

Valdosta-Lowndes MPO Electric Vehicle Infrastructure Readiness Strategy for Small Cities and Rural Areas in Southern Georgia



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Cover Photo: Amy Martin

Adopted June 1, 2022



REGIONAL SERVICES • COMMUNITY FOCUSED

Southern Georgia Regional Commission | Valdosta-Lowndes Metropolitan Planning
Organization

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This document is prepared in cooperation with the Georgia Department of Transportation, the Federal Highway Administration and Federal Transit Administration.

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RESOLUTION FY2022-7

**VALDOSTA-LOWNDES
METROPOLITAN PLANNING ORGANIZATION
POLICY COMMITTEE**

RESOLUTION TO Adopt the Electric Vehicle Infrastructure Strategy

WHEREAS, the Valdosta-Lowndes Metropolitan Planning Organization (VLMPO) supports the creation of a multimodal, safe, sustainable, and efficient transportation network that ensures accessibility to all roadway users in the Valdosta-Lowndes Metropolitan Planning Area; and

WHEREAS, the recently enacted federal Infrastructure Investment and Jobs Act includes several billion dollars in funding to install electric vehicle charging stations throughout the nation; and

WHEREAS, the Valdosta-Lowndes Metropolitan Planning Organization recognizes that a comprehensive Electric Vehicle (EV) Strategy is a priority for advancing policies that will make the community ready for electric vehicle implementation, charging infrastructure, and other electric vehicle technologies and further reduce the cost of future retrofits to new residential and commercial developments; and

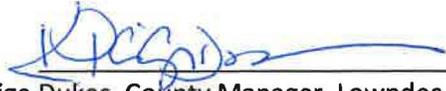
WHEREAS, the coordinated EV Strategy includes goals for writing a model ordinance for local governments and discusses how electric vehicle charging infrastructure can maximize benefits of potential EV investment and provide comprehensive planning guidance for ongoing investments within the metropolitan planning area; and

WHEREAS, the implementation of the EV Strategy will help the Valdosta-Lowndes Metropolitan Planning Organization region achieve the vision of being “A resilient community where partnerships and coordination promote regional success in economic development, education, infrastructure, and a high quality of life” by promoting overall transportation technology, energy conservation and expanded use of other energy sources.

NOW, THEREFORE BE IT RESOLVED, that the Valdosta Lowndes Metropolitan Planning Organization’s Policy Committee does hereby adopt the “Valdosta-Lowndes Metropolitan Planning Organization Electric Vehicle Infrastructure Strategy.”

CERTIFICATION

I hereby certify that the above is a true and correct copy of a Resolution adopted by the Valdosta-Lowndes Metropolitan Planning Organization Policy Committee at a meeting held on June 1, 2022.



Paige Dukes, County Manager, Lowndes County

Chair, Valdosta-Lowndes Metropolitan Planning Organization Policy Committee

Table of Contents

Adoption Resolution	2
Table of Contents	4
Introduction	5
VLMPD EV Strategy Benefits.....	9
VLMPD EV Strategy Goals and Objectives	11
Existing and Future Conditions Analysis	14
EV Charging Infrastructure Deployment.....	14
Implementation Considerations	16
Program Evaluation.....	17
Appendix	18

Introduction

Electric vehicles (EV) have been discussed for many decades as the future propulsion choice for motor vehicles both in the United States and throughout the world. The technology behind EVs has been developed to a point where it is now much more cost effective to mass-produce vehicles for use by the general consumer to provide cost effective, daily transportation.

“The Alternative Fuels Data Center shows a 70% reduction in annual emissions from gasoline-powered vehicles to electric vehicles. The estimate includes well-to-wheel emissions, or all emissions related to fuel production, processing, distribution, and use.”¹ While emissions have traditionally not been a major concern in South Georgia, there is general support for cleaner fuel sources for both power generations as well as transportation. It is this general support that is driving both a national and global shift for automakers to produce more EVs for the consumer market that will require new and expanded EV charging infrastructure as well as a reduction in gasoline fuel infrastructure (ex: gas stations) over time.

As a small Metropolitan Planning Organization, the Valdosta-Lowndes community often thinks of itself as a large rural community – in fact, it is the economic center of an 18-county region that is served by the Southern Georgia Regional Commission, which is the designated MPO for the Valdosta urban area. This report will focus on how a small metropolitan area can set an example for surrounding rural areas to develop EV charging infrastructure that will help these communities access amenities in the surrounding metro areas like Valdosta.

The primary motivation for this report is to outline the goals and objectives necessary for Valdosta and surrounding rural areas to be ready to implement EV charging infrastructure policies, programs, and projects ahead of any broad need from the traveling public. By putting in place new regulations and programs early communities like Valdosta can be ready to access new funding opportunities and attract private investment related to EV infrastructure, and transition the local economy from one based on gasoline powered motor vehicles to one based on EVs in an effort to improve overall economic development of the region.

