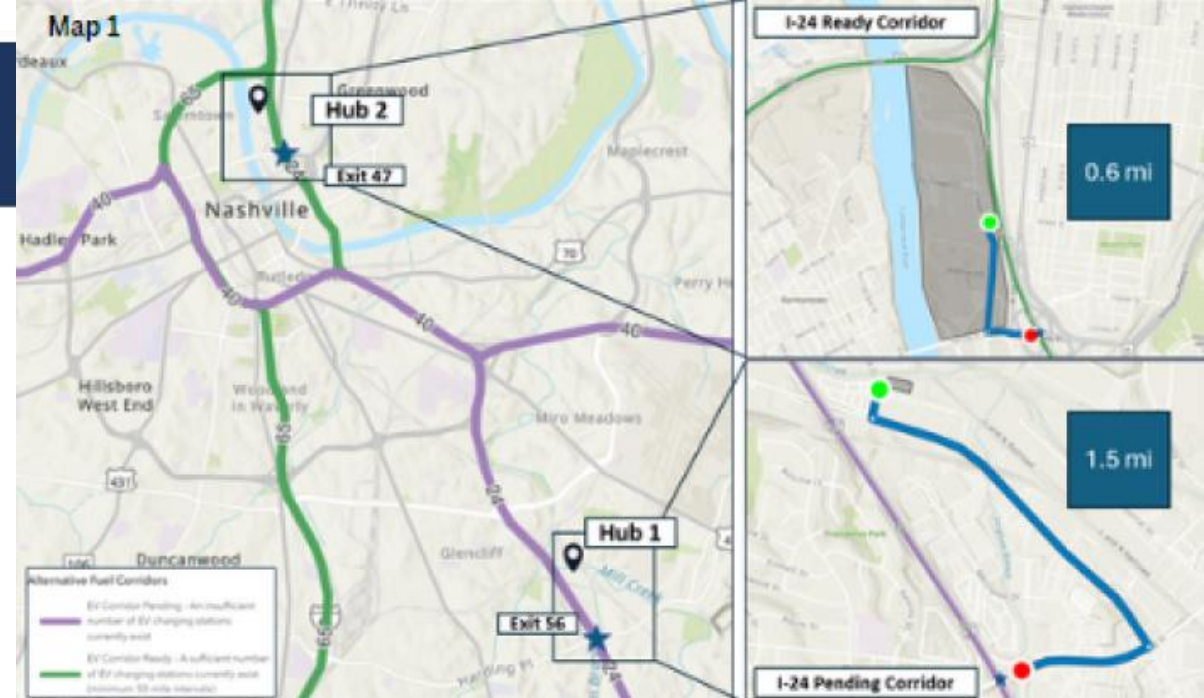
Driving Charging Infrastructure Availability	Awareness	Driving EV Adoption	Supportive Policies	Driving EV Availability, Offerings, and Innovation
<b>EV Infrastructure Coordination &amp; Planning</b>	<b>EV Ride &amp; Drive</b>	<b>State Government Relations</b>	<b>OEM Collaboration</b>	
Statewide EVSE Plan	Ride & Drive	State Policy Plan	In-State OEM Partnership + OEM-Dealer Network	
MDARD Charging Market Assessment	Statewide EVSE	Stakeholder Demand Management Collaboration	MDARD EV Catalogue	
<b>EV Infrastructure Build-Out</b>	<b>Fleet Education</b>	<b>Support Local Policies</b>	<b>Dealer Collaboration</b>	
Repair & Replace	EV Owners Club	Local Policy	Dealer Incentives	
Interstate & Highway Charging Network	<b>Fleet Education</b>	EVSE	Dealer Education Program Design	
Equal Access: Charging for Workplace	Fleet Case Studies	EV-Ready	Dealer Certification Program	
Equal Access: Charging for Multi-Family	Corporate EV Education	<b>Corporate Policy</b>	Cross-Marketing for Local Dealers	
Equal Access: Charging for Limited Income	Transit and Government Fleet Education	Workplace EV Policy Guide	Secondary Dealer Collaboration	
Metro Area Charging Networks	Freight Fleet Education	Commuter Benefits Education & Outreach	<b>Mobility Services Collaboration</b>	
<b>EV Infrastructure Standards &amp; Maintenance</b>	<b>EV Consumer Education</b>	EV 100	Rental Company Collaboration	
Site Host & Maintenance Guide	EV Charging Station Signage	<b>Coordinated Utility Programs</b>	Ride Share Collaboration	
	Consumer Marketing & Sales Materials	Smart Charging	Mobility as a Service (future)	
	Educator Training Program	EV Rates Assessment	<b>Consumer Preference Assessment</b>	
	EV Marketing Channels	Renewable EV Charging Certification	Consumer Focus Groups & Surveys	
		<b>EV/VE Incentives</b>		
		EV Purchase Incentives		
		EV Lease Incentives		
		EV Rental Incentives		
		EV Rewards Program		
		Recycling & Second Life Batteries		
		EV Rewards Program		

