Tennessee Electric Vehicle Infrastructure (TEVI) Formula Program

Deployment Plan

Prepared By:

TDOT Department of Transportation

Department of Environment & Conservation

This draft was submitted to FHWA for approval on July 28, 2022

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July 28, 2022

Secretary Pete Buttigieg
U.S. Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590

Secretary Jennifer Granholm
U.S. Department of Energy
1000 Independence Ave. SW
Washington DC 20585

RE: Tennessee's Electric Vehicle Infrastructure Plan

Mr. Buttigieg and Ms. Granholm,

On behalf of the State of Tennessee, I am providing you with a copy of the State's Electric Vehicle Infrastructure Plan. This Plan was jointly developed between the Tennessee Department of Transportation's Long Range Planning Division, and the Tennessee Department of Environment and Conservation's Office of Energy Programs.

Prior to the NEVI Program, Tennessee had already started to establish a statewide EV infrastructure; so, with the addition of these NEVI Program funds, we are able to accelerate our EV adoption goals, while concurrrently providing our residents and visitors with a sustainable, flexible, and environmentally-friendly fuel option.

There is a lot of excitement across our great nation when it comes to the electric vehicle industry; and we are anxiously looking forward to utilizing these NEVI funds in Tennessee to expand our existing EV charging infrastructure. Thank you again for this opportunity. If you have any questions, please feel free to contact me.

Sincerely,

Matthew Meservy, PE, TDM-CP
Director, Long Range Planning Division
Tennessee Department of Transportation

Tennessee Electric Vehicle Infrastructure Deployment Plan

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List of Abbreviations and Acronyms

Abbreviation	Meaning
AADT	Annual Average Daily Traffic
ADA	Americans with Disabilities Act
AFC	Alternative Fuel Corridors
ARC	Appalachian Regional Commission
BIL	Bipartisan Infrastructure Law
CCS	Combined charging system
CISA	Cybersecurity and Infrastructure Security Agency
CNG	Compressed Natural Gas
CY	Calendar Year
DAC	Disadvantaged communities
DBE	Disadvantaged Business Enterprise
DCFC	Direct current fast charging
DET	Drive Electric Tennessee
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
EJ	Environmental Justice
EMC	Electric Membership Corporation
EV	Electric vehicle
EVITP	Electric Vehicle Infrastructure Training Program
EVSE	Electric vehicle supply equipment
FAQs	Frequently Asked Questions
FAST Act	Fixing America's Surface Transportation Act
FFY	Federal Fiscal Year
FHWA	Federal Highway Administration
IAC	Interagency Consultation Committee
IIJA	Infrastructure Investment and Jobs Act
ITS	Intelligent transportation system
kWh	Kilowatt-hour
LEP	Limited English Proficiency
LPC	Local power company
MM	Mile marker
MPO	Metropolitan Planning Organization
NEVI	National Electric Vehicle Infrastructure
O&M	Opeations and maintenance
OMB	Office of Management and Budget
RFI	Request for Information
RPO	Rural Planning Organization
SBE	Small Business Enterprise
SE REVI	Southeast Regional Electric Vehicle Information Exchange
TCAT	Tennessee College of Applied Technology
TDEC OEP	Tennessee Department of Environment and Conservation's Office of Energy Programs
TDOT	Tennessee Department of Transportation
TEVI	Tennessee Electric Vehicle Infrastructure
TMCs	Transportation Management Centers
TVA	Tennessee Valley Authority
UT	University of Tennessee

Introduction

In November 2021, the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL), was signed into law. This law includes $7.5 billion in dedicated funding to help make electric vehicle (EV) charging stations accessible to all Americans for local and long-distance trips. This funding includes a $5 billion National Electric Vehicle Infrastructure (NEVI) Formula Program to help states create a network of EV charging stations along nationally designated Alternative Fuel Corridors (AFCs). The State of Tennessee expects to receive approximately $13.7 million in federal Fiscal Year (FFY) 2022 and approximately $88.3 million over the next 5 years (FY2022-2026). Each state is required to submit a State EV Infrastructure Deployment Plan to the federal Joint Office of Energy and Transportation that describes its approach to spending NEVI Formula Program funds in accordance with the federal guidance[1].

The Tennessee Electric Vehicle Infrastructure (TEVI) Deployment Plan was developed in accordance with the NEVI guidance and details how the State of Tennessee will deploy EV charging infrastructure and support the establishment of an interconnected network across the nation. Tennessee's plan was developed primarily through coordination between the Tennessee Department of Transportation (TDOT) and Tennessee Department of Environment and Conservation's Office of Energy Programs (TDEC OEP), which functions as Tennessee's governor-designated State Energy Office. Additional details regarding State agency coordination and stakeholder and public engagement are discussed in later sections of this Plan.

Initial NEVI Formula Program funds are directed to Federal Highway Administration (FHWA) designated AFCs for EVs to support the build out of a national network, particularly along the Interstate Highway System. The Fixing America's Surface Transportation (FAST) Act, passed in 2015, called on states to nominate AFCs along their major roadways for fuels including electric, hydrogen, propane, and natural gas. Through Rounds 1-5 of nominations, all major interstates and a portion of US-64 in Tennessee have been designated as electric AFCs and are eligible for NEVI program investments. Additional routes were not nominated in Round 6, which opened in February 2022.

Tennessee has several plans and initiatives focused on EVs that informed the development of the TEVI Deployment Plan:

- Drive Electric Tennessee (DET) is comprised of stakeholders representing State agencies (TDEC and TDOT), electric utilities, Clean Cities coalitions, local governments, universities, EV automotive manufacturers, businesses, and advocacy groups. In January 2019, DET released the first edition of its Electric Vehicle Roadmap for the state, which identified project categories and initiatives for implementation that will increase EV adoption across multiple Tennessee use cases and sectors. In November 2019, DET published its Statewide Electric Vehicle Charging Infrastructure Needs Assessment, which evaluated the condition of Tennessee's EV charging infrastructure and identified geographical areas where new chargers should be placed to promote EV adoption throughout the state.
- The I-40 Alternative Fuel Corridor Deployment Plan was developed by TDOT and TDEC in November 2020 to plan for the deployment of alternative fuel vehicle refueling and charging facilities along the I-40 interstate corridor in Tennessee and the border states of North Carolina and Arkansas. The plan focused on compressed natural gas (CNG) and EV infrastructure and serves as a guide for agencies and stakeholders across the Southeast to deploy future stations. A

[1] NEVI Formula Program Guidance -- The National Electric Vehicle Infrastructure (NEVI) Formula Program Guidance (dot.gov).

TDOT-funded follow-on effort seeks to further identify needs and opportunities along I-40 related to the gaps, specific exits, potential partners, and the needed criteria on which proposed infrastructure sites will be considered. This work is being managed by one of the state's two Clean Cities coalitions, the East Tennessee Clean Fuels Coalition.

- The Fast Charge TN Network: TDEC and the Tennessee Valley Authority (TVA) are partnering to develop a statewide EV network of direct current fast charging (DCFC) stations. This program, which will add approximately 40 new charging locations along Tennessee's interstates and major highways, is funded by the Volkswagen Settlement Environmental Mitigation Trust, TVA, and program participant cost share, and is not exclusive to the nationally designated AFCs. (More information on this program is included within the State Agency Coordination section of the TEVI Deployment Plan.)

Past planning efforts formed a foundation of collaboration between TDOT, TDEC, and other key stakeholders. Continued stakeholder coordination and engagement proved essential in the development of the TEVI Deployment Plan. This resulting Plan serves as a crucial building block to guide State agencies and stakeholders to efficiently deploy EV charging infrastructure in Tennessee and support the national EV charging network.

Dates of State Plan for Electric Vehicle Infrastructure Deployment Development and Adoption

The TEVI Deployment Plan was developed from March to August 2022, following the announcement of the NEVI Formula Program Guidance from FHWA. Below is a timeline for Plan development and adoption:

- March to June: Agency and stakeholder collaboration on key Plan components
- May: Stakeholder and Public Engagement
- June - July: Analysis and Plan Development
- August 1, 2022: Tennessee Plan submitted to federal Joint Office of Energy and Transportation
- September 30, 2022: Anticipated date of FHWA Approval
- December 31, 2022: Based on federal guidance and state procurement options, determine best procurement method for Tennessee's NEVI funds and draft procurement advertisement.
- March 31, 2023: Finalize procurement and work to advertise and award procurement method for implementing Tennessee's EV Charging Program.
- March 31, 2023: Develop necessary program requirements, oversight and management structure, reporting, etc. for successful deployment (State oversight of program), including continued collaboration and partnership with TDEC on the Fast Charge TN Network.
- June 30, 2023: Award procurement and manage implementation of program.
- June 30, 2023: Report on first year program achievements and percent of designated Alternative Fuels Corridors meeting 'corridor ready' status as well as any other program performance measures.

State Agency Coordination

State Agency Coordination - TEVI Deployment Plan Development

Following the release of the NEVI Program Guidance in February 2022, TDOT and TDEC formed an interagency working group ("Project Team") to collaborate on the TEVI Deployment Plan. The group met on a weekly or bi-weekly basis to develop and implement a public engagement strategy (i.e., stakeholder survey and public information sessions). The Project Team built off the efforts and lessons learned from the Fast Charge TN Network, such that NEVI-funded sites will continue to support corridor infrastructure network build out and will fill in remaining gaps along FHWA-designated AFCs.

Additional Background: Fast Charge TN Network

In February 2021, TDEC and the TVA announced a partnership to develop a statewide EV DCFC network to power the growth of EVs across Tennessee and reduce barriers to transportation electrification. Specifically, the two signed an agreement to collaborate and fund a network of DCFC stations every 50 miles along Tennessee's interstates and major highways. This "Fast Charge TN Network" will add approximately 40 new DCFC sites along prioritized corridor infrastructure gaps, more than doubling Tennessee's existing fast charging network for EVs. For reference, as of June 2022, there were 33 DCFC sites currently operating in Tennessee that are open to all consumers and support both charging standards common to EVs.

TDEC and TVA are leveraging various funding sources to support the development of the fast charging network with an anticipated project cost of $13.5 million. TDEC has committed 15%, the maximum allowable, of the State's Volkswagen Diesel Settlement Environmental Mitigation Trust allocation to fund light-duty EV charging infrastructure. Approximately $5.2 million from this fund is expected to be allocated to DCFC infrastructure along corridors. The remainder of the project will be funded by TVA, other program partners, and program participant cost share.

Maximizing Opportunities to Utilize U.S.-made EV Supply Equipment

TVA released a Request for Information (RFI) on April 7, 2021, to establish minimum technical specifications for equipment and operations under forthcoming EV fast charging funding solicitations. Responses to the RFI were used to create a list of providers offering DCFC supply equipment; operating network back-end options; and related program support services. Future subrecipients and/or contractors of the Fast Charge TN Network and TEVI Programs will be able to reference this list of providers when building a DCFC network along major travel corridors over the next several years. The RFI was also used to try to identify FHWA Buy America compliant DCFC infrastructure. As of June 2022, no vendor has been able to produce supporting documentation to demonstrate compliance and many have confirmed that they are in fact not compliant with FHWA Buy America requirements.

Following the passage of the IIJA, a number of EV charging infrastructure vendors have made public announcements regarding plans to manufacture FHWA Buy America compliant equipment within the U.S. In February 2022, the White House issued a Fact Sheet, which highlighted a new EV charger manufacturing facility in Tennessee that is projected to manufacture 30,000 Buy America-compliant DCFCs annually. Under the NEVI Program, the Project Team will comply with all applicable Buy America requirements and will maximize opportunities to utilize U.S. -made EV supply equipment.

Public Engagement

A comprehensive public engagement plan was developed by the Project Team in April 2022 to ensure meaningful public engagement in compliance with the NEVI Formula Program Guidance. The engagement plan set forth a list of activities, including the development of a TEVI specific website, the recording and publishing of an informational webinar, execution of a series of in-person public engagement sessions, and solicitation of feedback through a public survey. Following initial plan development, a draft TEVI Deployment Plan was shared with key stakeholders (the East Tennessee Clean Fuels Coalition, Middle-West Tennessee Clean Fuels Coalition, TVA, Tennessee Technological University, and local government representatives from Nashville, Memphis, Knoxville, and Chattanooga) for review; the Project Team solicited comments from these stakeholders on the draft plan in early July 2022 and incorporated stakeholder feedback into the plan before finalization.

Stakeholders Involved in TEVI Plan Development

Throughout 2018, a core team of stakeholders—including State agencies (TDEC and TDOT), electric utilities, cities, universities, Clean Cities coalitions, EV and related parts manufacturers, businesses, and advocacy groups—worked together on the development of a shared vision for electric transportation in the state, which includes goals and guiding principles for increased EV adoption over the next 5-10 years. Together, these stakeholders comprise the statewide EV consortium known as Drive Electric Tennessee (DET). DET members together formed an invaluable resource of knowledge and perspective to inform the TEVI Deployment Plan development.

In addition, TDEC OEP sends a monthly newsletter to a maintained listserv of approximately 5,000 subscribers on issues related to energy news, upcoming events, funding opportunities, and resources. Subscribers to this newsletter include members of the public and key stakeholders involved in the energy, transportation, EV, and related sectors. Furthermore, a targeted email list was developed to specifically target entities identified in the NEVI Formula Program requesting feedback to inform the TEVI Deployment Plan, including a link to participate in a public survey, details regarding in-person engagement sessions, and a link to the recorded webinar. Key stakeholder groups including DET, East Tennessee Clean Fuels, Middle-West Tennessee Clean Fuels, the Tennessee Advanced Energy Business Council, as well as Metropolitan Planning Organizations (MPOs) and Rural Planning Organizations (RPOs), further supported this outreach by sharing the information with their respective listservs. Tennessee also worked closely with MPOs and RPOs to disseminate information and gather feedback from local and county officials.

Additional public engagement was undertaken with the support of TDOT's Community Relations Division. TDOT ran a social media campaign on Facebook and Twitter that included general graphics to get involved and to advertise the public meetings and survey. Newspaper advertisements announcing the public meetings and survey were published in five minority focused newspapers in Nashville and Memphis. Three of these newspapers target the African American community and two target the Hispanic community and were translated into Spanish. Throughout the stakeholder and public engagement period, several media outlets covered the plan development and associated public meetings including Inside of Knoxville, Local 3 News in Chattanooga, and WBBJ Channel 7 in Jackson.

Attendees at public meetings and survey participants were asked to identify their organization. While over 50% of attendees and participants identify as members of the public, input was further received from a

range of entities, including the following (organizations in **bold** help address the goals of the federal Justice40 Initiative identified in Executive Order 14008):

- Chambers of Commerce
- Clean Cities Coalitions
- **Community-based organizations**
- Development Districts, regional planning & economic development organizations
- DET
- Electric Utility Providers
- Emergency management and public safety agencies
- Energy, Environmental, and Planning Consulting Firms
- Energy & Solar Companies
- **Environmental justice (EJ), equity, and community advocacy organizations**
- EV Advocacy Groups
- Gas Station Owners and Operators
- **Human Resources Agencies**
- Investors in EV Charging Infrastructure
- Local Governments
- MPOs
- Neighborhood and Homeowners Associations
- **Non-profit organizations involved with Clean Energy**
- Other Public Utility Providers
- Private Fleet Operators
- Private Sector EV Charging Station Owners & Network Operators
- **Public Transit Providers, in urban and rural areas**
- Real Estate Industry Groups
- RPOs
- Small Business Owners, **including Minority- and Women- Owned Businesses**
- Tennessee Department of Economic and Community Development
- TDEC
- Tennessee Department of Human Resources
- TDOT
- TVA
- University of Tennessee (UT)
- UT Extension Services
- Vehicle Manufacturers

In total, as of June 2022, 5,461 stakeholders received information on the TEVI Deployment Plan process via email blast, 109 attended an in-person public engagement session, 1,014 stakeholders responded to the TEVI Deployment Plan survey, and 352 stakeholders viewed the online webinar.

Public Outreach

Outreach to key stakeholders and the general public was implemented through several avenues, including through a project specific website, a recorded webinar, in-person engagement sessions, other public presentations, and a public survey.

Website

A publicly accessible website dedicated to NEVI and the TEVI Deployment Plan (www.tn.gov/evplan) was developed as the primary landing page for public outreach during plan development. The website includes background information about the NEVI Formula Program, a map of Tennessee's designated AFCs, and key stakeholders involved in transportation electrification in Tennessee. Additionally, a recorded webinar, public survey link, in-person meeting information, and Frequently Asked Questions (FAQs) were updated on the website as new information became available. This website will continue to be used as a resource for disseminating information, including the draft and approved Plan as well as relevant news and resources.

Recorded Webinar

The Project Team recorded a virtual presentation, which provided an overview of the NEVI funding program, a background on EVs and associated charging infrastructure, the current state of electrification in Tennessee, and key considerations for the TEVI Deployment Plan. The presentation was published on the TEVI website. Presentation slides were also made available to download in English and Spanish.

Social Media

TDOT Community Relations conducted a month-long social media campaign for the TEVI Deployment Plan. The social media posts included seven graphics to highlight the TEVI Deployment Plan announcement, ways in which stakeholders could join the conversation, a survey promotion, save the dates for in-person engagement sessions, and three additional graphics promoting the meetings in each region.

The campaign started on April 25 with the initial announcement, and postings were published five days a week through the end of May. In total, the Project Team saw over 34,700 impressions on Twitter, 97,000 individuals reached via Facebook, and 297 active engagements in response to social media posts on Facebook.

In-Person Engagement Sessions

A series of nine in-person public engagement sessions were conducted during the month of May. The in-person sessions consisted of the same presentation as the recorded webinar, with the addition of a listening session for attendees to pose questions and comments. Feedback was collected in several ways; attendees had the opportunity to fill out a questionnaire, write questions on note cards, and ask questions directly to presenters. Questions and comments were addressed by presenters and/or other TDOT and TDEC staff during the sessions and via FAQs published to the above-referenced website. Attendees were also provided with the link to take the public survey.

Meeting locations and venues were chosen based on proximity to AFCs, with additional consideration given to areas designated as U.S. Department of Energy (DOE)/U.S. Department of Transportation (DOT) Interim Guidance Disadvantaged Community Areas within the Electric Vehicle Charging Justice40 Map. All nine engagement sessions were held either within or adjacent to a Disadvantaged Community. Additionally, public engagement sessions were held in each of the state's four major cities and in five rural areas near an AFC. To maximize public engagement, the sessions were held outside of typical business hours (e.g., in the evenings), at publicly accessible venues. A total of 109 individuals attended the in-person engagement sessions. The map below shows the meeting locations in relation to designated AFCs and the DOE/DOT Interim Guidance Disadvantaged Community Areas.

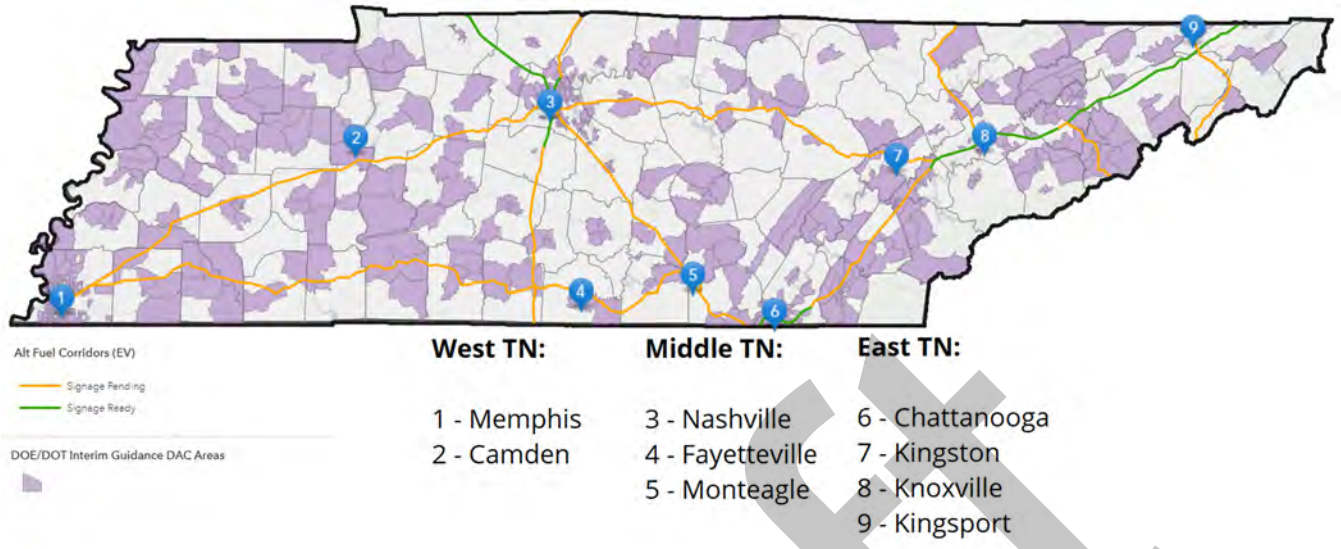

Figure 1: Map showing locations of NEVI public engagement sessions, split up by Grand Division (i.e., East, Middle, and West), coupled with DOE/DOT DAC areas and designated AFCs for EV.