This EV Strategy is being developed at the same time as the State of Georgia EV Charging Infrastructure Plan and that federal regulations and guidance are being developed for funding programs for EV infrastructure. Therefore, this strategy focuses on the tasks that local governments need to complete as well as local policies and programs in order for local governments to be competitive for future federal funding as well as private investment in EV charging infrastructure.

¹ VLMPO EV strategy Framework, Transport Studio, 2021: Southeast Energy Efficiency Alliance, "Electric Transportation Toolkit for Electric Membership Cooperatives," SEEA, 2020.

Fundamentals of EV Charging Infrastructure²

There are three types of chargers available to the EV market. Level 1 chargers use typical 110-volt household AC circuit at a rate of about 5 miles driving range per hour (RPH) charging time.

Types of EV Charging		Range	Application
Level 1		2 to 5 miles of range per hour	<ul style="list-style-type: none">• Single Family Homes• Multi-Unit Residential• Condos
Level 2		10 to 30 miles of range per hour	<ul style="list-style-type: none">• Single Family Homes• Multi-Unit Residential• Workplace• Fleet• Public
Level 3 (Direct Current Fast)		150 to 350+ miles of range per hour	<ul style="list-style-type: none">• Fleet• Public• Multi-Unit Residential

3

Level 2 chargers employ a 240-volt household circuit that are good for overnight charging at home or for locations where a car will be plugged in for a while (ex: work, theater, etc.). These chargers will be what most EV owners will use to charge when they are using a vehicle for most daily activities (ex: commuting, shopping) etc.

The third type, 150kW Direct Current (DC) Fast Chargers, are typically publicly accessible and can charge a battery in 30 minutes or so (depending on many factors) and will have the ability to charge multiple vehicles at once. This is the standard charger that is a part of the National Electric Vehicle Infrastructure (NEVI) Formula Program. These chargers facilitate mobility across states and the nation.

This report will focus on what local governments can do to facilitate the installation of Level 2 and DC Fast Chargers by either public agencies, the private sector, and/or public-private partnerships.

EV Strategy Workshop

On December 1, 2021, the VLMPO Policy Committee hosted a regional EV infrastructure goal setting workshop. The event was facilitated by Whitney Shepard with Transport Studio and included a panel of experts on federal and state EV strategy and was followed by discussion of

² <https://www.designnews.com/automotive-engineering/fundamentals-electric-vehicle-charging>

³ Source: https://www.phoenix.gov/sustainabilitysite/MediaAssets/New_Types_of_Charging.png

impacts, issues, and opportunities in the region. In addition to VLMPO committee members and staff from regional jurisdictions, attendees included representatives from the GA Public Service Commission, Clean Cities-Georgia, Georgia Power, Georgia Transmission, and Georgia EMCs.



4

The discussion highlighted the goals of increasing economic development, ensuring energy efficiency and security, improving air quality and public health, as well as a positive public image for the region. Topics of discussion included EV battery life and future use or recycling of old batteries, impacts of natural disasters on the electric grid, the need for education on new technologies, the importance of rural investments in EV infrastructure, opportunities for federal funding, investment strategies from public and private entities (like GA Public Service Commission, Georgia Power, etc.), and how developing an EV strategy can support local comprehensive planning.

After the event, Transport Studio prepared an EV Infrastructure Planning Framework that has led to the development of this EV Infrastructure Strategy. This Framework report is available on the website at www.sgrc.us.

EV Infrastructure Investment in Georgia

In July 2021, Governor Brian Kemp announced the creation of the Georgia Electric Mobility and Innovation Alliance (EMIA), led by the Georgia Department of Economic Development as a statewide initiative between government, industries, electric utilities, non-profits, and other

⁴ Source: SGRC, VLMPO Workshop Attendees 12-1-21.

stakeholders. EMIA is focused on growing the electric mobility ecosystem in Georgia through manufacturing and innovation.

The Georgia Department of Transportation has accelerated the support for installing EV Charging Infrastructure through the designation of ten highway corridors as being EV ready through the National Alternative Fuels Corridor initiative. Interstate 75 in Valdosta is included in this initiative and there are already DC Fast Charges located along this route (some are restricted to Tesla vehicles only).

Local governments in Southern Georgia are fortunate to be in a state that is a leader in future mobility technologies and innovation with resources like The Ray Intelligent Highway, autonomous vehicle testing, and smart traffic signal systems like those in Valdosta. The VLMPO is leading local governments to consider connected and autonomous vehicle needs that include the shift to EVs that are also connected and autonomous. Local governments in Southern Georgia need to take advantage of resources from state agencies and their position relative to other EV-related manufacturing and innovation companies to enhance their own economic development efforts.

Public Engagement

This EV Strategy was first presented to the VLMPO Committees in March 2021 as an overview of the document without a presentation by staff. Upon completion of the draft, it was made available for public comments and input from stakeholders in April and May 2022. The comment period included social media posts, and emails sent to VLMPO stakeholders asking for comments. In June 2022, the final document was presented to the VLMPO committees and an adoption resolution was passed. Copies of comments received during the comment period are included in the appendix.