**Projects**



# Freight Electrification

- TN was one of three states selected by NASEO to receive technical assistance to develop action plans for on-road freight electrification and charging infrastructure buildout.
- TN CFI proposal (pending) – Partnered with Prologis to build out Tennessee’s first electric truck charging “hubs” in the Nashville area with a combined 100 150kW connectors.
- Medium duty eTruck project
- Deployment support: Volkswagen Settlement, DERA, EPA Clean Heavy Duty Vehicle Program, tax credits, etc.







## TTU MD e-Truck Demonstration Project



Seeking volunteers for Test Drive!

### eTruck Info

Xos SV05 Battery-Electric Step Van

- **Range:** 100-150 miles
- **Cargo Volume:** 900-1000 cubic ft.
- **Charge Time:** ~2 hours [DCFC] or ~6 hours [L2]

### Volunteer Criteria

- Be a fleet running in Tennessee
- Have access to a Level 2 charger OR
- Pay for the installation of a Level 2 charger
- Proof of suitable insurance to cover the truck



**Borrow the truck for one month at  
NO COST to your organization!**

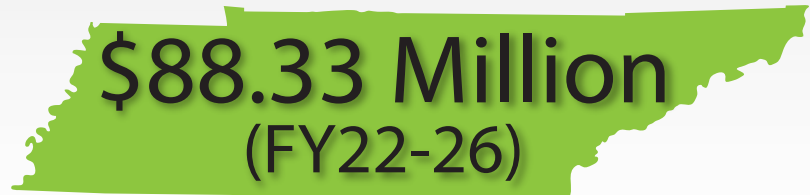
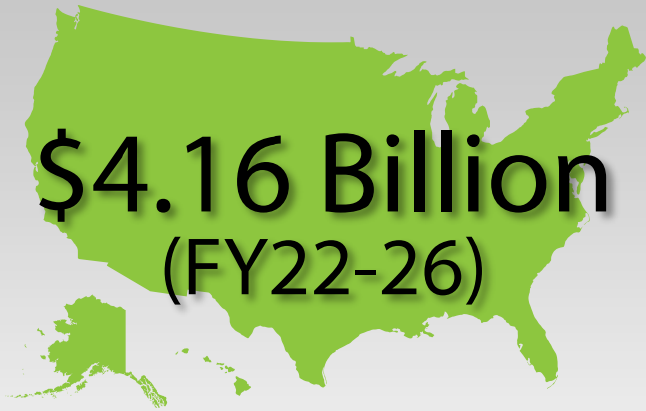
**Visit <https://mdetruck.com/>  
or scan below to get started!**

### Project Partners

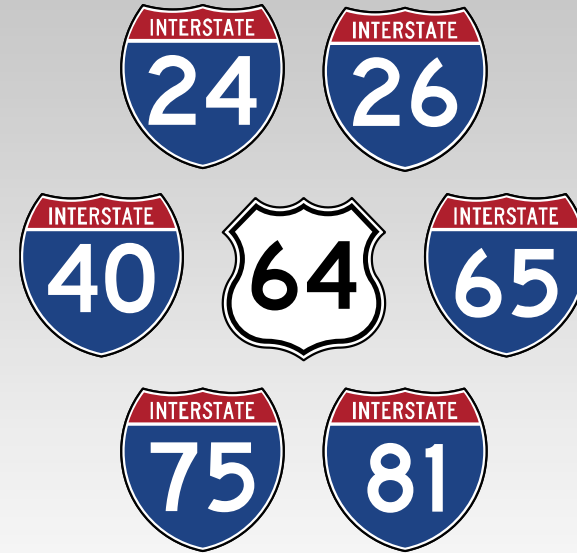


# National Electric Vehicle Infrastructure (NEVI) Program

## FUNDING



## ELIGIBLE



Alternative Fuel Corridors  
~1,500 Miles

TN



# National Electric Vehicle Infrastructure (NEVI) Program

In August 2023, TDOT and TDEC released a NEVI Notice of Funding Opportunity as well as a corresponding “gap map,” which showed eligible exits that can support full corridor build out. Applications were due by November 1, with awards announced on January 31, 2024.