In addition to the nine in-person public engagement sessions, TDOT and/or TDEC representatives presented on the TEVI Deployment Plan at several other conferences, public meetings, and/or events, including for the Tennessee Interagency Consultation Committee (IAC) on Air Quality, MPO and RPO meetings in regions located along the designated AFCs, the Thrive Freight Mobility Coalition, Tennessee Environmental Show of the South, American Public Power Association Annual Meeting, American Council of Engineering Companies (ACEC) of Tennessee–TDOT Partnership Conference, the Smart Factory Institute, and the Tennessee Advanced Energy Business Council – Statewide Automotive Innovation Roundtable.

Additionally, the East Tennessee Clean Fuels Coalition and Drive Electric TN held a planning workshop on community charging infrastructure needs and considerations in the 14-county Upper Cumberland region of Tennessee, including along the I-40 corridor. TDOT and TDEC representatives were in attendance to provide information on the TEVI Deployment Plan process and to gather feedback from workshop participants on potential locations within the region that could meet NEVI criteria as infrastructure site hosts.

Public Survey

TDOT and TDEC developed a survey to collect information from stakeholders and the public to inform the TEVI Deployment Plan. The survey was open to the public from April 26, 2022, through May 31, 2022, and received 1,014 responses. The survey was also translated into Spanish for increased accessibility. Seventy-six percent of participants identified as Tennessee residents or organizations that operate in Tennessee. Participants lived or worked in 274 different ZIP codes, across 88 different counties. Participants could select multiple identification types, but a majority of participants (64%) identified only as individuals/members of the public.
and **Error! Reference source not found.** summarize survey participant information. Several questions were analyzed to support key themes for incorporation within the TEVI Deployment Plan.

	Row Labels	**State**	**Count of Survey Participants Responding that they Live or Work in This County**
1	Knox County	TN	271

	Row Labels	State	Count of Survey Participants Responding that they Live or Work in This County
2	Davidson County	TN	156
3	Shelby County	TN	112
4	Hamilton County	TN	63
5	Williamson County	TN	46
6	Washington County	TN	42
7	Rutherford County	TN	30
8	Cumberland County	TN	28
9	Blount County	TN	23
10	Anderson County	TN	21
11	Hamblen County	TN	19
12	Sullivan County	TN	16
13	Putnam County	TN	15
13	Wilson County	TN	15
14	Bradley County	TN	12
14	Sevier County	TN	12
14	Montgomery County	TN	12
15	Fayette County	TN	10

Table 1: Top 15 Counties with Greatest Number of Survey Participants

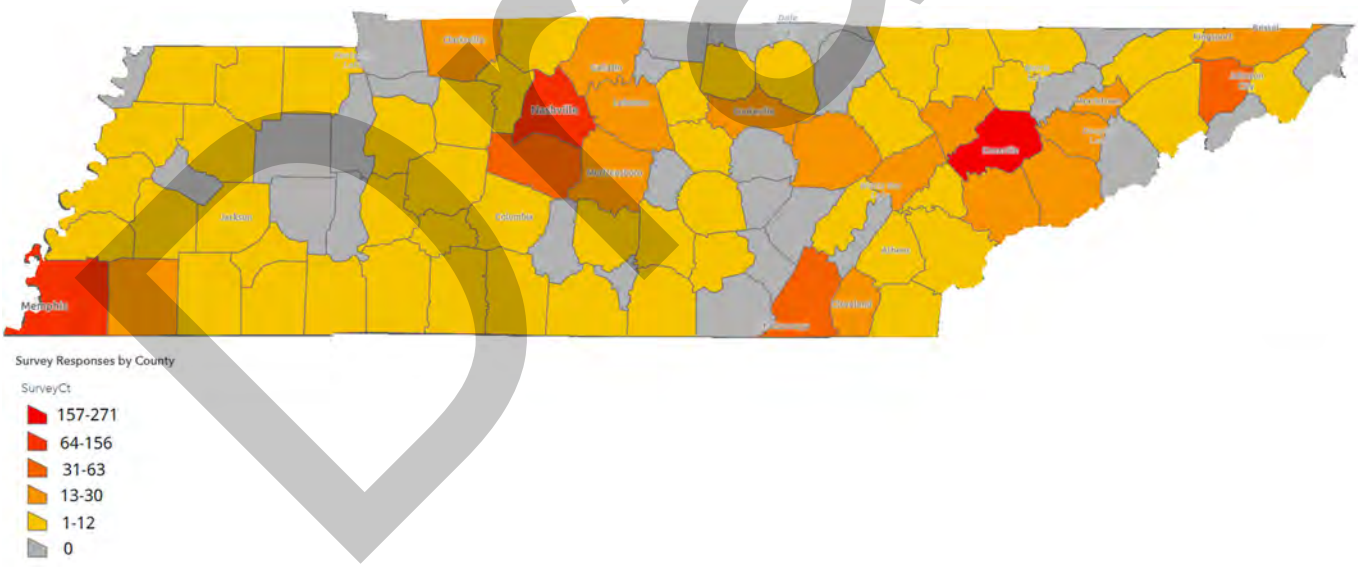

Figure 2: Heat map displaying number of survey responses by county.

Participant Type	Count	Percent of Total Participants
Individual/ Member of the Public	646	64%
State and Federal Government	85	8%
Potential or Current EV Site Host/ Owner	67	7%
Local Government/ MPO or RPO	57	6%
Community Advocacy Group (EV, EJ, etc.)	39	4%

Participant Type	Count	Percent of Total Participants
Manufacturer (Vehicle, EV chargers, etc.)	30	3%
Electric Utility	17	2%
Minority- or women-based Organization	17	2%
Freight or Logistics Industry	11	1%

Table 2: Survey Participant Representation

Participants were asked to rank 10 criteria that Tennessee should use in selecting or prioritizing sites for EV charging infrastructure. Eighteen percent of participants ranked "Vehicular Traffic (Annual Average Daily Traffic, or AADT)" as the first priority, suggesting that installation of chargers where there is demand is a top priority. Notably, the criterion that was ranked number one the least was "Room for Future Expansion," with only 5% of participants ranking this criterion first. This range, 5% to 18%, is relatively small, indicating that all criteria listed were important to a similar number of participants and should therefore be considered when choosing EV charging locations.

shows all of the potential criteria and the percentage of participants who ranked each criteria number one. Among all participants who answered the question, the criteria most commonly ranked in the top 3 were "Vehicular Traffic (AADT)," "Point of Interest / Destination," and "Amenities Nearby." Figure 4 provides a summary of criteria ranked in the top 3 for participants below.

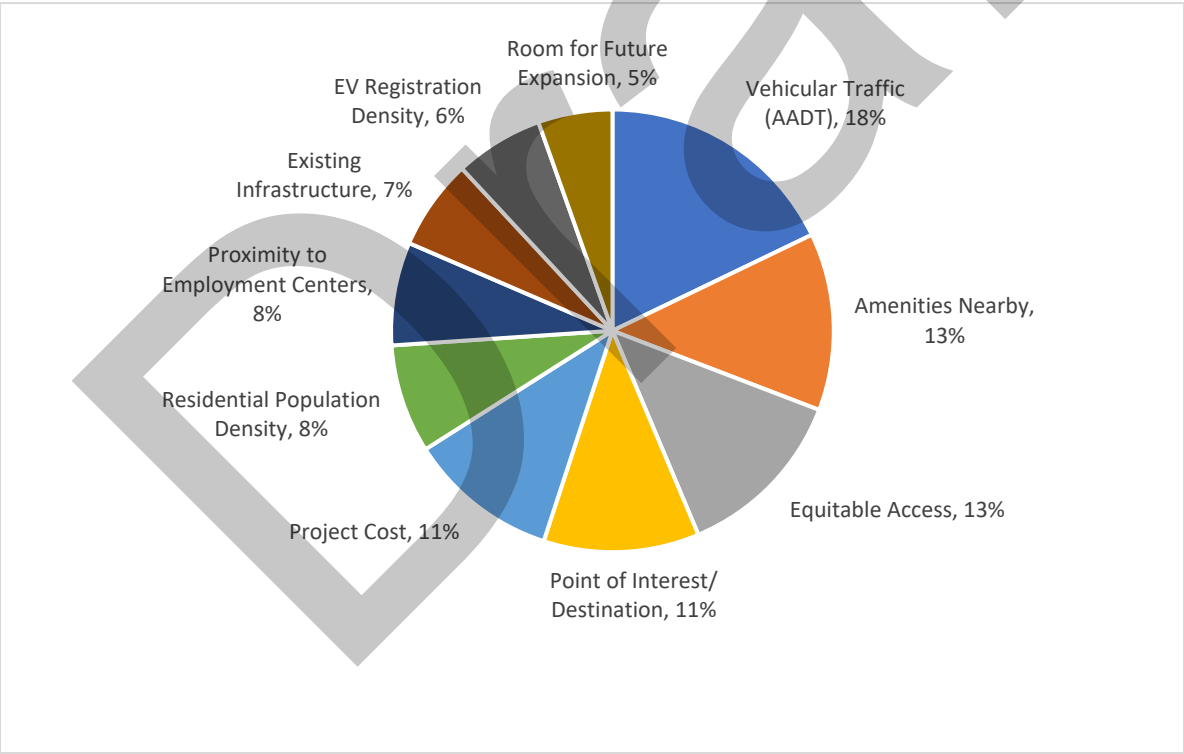

Figure 3: Percent of Participants Ranking Criterion as #1 Priority for EV Charging Locations

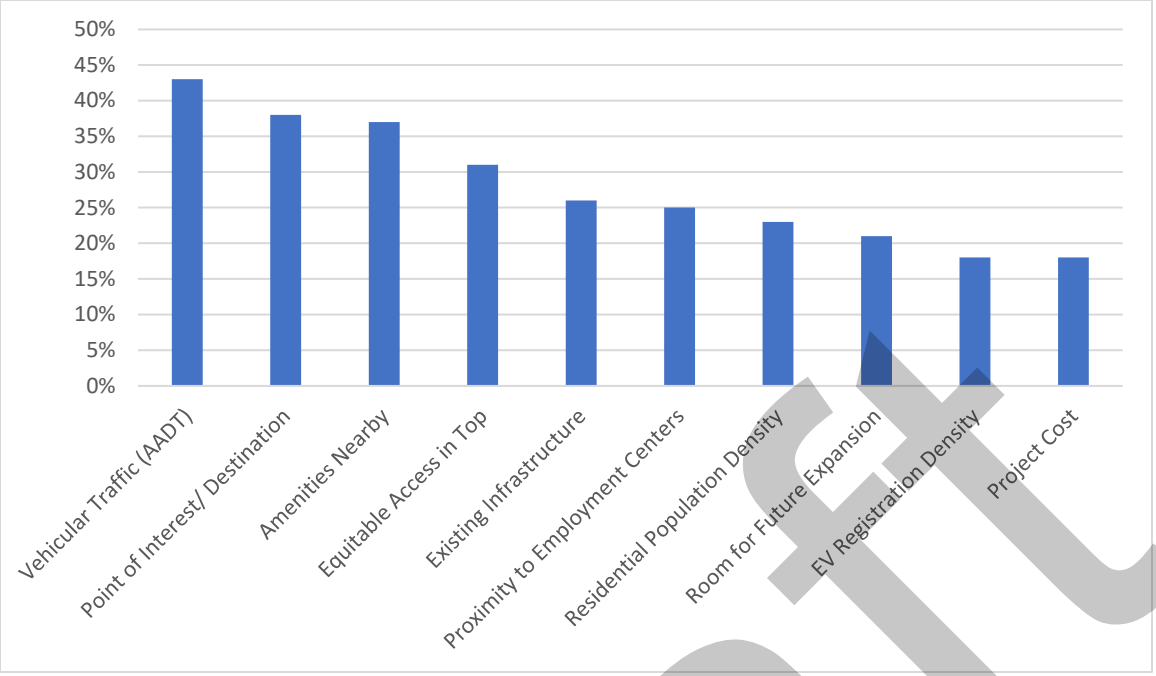

Figure 4: Percentage of Participants Ranking Each Criterion in Top Three for Charging Station Siting Priority#

Two questions were asked to specifically address equity considerations tied to EV charging infrastructure deployment. When asked to select three out of six options to enhance benefits for disadvantaged communities, 58% of participants ranked "engaging with community organizations" in the top three. When only considering participants who identified as part of a community advocacy group, 94% ranked "engaging with community organizations" in their top three, followed by "building chargers near apartments or multi-unit dwellings" at 53%. This finding is consistent with published research from leading equity-focused advocacy groups such as the Greenlining Institute, which highlights coordinating and partnering with community-based organizations as an essential early step in effective EV policymaking. Figure 5 below summarizes responses to this question from all participants who answered the question as well as from just participants who identified as community advocacy groups.

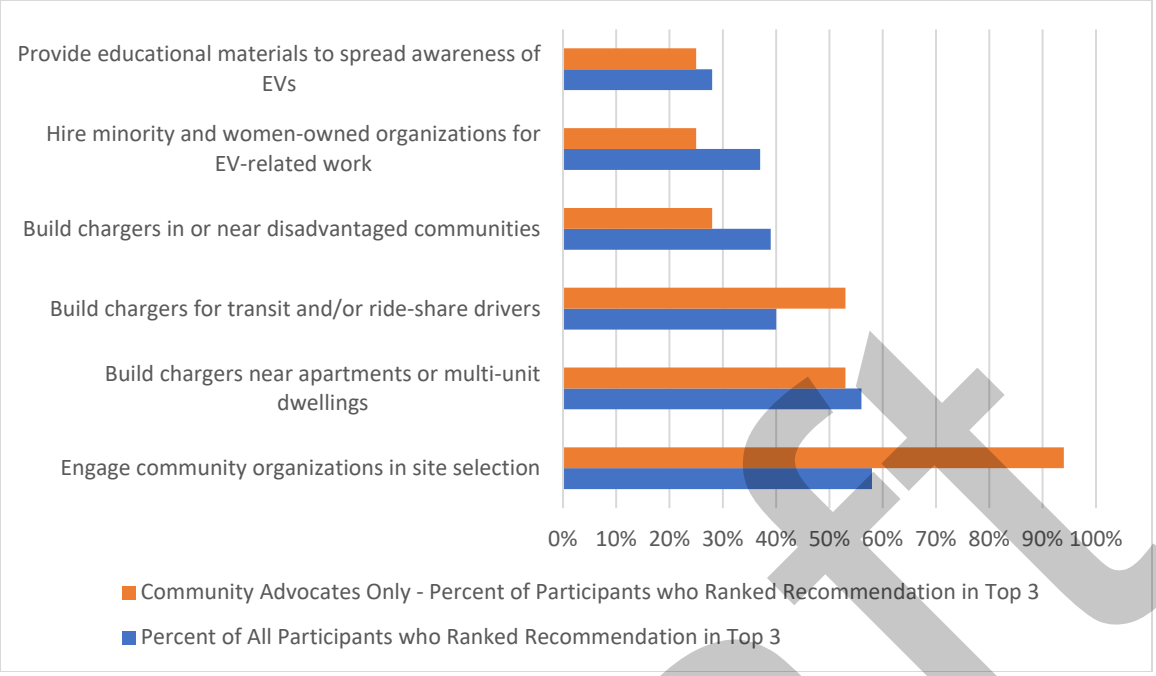

Figure 5: Recommendations on How Tennessee can Ensure Funding Benefits Underserved Communities

The survey results indicate that planning for future charging capabilities is important to stakeholders and the public. When asked whether Tennessee should build charging stations that can charge medium- and heavy-duty vehicles, 73% of participants said yes. This increases to 80% when just considering responses from participants who identified as "manufacturers (Vehicle, EV chargers, etc.)." Notably, upcoming EV models will be capable of charging at increasingly higher power levels. There are already many models capable of charging above 150 kW, which is the NEVI minimum power level requirement per port, and some upcoming models will be capable of charging at 350 kW. Further, when asked how Tennessee should plan for future expansion, and given the option to state that they should not do so, less than 2% did not support future proofing. Selecting larger locations that have room for more chargers, coordinating with utility organizations to future-proof utility infrastructure, and considering medium and heavy-duty vehicles were all popular answers, with 38%, 35%, and 25% of participants who answered the question selecting each option, respectively.

The survey also asked an open-ended question about the operation and maintenance standards that should be required of site hosts and/or charging station owners/operators. Twenty-two percent of participants who answered the question recommended some sort of minimum uptime requirement[2] or minimum response time requirement to fix equipment that is broken or malfunctioning. Safety and cleanliness were also common responses, with 17% of participants mentioning safety and 13% mentioning cleanliness. Notably, 4% of participants who answered the question referenced gas stations and requested that the EV charging experience be similar in terms of reliability of equipment, safety, and amenities. Other themes mentioned by less than 5% of participants included the enforcement of EV-only parking or parking-only-while-charging rules.

Participants were asked to provide open-ended responses to the question, "What types of charging station business and/or ownership models should Tennessee allow under the NEVI program?" Among participants who identified as a "Potential or Current EV Site Host/ Owner," there was a variety of

[2] "Uptime" is defined as the percentage of time over a calendar year that charging services are available or in-use.

recommendations and comments. However, one theme that emerged was a recommendation to not restrict NEVI funded projects to a specific business model, with 18% of this stakeholder group providing this feedback.

The survey proved to be a good tool to reinforce current knowledge about EV charging infrastructure priorities and glean a greater understanding of public and stakeholder priorities. The survey utilized a mix of multiple choice, ranking, and open-ended questions, which allowed participants a variety of ways to share input and provide feedback. Additionally, participants were shown a map with the designated AFCs and were asked to propose up to 3 locations for EV charging stations. The results from the survey questions and mapping will be essential beyond the scope of this plan's development. The Project Team intends to continue its analysis to inform future planning and coordination as specific sites are identified and prioritized.

Plan Vision and Goals

Plan Vision

The TEVI Deployment Plan outlines a multi-year infrastructure development strategy that will enable current and future drivers of EVs to confidently travel from one end of the state to another.

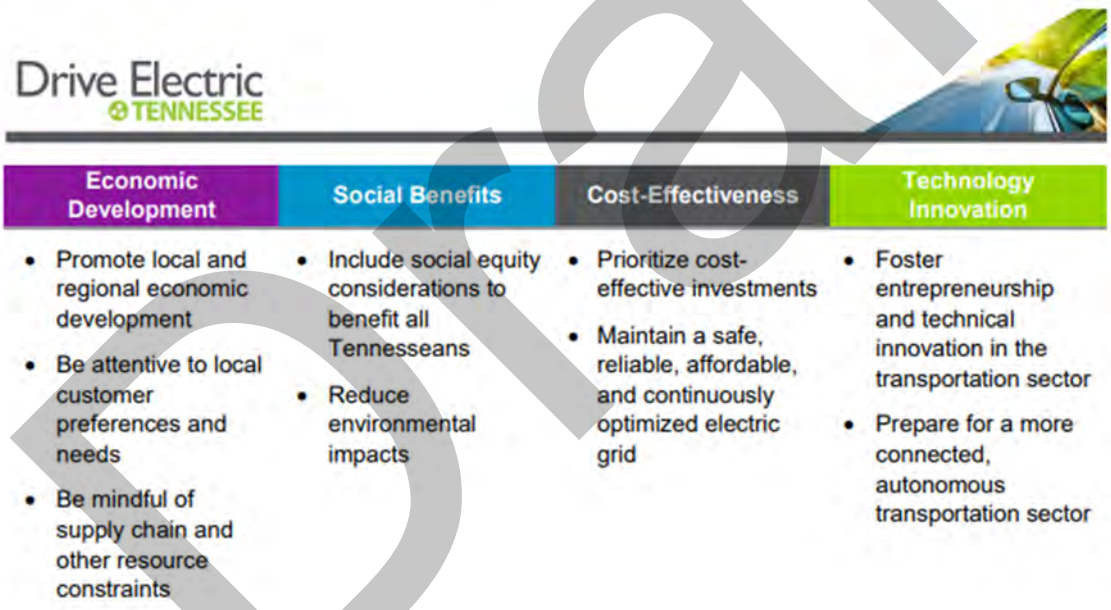

Figure 6: Drive Electric TN Guiding Principles

Consistent with the Guiding Principles outlined within the DET Roadmap (Figure 6 above), the vision for the TEVI Deployment Plan is to develop a safe, convenient, accessible, reliable, and equitable EV charging network that promotes the state's economic vitality and environmental stewardship while improving EV "range confidence" and supporting EV adoption throughout Tennessee. Greater adoption of EVs, which have zero tailpipe emissions and leverage TVA's clean electricity generation mix,[3] will

[3] TVA provides electricity to 99.7% of the service territory in Tennessee. https://tva-azr-eastus-cdn-ep-tvawcm-

provide many benefits for Tennesseans as they can play a significant role in reducing transportation-related emissions, improving air quality, and increasing transportation sector efficiency and resiliency. The development of a NEVI-compliant statewide EV charging network will expand accessibility of critical light-duty EV charging for all Tennesseans and regional travelers. These fast chargers will be available from high density markets in urban areas to underserved markets in rural or economically distressed areas.