National EV Policy

While EVs have been available to consumers for several years, the public EV charging infrastructure has been slower to develop. The Infrastructure Investment and Jobs Act (IIJA) passed by Congress in November 2021 provides the funding to begin to create a nationwide, publicly accessible EV charging infrastructure network that can readily improve mobility for all EV users who have been previously prevented from traveling greater distances due to the limited range of vehicles or available charging infrastructure.

The US Department of Transportation and Energy created a joint office to align resources across the federal government to implement this national EV charging network through shared knowledge and funding resources made available to states and local governments. The initial priorities⁵ of this joint office include:

- The accelerated adoption of EVs including those that cannot readily charge at home to enable up to 50% of new vehicles sales to be electric by 2030.

⁵ <https://driveelectric.gov/#about-description>

- Reduce transportation-related emissions to be on a path for the United States to be net-zero emissions by 2050.
- Create high-paying jobs to manufacture and service EVs and their associated infrastructure.
- Targeted benefits for all populations, that promote equity and reduces mobility and energy burdens while creating jobs and supporting businesses in both urban and rural areas.

For several years the Federal Highway Administration has worked to identify national Alternative Fuel Corridors that provide information to the traveling public on where alternative fuels (including: electric, CNG, LNG, hydrogen, LP, etc.) may be found along a route. This national EV charging infrastructure initiative will add more infrastructure to these corridors and build that infrastructure not just on Interstate highways, but on other parts of the National Highway System as well as key state and local corridors as well.

The National Electric Vehicle Infrastructure (NEVI) Formula Program provides funding for states to implement projects to build out their own networks of EV charging stations. This funding program provides 80 percent federal funds that are matched with either private or state funds to complete a project. Because the private sector already has expertise in the installation, operation, and maintenance of EV charging infrastructure the NEVI Program anticipates that most states will contract with private companies in whole or in part to build EV charging infrastructure further providing for well-paying jobs, small business and community engagement in the EV industry.

VLMPO EV Strategy Benefits

The 2021 Joint Comprehensive Plan for Lowndes County and Cities identifies the need and opportunity⁶ and policies⁷ to provide the necessary infrastructure for EV charging stations in appropriate locations. To this end, the Comprehensive Plan includes the following activities in the work program:

- Develop EV charging station model ordinance⁸
- Complete an EV Implementation Strategy report⁹

The VLMPO's Vision2045 Metropolitan Transportation Plan discusses the increasing prevalence of EVs as a part of the future of transportation mobility throughout Lowndes County and surrounding areas. The Plan notes that EVs will provide efficiencies for public transit systems as well as individual users. When coupled with connected and autonomous vehicles (CAVs), EVs will change the future of mobility for everyone in the community whether they drive or not. EVs will

⁶ https://www.dca.ga.gov/sites/default/files/lowndescounty_compplan_12172021.pdf; pg. 20

⁷ https://www.dca.ga.gov/sites/default/files/lowndescounty_compplan_12172021.pdf; pg. 46

⁸ https://www.dca.ga.gov/sites/default/files/lowndescounty_compplan_12172021.pdf; pg. 54

⁹ https://www.dca.ga.gov/sites/default/files/lowndescounty_compplan_12172021.pdf; pg. 73, 78, 81, 83, 85, 89

play a bigger role in the transportation of people and the delivery of goods and services to people through CAVs (like drone delivery). Specifically, the Vision2045 MTP highlights¹⁰ that local governments can transition their communities to a future with EVs through the following initiatives:

- Building parking lots/decks that include electrical conduit to many parking spaces for future EV charger installation.
- Change policy for parking lots that require a minimum number of spaces to be EV charger ready (conduit installed), and install EV chargers for on-street parking on existing light poles.
- Prepare for funding opportunities from federal, state, and private sector partners.
- Convert municipal vehicle fleets to electric where appropriate to reduce costs and encourage community adoption of EVs.
- Implement programs to ensure equity for all populations to access EVs, including through the implementation of EV public transit fleets.
- Require that all new residential structures include EV charging ready electrical boxes and plugs in garages or carports.

The growing number of EVs is beneficial both nationally and locally by reducing dependence on foreign sources of petroleum. While the US imports about 3% of petroleum consumed, the transportation sector amounts for 30% of all energy consumption and 70% of petroleum consumption.¹¹ Minimizing imported petroleum and reducing overall transportation sector petroleum consumption would mean less dependence on this fuel source and increase overall resiliency of energy sources (electricity generation uses many diverse fuel sources).

While the current purchase cost of EVs tends to be higher than conventional gasoline fueled vehicles, the increases in EV production are driving down the costs of entry into the EV market by many consumers. The overall costs to fuel/charge an EV can be anywhere from one-quarter to one-half the cost of gasoline (depending on price), and other costs of annual maintenance are often lower as well¹². As EVs become more prevalent users will be able to save money usually spent on gasoline.

As mentioned previously another benefit of EVs is that they typically have emissions that are 70% less than traditional gasoline fueled vehicles. While the VLMPO area and surrounding area is in attainment for national air quality standards, improved air quality in general is a positive for the overall health of people.