## NEVI Candidate Sites

- I-24      ● I-65
- I-26      ● I-75
- I-40      ● I-81

## Existing NEVI-Compliant Chargers

- within TN
- outside TN

## Gaps and Corridors

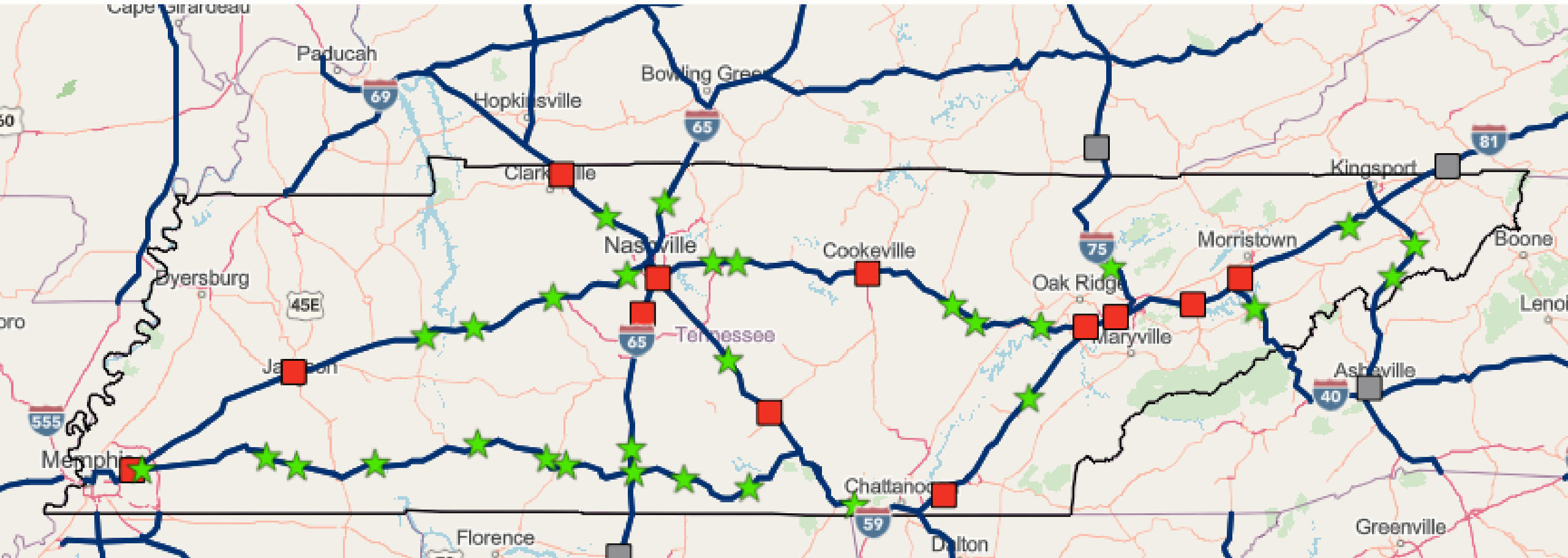
- Gap
- 1-mile travel distance (straight-line distance for US-64)
- Electric Vehicle Alt Fuel Corridor





# National Electric Vehicle Infrastructure (NEVI) Program

167 applications were received from 23 different applicants, comprised of both public and private entities. Ten of those applicants will be awarded contracts to establish 30 new charging locations throughout the state. These awardees will purchase, install, own, operate, maintain, and report on the program-funded EV charging infrastructure.