High Level Goals

- **Complement Existing/Planned Infrastructure:** NEVI-funded infrastructure will seek to complement existing as well as planned (e.g., Fast Charge TN network infrastructure that will be installed in the next 1-3 years) infrastructure, minimizing duplication but adding redundancy where it makes sense (providing multiple charging options along a given travel route, particularly in areas with higher anticipated EV charger utilization).
- **Upgrade Existing Infrastructure Sites Where Possible to Maximize Impact of NEVI Funding:** The Project Team will evaluate existing charging infrastructure that could be upgraded to meet NEVI technical specifications as potential sites for prioritization, to achieve full "build out" of designated corridors with greater efficiency, thus allowing the State to unlock any remaining, unobligated NEVI funds for alternate infrastructure sites and use cases.
- **Future-Proof Infrastructure Sites:** Charging infrastructure sites will be developed with future expansion in mind, in order to minimize costs that could be incurred at a later date to accommodate such expansion. In addition to the available site area, future expansion shall apply to sizing of electrical distribution equipment, including, but not limited to, transformers, concrete pads, electric panels, disconnects, size and number of conduits installed, etc. Additionally, the Project Team will encourage the installation of infrastructure that exceeds the minimum power levels required by the NEVI Program (e.g., encouraging the purchase and installation of one 350 kW charger at each location), in order to support the future acceptance of higher-powered charging by vehicles in the years to come.
- **Consideration of Multiple Vehicle Types/Sizes:** Charging infrastructure sites will be designed to accommodate a variety of vehicle types, including medium and heavy-duty vehicles, and, where feasible, will seek to include at least one charger at each site providing a pull-through space for passenger vehicles pulling trailers or for larger recreational vehicles. Additionally, the Project Team will evaluate and prioritize sites that may be viable as mobility hubs that address charging needs of light-duty passenger vehicles and medium- and heavy-duty transit applications.
- **Promote Multimodal Accessibility:** Where feasible, locations will be selected and/or developed to promote easy access to nearby amenities (e.g., walkability via sidewalks) or to encourage multimodal transportation alternatives (e.g., biking, scooter, transit use, etc.).
- **Standardization:** Across the charging network to be developed, the Project Team will seek to provide a consistent charging experience with adequate lighting, signage, and instructions for reporting charger outages. Additionally, cable length will be considered to accommodate vehicles with charge ports in various vehicle locations.
- **Contribute to a Cohesive Regional Network:** The Project Team will coordinate with regional partners that share a border with Tennessee, to ensure that infrastructure placed near state lines will complement rather than duplicate existing or other planned infrastructure along the same corridor in other states.
- **Ensure Ongoing Infrastructure Operation and Maintenance:** Network reliability will be a critical element to the success of the NEVI Program. The obligation to operate and maintain

prd.azureedge.net/cdn-tvawcma/docs/default-source/about-tva/fact-sheets/2021-3722-state-fact-sheet-fy20_tn_fnldbf0f065-e017-40c7-81a8-6c85d8e94351.pdf?sfvrsn=364d25b_3.

infrastructure will be incorporated into subrecipient contracts; the Project Team will monitor compliance with these requirements via ongoing reporting and/or onsite monitoring, to ensure that chargers in the network are functioning and meeting demand from corridor travelers.

- **Maximize Job Creation and Workforce Development Opportunities:** Tennessee supports investments that expand good paying jobs, increase job access, improve job quality, provide strong labor standards, strengthen local/regional economies, and develop an equitable and diverse workforce in building EV charging infrastructure. In meeting NEVI program regulations, the Project Team will engage the appropriate labor and workforce entities, such as the Tennessee Department of Labor and the Tennessee Colleges of Applied Technology, to evaluate strategies for successful implementation of this Plan. Where possible, the Project Team will seek to grow and diversify the local workforce, and will leverage geographic, economic, or other hiring strategies to maximize job creation and economic benefits.
- **Drive Awareness through Education and Outreach:** Engagement materials, signage, and awareness campaigns will be developed to educate the public on the locations and availability of chargers, good charging habits, equipment capability, and ways to provide feedback on the network. The Project Team will also leverage existing DET social media channels, such as the DET Facebook group (1,600 followers as of July 2022), to disseminate information. These initiatives will drive user interest and awareness as well as create pathways for customer input and network improvement. Through workshops and outreach events intended to reach disadvantaged communities, the Project Team will further seek to understand ways in which charger installations are meeting or benefitting the needs of the communities they serve while simultaneously providing access to all EV drivers across the state. Inputs derived from such engagement will further inform ongoing infrastructure installations under the NEVI Program.
- **Evaluation of Utilization Data to Inform Future Infrastructure Development:** The Project Team will gather data on charger utilization from station owners, operators, and/or site hosts and will adjust the network as needed based on this information. The data will be valuable not only for the Project Team, but also for other key stakeholders involved in the EV infrastructure space, as utilization data will be critical to inform analysis and decisions regarding future market expansion.
- **Minimize Cybersecurity Risks of an Interconnected EV Infrastructure Network:** The Project Team will require subrecipients to maintain compliance with current and future cybersecurity requirements as well as to protect consumer data and personally identifiable information.

Timeline

Year 1 will focus on building out FHWA-designated AFCs to meet NEVI guidance and related requirements. Approximately 20-22 new charging infrastructure sites will be needed to satisfy the 50-mile maximum distance requirement from FHWA. The 20-22 sites will complement 10 existing NEVI-compliant sites installed by the private sector and a handful of planned sites resulting from the Fast Charge TN Network that are anticipated to either meet NEVI requirements or be built to be partially in compliance (e.g., two 150kW chargers located no more than one travel mile from a designated corridor). A full list of existing Level 2 and DCFC stations along the FHWA-designated AFCs can be found in the Appendix. To minimize duplication, these efforts will include iterative evaluations to assess both Fast Charge TN Network and private sector infrastructure development outside of the NEVI Program. Multiple vendors may be engaged to complete the work. TDOT will balance contractual agreements to ensure that both rural and urban projects are moving forward at a comparable rate.

Year 2 will focus on filling any remaining corridor gaps that may exist after Year 1. As the charging network expands to more rural areas, different equipment needs may be identified due to varying power

supply. For example, a combination of solar/battery equipment may be utilized to minimize grid impacts and to ensure adequate power for 4 units rated at 150kW per unit.

Once the Project Team has achieved full build out of the FHWA-designated AFCs with NEVI-compliant stations, the Project Team will conduct a second round of public engagement and listening sessions to gather feedback on additional corridors or alternative use cases (e.g., community charging, rural destination charging, etc.) that should be pursued with remaining NEVI funding. The Project Team will then update and/or amend the TEVI Deployment Plan accordingly.

Outcome-Oriented Goal with a Quantified Target

The Project Team will seek to achieve full corridor build out of NEVI-compliant stations along all FHWA-designated AFCs by the end of Year 2 of the NEVI Program (i.e., by the end of FFY 2023-2024).

Contracting

Types of Contracts

Several different contracting models exist to help expand the current charging infrastructure across the state. Some examples include end-user ownership (e.g., public or private landowners), local power company (LPC) ownership, and third-party or commercial ownership. Successful public-private partnerships for EV stations currently exist across the region and can be used as a starting model when procuring these statewide contracts.

Tennessee's approach to contracting will - in most cases - involve an arrangement with experienced third-parties, which could include EV charging vendors and/or teams of professionals. Each subrecipient and/or contractor would be required to provide proof of the necessary qualifications using in-house capabilities or via agreements with multiple entities that have specific experience in the delivery cycle, such as real estate procurement and/or leasing, site design, construction, etc. This contracting approach is expected to offer the most flexibility to the Project Team when seeking the proper level of professional services needed to develop NEVI-compliant charging infrastructure.

As the State reaches "build-out" of NEVI-compliant charging infrastructure along its FHWA-designated AFCs, additional contracting opportunities could be used or leveraged. For example, to help increase charging station density within larger urban areas, the Project Team may issue grants to individual property or business owners to install charging stations. Alternatively, the Project Team could set aside a portion of funds to provide focused grant opportunities to local governments, LPCs, or to other EV charging vendors.

Potential Contracting Strategies / Coverage Areas

There are several ways the Project Team could distribute these contracts. The first would be to procure one contract for the entire state; however, this is highly unlikely. The concern with a single statewide contract would be the subrecipient's or contractor's ability to have enough manpower and capacity to simultaneously provide implementation services across an entire state.

Another option would be to set up contracts based on LPC service area. The benefit of this approach would be to create consistent communication and collaboration between the subrecipients and/or contractors and the LPCs. By limiting one subrecipient or contractor to an LPC within its service territory, design and implementation schedules could be streamlined. There are currently 48 LPC services

areas that fall along the FHWA-designated AFCs. Refer to Table 4 for a detailed list of the LPCs that service the geographic areas along the corridors.

A third option would be to use Tennessee's Grand Divisions as the contract areas. As mentioned before, Tennessee is divided into three unique areas (East, Middle, and West), and each have their own unique topography and land uses. This is an attractive option because it maintains a smaller group of subrecipients and/or contractors for the Project Team to monitor and would reduce the number of potential charging station spacing conflicts near the Grand Division borders.

A fourth option would be to solicit and award contracts by designated AFC or by AFC segment. This has similar benefits as awarding contracts based on LPC service area but could potentially provide a more comprehensive approach to gap-filling along a given route. Another benefit of the corridor approach is the elimination of coordination between LPC service areas. In other words, subrecipients and/or contractors would not have to work with subrecipients and/or contractors in adjacent LPC areas to establish or maintain the NEVI spacing requirements between stations. Instead, one subrecipient and/or contractor could work within multiple LPC service areas to establish the charging station network.

Following submission and receipt of FHWA approval of the TEVI Deployment Plan, the Project Team will conduct a comprehensive review of all available contracting mechanisms and approaches and will make a determination as to the preferred pathway forward to allow for successful implementation of the TEVI Deployment Plan.

Existing and Future Conditions Analysis

State Geography, Terrain, Climate and Land Use Patterns

Tennessee Geography

Tennessee is in the Southeastern United States and is mostly in what is considered part of the Upland South, with the eastern third being part of Appalachia. Tennessee covers roughly 42,143 square miles, of which 926 square miles, or 2.2%, is water. It is the 16th smallest state in terms of land area and is about 440 miles long from east to west and 112 miles wide from north to south. Tennessee is geographically, culturally, economically, and legally divided into three Grand Divisions: East, Middle, and West. As culturally and historically distinct regions, the Grand Divisions are sometimes called "The Three Tennessees." The state borders eight others: Kentucky and Virginia to the north, North Carolina to the east, Georgia, Alabama, and Mississippi to the south, and Arkansas and Missouri to the west. It is tied with Missouri as the state bordering the most other states. The boundary between Eastern and Central Time Zones runs through the Cumberland Plateau. Tennessee's eastern boundary follows the highest crests of the Blue Ridge Mountains, and the Mississippi River forms its western boundary. Due to flooding of the Mississippi River that has changed its path, the state's western boundary deviates from the river in some places. Neither the northern nor the southern border of Tennessee follows a geographic feature.

Tennessee Topography and Terrain

Tennessee features six principal physiographic provinces, from east to west, which are part of three larger regions: the Blue Ridge Mountains, the Ridge-and-Valley Appalachians, and the Cumberland Plateau, which is part of the Appalachian Mountains; the Highland Rim and Nashville Basin, which are part of the Interior Low Plateaus of the Interior Plains; and the East Gulf Coastal Plain, which is part of the Atlantic Plains. Minor regions include the southern tip of the Cumberland Mountains, the Western Tennessee

Valley, and the Mississippi Alluvial Plain. The state's highest point is Clingmans Dome, at 6,643 feet above sea level. Clingmans Dome is the highest point on the Appalachian Trail and is the third-highest peak in the United States east of the Mississippi River. The state's lowest point, at 178 feet, is on the Mississippi River at the Mississippi state line in Memphis. Tennessee is home to the most caves in the United States, with more than 10,000 documented.

Tennessee Climate

Most of the state has a humid subtropical climate, with the exception of some of the higher elevations in the Appalachians, which are classified as having a mountain temperate or humid continental climate due to cooler temperatures. The Gulf of Mexico is the dominant factor in the climate of Tennessee, with winds from the south being responsible for most of the state's annual precipitation. Generally, the state has hot summers and mild to cool winters with generous precipitation throughout the year, with highest average monthly precipitation generally in the winter and spring months, between December and April. The driest months, on average, are August to October. On average, the state receives 50 inches of precipitation annually. Snowfall ranges from 5 inches in West Tennessee to over 80 inches in the highest mountains in East Tennessee.

Summers in the state are generally hot and humid, with most of the state averaging a high of around 90 °F during the summer months. Winters tend to be mild to cool, increasing in coolness at higher elevations. Generally, for areas outside the highest mountains, the average overnight lows are near freezing for most of the state.

Extreme weather events that frequently occur in Tennessee include severe thunderstorms, flooding, tornadoes, droughts, heat and cold waves, and winter storms. While the state is far enough from the coast to avoid direct impact from a hurricane, the location of the state makes it likely to be hit by the remnants of tropical cyclones, which weaken over land and can cause significant rainfall. The state averages about fifty days of thunderstorms per year, some of which can be severe with large hail and damaging winds. On average, the state has 15 tornadoes per year. Tornadoes in Tennessee can be severe, and Tennessee leads the nation in the percentage of total tornadoes resulting in fatalities. Winter storms are an occasional problem, although ice storms are a more likely occurrence. Fog is a persistent problem in parts of the state, especially in East Tennessee. Since 2000, the state has received 33 major disaster declarations involving severe storms and flooding.

Tennessee is projected to encounter historically unprecedented warming during this century, despite the fact that the state has experienced little overall warming to date since the beginning of the 20th century. Future naturally occurring droughts are projected to become more frequent and intense as these high temperatures will lead to more rapid depletion of soil moisture during dry spells. Additionally, the number and intensity of extreme heat and precipitation events are projected to increase in the future, while the intensity of cold waves is projected to decrease.

Industry/Market Conditions

EV Ownership/Availability

EV sales have increased significantly in the United States and in Tennessee over the past decade. Light-duty EV[4] sales in the U.S. increased 3,700% from 2011 to 2021 and the percentage of light-duty vehicles

[4] EVs includes battery-electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs).

sales that were EVs increased from 0.14% in 2011 to 4.51% in 2021[5]. **Error! Reference source not found.** summarizes this growth in EV sales and EV market share from 2011 to 2021.

Year	EV Sales	EV Market Share
2011	17,731	0.14%
2012	53,713	0.37%
2013	95,352	0.61%
2014	118,712	0.72%
2015	112,897	0.65%
2016	157,352	0.90%
2017	199,826	1.17%
2018	361,307	2.10%
2019	350,375	2.07%
2020	338,577	2.34%
2021	673,758	4.51%

Table 3: Sales of EVs and EV market share within the United States from 2011 to 2021

This table shows light-duty EV sales in the United States from 2011 through 2021. The table also shows the percentage of light-duty sales that were EVs for each year. Source: Atlas Public Policy's "Automakers Dashboard" https://www.atlasevhub.com/materials/automakers-dashboard/.

In Tennessee, light-duty EV sales and market share have also increased substantially since 2011. While some quarters saw slight dips from the previous quarter, the overall trend is a significant increase, with EV sales in each quarter substantially exceeding quarterly sales during the same quarter of the prior year and annual EV sales growing by 144% from 2019 to 2021. Figure 7 shows light-duty EV sales in Tennessee by quarter, broken down by automaker, as well as the percentage of light-duty sales in the state that were EVs.

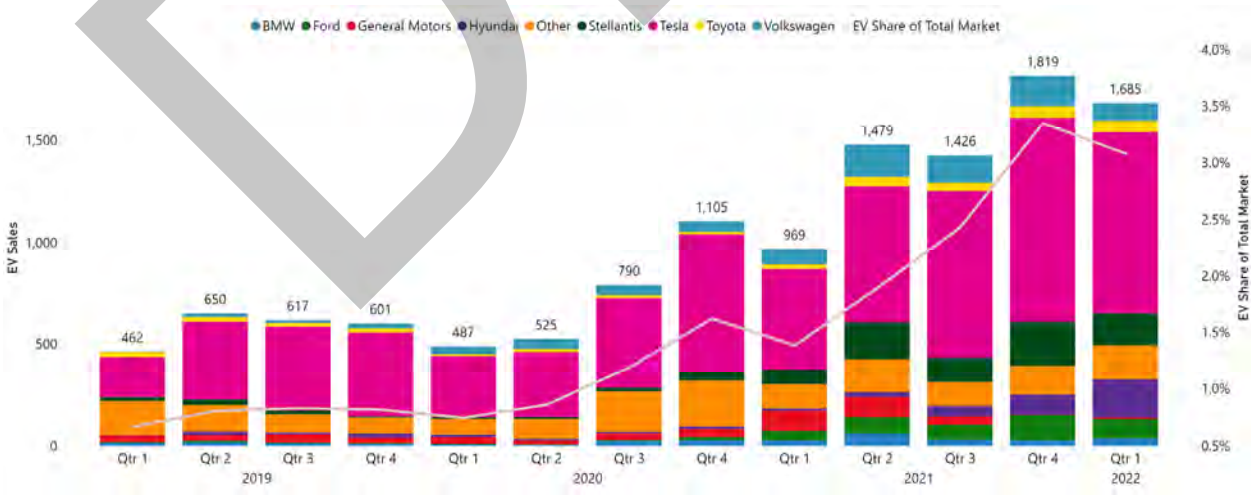

Figure 7: EV Sales and EV Share of Total Market by Year, Quarter, and Parent Company

[5] Atlas Public Policy's "Automakers Dashboard". https://www.atlasevhub.com/materials/automakers-dashboard/

As part of the multi-stakeholder driven Drive Electric TN roadmapping effort mentioned earlier in this plan, a shared vision and goal to drive EV adoption to 200,000 EVs in Tennessee by 2028 was established. TDEC OEP obtains active EV registration counts on a quarterly basis from the Tennessee Department of Revenue. These figures are then populated and made publicly available on the Atlas Public Policy interactive EV Registration Data portal. Figure 8 below provides a geographic representation of EV ownership in Tennessee by county and zip code as of March 31, 2022. As of March 31, 2022, there were 18,451 registered EVs on the road in Tennessee. Figure 9 below details a breakdown of EVs in Tennessee by vehicle manufacturer.