¹⁰

https://www.sgrc.us/documents/transportation/visionplans/Vision2045_Metropolitan_Transportation_Plan.pdf; pg. 53

¹¹ https://afdc.energy.gov/fuels/electricity_benefits.html

¹² <https://afdc.energy.gov/calc/>; price per gallon used: \$2.30/\$4.30 and \$0.12/kwh for average electricity cost

This EV strategy can be used as a regional economic development tool to support business growth and workforce development. Local businesses can become leaders in the installation, operation, and maintenance of EV charging infrastructure and EVs batteries and other components. Technical colleges and other institutions should develop training courses to teach future EV technologists who will be skilled in maintaining EVs and EV charging infrastructure.

VLMPPO EV Strategy Goals and Objectives

The Common Community Vision for Lowndes County outlines ways for the VLMPPO region to develop infrastructure programs to be “A resilient community where partnerships and coordination promote regional success in economic development, education, infrastructure, and a high quality of life.”¹³ This EV Strategy will help the VLMPPO region achieve this vision by promoting overall energy conservation and expanded use of solar and other energy sources.

To help achieve this vision, this EV Strategy sets out these goals and objectives:

Goal 1: Local and Regional EV Champions and Partners

- The VLMPPO shall be a regional leader among local governments that forms a regional committee that identifies a local champion, partner organizations and stakeholders that can coordinate regional EV infrastructure investments.
 - Partner organizations may include GA Power, EMCs, Clean Cities Georgia Coalition, Development Authorities, major retail locations, schools (K-12/Colleges/Universities) major hoteliers, etc.
- The VLMPPO shall participate in national and state dialogues to discuss a means of funding transportation infrastructure improvements without motor fuel taxes.

Goal 2: Transportation and Comprehensive Planning; Updates to Codes, Ordinances, etc.

- The VLMPPO shall amend the Vision2045 Metropolitan Transportation Plan (or incorporate into next MTP update) to include EV infrastructure projects and strategies, where appropriate.
- The VLMPPO and SGRC shall develop basic EV infrastructure project and strategy language to include in amended local Comprehensive Plans, Regional Plans, and Comprehensive Economic Development Strategies.
- The VLMPPO and SGRC shall develop basic language to ensure that EV charging infrastructure is identified as critical facilities in local Hazard Mitigation Plans.
- The VLMPPO and SGRC shall develop a model ordinance (ex: zoning/land development) to allow and/or require new (or significant remodel) of single-family

¹³ [Greater Lowndes County Common Community Vision](#); pg. 13

or multi-family residential, commercial, and industrial properties to be EV Charging Ready

- Model ordinance should consider: historic district requirements, on-street charging, charging as an accessory use, require minimum EV parking spaces by land use, etc.)
- Additional partners may include institutions (hospitals, churches, universities), GA Dept. of Community Affairs, realtors, building contractors, business owners, etc.
- SGRC shall work with GA DCA to update state and local building codes to require new and/or remodeled buildings to be EV Charging Ready.
- Local governments shall review and update local land permitting and building inspection processes as needed to incorporate any changes required for EV infrastructure.
- Local governments shall review their cybersecurity measures for not only EV charging stations, but also other connected systems to reduce cybersecurity threats to local outages.

Goal 3: Local/Regional EV Charging Station Network

- The VLMPO and SGRC shall map existing charging locations and develop an EV Suitability Map (at the tract level) using criteria specified by NEVI, focusing on those areas not on interstates.
 - Local need to work with MEAG cities, EMCs, and GA Power to determine if the existing electrical grid can handle EV charging
 - MEAG cities, EMCs, and GA Power should develop mitigation strategies in those areas where the electric grid cannot support EV charging
- The VLMPO and SGRC shall work with local governments (including schools and authorities) to identify which of their fleet locations needs EV charging station investments.

Goal 4: Coordination with Businesses for EV Infrastructure Implementation

- The VLMPO and SGRC's WorkSource Southern Georgia should work with area Technical Colleges to develop career pathways to train skilled workers to repair and maintain EVs and EV Charging Infrastructure.