# Fast Charge TN Network

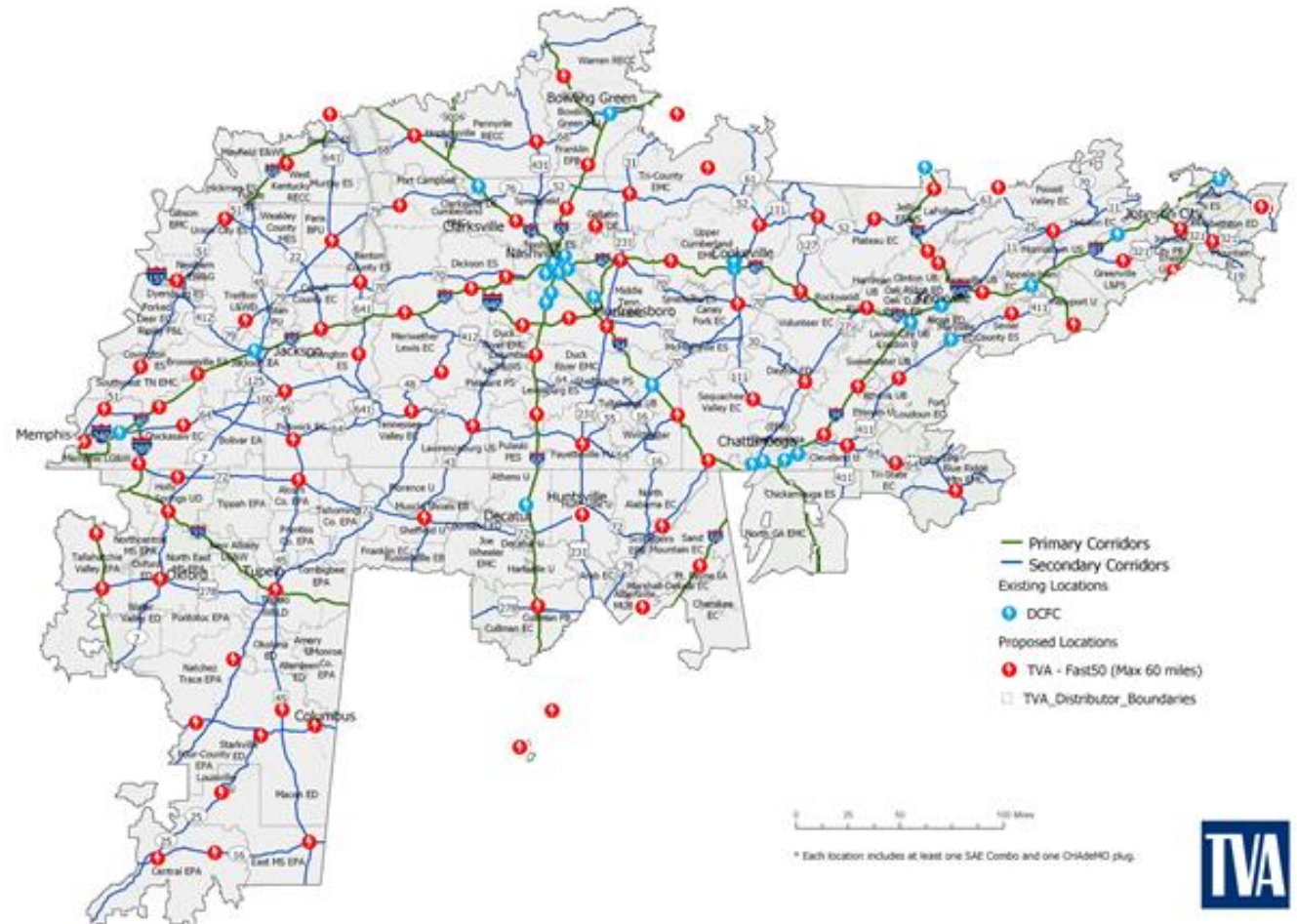
TDEC and TVA are working with LPCs who will install, own, and operate fast charging stations along interstates and major highway corridors at least every 50 miles

## Eliminate Range Anxiety

- Network of fast charging stations across the region
- Ensure drivers can charge at least every 50 miles

## LPCs Will Install, Own and Operate

- LPCs will secure the charging station site, design and install the station, and operate and maintain equipment
- LPCs should follow minimum technical specifications and site development guidelines





# Fast Charge TN Network (as of October 2024)



- 24 sites currently live
- 20 sites currently in various stages of development/implementation
- Approx. 15 sites to be funded by an upcoming competitive funding round