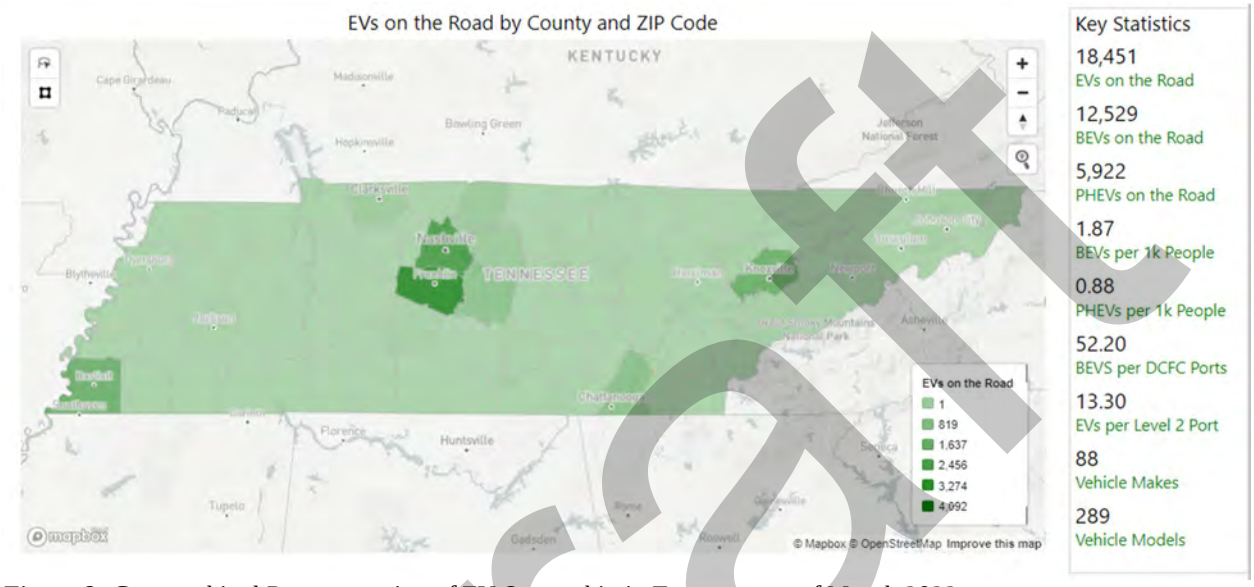

Figure 8: Geographical Representation of EV Ownership in Tennessee as of March 2022

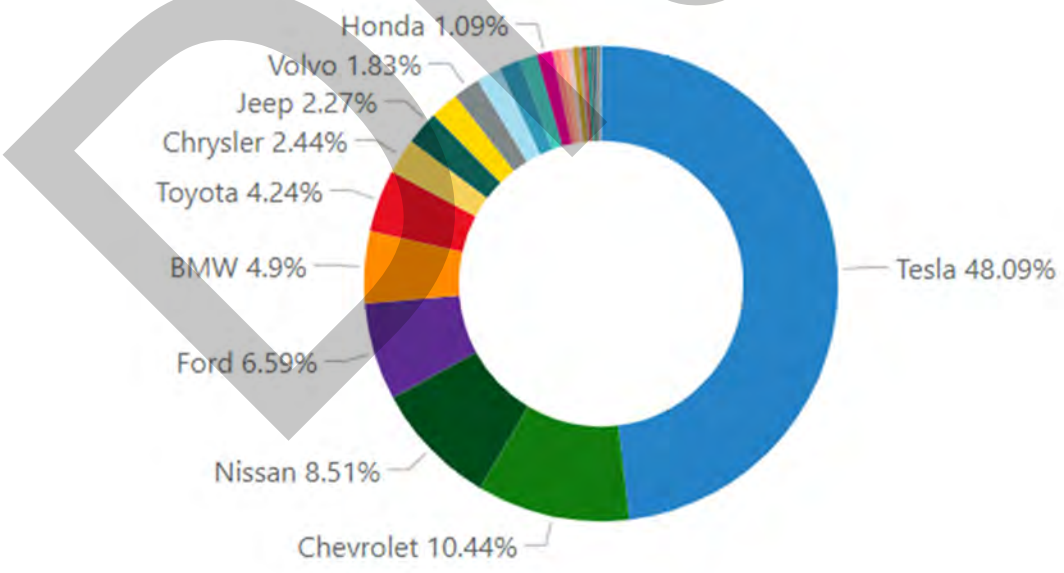

Figure 9: Market Share of EVs by Vehicle Make as of March 2022

With regard to vehicle availability, Tennesseans considering the purchase of a new car must be able to find the right EV that fits their needs and preferences. The EV options must be cost-competitive with

traditional vehicles, they must deliver the same (or better) functionality, and they must be attractive to diverse customers. This requires broad collaboration across automakers, their dealerships, and other stakeholders, with the simple goal of offering EVs that meet Tennessee customers' needs.

Electrification commitments from automakers suggest that EV sales will continue to grow in the United States. As of June 2022, most major automakers announced significant investments in EVs, with Toyota, Ford, GM, and Stellantis (Jeep, Chrysler) each announcing plans to invest at least $30 billion to develop EV models by 2030.[6] In Tennessee, Nissan North America has manufactured their all-electric Leaf in Smyrna since 2013. Volkswagen's all-electric SUV, the I.D. 4, started to roll off the assembly line at Enterprise South in Chattanooga in early 2022. GM Spring Hill is building the new all-electric Cadillac Lyric SUV as well as a $2.3 billion battery cell manufacturing plant in Spring Hill through the Ultium Cells joint venture. Most recently, Ford Motor Company and SK Innovations announced an investment of more than $5.6 billion in their "Blue Oval City" production complex, which will create 6,000 new jobs at the Megasite of West Tennessee that will contribute to the next generation of electric trucks and vehicle batteries.

Grid Capacity

The electric power system known as the "power grid" is an interconnected system consisting of power generation stations (power plants), high voltage transmission systems (transmission power lines, transformers, etc.), and lower voltage distribution systems (distribution power lines, transformers, etc.) that connect to commercial, industrial, and residential end-users. In Tennessee, TVA manages the generation and transmissions systems for the vast majority of the state (~99.7%), while LPCs manage the distribution system and retail sale of electricity to the majority of Tennessee end-users.

With regard to EV adoption and the existing and future conditions analysis of the power system, TVA includes EV adoption forecasts in all short-term (annual capacity planning and load forecasts) and long-term (Integrated Resource Plan - IRP) planning processes. Tennessee stakeholders have established a goal through the DET initiative to drive EV adoption to 200,000 EVs on Tennessee roads by 2028. This goal would only add ~0.5% to TVA's current energy generation/capacity needs. Longer horizon adoption scenarios were considered in TVA's last IRP process, including a "100% EVs" transition, which could add up to 25% - 35% (roughly 50,000 GWh) to TVA's energy generation needs over the seven-state region that TVA serves. For historical context, between 1950 – 1970, TVA's energy generation increased nearly 75,000 GWh; therefore, the theoretical maximum increase from "100% EV" energy needs would require less than was required during the period of post-war growth (load growth at this time was driven in large part due to the adoption of air conditioning, refrigeration, industrial and commercial growth).

According to local EV analysis, the majority of EV charging in the TVA region occurs at residences at lower power levels (Level 1 and Level 2 chargers). This load can be accommodated in off-peak hours using the distribution systems in place to date. Higher power charging around town and along highway or interstate corridors will supplement EV charging needs. These larger charging systems generally require 480 Volt, three-phase power delivery, which is common throughout LPC distribution systems, especially in areas of commercial development.

[6] Ford: https://www.theverge.com/2021/5/26/22454728/ford-plus-pro-electric-explorer-suv-investment
GM: https://www.linkedin.com/pulse/accelerating-our-commitment-all-electric-future-mary-barra/
Stellantis: https://www.reuters.com/business/autos-transportation/stellantis-says-h1-margin-expected-top-annual-target-55-75-2021-07-08/

Electric Utilities that Service the Study Area

Table 4 includes all membership associations, utilities, and local power companies that serve the areas along Tennessee's FHWA-designated AFCs:

Tennessee Electric Cooperative Association
Tennessee Municipal Electric Power Association
Tennessee Valley Authority
Tennessee Valley Public Power Association
Appalachian Electric Cooperative
Athens Utility Board
Benton County Electric System
Bolivar Energy Authority
Carroll County
Chickasaw Electric Cooperative
City of Bristol
City of Clarksville
City of Cleveland
City of Clinton
City of Cookeville
City of Dickson
City of Elizabethton
City of Fayetteville
City of Harriman
City of Jackson
City of Jellico
City of Johnson City
City of Lafollette
City of Lawrenceburg
City of Lenoir
City of Lexington
City of Murfreesboro
City of Newport
City of Pulaski
City of Rockwood
City of Sweetwater
City of Winchester
Columbia Power and Water System
Cumberland Electric Membership Corporation (EMC)
Duck River EMC
EPB of Chattanooga
Greeneville Light & Power
Holston Electric Coop, Inc.
Kingsport Power Company
Knoxville Utilities Board
Loudon Utilities Board
Memphis Light, Gas and Water

Meriwether Lewis Electric Cooperative
Middle Tennessee EMC
Nashville Electric Service
Pickwick Electric Cooperative
Sequachee Valley Electric Cooperative
Southwest Tennessee EMC
Tennessee Valley Electric Cooperative
Town of Erwin
Upper Cumberland EMC
Volunteer Electric Cooperative

Table 4: LPC Services Areas that Fall Along the FHWA-Designated AFCs

The Tennessee Electric Cooperative Association is a trade association established to serve the needs of Tennessee's electric cooperatives. The association represents 23 individual power distributors including Tennessee's 22 electric cooperatives and one municipal system. It exists to provide leadership and advocacy to support Tennessee's consumer-owned electric co-ops.

The Tennessee Municipal Electric Power Association is a membership association of 60 municipal and county electric power providers that serve over 2.4 million homes and businesses across Tennessee. Its members serve two-thirds of the electric customers in Tennessee and distribute three-quarters of the power sold in the state.

TVA provides electricity for 153 local power companies serving 10 million people in Tennessee and parts of six surrounding states, as well as directly to 60 large industrial customers and federal installations. It also provides flood control, navigation, and land management for the Tennessee River system, and assists local power companies and regional governments with their economic development efforts.

The Tennessee Valley Public Power Association is the nonprofit, regional service organization that represents the interests of consumer-owned electric utilities operating within the Tennessee Valley Authority service area. Members include both municipal and electric cooperatives that serve more than 10 million people in Alabama, Georgia, Tennessee, Mississippi, Kentucky, North Carolina and Virginia.

Tennessee's designated AFC network runs through the service territories of 48 of the state's local power companies, which includes a mix of municipal and county power providers, electric cooperatives, electric membership corporations, and consumer-owned utilities.

State Travel Patterns, Land Use Patterns, Public Transportation Needs, Freight and Other Supply Chain Needs

State Travel Patterns

Figure 10 provides a spatial snapshot of the State's long-distance trip distribution. The map was created using Tennessee's Statewide Travel Demand Model and shows the origins and destinations of trips 100 miles or more that pass through Tennessee in 2018, which is the current model's base year. For comparison purposes, these trip distances represent only 0.34% of the total trips that occur on Tennessee roadways.

Figure 10: Long-distance travel (100 miles or greater) origins/destinations of trips passing through Tennessee.

Land Use Patterns

Tennessee has seen tremendous growth over the last 20 years. Most of this growth has occurred in the larger urban areas as would be expected; however, the state has also experienced substantial growth in rural areas. Recent forecasts by Woods and Poole have reported a 47% (55% urban vs. 33% rural) increase in total population from 1980 to 2018 – which equates to just over 1% of sustained annual growth over the same 38-year period. Furthermore, between 2010 and 2018, the rate of growth leveled off but continued to grow at a rate just under 1% annually (0.79%). Tennessee's four major urban counties of Davidson (Nashville), Shelby (Memphis), Knox (Knoxville), and Hamilton (Chattanooga) saw no less than a 21% increase in population between 1980 and 2018.

Employment growth during the same time period was even more dramatic. Between 1980 and 2018, statewide employment grew 80%, or roughly 1.6% annually, with the majority of this growth occurring in the same four urban counties mentioned in the previous paragraph. Most of the state's employment growth has involved non-basic employment, which includes retail, construction, services, government, wholesale, transportation and public utilities, and finance/insurance/real estate. However, with the recent announcement of Ford's $5.6 billion, 3,600-acre Blue Oval City development near Memphis, as well as other EV-related suppliers relocating to Tennessee, basic employment growth (i.e., manufacturing) could be the primary driver of Tennessee's future employment growth.

Public Transportation Needs

Tennessee is fortunate to have public transit service in all 95 counties of the state, which are serviced by 28 transit agencies. TDOT provides support and responsibility for the 19 urbanized and municipal transit

operations, as well as the nine rural public transit agencies. In 2021, TDOT supported the transit agencies in the state financially with technical assistance to provide over 16 million annual trips to transit riders.

There are several factors that could lead to an accelerated transformation from combustion engine to electric transit vehicle fleets in Tennessee. Current combustion engine transit vehicles have a long delivery period for several reasons in the current market. The electric transit vehicle may have a shorter delivery window, thus allowing it to replace outdated 'end of life' transit vehicles with cleaner drivetrains. While some of the agencies have already built up their electric infrastructure with a few vehicles to handle this natural progression, there is a need for more associated charging infrastructure and vehicles. While there are not many electric transit vehicles currently operating in Tennessee, there are projections for the various agencies to deploy additional vehicles, leveraging various federal and State grant programs. One program is the IMPROVE Act Transit Improvement Grant Program. This is a State-led program that offers matching funds (75% State / 25% local) to transit agencies. Eligible projects include transit center electric infrastructure, electric charging stations, and EVs. In State FY 2022, TDOT awarded $21 million dollars through this competitive grant program.

As mentioned earlier, 28 various transit agencies operate facilities in both urban and rural areas throughout the state. The Project Team will evaluate synergies where transit applications can be supported by NEVI-funded stations, such that the stations can serve as mobility hubs for not only individual EV drivers but also for public transportation providers. In doing so, the Project Team will engage transit agencies to determine the need and interest in supporting EV infrastructure development within their service territories to drive the expansion of electric public transportation; evaluate potential public-private partnership models that could be pursued; and consider the power level, design, and spacing requirements needed to support medium and/or heavy-duty transit vehicle utilization of the infrastructure. This could provide a great opportunity, particularly for rural transit agencies, to help with needed and quantifiable coverage. The FHWA-designated AFCs in Tennessee are in close proximity to these transit agency service territories, which could lead to even more opportunities for additional accessibility to the public.

Freight and Other Supply Chain Needs

From a freight movement perspective, all of Tennessee's interstates see high volumes of truck traffic. The majority of freight traveling in and through the state travels by way of truck traffic. Interstates and major U.S. highways are the paths that these truckers use. As more trucks migrate to electrification, all major interstates in Tennessee will need DCFC facilities that can accommodate medium- and heavy-duty trucks for shorter time periods. These potential charging stations should be easily accessible and have other amenities for the driver. Travel centers that offer showers, safe truck parking, restaurants, and other amenities would best serve the needs of the trucking community.

When examining interstates in Tennessee, Interstate 40 (I-40) covers 440 miles from east to west and is a major coast-to-coast connector. There are also several metropolitan areas that I-40 traverses in the state. The highest amount of freight-related charging stations should be invested on this corridor. Ideally, charging stations equipped for medium- and heavy-duty trucks should be placed along I-40 in the following locations: Memphis, just east of the downtown area around mile markers (MM) 16-22; east of Jackson, around MM 85-108; west of Dickson, around MM 163; east of Lebanon, TN, around MM 235-245; between Monterrey and Crossville, around MM 300-310; and near Danville, around MM 410-417. I-81 connects with I-40 near Danville and, ideally, a freight-related charging station should be located somewhere around the Johnson City area. For the north/south interstates in Tennessee (I-65, I-24, and I-75), as these interstates are between 120-180 miles in length, at least one freight-related charging station should be placed along each of these corridors. Since I-840, I-26, I-55, and I-155 are all relatively short, there are no recommendations for freight-related charging stations to be placed along these corridors.

The sheer majority of medium- and heavy-duty trucks that will use electrification in the future will have a home terminal where most of the vehicles will charge. Freight companies will deliver during the normal hours of the day and will charge their vehicles at night while the truck is unoccupied. Most of the industry will utilize the "relay" model, whereby a driver will drive the charged vehicle to meet another driver or another load and then return to the home terminal before the hours of service expire. Therefore, most of the charging would be developed by freight operators on privately-owned property. Any NEVI-funded stations that would support freight vehicles would supplement the privately-owned infrastructure network. Since many areas of the state have distribution centers, particularly near the Memphis and Nashville areas, some freight-related charging stations could be placed in and around these areas where many freight companies operate and/or are situated. This will enable trucks to charge in conjunction with deliveries to these locations. Other logical locations for charging stations could be incorporated near intermodal facilities where freight is being transferred from truck to rail and/or from barge to truck.

The Project Team will monitor ongoing developments in the EV freight and heavy-duty trucking space and will evaluate the viability of NEVI infrastructure investments that could be leveraged by electrified freight vehicles. Additionally, following the release of anticipated FHWA guidance in the fall of 2022 on freight electrification and related freight corridor designations, the Project Team will revisit freight considerations as they relate to the NEVI Formula Program and will revise the TEVI Deployment Plan accordingly.

FHWA-Designated Alternative Fuel Corridors

Throughout Rounds 1-4 of AFC designations, Tennessee successfully nominated the entirety of each of its major interstate highways as AFCs for electricity. This includes:

- I-40, which enters the state from Arkansas and runs west-to-east across the state through Memphis, Jackson, Nashville, Cookeville, and Knoxville, and exits the state into North Carolina;
- I-65, which enters the state from Kentucky near Portland and runs north-to-south through Goodlettsville, Nashville, and Franklin and exits the state into Alabama;
- I-24, which enters the state from Kentucky and runs northwest-to-southeast through Clarksville, Nashville, Murfreesboro, Manchester, and Chattanooga and ends near the Tennessee-Georgia border;
- I-75, which enters the state from Kentucky near Jellico and runs north-to-south through Caryville, Knoxville, Lenoir City, Athens, Cleveland, and Chattanooga and exits the state into Georgia;
- I-81, which runs northeast-to-southwest entering the state from Virginia near Bristol and ending near Dandridge; and
- I-26, which runs north-to-south entering Tennessee from Virginia near Kingsport and running through Johnson City and Erwin before exiting the state into North Carolina.

In Round 5 of designations, the State successfully nominated its first non-interstate highway as an AFC for electricity, U.S.-64, in the southern part of the state. The designation does not include the entirety of U.S.-64's stretch across Tennessee, but it includes the start of its east-to-west span coming into Memphis from Arkansas and through Bolivar, Selmer, Waynesboro, Lawrenceburg, Pulaski, Fayetteville, and Winchester through its junction with I-24 near Pelham.

Although requirements and parameters for "Corridor Pending" versus "Corridor Ready" status have changed or been amended with each successive corridor designation round by FHWA, the following map and list details such statuses as they were assigned at the time of corridor designation. The Project Team will prioritize initial use of NEVI funds to satisfy the 50-mile maximum distance requirement from FHWA to achieve Corridor Ready status for all FHWA-designated AFCs in Tennessee before evaluating alternate use cases and locations for infrastructure development.

Figure 11: Map displaying Tennessee's FHWA-designated AFCs for electricity

- "Corridor Pending" Corridors:
  - I-40 from Memphis to the I-75/I-40 junction near Lenoir City, and from Dandridge to the TN-NC border
  - I-65 from the TN-KY border to Goodlettsville, and Franklin to the TN-AL border
  - I-24 from Nashville to Chattanooga
  - I-75 from the TN-KY border to Knoxville, and Lenoir City to Ooltewah
  - I-26 from the TN-VA border to the TN-NC border
  - U.S.-64 from the TN-AR border to Pelham
- "Corridor Ready" Corridors
  - I-40 from the I-40/I-75 junction to Dandridge
  - I-65 from Goodlettsville to Franklin
  - I-24 from the TN-KY border to Nashville
  - I-75 from the I-75/I-40 junction in Knoxville to Lenoir City
  - I-81 from the TN-VA border to the highway's end near Dandridge

Existing Locations of Charging Infrastructure Along Alternative Fuel Corridors

Each AFC in Tennessee has some level of buildout of both DCFC infrastructure and Level 2 charging infrastructure along its length; however, as of June 2022, only 10 Electrify America DCFC stations were compliant with the minimum standards of the NEVI program. A table detailing existing DCFC and Level 2 charging infrastructure is included within the Appendix, for reference.