Goal 5: Education and Outreach for EV Charging Infrastructure

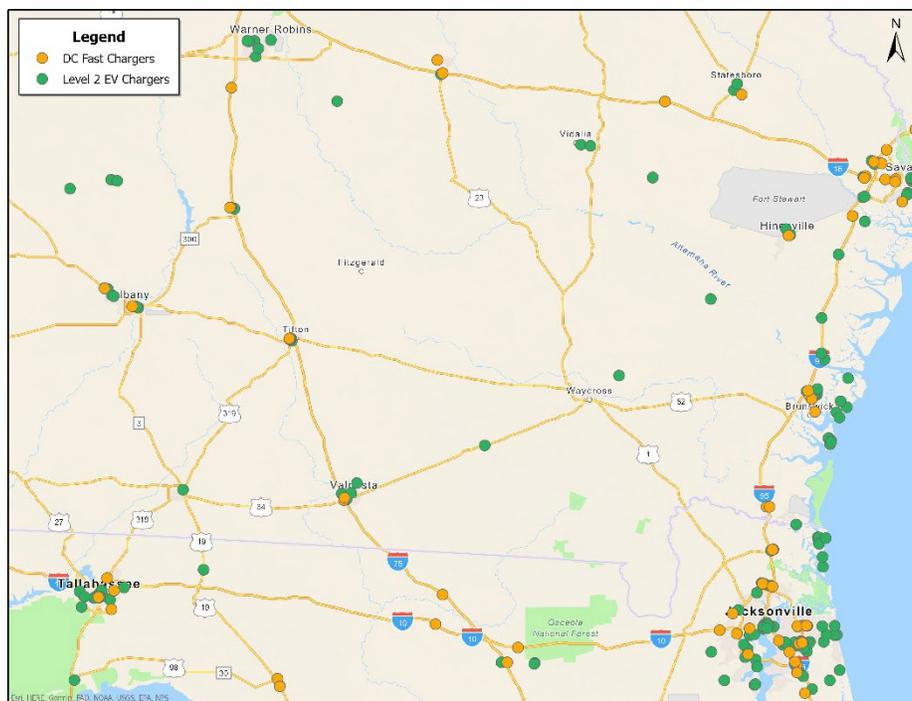
- The VLMPO should consider becoming a member of the Clean Cities Georgia Coalition and other organizations that promote EV charging infrastructure as appropriate.
- The VLMPO and SGRC shall develop an educational campaign to inform the public about EVs, EV Charging Stations, and their impact on South Georgia mobility, environment, and economic development.

Goal 6: First Responders, Government Fleets and EV Deployment

- Local governments shall develop or enroll first responders in training programs for EV emergency response (partners include GPSTC in Forsyth, Valdosta and Lowndes FD, etc.).
- Local governments shall develop policies and/or ordinances for public EV charging locations to enforce strict time limits at public and private locations to allow other cars to use EV chargers (similar to parking enforcement).
- The VLMPO and SGRC shall work with local governments (including schools and authorities) to identify grant opportunities to replace gasoline powered fleet vehicles with EVs.

Existing and Future Conditions Analysis

The US Department of Energy's Alternative Fuels Data Center Station Locator tool¹⁴ identifies about 17 Level 2 and DC Fast Charger locations in Southern Georgia, most of which are in Valdosta and Tifton. Most of these locations are at hotels, and existing EV car dealerships. Only one of these locations (at the Wal-Mart on Norman Drive in Valdosta) is a publicly accessible DC Fast Charger that meets the requirements of the NEVI Program. This indicates that there are opportunities for the installation of DC Fast Charging locations throughout the region to facilitate the improved mobility of individuals with EVs. There is also an identified need for Level 2 EV chargers throughout the region that might be installed at locations where people would be expected to spend more time with vehicles parked (examples include workplaces, casual restaurants, some retail areas, etc.).