# Tennessee State Parks

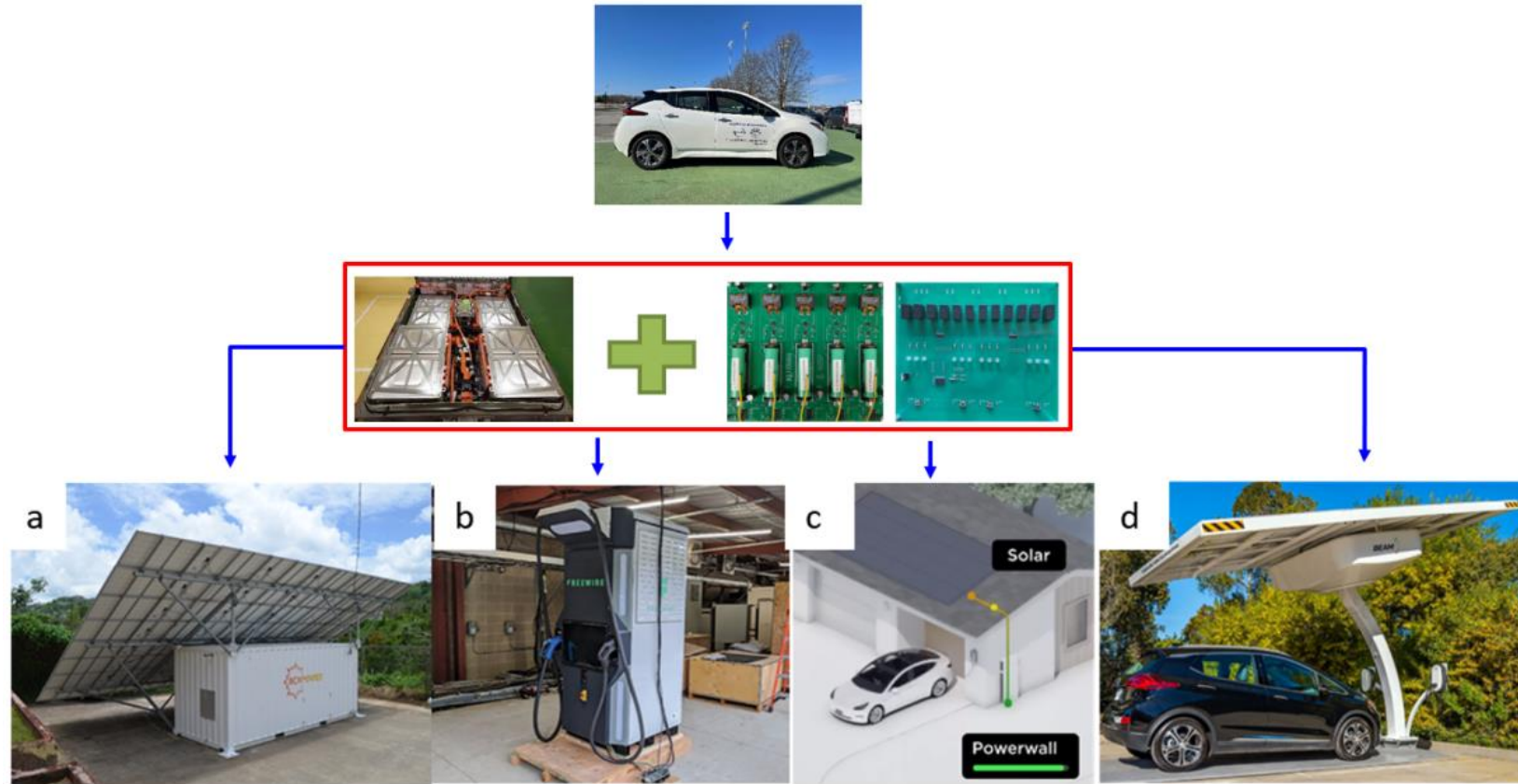
- In 2021, TDEC announced a partnership with Rivian to install Level 2 charging stations at Tennessee State Parks. The goal is to have charging stations available at all viable state parks systemwide.
- In addition to overseeing design and installation, Rivian will provide, at no cost to the state:
  - chargers
  - utility upgrades and other installation costs
  - network access fees
  - equipment service
  - Maintenance
- Live at 40 sites across 37 parks.
- Additionally, 13 new F-150 Lightnings have been deployed at State Parks across Tennessee.
- TVA has also provided mobile, solar assisted charging infrastructure at two State Natural Areas.





# Second-life Battery in Mobile EV Charging Application for Rural Transportation (SMART)

- Aims to develop affordable Mobile Charging Stations that can be deployed in rural, capacity-constrained communities at scale by utilizing second-life batteries (SLB) retired from EVs.



# Example Smart Mobility Collaboration with ORNL

- Demonstrating Rapidly Deployable Artificial Intelligence (AI) Based Adaptive Signal Timing Optimization
- Nashville Area Sustainable Human-centered Grid Modernization Strategy (NASH-GMS)
- Intelligent, Interconnected Microgrid (i2MG) Networks for Equitable, Coordinated Electric Vehicle Charging (Pending)





**Find out more at**  
[http://www.tn.gov/environment/  
energy](http://www.tn.gov/environment/energy)

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