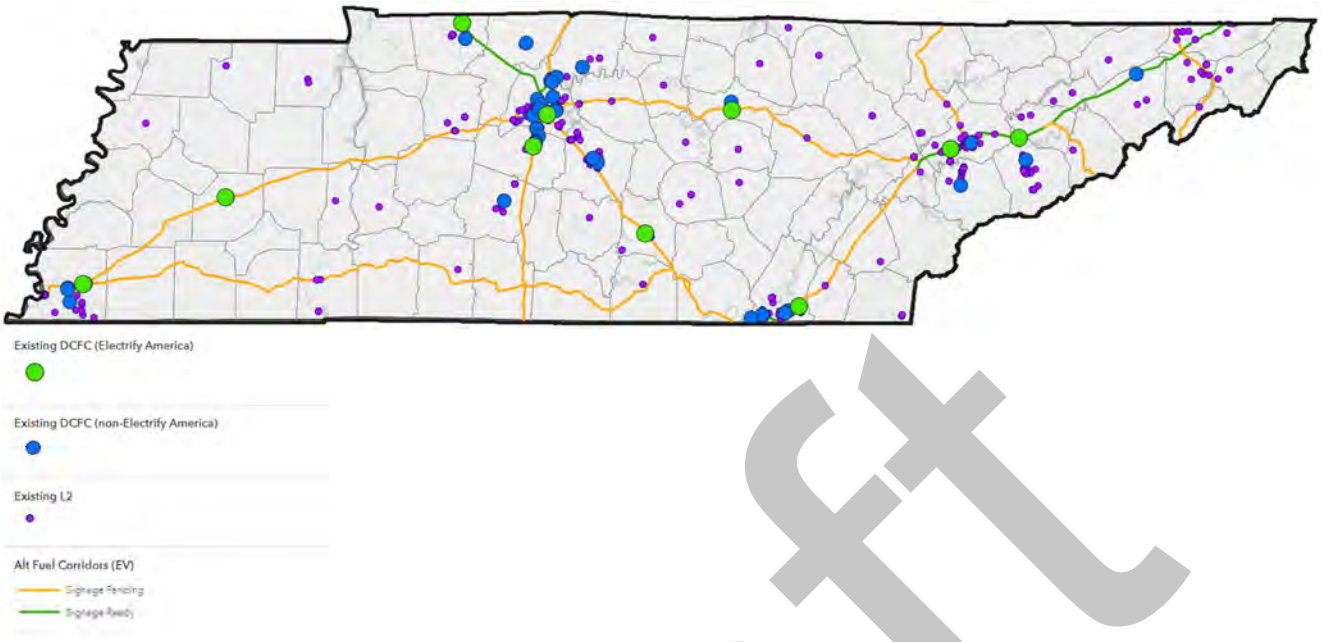

Figure 12: Map displaying Tennessee's designated AFCs for EV as well as existing DCFC and L2 charging infrastructure (DCFC infrastructure shown here excludes Tesla stations and has no limits on power capacity).

Industry/Market Conditions and Known Risks and Challenges

The substantial growth in EV sales as well as supportive EV adoption policies indicate that EV sales are likely to continue to increase rapidly in the U.S. and in Tennessee. This increase will require a substantially greater number of DCFCs in order to meet EV drivers' needs. As of the end of May 2022, there were a total of 240 DCFCs at 73 stations across the state. While many EV drivers are currently able to meet the majority of their charging needs with at-home, low-power charging, there will be an increasing number of EV drivers who do not have access to at-home charging, such as those who live in multi-family dwellings, planned unit developments, park on the street, or park somewhere where there is no or limited access to an electrical outlet. Additionally, drivers who can charge at home will still need access to public DCFCs to make longer trips. Other important use cases, such as ride-share vehicles and rental cars, will require public DCFCs as well.

Although higher-powered DCFC infrastructure requires more expensive hardware, construction, and electrical upgrade costs, studies have found that higher-powered DCFCs are less expensive on a per-kilowatt basis.[7] Studies also show that installation of 350 kW DCFCs would decrease the total investment required to meet demands from projected EV adoption as compared to installation of 50kW or 150 kW chargers. This is because fewer chargers overall would be needed.[8] Higher-powered DCFCs also have advantages with regard to future proofing (i.e., investments in higher-powered infrastructure now will require fewer upgrades to meet future charging requirements). As discussed in the Public Outreach section of this document, fewer than 2% of participants in Tennessee's NEVI stakeholder survey indicated that future-proofing was not important. As was also noted in that section, upcoming EV models will be capable of charging at higher and higher power levels; many existing models are already capable

[7] McKenzie, Lucy and Nick Nigro. How Much Should the US Invest in Public EV Charging? $39 Billion. https://atlaspolicy.com/wp-content/uploads/2021/04/US_Electrification_Infrastructure_Assessment_Exec-Summary.pdf
[8] Ibid.

of charging above 150 kW. In addition, medium- and heavy-duty EVs have large batteries and will need access to higher-powered charging to enable quick stops along commercial routes. Notably, 73% of participants in the TEVI Deployment Plan stakeholder survey indicated that Tennessee should use NEVI funds to build chargers that could accommodate the charging needs of medium- and heavy-duty EVs.

With regard to known and anticipated risks, the Project Team has identified the following challenges that will need to be considered and addressed in the implementation of NEVI funding:

- **Operations and Maintenance of Infrastructure:** Network reliability will be a critical element to the success of the NEVI Program. There is a risk that infrastructure may break and not be fixed in a timely manner, which will threaten the viability of the network and negatively impact user experience. The obligation to operate and maintain infrastructure will be incorporated into subrecipient contracts; the Project Team will monitor compliance with these requirements via ongoing reporting and/or onsite monitoring, to ensure that chargers in the network are functioning and meeting demand from corridor travelers. It is also a risk that chargers will not be operated beyond the required term of the agreement if utilization is not high enough. These risks are higher in areas with lower population density and travel demand. Lastly, with the rapid evolution of technology, the Project Team will evaluate strategies to mitigate deployment of charging infrastructure technologies that are anticipated to soon become obsolete.
- **Lack of Willing and Available Site Hosts:** In many parts of the state, particularly in some of the more rural areas, it may be difficult to find willing site hosts that are able to provide sufficient space for EV charging stations within one travel mile of the corridor in question. Site hosts' willingness to participate will depend on their awareness of the benefits and challenges of hosting EV charging infrastructure, and their calculation of the future benefits and opportunity costs. EV service providers report spending significant time and resources in recruitment and education of potential site hosts. This presents an execution risk that may be higher in less-developed areas where there are fewer eligible properties to begin with.
- **Required Electrical Upgrades:** Associated electrical upgrade costs, particularly in rural areas with limited development, may prove to be cost prohibitive for many site hosts or infrastructure owners/operators that will need to provide associated cost share.
- **Supply Chain Disruptions:** Delays tied to availability of semiconductors, port congestion, strained steel supplies, availability of FHWA-Buy America compliant hardware, and other labor shortages may end up impacting timelines for successful implementation of the NEVI Formula Program.

EV Charging Infrastructure Deployment

The Project Team will conduct a competitive solicitation for applicants to propose projects to acquire, install, own, operate, and maintain NEVI-compliant DCFC infrastructure along FHWA-designated AFC. The Project Team currently intends to cluster project solicitations either by corridor, corridor segment, or by Grand Division (i.e., East, Middle, and West). The Project Team will take into account existing stations that meet NEVI standards in order to determine and prioritize remaining gaps to be filled. Additionally, the Project Team will take into account the location of Fast Charge TN Network stations or other privately developed stations that will either (1) meet NEVI standards or that (2) may partially meet NEVI standards (e.g., the site has two NEVI-compliant chargers, is located within one mile of an AFC, and only requires two additional chargers to be NEVI-compliant), such that these locations could be "filled in" or upgraded to meet NEVI technical specifications at a lower total cost per site. The Project Team shall seek to leverage NEVI funding to develop an interconnected network of stations that meet or exceed NEVI guidelines along all FHWA-designated AFCs within Tennessee.

Gap Prioritization Methodology

The following categories will be used to help establish a hierarchy of corridors with the most critical need to fill charging infrastructure gaps along the designated AFC:

- Air Quality
  - What percentage of gaps fall within an air quality non-attainment/maintenance area?
- Economic
  - Estimated number of sites needed to close the gap(s)?
- Traffic
  - What is the current Average Annual Daily Traffic (AADT) near the potential station?
- Stakeholders and Site Hosts
  - Are there any stakeholders (e.g., public or private landowners) that have indicated a willingness to host a DCFC station?
  - Are there any stakeholders or potential site hosts that would provide additional funding or cost share?

Infrastructure Site Prioritization Methodology

The following categories will be used to establish a station location "scoresheet" for the purpose of measuring the attractiveness of potential charging station sites.

- Environmental
  - Is the proposed project located in an air quality non-attainment or maintenance county?
  - Are there any natural resources that would be negatively affected by the project?
- Traffic
  - What is the current AADT near the potential station?
- Site Team
  - Is there an established Site Team for this site/gap?
  - How many of these positions are currently filled?
- Gaps
  - How well does the selected exit/site fill the gap (e.g., location within the gap)?
- Site Hosts
  - Are there any stakeholders that have indicated a willingness to host a DCFC station?
  - Does the LPC want to be a partner to build a station?
  - Does the LPC have property that could be used for the station?
  - Is there one owner of the property that the team will need to work with or is there another "tenant" for the spaces?
- Zoning
  - Is the site already appropriately zoned for a DCFC location in that area?
- Proximity to Power
  - Is the needed power (i.e., 600 kW) currently available at the selected site?
  - How far away is the utility power from the proposed charging station location (i.e., how far will the 600-kW need to be pulled)?
  - Can the new switch gear be placed such that it is less than 25-50 feet from the electric vehicle supply equipment (EVSE) parking spaces?
- Construction
  - Will most or all trenching and related construction take place in grass or ground, versus needing significant asphalt/concrete disturbance?
- Upgradability
  - Is there enough power nearby now for future upgradability?
  - Is this site large enough for additional chargers to be installed in the future?

- Design
  - How ample is parking so that the new installation does not impede business operations and needed parking?
  - Is there enough parking in the lot for people to move their EV when they are finished charging?
  - How confined is the parking at the site (e.g., width of lanes in between parking rows, turning radius around ends of rows)?
  - Do the parking spaces meet current size code? How wide are the parking spaces?
  - Will the EVSE-designated area on the property incur pedestrian traffic issues due to cord placement and sidewalk or similar routing?
  - Are there easy ingress and egress options for the property?
  - Can the EVSE be placed such that it does not interfere with sweeping, snow removal, etc.?
- Visibility
  - Is the site clearly visible from the highway or main road?
- Network
  - What is the quality of the cellular/wireless connection at the site?
- Safety
  - Is the proposed EVSE-designated area well lit?
  - Are there any security video cameras in the area (owned by nearby businesses)?
  - Will there be weather protection (i.e., canopy) available, or is there a plan to add such?
  - Is the EVSE-designated area generally populated?
  - Is the parking lot or the intended use spaces in a flood plain?
- Amenities
  - Are there bathrooms onsite that are available 24/7?
  - Are there restaurants or other food/drink options onsite or nearby?
  - Are there any shopping/retail store options nearby?
  - Are there any grassy areas or is there room to walk a pet?
- Equity
  - Is the proposed project located in an economically distressed or at-risk area (as determined by the Appalachian Regional Commission)?
  - Is the proposed project located in a Disadvantaged Community (as detailed within the Electric Vehicle Justice40 map)?
- Flexible Use Space
  - Can one of the charging spaces be designed for a vehicle to pull through (e.g., hauling a trailer)?
  - Will the design offer a parking space for a medium-duty vehicle (e.g., E450 shuttle)?
- Cost Effectiveness
  - How much funding is being requested per DCFC unit?

Funding Sources

Subrecipients will be required to provide, at a minimum, 20% of project costs via non-federal funding sources (e.g., private funding, local government, and/or utility contributions, including non-federal contributions from TVA[9]). Additionally, proposed projects will be evaluated based on cost-effectiveness, an ability to minimize required public investment, and/or an ability to provide more than the required minimum of 20% cost share. On a case-by-case basis, the Project Team will evaluate additional contributions of cost-share from State funding and/or other from non-federal funding sources (e.g.,

[9] Grid Resilience Formula Grants to States and Indian Tribes IIJA Section 40101(d), Frequently Asked Questions.

Volkswagen Settlement Environmental Mitigation Trust) to help meet non-federal, local cost share requirements for projects that will benefit disadvantaged communities.

Operational and maintenance costs purchased upfront shall be considered reimbursable under the program; following the program period of performance, infrastructure owners will be able to collect fees from station operation and will be responsible for maintenance going forward.

2022 Infrastructure Deployments/Upgrades

As noted above, the Project Team will divide the FHWA-designated AFCs into segments based on an analysis of gaps in the current network, future charger needs, and geography. The gap analysis will begin with a review of existing infrastructure. Figure 12 shows the locations of existing, public DCFC infrastructure (not including Tesla stations) in Tennessee as of June 2022. This map demonstrates the current EV charging infrastructure density (e.g., stations/mile) and highlights the extent to which a vast majority of DCFC infrastructure currently falls along AFCs and the Interstate Highway System.

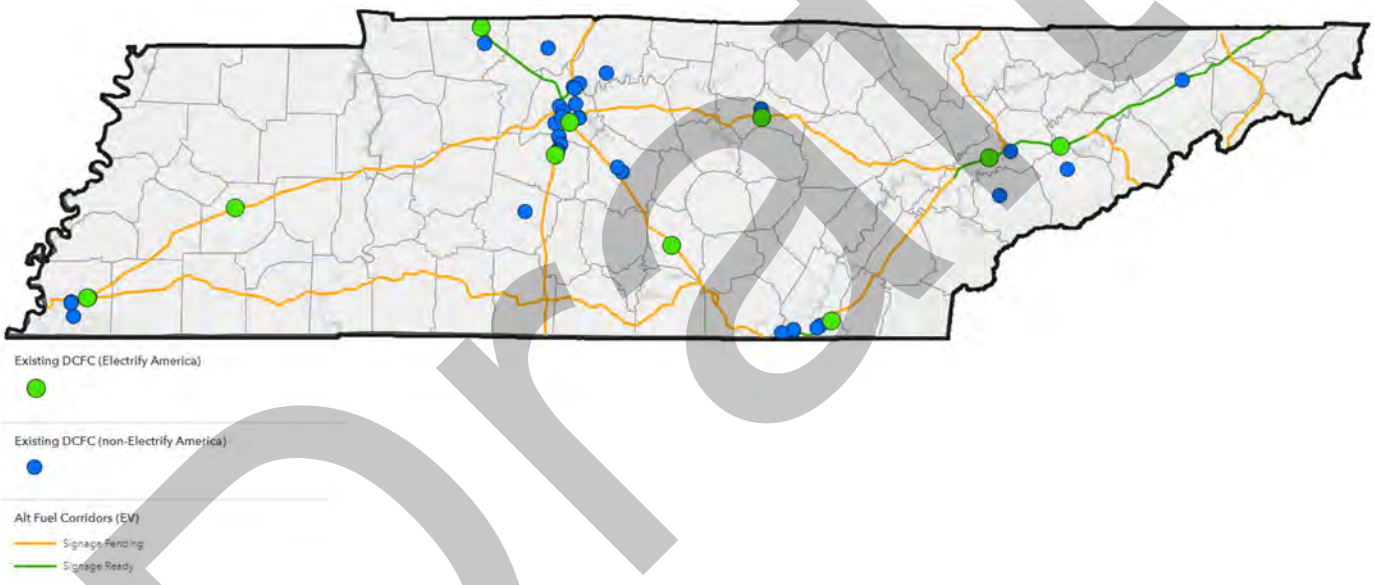

Figure 13: Map displaying Tennessee's designated AFCs in addition to existing DCFC infrastructure (excluding Tesla, with Electrify America stations displayed separately).

Figure 13 shows the locations of existing, public DCFC infrastructure that meet NEVI Formula Program minimum technical specifications (stations are located within one travel mile from an AFC, have a minimum of four combined charging system (CCS) Type 1 ports with a maximum charging power per port of at least 150 kW, and have a total site power capacity of no less than 600 kW). As of June 2022, Tennessee has a total of 10 geographic locations (comprising 49 total DCFC ports) that meet the NEVI Formula Program criteria.

The prioritized corridor gaps shown in Figure 13 are areas that are at least approximately 25 miles from the nearest identified NEVI-compliant charging location in any given direction (including stations located across state lines). For example, the gaps on either side of I-40 from the Jackson station begin 25 miles on either side of the station. At interchanges, such as the I-75/I-40 interchange near Knoxville, the extent of the gaps consider all of the possible routes a traveler may take through that interchange (e.g., a traveler heading westbound on I-40 toward Knoxville may continue westbound or turn northbound onto I-75,

explaining the relatively small geographic distance between the Knoxville station to the west of the I-40 W to I-75 N exit and the priority area on I-75 north of the interchange).
It is important to note that these "gaps" are a guiding visualization for the State to convey areas of high priority. However, the Project Team will still consider proposals/locations that fall outside of these zones, particularly those that meet other prioritized criteria and that minimize total distance between existing, NEVI-compliant stations along designated AFCs.

In Year One, the Project Team will prioritize the development of new charging station that are located no more than 50 miles from existing stations that meet the NEVI Formula Program standards and are within one mile of the designated AFC.

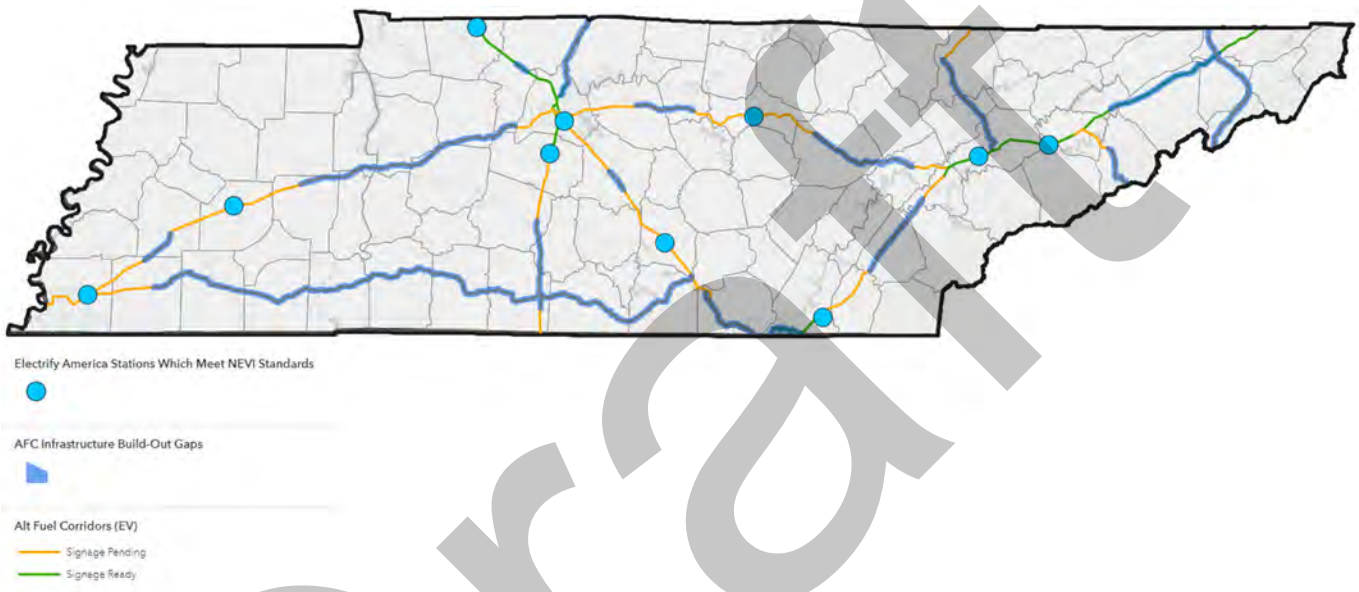

Figure 14: Map displaying Tennessee's designated AFCs, NEVI-compliant Electrify America DCFC infrastructure, and prioritized corridor gaps.

Upgrades of Corridor Pending Designations to Corridor Ready Designations

Approximately 20-22 new charging infrastructure locations will be needed to satisfy the 50-mile maximum distance requirement from FHWA for the NEVI Formula Program and to achieve Corridor Ready status for all FHWA-designated AFCs in Tennessee. The 20-22 locations will complement 10 existing NEVI-compliant locations installed by the private sector and a handful of planned locations resulting from the Fast Charge TN Network that are anticipated to either meet NEVI requirements or be built to be partially in compliance (e.g., two 150kW chargers located no more than one travel mile from a designated corridor).

Figure 15: Map displaying Tennessee's FHWA-designated AFCs for EV.