15

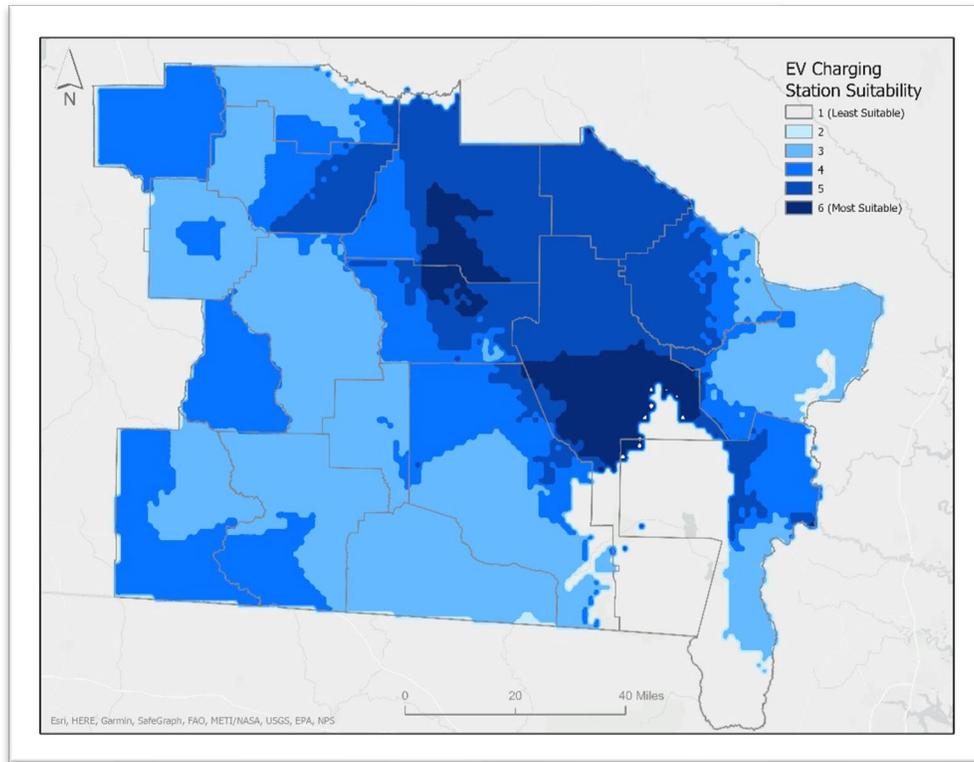
EV Charging Infrastructure Deployment

As a part of this report, the VLMPO working with the SGRC Geographic Information Systems (GIS) department looked at how suitable different areas of the entire SGRC Region are for future EV charging infrastructure deployments. This is important to the VLMPO because as a central, metropolitan city in Southern Georgia, many residents commute to Valdosta from surrounding counties, even those outside the local metropolitan area. In order for Valdosta to have a successful economic future with increasing numbers of electric vehicles we also need to make

¹⁴ <https://afdc.energy.gov/stations#/find/nearest?fuel=ELEC>

¹⁵ Source: SGRC GIS; 5/18/2022

sure that surrounding rural areas have access to EV charging infrastructure. The map below shows the areas that are more suitable for Level 2 or Level 3 EV charging deployments throughout the region.



16

This suitability map was developed using the same or similar data and criteria modified from the NEVI state planning requirements¹⁷.

The methodology used to develop this suitability map included the following data sources:

- [EV Justice Tracts 40](#)
- [Alternative Fuel Corridors](#)
- [GA & FL NEVI eligible stations](#)
- [Alternative Fueling Stations](#)
- [Electric substations](#)
- US Census Bureau 2020 Population and Designated Places

These data sources were then overlaid to create an overall weighted suitability index as follows. A full technical report of this methodology is available upon request.

¹⁶ VLMPO/SGRC suitability map for EV Charging Infrastructure. Source: SGRC

¹⁷

https://www.fhwa.dot.gov/environment/alternative_fuel_corridors/nominations/90d_nevi_formula_program_guidance.pdf

1. Areas more than 50 miles driving distance from existing NEVI eligible stations were identified. Areas on interstates were excluded, as states are required to by federal guidance to look at these roadways.
2. Census tracts that were identified by the EV Environmental Justice 40 initiative were then identified.
3. Census designated places (CDP) were identified and a 30-minute drive time from each CDP centroid was calculated. These drive time polygons were then weighted by population from the origin point to give more weight to areas that have more people.
4. Areas were then identified by their distance away from existing designated Alternative Fuel corridors on a quintile scale with those being farther away receiving a higher weight.
5. Each of the weighted scores in the raster layers were summed to create a map of more suitable areas for Level 2 and 3 EV charging infrastructure needs.

Implementation Considerations

As local governments work to implement EV charging infrastructure in their communities, they should work with power companies and private companies that install, own, operate, and maintain EV infrastructure to ease the burden on local governments. There are many different models of install-own-operate-maintain offered by private companies and each local government and local business will need to determine for themselves what works best for them.

The most important thing that a local government can do is to make sure their local ordinances are EV-ready, meaning that they have adopted a model ordinance to include EV vehicles and EV charging infrastructure into new development projects. While EV charging stations may not be coming to individual communities in the next six months, the private market is building quickly and even in rural areas, there will soon be a demand for EV infrastructure and local governments can get ahead of the industry now to ensure their community is EV ready.

The EV Strategy the Workshop hosted by the VLMPO and SGRC in December 2021 resulted in the identification of several local model ordinance best practices:

- [Summary of Best Practices in EV Ordinances](#), by the Great Plains Institute
- [Model Electric Vehicle Ordinance](#), Kane County, IL
- [EV Infrastructure Zoning Amendment](#), Auburn Hills, MI
- [Virginia EV Charging Site Design Guidelines](#)
- [Clean Cities Georgia EV Readiness Workbook](#)

Using these and other resources with technical assistance from the VLMPO and SGRC local governments in Southern Georgia will be well positioned to welcome EVs to their communities.

Cybersecurity

As local governments work to implement EV charging infrastructure, whether on their own or in partnership with private entities, they should prioritize the cybersecurity considerations for stations to ensure that they are not compromised by malicious code. These additional

considerations will require additional staff expertise and costs associated with the ongoing maintenance of the EV charging infrastructure.

Public Comments and Equity Considerations

This EV Strategy was made available for public comment in the spring of 2022. This comment period gave stakeholders, local governments, and the public the opportunity to comment on how EV charging infrastructure might be deployed in Southern Georgia. A summary of the comments received is included in the Appendix.

As a part of the deployment analysis conducted above several GIS layers were included that address disadvantaged populations that should be a priority for equitably deploying EV charging infrastructure throughout the region. As each EV charging installation is considered specific local conditions should be addressed that improve access for disadvantaged populations. Depending on the funding sources used to support the installation specific requirements may be required to address equity concerns like the Civil Rights Act, Americans with Disabilities Act, and Section 504 of the Rehabilitation act, among other state and federal laws and regulations.