Increases of Capacity/Redundancy along Existing AFC

To build resiliency across the network, the Project Team will future-proof sites for later expansion as well as consider the installation of additional chargers on the highest-volume corridors. Other private and public investments in EV infrastructure will also focus on high-usage corridors and centers, bolstering redundancy and increased frequency. After initial utilization data is received from chargers funded under the first round NEVI Formula Program solicitation, the Project Team will conduct analysis of usage data to identify areas where further redundancies would provide public value.

Electric Vehicle Freight Considerations

TennSMART is a public-private consortium designed to accelerate the development and deployment of new intelligent mobility innovations, including EV freight technologies, in Tennessee. It provides a collaborative forum for key stakeholders representing the automotive and trucking industries, local and State government, and research institutions to address opportunities that no one organization could attain alone. TennSMART focuses on research related to connected and automated vehicles, EVs, cybersecurity, freight efficiency, and multimodal commuting.

The Project Team will monitor ongoing developments in the EV freight and heavy-duty trucking space and will engage TennSMART members on coordination of NEVI infrastructure investments that could be leveraged by electrified freight vehicles. Additionally, following the release of anticipated FHWA guidance in the fall of 2022 on freight electrification and related freight corridor designations, the Project Team will revisit freight considerations as they relate to the NEVI Formula Program and will revise the TEVI Deployment Plan accordingly.

Public Transportation Considerations

All 95 counties in Tennessee currently offer public transportation and transit services. All four of TN's major urban areas (Nashville, Memphis, Knoxville, and Chattanooga) have deployed or are in the process of deploying all-electric transit buses. Additionally, through a U.S. Department of Energy-funded project, Tennessee Technological University has engaged in recent work to develop an EV demonstration testbed in the rural and economically distressed Upper Cumberland region of Tennessee, partnering with a transit agency in the area (the Upper Cumberland Human Resource Agency) to deploy an all-electric shuttle bus for purposes of public transportation. Building off of this work, the Project Team will evaluate synergies where transit applications can be supported by NEVI-funded stations, such that the stations can serve as mobility hubs for not only individual EV drivers but also for public transportation providers. In doing so, the Project Team will engage transit agencies to determine the need and interest in supporting EV infrastructure development within their service territories to drive the expansion of electric public transportation; evaluate potential public-private partnership models that could be pursued; and consider

the power level, design, and spacing requirements needed to support medium- and/or heavy-duty transit vehicle usage of the infrastructure.

FY23-26 Infrastructure Deployments

As noted above, Year 2 will focus on filling any remaining corridor gaps that may exist after the initial Year one solicitation for projects. As the charging network spreads to more rural areas, the equipment installed may need to adjust to accommodate varying power supply. A combination of solar/battery equipment may be placed to minimize grid impacts and to ensure adequate power for 4 units rated at 150kW per unit. The Project Team will seek to achieve full corridor build out of NEVI-compliant stations along all FHWA-designated AFCs by the end of Year 2 of the NEVI Program (i.e., by the end of FFY 2023-2024).

Once the Project Team has achieved full build out of the FHWA-designated AFCs with NEVI-compliant stations, the Project Team will conduct a second round of public information engagement and listening sessions to gather feedback on additional corridors or alternative use cases (e.g., community charging, rural destination charging, etc.) that should be pursued with any remaining NEVI funding. The Project Team will then update and amend the TEVI Deployment Plan accordingly to reflect a plan for remaining NEVI funding spend and deployment. Efforts like the planning workshop on community charging infrastructure needs and considerations that East Tennessee Clean Fuels and Drive Electric TN held in the 14-county Upper Cumberland region (see page 9) could be duplicated to gather input from community members across all Tennessee regions on suggestions for locations for off-corridor DCFC and potential L2 sites.

Utility, Regional, and Local Policy

Supportive EV policies can have a significant and measurable impact on EV market growth. Many of these policies can enhance the EV ownership experience, while other policies can mitigate the costs of owning and operating an EV or associated charging infrastructure. The Project Team embraces the breadth and potential of EV-focused policy development in Tennessee, be it at the State, local, utility, or EV and EVSE manufacturer level.

Utility-Related Policies

In November 2020, TVA's Board of Directors approved a new commercial rate structure intended to support the expansion of EV charging infrastructure across the Tennessee Valley. TVA's LPCs will be able to use this wholesale rate option, which removes demand charges, to provide charging station developers with a stable, economic electricity cost for infrastructure operation, improving the business case for owners and operators of charging stations and encouraging investment in public charging infrastructure development. The TVA Board also approved a new set of EV-related policies, outlining the rules for LPC investment in public charging stations and allowing for kilowatt-hour (kWh) pricing for EV charging stations.

A number of LPCs in Tennessee have also deployed incentives to encourage EV adoption within their service territories. The Knoxville Utilities Board offers a $400 rebate for residential Level 2 charger installations. Additionally, the Electric Power Board of Chattanooga offers an incentive for commercial business customers to install publicly accessible EV charging infrastructure. Qualifying equipment and incentive amounts include:

- $2,000 per port for Level 2 and DCFCs with OpenADR networking capabilities
- $500 per port for Level 2 chargers not capable of meeting network requirements

Regional Coordination

The Southeast Regional Electric Vehicle Information Exchange (SE REVI) is a collaboration of State and Territory Energy Offices as well as Departments of Transportation from Alabama, Arkansas, Florida, Georgia, Kentucky, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, and the Virgin Islands. Through SE REVI, the State and Territory Energy Offices and Departments of Transportation:

- Share information and best practices and collaborate on EV infrastructure planning, policy development, and program implementation;
- Explore ways to promote electric transportation solutions in communities that are rural, low-income, or that face disproportionate air quality burdens;
- Examine the role of EV infrastructure during evacuations; and
- Evaluate the use of EVs to build resiliency into power supply delivery.

Facilitation and analytical support for SE REVI is provided by the National Association of State Energy Officials and the Duke University Nicholas Institute.

In late 2021, states and territories participating in SE REVI launched a multi-state EV infrastructure map to enable coordination across the region on EV infrastructure investments. The interactive map utilizes various data, including locations of current and planned Level 2 and DCFCs, state and national parks, AFCs, hurricane evacuation routes, social equity data, and electric service provider territories. Developed with input from each SE REVI participant, the map will be used to inform NEVI infrastructure investment decisions and to conduct education and outreach on EV infrastructure gaps and opportunities along priority corridors.

In addition to SE REVI, the East Tennessee Clean Fuels Coalition co-manages the "National Alternative Fuel Corridor Council", which is a partnership of Clean Cities coalitions and state DOT officials from across the country. Through this Council, the Project Team will continue to coordinate with regional partners on topics including but not limited to signage, infrastructure development, and related program implementation.

Local Policy

Throughout Tennessee, a number of local policies or incentives have been deployed to encourage EV adoption and deployment. On June 5, 2019, the Metropolitan Government of Nashville and Davidson County enacted BL2019-1598 to establish a fleet transition schedule so that all motor vehicles owned by the metropolitan government (excluding emergency vehicles) will be Zero Emission Vehicles by the year 2050. More immediately, 25% of the vehicles in the metropolitan government fleet (excluding emergency vehicles) shall be low-or-zero-emission vehicles by 2025.

The City of Knoxville has established a "Green Fleet Policy," which includes a goal of reducing City operations emissions 50% by 2030 and community emissions 80% by 2050 (relative to 2005). Transit fleet electrification is a major component to the City's efforts, and Knoxville Area Transit has awarded New Flyer of America, Inc., a contract for the purchase of 12 all-electric, heavy-duty transit buses, with an option to purchase up to 13 additional buses throughout the term of the five-year agreement.

The City of Memphis and Shelby County has established a goal within its Climate Action Plan to convert the city's entire transit fleet to electric transit buses by 2050.

Education and Outreach

TDEC OEP, TVA, Tennessee's two Clean Cities coalitions, and DET conduct ongoing education and outreach to raise awareness regarding EVs, available infrastructure, and forthcoming opportunities in the transportation electrification space. The Project Team will seek to leverage these education and outreach channels over the coming years to enhance the visibility of the NEVI-funded network and to generate user interest as it is being developed.

Implementation

Strategies for EVSE Operations & Maintenance

The Project Team will ensure that the operations and maintenance (O&M) of charging infrastructure to be constructed under the NEVI program will be the subrecipient's responsibility for no less than five years from the time the charging infrastructure becomes operational.

In accordance with anticipated FHWA requirements around minimum station uptime, the Project Team will impose an uptime requirement of at least 97% (uptime is calculated as the time when a charger's hardware and software are both online and available for use and the charging port successfully dispenses electricity as expected) and will require that uptime be reported by subrecipients as a dataset submitted quarterly. The Project Team will monitor station uptime through subrecipient reported usage data and general user satisfaction feedback posted to publicly accessible third-party charging websites. Enforcement of idle fees and time limits will be the responsibility of the subrecipient.

Applicants will be required to submit an O&M Plan to demonstrate that the equipment will be operational at least 97% of the time based on the hours of operation. Additionally, the O&M plan will address customer service, site host training, process and timelines for upkeep, and repair turnaround time. The O&M Plan will also address circumstances where electricity and connectivity issues may fall outside of the purview of the network vendor and the responsible parties in such circumstances. The Project Team expects that most malfunctions and repairs be addressed within 48 hours of the initial notice; O&M Plans will need to address how this repair time will be achieved. For significant or complex issues leading to downtime (such as vandalism), the equipment will be expected to be repaired in 2 – 5 days. The O&M Plan will also need to identify the party responsible for payment of all operating costs, including but not limited to payment of leases, rents, royalties, licenses, fees, taxes, revenue sharing, utilities, and electric power supply for the charging equipment and supporting elements, such as area lighting. Additionally, the O&M Plan will address who will be responsible for ensuring the maintenance of the charging station pedestals and all ancillary equipment, including but not limited to any awnings, canopies, shelters and information display kiosks, or signage associated with the charging station.

Strategies for Identifying Electric Vehicle Charger Service Providers and Station Owners

NEVI Program subrecipients will be responsible for securing interested site hosts and EV charger service providers in accordance with program rules and requirements. Additionally, as part of the project solicitation process, the Project Team will leverage existing outreach methods and contact lists to spread awareness of the opportunity to EV charging equipment service providers and to potential station owners/property owners.

Strategies for EVSE Data Collection & Sharing

The Project Team will include data collection and reporting requirements within subrecipient contracts under the NEVI Program. In accordance with anticipated FHWA requirements around data submittal, the Project Team will then gather and report quarterly data on charging station use, reliability, maintenance, and installation cost information. The Project Team is currently evaluating how data should be collected, stored, and submitted to the State; what specific data should be required; and whether or how to aggregate and publish the data or resultant analyses.

Further, the Project Team will develop its data requirements in consultation with available national standards, such as the EV Charging Use Data Specification that Atlas Public Policy is currently developing in coordination with key stakeholders such as the Alliance for Transportation and Idaho National Laboratory.[10] Tennessee may adopt an existing specification or use one as a foundation when developing its own data reporting requirements. The long-term goal for these efforts will be a unified set of data to track use and reliability of publicly funded charging infrastructure.

Strategies to Address Resilience, Emergency Evacuation, Snow Removal/Seasonal Needs

As noted within the Tennessee Climate section above, extreme weather events that frequently occur in Tennessee include severe thunderstorms, flooding, tornadoes, droughts, heat and cold waves, and winter storms. During such events, it is important to have charging infrastructure that is reliable in the event of evacuations. However, a key challenge in maintaining reliability is the risk of power and communication outages. The Project Team will evaluate and consider technologies that can provide backup power during extreme weather events and emergency evacuations. Battery backup and storage, often coupled with solar power, are some of the technologies currently under consideration. Project site assessments will evaluate potential impacts from extreme weather events, flooding, terrain, and snow removal. The State will not exclude projects that add redundancy and improve the overall resilience of the national network of EV charging stations. Seasonality will be addressed by mandating the use of equipment that is certified to operate outdoors in extreme weather conditions.

To encourage subrecipient insurance policies that could cover infrastructure damage caused by extreme weather events, the Project Team will include language within subrecipient contracts to note that for five years following infrastructure installation and commissioning, if any DCFC or related equipment installed by the subrecipient is damaged, destroyed, or otherwise rendered inoperable, then the subrecipient shall repair or replace, as approved in advance by the State, the damaged or destroyed DCFC and/or related equipment with comparable equipment that, in the State's discretion, meets or exceeds the NEVI Program standards. All repair or replacement work must be approved in advance by the State and be performed at the subrecipient's sole cost. Subrecipients will be able to apply any insurance policy proceeds received due to damage or destruction of the DCFCs and/or related equipment to satisfy repair or replacement obligations.

TDOT operates HELP trucks on Tennessee's most heavily traveled highways in Chattanooga, Knoxville, Memphis and Nashville. The program began in 1999 for the purpose of reducing traffic congestion, improving safety, and assisting motorists in distress. TDOT's HELP trucks work in partnership with emergency response agencies and other TDOT units as part of a highway incident management team. In tandem with the development of a DCFC infrastructure network along Tennessee's major travel corridors,

[10] https://evchargingspec.org/.

TDOT will evaluate ways in which the HELP truck program can utilize mobile charging units to assist stranded vehicles that have run out of charge or to provide charging services in times of emergency.

Strategies to Promote Strong Labor, Safety, Training, and Installation Standards

Applicants will be required to submit EV Infrastructure Workforce Plans as part of their applications for funding. These plans will need to detail information on job creation and recruitment, training and upward mobility, safe workplace conditions, workforce engagement, workforce accessibility to jobs, pay/prevailing wages, supplier diversity, and benefits. In accordance with anticipated FHWA requirements around minimum skill, training, and certification standards for technicians installing, operating, and maintaining EV charging infrastructure, the EV Infrastructure Workforce Plans would also require applicants to demonstrate that electricians installing, operating, or maintaining EV charging infrastructure will be able to meet one of the following requirements: (i) Certification from the Electric Vehicle Infrastructure Training Program (EVITP) or (ii) Graduation from a Registered Apprenticeship Program for electricians that includes EVSE-specific training and is developed as a part of a national guideline standard approved by the Department of Labor in consultation with the Department of Transportation.

The Project Team expects to continue to explore and support investments in EV charging infrastructure workforce training and development programs to align with workforce supply and demand. Many existing apprenticeship and pre-apprenticeship programs could be leveraged to train and develop a new EV charging infrastructure workforce. The State also maintains a strong relationship with community colleges and universities, many of which are in the midst of designing new curricula around EV and EV charging infrastructure manufacturing, operations, and maintenance.

The State will seek to engage with rural and small businesses across the EV charging infrastructure supply chain by leveraging channels maintained by the TN Department of Economic and Community Development, the Tennessee Chamber of Commerce and Industry, Tennessee Advanced Energy Business Council, the TN Small Business Development Center, the Small Business Administration Tennessee District Office, Development Districts throughout the state, the Brotherhood of Electrical Workers, local chambers of commerce, and through the EV charging infrastructure industry. Outreach to rural and small businesses will include communications and targeted meetings across the EV charging infrastructure supply chains.

Civil Rights

Title VI of the Civil Rights Act

Title VI of the Civil Rights Act of 1964 prohibits discrimination based on race, color, or national origin in programs or activities receiving federal financial assistance (42 U.S.C. §2000d). As recipients of federal funding, TDOT and TDEC are required to comply with the rules, laws, and regulations of Title VI. Title VI also applies to recipients of federal financial assistance that passes through TDOT or TDEC in the form of grants, contracts, or subcontracts.

TDOT and TDEC both maintain Title VI programs that outline specific requirements for grantees and subrecipients. These subrecipients will be required to complete the appropriate Title VI training, maintain a certificate of training completion, and submit to annual compliance reviews or other certifications as outlined by the granting agency.

Americans with Disabilities Act and Section 504 of the Rehabilitation Act

NEVI Formula Program funding is directed primarily at EV charging infrastructure that is open to the general public. Thus, these chargers must be accessible to individuals with disabilities as outlined in the Americans with Disabilities Act (ADA). Opportunities related to public feedback will be held in accordance with Section 504 of the Rehabilitation Act of 1973 to solicit feedback from the disability community.

It will be the responsibility of each subrecipient to consult their legal advisor and determine whether the subrecipient's publicly accessible EV chargers may be subject to current requirements of the ADA and any State accessibility requirements and, if so, what steps the subrecipient must take to ensure compliance. As part of the development of the Fast Charge TN Network, TDEC, TVA, and TDOT's Roadway Design Division developed State accessibility requirements, which will remain applicable for stations to be funded under the NEVI Program. The accessibility requirements establish that at least one van-accessible EV charging stall must be available at each EV charging station. Accessibility requirements are summarized below and in Figure 15:

- Total stall width, including both access aisles, shall be a minimum of 252"
- Parking stall minimum width: 96"
- Stall minimum length: 216"
- Access aisles:
    - Access aisle with 60" min. width must be located along one side of EV charging stall, be the same length as the stall(s) it serves and connect to an accessible route to the charger. It is preferable, but not required, to locate this 60" aisle adjacent other EV charging stalls.
    - Access aisle with 48" min. width must be located along opposite side of EV charging stall, be the same length as the stall(s) it serves, and connect to an accessible route to the charger
    - Boundary of the access aisle must be marked
    - Access aisles may have 1:50 maximum slope in all directions
- Accessible path to EV charger must be provided (wheel stops and curbs cannot be located in a manner that obstructs an accessible path to the charger)

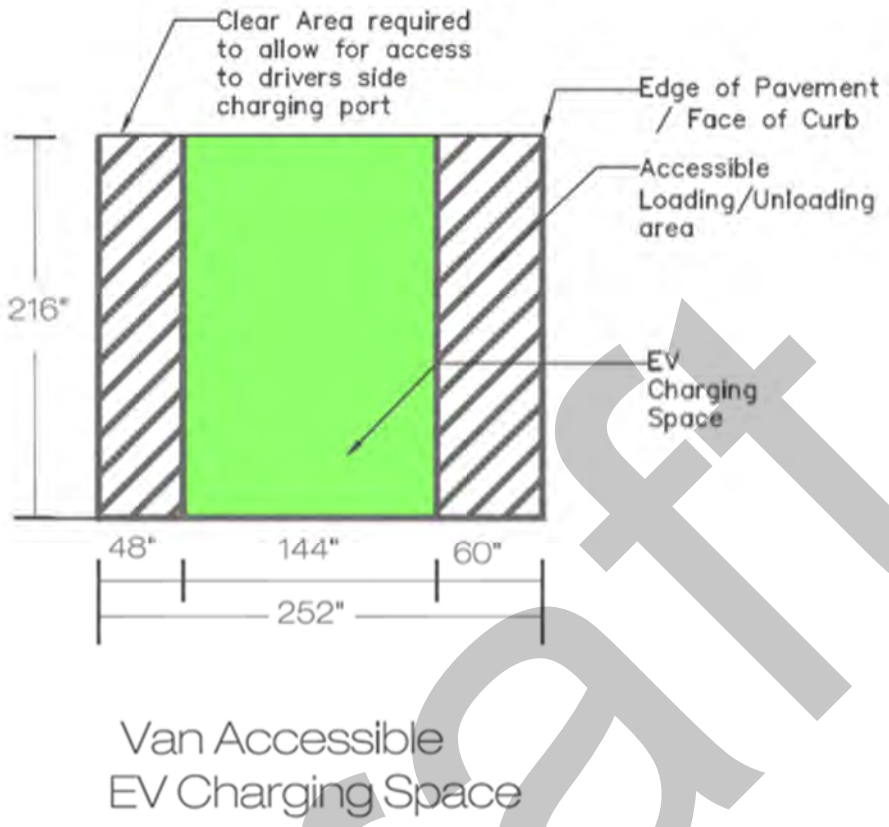

Figure 16: Van Accessible EV Charging Space Graphical Illustration

Equity Considerations

Identification and Outreach to Disadvantaged Communities in the State

Many of the burdens from existing transportation networks and programs have been disproportionally borne by disadvantaged communities (DACs), including energy and transportation-burdened communities, communities facing high rates of environmental pollution, those whose economies are highly dependent on fossil energy sources, and those with high rates of social vulnerability. To address this inequity, the Justice40 Initiative establishes a goal that at least 40% of the overall benefits of investments in clean transportation flow to DACs. Consistent with Executive Order 14008 and the Interim Justice40 Guidance issued by the Office of Management and Budget (OMB), as well as Section III.C. of the NEVI Formula Program Guidance, the Project Team utilized the Electric Vehicle Charging Justice40 Map tool to identify and conduct outreach to DACs to raise awareness regarding the NEVI Formula Program and to solicit feedback from DACs on key considerations to be included within the TEVI Deployment Plan.

TEVI Deployment Plan was developed through engagement with rural, underserved, and DACs. As detailed in the Stakeholder and Public Outreach Section, TDOT and TDEC established an engagement plan at the beginning of the planning process to guide stakeholder outreach. All of the FHWA-designated AFCs in Tennessee pass through areas that meet the DOE and DOT definition of DACs. Specifically, the Project Team ensured that outreach to DACs was conducted through each of the avenues detailed below:

- **Outreach and engagement sessions:** The locations and venues for in-person public and stakeholder engagement sessions were selected based on proximity to designated AFCs, with additional consideration given to areas designated as DOE/DOT Interim Guidance DACs within the Electric Vehicle Charging Justice40 Map. In addition to hosting sessions in Tennessee's four major urban areas (Chattanooga, Knoxville, Memphis, and Nashville), rural areas overlapping the corridors were also selected for five additional sessions (Kingston, Kingsport, Monteagle, Fayetteville, and Camden). All nine engagement sessions were held either within or adjacent to a DAC. Additionally, all sessions were held at 5:30 pm to accommodate schedules for working individuals.
- **Print media:** Advertisements publicizing the in-person engagement sessions were published in five minority newspapers in Nashville and Memphis, three with a focus on African-American communities and two with a focus on Hispanic communities (and translated into Spanish).
- **Participant resources:** The Project Team was prepared to offer accommodations as requested for participants with Limited English Proficiency (LEP). No additional services were requested ahead of the in-person sessions. A webinar was recorded and published on the TEVI Deployment plan website to accommodate individuals who could not attend in-person sessions. Presentation materials used in the online webinar and in-person sessions were published online and translated into Spanish.
- **Public survey:** The online stakeholder engagement survey was also translated into Spanish and published on the TEVI Deployment plan website.

The public survey had two questions that specifically asked about DACs. When asked how the State can ensure that NEVI funding benefits DACs, the top selected options were to engage community organizers in site selection and to build chargers near apartments and multi-unit dwellings. An open-ended question was also asked about how the State can minimize potential impacts to DACs, including gentrification. Responses varied, but common themes included engaging community leaders in outreach and education, providing employment opportunities, ensuring chargers are in safe and publicly accessible areas, and developing incentives.

As EV ownership and demand for charging infrastructure expands in Tennessee, there are further opportunities to ensure resources are distributed equitably across communities. Continued engagement with our rural areas and DACs will be key to ensuring reliable long-range travel opportunities and support for local demand. TDOT will utilize its existing relationships with MPOs and RPOs to support planning for EV charging infrastructure in urban and rural areas. Collaborating with MPOs and RPOs will ensure that local needs are considered and that city and county leaders are engaged in the planning process.

Process to Identify, Quantify, and Measure Benefits to DACs

Through outreach and engagement conducted as part of the TEVI Deployment Plan development, the Project Team sought to provide foundational information to DAC members that will equipment them to actively provide feedback for NEVI decisions (e.g., outreach and education on EV charging basics, existing and planned public EV charger locations, total cost of ownership, and financial incentives).

In addition to the use of the Electric Vehicle Charging Justice40 mapping tool, the Project Team will also take into account benefits from NEVI investments that could accrue to individuals located within economically Distressed or At-Risk counties, as determined by the Appalachian Regional Commission. Specifically, Distressed counties rank among the 10% most economically distressed counties in the nation. Each year, the Appalachian Regional Commission (ARC) prepares an index of county economic status for every county in the United States. Economic status designations are identified through a composite measure of each county's three-year average unemployment rate, per capita market income,

and poverty rate. Based on these indicators, each county is then categorized as distressed, at-risk, transitional, competitive or attainment. The map below overlays geographic areas that are either economically Distressed/At-Risk, are considered DACs by U.S. DOE/DOT, or both.

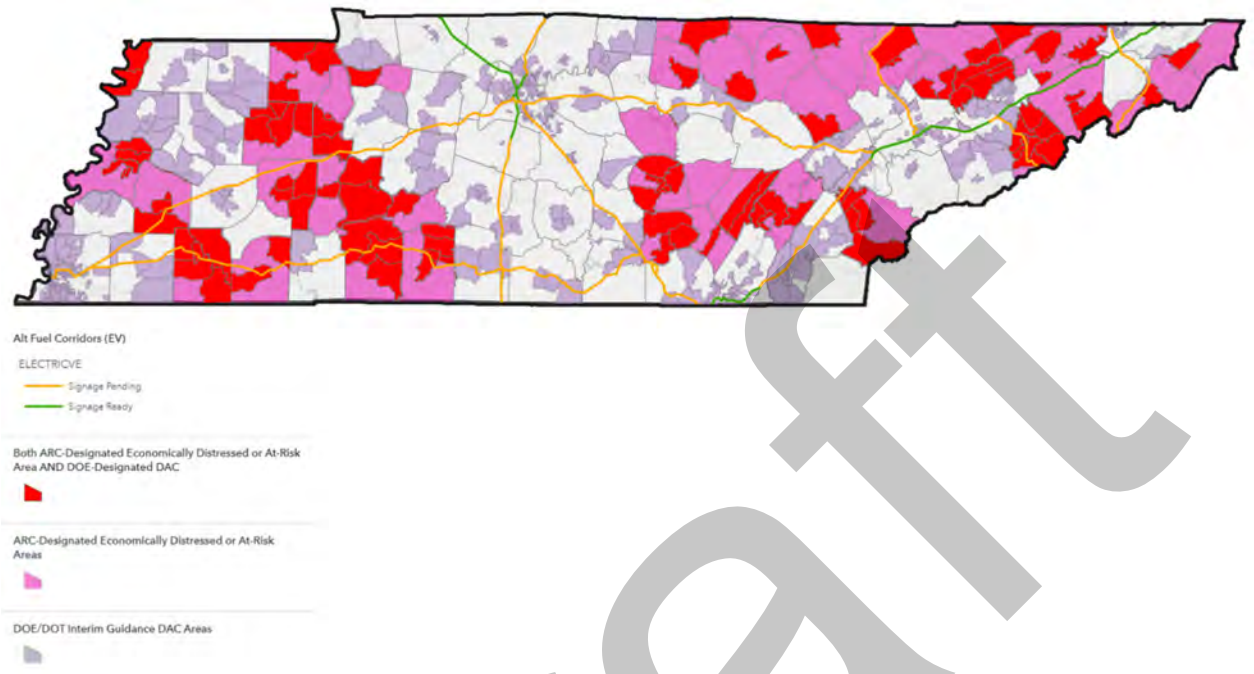

Figure 17: Map displaying Tennessee's designated AFCs as well as areas that have been designated as Economically Distressed or At-Risk areas for State FY2023 according to standards set forth by the Appalachian Regional Commission, Disadvantaged Communities by U.S. DOE/DOT, or both.

Benefits to DACs through this Plan

The Project Team has and will continue to gather and publish information about the benefits of EV charging infrastructure that may accrue to DAC members, including:

- Access to clean transportation;
- Decreased transportation cost burden;
- Disadvantaged business opportunities / enterprise creation in DACs;
- Jobs and jobs training;
- Reduced environmental exposure to transportation emissions / improved local air quality;
- Increased parity in clean energy technology access and adoption; and
- Increased availability of charging infrastructure that can serve transit and shared-ride vehicles.

Meaningful community engagement can improve outcomes by helping to inform decisions with the needs, interests, and concerns of affected stakeholders and groups. As NEVI deployment activities progress, the Project Team will continue to engage DACs in an iterative fashion in order to receive input on DAC priorities and concerns; publicly summarize inputs from DACs; communicate program design decisions and solicit feedback on such from DAC members; communicate and validate benefits received by DAC members; and update any program design considerations accordingly, as needed.

Labor and Workforce Considerations

Tennessee is the top state in the Southeast for EV manufacturing, claiming nearly 40% of the region's EV manufacturing jobs and investment. According to the Tennessee Department of Economic and Community Development, nearly $12 billion in capital investment has been accrued in the state since 2017 in the EV sector alone. This reflects the four major automotive manufacturers that currently or soon plan to produce EVs and associated battery technologies in Tennessee (Ford, Volkswagen, GM, and Nissan), as well as other vehicle, parts, battery producers, and EV charging infrastructure manufacturers that have set up shop across the state.

In 2021, Ford Motor Company and SK Innovation announced plans to build Blue Oval City in West Tennessee. The facility will primarily consist of an automotive assembly plant that will produce the electric Ford F-150 Lightning pickup trucks and a plant that will manufacture EV batteries. The project, which is projected to directly employ 5,800 Tennesseans, is expected to cost $5.6 billion, making it the single largest investment in state history. Notably, the Tennessee College of Applied Technology (TCAT), a public technical college, is building a campus adjacent to Ford's Blue Oval City that will serve as a training and employment center for Ford. Workforce training partnerships already exist in other parts of the state, with manufacturing companies providing technical education and skilled labor within Tennessee.

Tennessee strongly supports investments that expand good paying jobs, increase job access, improve job quality, provide strong labor standards, strengthen local/regional economies, and develop an equitable and diverse workforce in building EV charging infrastructure. Tennessee has a number of programs through the Tennessee Department of Labor and Workforce Development to promote a highly skilled and diverse workforce. TDOT also administers a Small Business Development Program that includes the Disadvantaged Business Enterprise (DBE) and Small Business Enterprise (SBE) programs. The Small Business Development Program's primary goal is to increase the number of minority and female businesses in the highway and bridge construction industry. The DBE program was developed by FHWA to encourage minority, female, and other disadvantaged firms to complete transportation-related work. Eligible providers or subcontractors completing work under the NEVI Formula Program will be encouraged to become a TDOT-certified DBE and support ongoing DBE goals.

The Project Team will engage the appropriate labor and workforce entities and strategies for successful implementation of this plan. Where possible, the Project Team will seek to grow and diversify the local workforce, and will leverage geographic, economic, or other hiring preferences to maximize job creation and economic benefits.

Cybersecurity

TDOT is committed to ensuring that the statewide EV charging infrastructure network to be developed under the NEVI Program will not pose a cybersecurity risk. EV charging infrastructure provides direct connections to a vehicle's onboard system as well as to the EV charging service provider's network. The infrastructure further provides an indirect connection to the driver's smart phone if the charge is paid for with an app, to banking information if a credit card is utilized, to telecommunications providers, and to the electric grid. The connection between non-State-owned assets and State-owned intelligent transportation system (ITS) infrastructure represents an elevated security concern to TDOT and the motorist. This connection creates bi-directional risk as well as a possible liability for theft of personal information, payment/ transaction information, or vehicle information and location data. TDOT will

contract with a skilled vendor to provide cybersecurity services and limit liability. TDOT will offer oversight of the service and governance of the associated data and financials.

The current ITS infrastructure is not connected to the State's network and therefore provides minimal risk of data breach between the State office network and the EV charging infrastructure network. However, if TDOT chose to manage network services internally, there would be an increased potential for exposure of the Transportation Management Centers (TMCs). In addition, there would be a connection to the statewide power-grid. TDOT is not aware of Federal mandates that may exist with regard to securing this network but there are generally heightened guidelines for access to public utility networks.

Subrecipients will own, operate, and maintain the EV charging stations as well as the data produced. They will be required to provide TDOT with anonymized data on a recurring basis. Subrecipients will also be required to publish station location, power ratings, and costs to the various websites and apps that track publicly accessible EV charging stations, including the U.S. Department of Energy's Alternative Fuels Data Center Station Locator.

As part of the contract, prior to issuance of the award or other funding, the subrecipient will be required to provide a cybersecurity plan that demonstrates compliance with applicable State and federal cybersecurity requirements. The plan must also demonstrate how the recipient will maintain and improve cybersecurity throughout the life of the project. This will include requirements to maintain compliance with current and future cybersecurity requirements as well as alerting TDOT and the Cybersecurity and Infrastructure Security Agency (CISA) of any known or suspected network or system compromises.

Further guidance from the Joint Office regarding cybersecurity guidelines is pending; Tennessee will comply with the federal guidance upon issuance.

Program Evaluation

In accordance with anticipated FHWA requirements around data submittal, the Project Team will gather and report quarterly data on charging station use, reliability, maintenance, and installation cost information and annual data on organizations operating, maintaining, or installing EV charging infrastructure as well as information on certifications of these entities through State or local business opportunity certification programs.

The goal will be to facilitate efficient and valuable data collection, evaluation, and reporting in order to ensure a reliable and consistent charging experience throughout Tennessee. This will include the monitoring of private sector development, examination of utilization data from installed equipment, and working with planning partners to develop new locations and/or make necessary adjustments to existing locations. Data will be evaluated and analyzed on an ongoing basis to inform annual updates to the TEVI Deployment Plan and to assist the Project Team in monitoring and reporting progress. Lastly, Project Team members will track and evaluate progress through quarterly and annual reports, invoice reviews, desktop monitoring, and onsite monitoring visits.

Discretionary Exceptions

As part of the development and approval of State Plans, a State may submit a request for discretionary exceptions from the requirement that charging infrastructure is installed every 50 miles along designated AFC highway and within one travel mile of the designated AFC highway. The NEVI Formula Program Guidance notes that exceptions will be granted under very limited circumstances on a case-by-case basis,

approved in conjunction with annual state plan certification. A state may apply for an exception to the 50-mile criteria, an exception to the 1-mile (proximity) criteria, or to both criteria for any of four reasons:

- Grid Capacity: Delivering sufficient power to the charging site requires major upgrades to existing infrastructure
- Geography: Lack of necessary services or access to the site significantly compromise accessibility and/or functionality (e.g., roadway exits, necessary amenities)
- Equity: An alternate location that would still service travelers on the AFC would better support providing benefits to a disadvantaged community
- Extraordinary Cost: Costs to locate and operate a station at a given site prevent its economic viability even with federal funding through NEVI or other sources

Given existing power capacity and a potential lack of eligible site hosts along some of the AFCs in Tennessee, particularly in the most rural parts of the state, the Project Team does anticipate that it may need to request one or more discretionary exceptions to the NEVI minimum technical specifications. Such occurrences are anticipated to be identified following project solicitation and evaluation of project proposals. Any potential issues with identifying and developing sites to meet the NEVI Program minimum technical specifications will be communicated with FHWA as the program develops.

For each exception request that is submitted, the Project Team will detail the following:

- Why the request for an exception is being made, providing information to substantiate each of the allowable reasons that are applicable.
- The alternative location that is being proposed and how the alternative being proposed to the requirements contributes to the completion of a national network of convenient, affordable, reliable, and equitable EV charging infrastructure.
- Any analysis that has been performed that substantiates the request for a discretionary exception.

Appendix A: Supporting Materials (As Applicable)

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
121816	DCFC	I-40	Memphis	8	Electrify America
121811	DCFC	I-40	Jackson	8	Electrify America
121800	DCFC	I-24	Clarksville	8	Electrify America
121804	DCFC	I-24	Nashville	18	Electrify America
146949	DCFC	I-65	Franklin	8	Electrify America
121813	DCFC	I-24	Manchester	8	Electrify America
121803	DCFC	I-40	Cookeville	8	Electrify America
121818	DCFC	I-75	Ooltewah	16	Electrify America
121808	DCFC	I-75 / I-40	Knoxville	8	Electrify America
186722	DCFC	I-40	Kodak	8	Electrify America
39802	DCFC	I-75	Chattanooga	2	Non-Networked
39808	DCFC	I-65	Franklin	3	Non-Networked
39815	DCFC	I-65 / I-40	Madison	3	Non-Networked
39819	DCFC	I-40	Memphis	3	Non-Networked
39821	DCFC	I-24	Murfreesboro	6	Non-Networked
39823	DCFC	I-40 / I-65 / I-24	Nashville	2	Non-Networked
39846	DCFC	I-40	Bartlett	2	Non-Networked
43762	DCFC	I-65	Franklin	6	Non-Networked
68421	DCFC	I-40	Jackson	2	Non-Networked
78292	DCFC	I-40 / I-75	Knoxville	4	Non-Networked
143383	DCFC	I-40 / I-65 / I-24	Nashville	2	ChargePoint Network
164275	DCFC	I-40	Cookeville	4	ChargePoint Network
173438	DCFC	I-65	Brentwood	2	ChargePoint Network
173439	DCFC	I-65	Brentwood	2	ChargePoint Network
174248	DCFC	I-40 / I-65 / I-24	Nashville	2	ChargePoint Network
174249	DCFC	I-40 / I-65 / I-24	Nashville	2	ChargePoint Network
174250	DCFC	I-40 / I-65 / I-24	Nashville	2	ChargePoint Network
182716	DCFC	I-75	Chattanooga	2	ChargePoint Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
183182	DCFC	I-65	Franklin	2	ChargePoint Network
198254	DCFC	I-65	Brentwood	2	eVgo Network
198269	DCFC	I-75	Chattanooga	2	eVgo Network
198283	DCFC	I-75	Chattanooga	2	eVgo Network
198284	DCFC	I-75	Chattanooga	2	eVgo Network
198304	DCFC	I-40 / I-75	Knoxville	2	eVgo Network
198378	DCFC	I-40 / I-65 / I-24	Nashville	3	eVgo Network
198588	DCFC	I-40 / I-65 / I-24	Nashville	2	eVgo Network
198589	DCFC	I-65	Hendersonville	2	eVgo Network
198591	DCFC	I-24	Murfreesboro	2	eVgo Network
198592	DCFC	I-65	Brentwood	2	eVgo Network
202906	DCFC	I-40	Memphis	2	ChargePoint Network
206278	DCFC	I-40	Memphis	1	EV Connect
213971	DCFC	I-65	Franklin	2	ChargePoint Network
218517	DCFC	I-40 / I-65 / I-24	Nashville	2	ChargePoint Network
221115	DCFC	I-40	Barlett	1	EV Connect
39802	L2	I-24	Chattanooga	1	Non-Networked
39816	L2	I-24	Manchester	1	Non-Networked
39821	L2	I-24	Murfreesboro	1	Non-Networked
53986	L2	I-24	Clarksville	2	Non-Networked
63597	L2	I-24	Chattanooga	2	Non-Networked
75696	L2	I-24	Chattanooga	2	ChargePoint Network
77363	L2	I-24	Chattanooga	2	ChargePoint Network
77364	L2	I-24	Chattanooga	2	ChargePoint Network
77367	L2	I-24	Chattanooga	2	ChargePoint Network
80496	L2	I-24	Chattanooga	2	ChargePoint Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
85392	L2	I-24	Smyrna	2	ChargePoint Network
85877	L2	I-24	Chattanooga	2	ChargePoint Network
95140	L2	I-24	Murfreesboro	4	Blink Network
104604	L2	I-24	Murfreesboro	2	Non-Networked
115575	L2	I-24	Antioch	8	Tesla Destination
115576	L2	I-24	Antioch	5	Tesla Destination
115581	L2	I-24	Clarksville	10	Tesla Destination
115582	L2	I-24	Clarksville	2	Tesla Destination
115602	L2	I-24	Murfreesboro	12	Tesla Destination
115617	L2	I-24	Smyrna	3	Tesla Destination
117699	L2	I-24	Nashville	1	ChargePoint Network
149537	L2	I-24	Nashville	6	Blink Network
150659	L2	I-24	Smyrna	2	Tesla Destination
150670	L2	I-24	Murfreesboro	1	Tesla Destination
150689	L2	I-24	Smyrna	2	Tesla Destination
155332	L2	I-24	Murfreesboro	2	Blink Network
164745	L2	I-24	Smyrna	2	Blink Network
165163	L2	I-24	Murfreesboro	3	Blink Network
165164	L2	I-24	Murfreesboro	2	Blink Network
165191	L2	I-24	Murfreesboro	3	Blink Network
172021	L2	I-24	Chattanooga	2	ChargePoint Network
173779	L2	I-24	Nashville	1	ChargePoint Network
182917	L2	I-24	Murfreesboro	1	ChargePoint Network
182935	L2	I-24	Murfreesboro	1	ChargePoint Network
182936	L2	I-24	Murfreesboro	1	ChargePoint Network
182937	L2	I-24	Murfreesboro	1	ChargePoint Network
183732	L2	I-24	Chattanooga	2	Blink Network
190774	L2	I-24	Murfreesboro	2	Blink Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
193311	L2	I-24	Murfreesboro	2	Blink Network
194609	L2	I-24	Murfreesboro	2	Blink Network
213333	L2	I-24	Murfreesboro	1	ChargePoint Network
213334	L2	I-24	Murfreesboro	1	ChargePoint Network
216558	L2	I-24	Smyrna	4	Blink Network
220798	L2	I-24	Murfreesboro	4	Blink Network
39811	L2	I-26	Johnson City	1	Non-Networked
41483	L2	I-26	Kingsport	6	Non-Networked
115594	L2	I-26	Kingsport	3	Tesla Destination
145557	L2	I-26	Johnson City	2	ChargePoint Network
152563	L2	I-26	Erwin	2	ChargePoint Network
169433	L2	I-26	Johnson City	2	ChargePoint Network
189041	L2	I-26	Johnson City	1	Blink Network
206159	L2	I-26	Johnson City	1	ChargePoint Network
39805	L2	I-40	Cookeville	1	Non-Networked
39806	L2	I-40	Dickson	1	Non-Networked
39813	L2	I-40	Knoxville	1	Non-Networked
39814	L2	I-40	Knoxville	1	Non-Networked
39819	L2	I-40	Memphis	1	Non-Networked
39846	L2	I-40	Bartlett	2	Non-Networked
52834	L2	I-40	Memphis	10	Non-Networked
53987	L2	I-40	Memphis	2	Non-Networked
73707	L2	I-40	Nashville	1	ChargePoint Network
78292	L2	I-40	Knoxville	2	Non-Networked
78293	L2	I-40	Knoxville	6	Non-Networked
78294	L2	I-40	Knoxville	6	Non-Networked
95109	L2	I-40	Knoxville	2	Blink Network
95183	L2	I-40	Knoxville	4	Blink Network
95381	L2	I-40	Cookeville	1	Blink Network
95440	L2	I-40	Memphis	2	Blink Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
95772	L2	I-40	Knoxville	2	Blink Network
96156	L2	I-40	Kodak	1	Blink Network
96322	L2	I-40	Knoxville	6	Blink Network
96342	L2	I-40	Memphis	2	Blink Network
96344	L2	I-40	Memphis	2	Blink Network
96371	L2	I-40	Knoxville	2	Blink Network
96459	L2	I-40	Memphis	2	Blink Network
96463	L2	I-40	Lebanon	2	Blink Network
96532	L2	I-40	Knoxville	1	Blink Network
96533	L2	I-40	Kodak	1	Blink Network
104596	L2	I-40	Knoxville	2	Non-Networked
104599	L2	I-40	Knoxville	2	Non-Networked
104602	L2	I-40	Lenoir City	2	Non-Networked
105377	L2	I-40	Nashville	2	ChargePoint Network
115577	L2	I-40	Baxter	3	Tesla Destination
115584	L2	I-40	Crossville	2	Tesla Destination
115585	L2	I-40	Dickson	10	Tesla Destination
115592	L2	I-40	Jackson	3	Tesla Destination
115595	L2	I-40	Knoxville	2	Tesla Destination
115596	L2	I-40	Knoxville	10	Tesla Destination
115597	L2	I-40	Kodak	1	Tesla Destination
115598	L2	I-40	Memphis	2	Tesla Destination
115599	L2	I-40	Memphis	3	Tesla Destination
115600	L2	I-40	Memphis	2	Tesla Destination
115601	L2	I-40	Memphis	4	Tesla Destination
115610	L2	I-40	Nashville	8	Tesla Destination
117616	L2	I-40	Nashville	1	ChargePoint Network
117698	L2	I-40	Knoxville	1	ChargePoint Network
122547	L2	I-40	Cookeville	3	Tesla Destination
122755	L2	I-40	Knoxville	2	Non-Networked
123452	L2	I-40	Bartlett	5	Non-Networked
145149	L2	I-40	Knoxville	2	ChargePoint Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
145150	L2	I-40	Knoxville	2	ChargePoint Network
146988	L2	I-40	Nashville	2	ChargePoint Network
146989	L2	I-40	Nashville	2	ChargePoint Network
150731	L2	I-40	Cookeville	7	Tesla Destination
152235	L2	I-40	Cookeville	2	ChargePoint Network
152338	L2	I-40	Memphis	2	Blink Network
153303	L2	I-40	Memphis	2	ChargePoint Network
153309	L2	I-40	Nashville	2	ChargePoint Network
153325	L2	I-40	Nashville	2	ChargePoint Network
154404	L2	I-40	Memphis	2	Blink Network
163587	L2	I-40	Mt. Juliet	2	ChargePoint Network
163588	L2	I-40	Mt. Juliet	2	ChargePoint Network
163823	L2	I-40	Nashville	1	Blink Network
164563	L2	I-40	Knoxville	2	Non-Networked
164564	L2	I-40	Knoxville	1	Non-Networked
164671	L2	I-40	Nashville	2	ChargePoint Network
164779	L2	I-40	Knoxville	1	Blink Network
165230	L2	I-40	Nashville	2	ChargePoint Network
169134	L2	I-40	Mount Juliet	1	Tesla Destination
170218	L2	I-40	Knoxville	1	Non-Networked
170219	L2	I-40	Knoxville	3	Non-Networked
170220	L2	I-40	Knoxville	2	Non-Networked
170221	L2	I-40	Knoxville	3	Non-Networked
170222	L2	I-40	Knoxville	4	Non-Networked
170223	L2	I-40	Knoxville	1	Non-Networked
170224	L2	I-40	Knoxville	4	Non-Networked
170225	L2	I-40	Knoxville	2	Non-Networked