Program Evaluation

The VLMPO and SGRC should reevaluate the deployment of EV charging infrastructure and the effectiveness of this Strategy for any updates that may need to be made. As with other fast changing technologies some objectives and strategies to deploy EV charging infrastructure may change faster than this Strategy or other local and regional plans can be updated. For this reason, activities included in work programs and plans should be broad enough to support EV charging infrastructure deployment and other associated strategies, but not specific enough to restrict a community from implementing a new, unforeseen technological advancement.

Appendix

Appendix A

Electric Vehicle Implementation Strategy Public Comment Period Press Release.

Appendix B

Comments Received from Electric Vehicle Implementation Strategy Public Comment Period.

Appendix A



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Comments Sought for Electric Vehicle and Infrastructure Impact Drafts

[Staff Report](#)

Tuesday, April 12th, 2022

The Valdosta-Lowndes Metropolitan Planning Organization is seeking comments for an Electric Vehicle Charging Strategy and Transportation Low-Impact Development Policy for federally funded projects in the metropolitan Planning area. The opportunity to provide comment will be available until May 12, 2022 prior to final adoption by the MPO Policy Committee on June 1, 2022.

The recently enacted federal Infrastructure Investment and Jobs Act includes several billion dollars in funding to install electric vehicle charging stations throughout the nation. The VLMPO has developed this strategy to help communities in southern Georgia be ready to install this infrastructure when funding becomes available or when the private sector begins installing more chargers.

This strategy guides local governments to implement policies that will make them ready for electric vehicle charging infrastructure and reduce the cost of future retrofits to new residential and commercial developments. The Strategy includes goals for writing a model ordinance for local governments, and ensuring that electric vehicle charging infrastructure is discussed as a part of local comprehensive planning efforts.

The Electric Vehicle Strategy also includes a brief analysis on what communities in southern Georgia are most suitable for investments in electric vehicle fast chargers, stations that typically charge a vehicle to 80% capacity in about 30 minutes. Investments in this type of charging infrastructure outside of metropolitan areas allows commuters and travelers to charge at intervals that reduce 'range anxiety'.

A second document the VLMPO is seeking comment on is a transportation Low Impact Development Policy that provides guidance on best practices to support the resiliency and reliability of the transportation system to reduce or mitigate stormwater impacts of surface transportation within the metropolitan planning area.

Similar to the VLMPO's Complete Streets Policy this Low Impact Development Policy will only apply to roadway improvements that are funded with federal funds, but it is encouraged to be used by local governments for all funding sources.

The VLMPO's Vision2045 Metropolitan Transportation Plan and the 2017 Suwanee-Satilla Regional Water Plan encourage implementing cost-effective water management strategies that improve the overall quality of surface water in local water bodies.

Low Impact Development best practices include the installation of pervious pavement, stormwater storage and reuse, bio filtration in detention areas, and green roofs on buildings among other practices.

The documents are available on the VLMPO website at www.sgrc.us/vlmpo.html as well as at local libraries and government offices. Comments can be submitted via email to Corey Hull at chull@sgrc.us through May 12, 2022.

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Appendix B

From: [Corey Hull](#)
To: [Amy Martin](#)
Subject: FW: Comments on VLMPO Electric Vehicle Strategy Draft
Date: Wednesday, May 18, 2022 11:53:43 AM

Corey A. Hull, AICP
Transportation and Environmental Director

229-333-5277 (x129)
229-300-0922 (c)
chull@sgrc.us

1937 Carlton Adams Drive
Valdosta, Georgia 31601

-----Original Message-----

From: Corey Hull
Sent: Wednesday, May 18, 2022 11:54 AM
To: 'Chris Lawrence' <lordsutch@gmail.com>
Subject: RE: Comments on VLMPO Electric Vehicle Strategy Draft

Chris,

Thank you for your comments and participation, I have addressed many of these as noted below.

Corey A. Hull, AICP
Transportation and Environmental Director

229-333-5277 (x129)
229-300-0922 (c)
chull@sgrc.us

1937 Carlton Adams Drive
Valdosta, Georgia 31601

-----Original Message-----

From: Chris Lawrence <lordsutch@gmail.com>
Sent: Thursday, May 12, 2022 2:30 PM
To: Corey Hull <chull@sgrc.us>
Subject: Comments on VLMPO Electric Vehicle Strategy Draft

Dear Mr. Hull - Thank you for the opportunity for public comment on VLMPO's Electric Vehicle Strategy draft. The document is clearly the result of careful consideration and most of its content is sound, so I will limit my comments to a few points of note.

On page 5 of the document, with regard to the levels of charging the industry-standard term for high-speed charging using direct current is "DC Fast Charging"; the 'Level 3' nomenclature is considered deprecated at best. Also, while the NEVI program guidance issued by USDOT does specify a minimum charging output of 150 kW at at least four stations (with a total simultaneous output of 600 kW or more), the majority of DC fast charging stations installed in Georgia do not meet this standard, and charging outputs as low as 25 kW are sometimes seen at DC fast charging stations, with typical installations by Georgia Power in partnership with ChargePoint being either single 50 kW

stations at older sites or paired 62.5 kW stations (which have higher output if only one vehicle is charging, ranging from approximately 75 kW with most EVs to 125 kW with a limited number of EVs that have a nominal "800 volt" system like the Kia EV6 and Porsche Taycan). While going forward a 150 kW minimum standard is desirable, in the planning phase it would make sense to prioritize areas that lack any DC fast charging for installing new DC fast charging stations; this would suggest, for example, prioritizing an installation in Waycross over one in Douglas, as Georgia Power is currently installing a two-charger station in Douglas according to PlugShare (<https://www.plugshare.com/location/372345>).