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
173640	L2	I-40	Nashville	2	ChargePoint Network
173641	L2	I-40	Nashville	2	ChargePoint Network
174420	L2	I-40	Knoxville	2	ChargePoint Network
174421	L2	I-40	Knoxville	2	ChargePoint Network
174555	L2	I-40	Nashville	2	ChargePoint Network
174556	L2	I-40	Nashville	2	ChargePoint Network
181008	L2	I-40	Nashville	2	ChargePoint Network
181009	L2	I-40	Nashville	2	ChargePoint Network
181010	L2	I-40	Nashville	2	ChargePoint Network
181011	L2	I-40	Nashville	2	ChargePoint Network
181012	L2	I-40	Nashville	2	ChargePoint Network
181013	L2	I-40	Nashville	2	ChargePoint Network
181014	L2	I-40	Nashville	2	ChargePoint Network
181015	L2	I-40	Nashville	2	ChargePoint Network
184878	L2	I-40	Nashville	2	ChargePoint Network
184879	L2	I-40	Nashville	2	ChargePoint Network
184880	L2	I-40	Nashville	2	ChargePoint Network
184889	L2	I-40	Nashville	2	ChargePoint Network
185379	L2	I-40	Knoxville	2	Blink Network
185579	L2	I-40	Nashville	2	ChargePoint Network
189128	L2	I-40	Memphis	2	Blink Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
189468	L2	I-40	Memphis	2	ChargePoint Network
189469	L2	I-40	Memphis	2	ChargePoint Network
195211	L2	I-40	Memphis	2	SemaCharge Network
195871	L2	I-40	Knoxville	2	Non-Networked
196054	L2	I-40	Nashville	2	ChargePoint Network
196427	L2	I-40	Memphis	2	ChargePoint Network
196459	L2	I-40	Knoxville	2	ChargePoint Network
201016	L2	I-40	Jackson	3	Blink Network
205447	L2	I-40	Nashville	2	ChargePoint Network
205985	L2	I-40	Knoxville	1	ChargePoint Network
207516	L2	I-40	Memphis	1	ChargePoint Network
207517	L2	I-40	Memphis	1	ChargePoint Network
213661	L2	I-40	Knoxville	1	Blink Network
217040	L2	I-40	Kodak	1	Non-Networked
221171	L2	I-40	Knoxville	2	Blink Network
68034	L2	I-40 / I-24	Nashville	2	ChargePoint Network
116720	L2	I-40 / I-24	Nashville	2	ChargePoint Network
173676	L2	I-40 / I-24	Nashville	2	ChargePoint Network
173677	L2	I-40 / I-24	Nashville	2	ChargePoint Network
173678	L2	I-40 / I-24	Nashville	2	ChargePoint Network
173679	L2	I-40 / I-24	Nashville	2	ChargePoint Network
198378	L2	I-40 / I-24	Nashville	2	eVgo Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
201586	L2	I-40 / I-24	Nashville	2	ChargePoint Network
39808	L2	I-65	Franklin	1	Non-Networked
39823	L2	I-65	Nashville	2	Non-Networked
43762	L2	I-65	Franklin	4	Non-Networked
62273	L2	I-65	Nashville	2	ChargePoint Network
78943	L2	I-65	Brentwood	2	ChargePoint Network
79958	L2	I-65	Brentwood	1	ChargePoint Network
87676	L2	I-65	Brentwood	2	ChargePoint Network
95484	L2	I-65	Nashville	2	Blink Network
97067	L2	I-65	Franklin	2	ChargePoint Network
103077	L2	I-65	Brentwood	2	ChargePoint Network
104593	L2	I-65	Franklin	2	Non-Networked
104594	L2	I-65	Franklin	1	Non-Networked
115586	L2	I-65	Franklin	8	Tesla Destination
115587	L2	I-65	Franklin	2	Tesla Destination
115588	L2	I-65	Franklin	2	Tesla Destination
115605	L2	I-65	Nashville	1	Tesla Destination
122548	L2	I-65	Nashville	3	Tesla Destination
153159	L2	I-65	Brentwood	2	ChargePoint Network
153685	L2	I-65	Franklin	2	ChargePoint Network
163613	L2	I-65	Franklin	2	ChargePoint Network
164857	L2	I-65	Nashville	2	ChargePoint Network
164864	L2	I-65	Nashville	2	ChargePoint Network
167580	L2	I-65	Brentwood	2	Non-Networked
168866	L2	I-65	Nashville	4	Tesla Destination

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
171571	L2	I-65	Brentwood	1	ChargePoint Network
171874	L2	I-65	Brentwood	2	ChargePoint Network
171875	L2	I-65	Brentwood	2	ChargePoint Network
171876	L2	I-65	Brentwood	2	ChargePoint Network
171877	L2	I-65	Brentwood	2	ChargePoint Network
172637	L2	I-65	Brentwood	2	ChargePoint Network
172638	L2	I-65	Brentwood	2	ChargePoint Network
172639	L2	I-65	Brentwood	2	ChargePoint Network
175056	L2	I-65	Brentwood	2	ChargePoint Network
175162	L2	I-65	Franklin	2	ChargePoint Network
182931	L2	I-65	Franklin	1	ChargePoint Network
182932	L2	I-65	Franklin	1	ChargePoint Network
182933	L2	I-65	Franklin	1	ChargePoint Network
182934	L2	I-65	Franklin	1	ChargePoint Network
184083	L2	I-65	Nashville	2	Non-Networked
191339	L2	I-65	Nashville	4	SemaCharge Network
195613	L2	I-65	Nashville	2	SemaCharge Network
196168	L2	I-65	Franklin	2	ChargePoint Network
196555	L2	I-65	Brentwood	4	SemaCharge Network
198080	L2	I-65	Goodlettsville	2	ChargePoint Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
204654	L2	I-65	Goodlettsville	2	ChargePoint Network
218194	L2	I-65	Franklin	1	SemaCharge Network
218195	L2	I-65	Franklin	1	SemaCharge Network
220482	L2	I-65	Nashville	1	SemaCharge Network
39813	L2	I-75	Knoxville	1	Non-Networked
39814	L2	I-75	Knoxville	1	Non-Networked
61214	L2	I-75	Chattanooga	2	ChargePoint Network
73225	L2	I-75	Etowah	1	Non-Networked
77360	L2	I-75	Chattanooga	2	ChargePoint Network
77366	L2	I-75	Chattanooga	2	ChargePoint Network
78354	L2	I-75	Chattanooga	2	ChargePoint Network
89771	L2	I-75	Chattanooga	2	ChargePoint Network
89772	L2	I-75	Chattanooga	2	ChargePoint Network
95183	L2	I-75	Knoxville	4	Blink Network
95497	L2	I-75	Ooltewah	2	Blink Network
96322	L2	I-75	Knoxville	6	Blink Network
96356	L2	I-75	Chattanooga	1	Blink Network
96532	L2	I-75	Knoxville	1	Blink Network
100238	L2	I-75	Ooltewah	2	Blink Network
100239	L2	I-75	Ooltewah	2	Blink Network
104596	L2	I-75	Knoxville	2	Non-Networked
104599	L2	I-75	Knoxville	2	Non-Networked
115596	L2	I-75	Knoxville	10	Tesla Destination
115618	L2	I-75	Townsend	1	Tesla Destination
115620	L2	I-75	Walland	2	Tesla Destination
117698	L2	I-75	Knoxville	1	ChargePoint Network
164563	L2	I-75	Knoxville	2	Non-Networked

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
164564	L2	I-75	Knoxville	1	Non-Networked
164779	L2	I-75	Knoxville	1	Blink Network
165502	L2	I-75	Cleveland	2	ChargePoint Network
170225	L2	I-75	Knoxville	2	Non-Networked
172629	L2	I-75	Chattanooga	2	ChargePoint Network
172630	L2	I-75	Chattanooga	2	ChargePoint Network
185379	L2	I-75	Knoxville	2	Blink Network
187886	L2	I-75	Ooltewah	1	Blink Network
189062	L2	I-75	Powell	1	Blink Network
189697	L2	I-75	Ducktown	2	Blink Network
195936	L2	I-75	Clinton	2	Blink Network
197819	L2	I-75	Ducktown	2	Blink Network
205985	L2	I-75	Knoxville	1	ChargePoint Network
213661	L2	I-75	Knoxville	1	Blink Network
217038	L2	I-75	Walland	2	Non-Networked
194239	L2	I-81	Blountville	2	Non-Networked
220332	L2	I-81	Bristol	1	ChargePoint Network
220333	L2	I-81	Bristol	1	ChargePoint Network
47853	L2	U.S.-64	Savannah	1	Non-Networked
165453	L2	U.S.-64	Savannah	1	Non-Networked
52836	L2	I-40 / I-65	Nashville	10	Non-Networked
62807	L2	I-40 / I-65	Nashville	2	ChargePoint Network
63039	L2	I-40 / I-65	Nashville	2	ChargePoint Network
64552	L2	I-40 / I-65	Nashville	2	ChargePoint Network
68143	L2	I-40 / I-65	Nashville	2	ChargePoint Network
70728	L2	I-40 / I-65	Nashville	1	ChargePoint Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
76199	L2	I-40 / I-65	Nashville	1	ChargePoint Network
95221	L2	I-40 / I-65	Nashville	4	Blink Network
95484	L2	I-40 / I-65	Nashville	2	Blink Network
115603	L2	I-40 / I-65	Nashville	4	Tesla Destination
115605	L2	I-40 / I-65	Nashville	1	Tesla Destination
115606	L2	I-40 / I-65	Nashville	2	Tesla Destination
115609	L2	I-40 / I-65	Nashville	4	Tesla Destination
115611	L2	I-40 / I-65	Nashville	6	Tesla Destination
117772	L2	I-40 / I-65	Nashville	2	ChargePoint Network
148476	L2	I-40 / I-65	Nashville	2	SemaCharge Network
152995	L2	I-40 / I-65	Nashville	2	Non-Networked
154079	L2	I-40 / I-65	Nashville	2	ChargePoint Network
154145	L2	I-40 / I-65	Nashville	1	ChargePoint Network
154784	L2	I-40 / I-65	Nashville	2	ChargePoint Network
155530	L2	I-40 / I-65	Nashville	2	ChargePoint Network
164857	L2	I-40 / I-65	Nashville	2	ChargePoint Network
164864	L2	I-40 / I-65	Nashville	2	ChargePoint Network
168866	L2	I-40 / I-65	Nashville	4	Tesla Destination
170149	L2	I-40 / I-65	Nashville	2	ChargePoint Network
170150	L2	I-40 / I-65	Nashville	2	ChargePoint Network
171286	L2	I-40 / I-65	Nashville	2	ChargePoint Network
171310	L2	I-40 / I-65	Nashville	2	ChargePoint Network
171311	L2	I-40 / I-65	Nashville	2	ChargePoint Network
171312	L2	I-40 / I-65	Nashville	2	ChargePoint Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
171313	L2	I-40 / I-65	Nashville	1	ChargePoint Network
171421	L2	I-40 / I-65	Nashville	2	ChargePoint Network
171710	L2	I-40 / I-65	Nashville	1	ChargePoint Network
171711	L2	I-40 / I-65	Nashville	2	ChargePoint Network
171712	L2	I-40 / I-65	Nashville	2	ChargePoint Network
171713	L2	I-40 / I-65	Nashville	2	ChargePoint Network
171761	L2	I-40 / I-65	Nashville	2	ChargePoint Network
171799	L2	I-40 / I-65	Nashville	1	ChargePoint Network
171949	L2	I-40 / I-65	Nashville	2	ChargePoint Network
173786	L2	I-40 / I-65	Nashville	2	ChargePoint Network
175251	L2	I-40 / I-65	Nashville	2	ChargePoint Network
175252	L2	I-40 / I-65	Nashville	2	ChargePoint Network
175253	L2	I-40 / I-65	Nashville	2	ChargePoint Network
175254	L2	I-40 / I-65	Nashville	2	ChargePoint Network
175255	L2	I-40 / I-65	Nashville	2	ChargePoint Network
175256	L2	I-40 / I-65	Nashville	2	ChargePoint Network
175257	L2	I-40 / I-65	Nashville	2	ChargePoint Network
175273	L2	I-40 / I-65	Nashville	1	ChargePoint Network
175274	L2	I-40 / I-65	Nashville	1	ChargePoint Network
175275	L2	I-40 / I-65	Nashville	1	ChargePoint Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
175423	L2	I-40 / I-65	Nashville	2	ChargePoint Network
181946	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182230	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182231	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182232	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182233	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182234	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182235	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182236	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182246	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182247	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182248	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182249	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182250	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182251	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182252	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182253	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182254	L2	I-40 / I-65	Nashville	2	ChargePoint Network
182255	L2	I-40 / I-65	Nashville	1	ChargePoint Network
182256	L2	I-40 / I-65	Nashville	2	ChargePoint Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
182257	L2	I-40 / I-65	Nashville	1	ChargePoint Network
183265	L2	I-40 / I-65	Nashville	2	Non-Networked
183629	L2	I-40 / I-65	Nashville	3	Blink Network
184083	L2	I-40 / I-65	Nashville	2	Non-Networked
187755	L2	I-40 / I-65	Nashville	2	Blink Network
189939	L2	I-40 / I-65	Nashville	2	ChargePoint Network
189940	L2	I-40 / I-65	Nashville	2	ChargePoint Network
191340	L2	I-40 / I-65	Nashville	4	SemaCharge Network
191530	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193891	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193892	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193893	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193894	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193895	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193896	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193897	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193898	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193899	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193900	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193901	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193902	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193904	L2	I-40 / I-65	Nashville	2	ChargePoint Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
193905	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193906	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193907	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193908	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193909	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193910	L2	I-40 / I-65	Nashville	2	ChargePoint Network
193930	L2	I-40 / I-65	Nashville	2	ChargePoint Network
195209	L2	I-40 / I-65	Nashville	4	SemaCharge Network
195210	L2	I-40 / I-65	Nashville	7	SemaCharge Network
196165	L2	I-40 / I-65	Nashville	2	ChargePoint Network
198378	L2	I-40 / I-65	Nashville	2	eVgo Network
207612	L2	I-40 / I-65	Nashville	2	ChargePoint Network
207613	L2	I-40 / I-65	Nashville	2	ChargePoint Network
207614	L2	I-40 / I-65	Nashville	2	ChargePoint Network
207615	L2	I-40 / I-65	Nashville	2	ChargePoint Network
207616	L2	I-40 / I-65	Nashville	2	ChargePoint Network
207617	L2	I-40 / I-65	Nashville	2	ChargePoint Network
212954	L2	I-40 / I-65	Nashville	2	ChargePoint Network
213411	L2	I-40 / I-65	Nashville	2	ChargePoint Network
213412	L2	I-40 / I-65	Nashville	2	ChargePoint Network

State EV Charging Location Unique ID*	Charger Level (DCFC, L2)	Route	Location	Number of EV Connectors	EV Network (if known)
213413	L2	I-40 / I-65	Nashville	2	ChargePoint Network
213414	L2	I-40 / I-65	Nashville	2	ChargePoint Network
213415	L2	I-40 / I-65	Nashville	2	ChargePoint Network
213416	L2	I-40 / I-65	Nashville	2	ChargePoint Network
214982	L2	I-40 / I-65	Nashville	2	ChargePoint Network
218950	L2	I-40 / I-65	Nashville	1	ChargePoint Network