Updated to use DC Fast Charging language throughout.

On a related note, on page 13 of the document, it would probably be helpful to either present separate maps showing level 2 and DC charging locations, or having different colored markers for the two types of charging stations, as level 2 charging is more suitable for overnight and workplace charging than it is for motorists passing through a community either en route to a final destination or as a short day trip.

Map will be updated to show differences in Level 2 locations vs. DC Fast Charging locations.

I would also suggest that there are some overlapping considerations with other sustainability and economic development efforts. The decisions made regarding where to place charging stations have the potential to reshape the growth patterns and geography of communities.

If Valdosta plans to emphasize low-impact development practices, it would make sense to encourage better utilization of existing sites and redevelopment of abandoned sites rather than fostering greenfield development, and the placement of DCFC stations can be a tool in achieving these goals. For example, efforts to revitalize or increase the patronage of downtown businesses in cities like Valdosta could be enhanced by locating new DCFC stations in these areas, and such chargers would not necessarily need to be capable of 150 kW output as individuals would likely be planning a longer stop than they would at sites catering to through travelers near I-75. Lower-power DCFC stations could also be used to attract through-travelers' patronage to other areas of the community such as the Valdosta Mall and North Ashley Street.

I think this best might be handled through the implementation of this strategy by local governments, we can encourage this through the implementation of the goals and objectives.

As an EV driver myself, on lengthy trips I usually end up patronizing either the site host (in the case of Electrify America, most often a Walmart or Target store) or a restaurant within a short walking distance of the charging station if possible, rather than making multiple stops in a community like a driver of a gas or diesel-powered vehicle might; it simply makes no sense for an EV driver to spend 30-45 minutes charging and then another 30-45 minutes at a restaurant a couple of miles away when the EV driver can charge and eat in 30-45 minutes total, so as more drivers adopt EVs those restaurants and other non-hotel businesses that cater to travelers that are not located close to DCFC stations are likely to lose substantial patronage (similarly, hotels that do not provide overnight level 2 charging stations for their patrons are likely to be at a substantial disadvantage). Because charging stations effectively create a "captive audience" of potential customers, community development strategies should take advantage of the opportunity afforded by DCFC station placement to attract customers to retailers and restaurants that they would otherwise not patronize, perhaps working in partnerships with these businesses to fund and host these sites. The same argument would also extend to other communities in the SGRC area along I-75 such as Tifton, Hahira, Adel, etc.

This strategy does not specifically say where a charging station should be built but is leaving that to the private sector and local governments to determine that.

Finally, I noticed that the document uses the spelling "travelling" in several places; my understanding is that the generally accepted American spelling for this word is "traveling" with a single 'l' instead of two, with the two-'l' spelling being used in Britain.

Obviously this is not a major issue but I thought I would bring it to your attention in the interest of thoroughness, if nothing else.

Thank you for pointing this out, these instances have been corrected using American spelling.

Thank you for reviewing my comments and I look forward to the final report.

Christopher N. Lawrence

Amy Martin

From: Corey Hull
Sent: Wednesday, May 18, 2022 11:43 AM
To: Amy Martin
Subject: FW: Valdosta EV planning

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From: Jeff Smith <jeff@beveragetruckpros.com>
Sent: Monday, April 18, 2022 10:41 AM
To: Corey Hull <chull@sgrc.us>
Subject: Valdosta EV planning

Hi Corey.

My wife and I live in Valdosta (Stone Creek) and have a BMW i3 that we use as our around town grocery getter. We have kept an ICE vehicle for our long trips, but all of our local driving is done in our EV. We have a level 2 charger installed at our house, which is our primary charging location.

There definitely is a shortage of chargers in the area, especially for people that are traveling through the area via I75. If I am not mistaken, the only high speed charger in the area is at Walmart on Norman Dr. It would be great to put one in an area where there are more options for food/shopping available for travelers to stop at. Most of the EVs that are capable of high speed charging only need 20-40 minutes to charge, so just enough time to grab some lunch or dinner. A high speed charger in the area of the St Augustine and Norman Dr intersection could bring travelers off the interstate and add revenue to the businesses in the area.

Since level 2 chargers are usually at locations that people spend more time at, the hospital, colleges, and the downtown areas would be well suited for level 2 locations. My wife and I travel to London several times per year, and it is amazing to see how many EVs are in use there. There are lots of level 2 street chargers with designated EV parking spots that are in constant use.

I am really glad that this is a project that is in the works and would be glad to answer any questions that people might have about EV ownership in the Valdosta area.

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