





EV 101 and Current Landscape

Sumner Pomeroy, Executive Director

How We Can Help

- Designated Clean Cities and Communities Coalition, a U.S. Department of Energy partnership to foster transportation energy choices nationwide
- Advance local alternative transportation initiatives for all communities through:
 - Fleet conversions: match the right fuel for the right application
 - Grant partnership & management
 - Education and outreach





Electric Vehicles (EV)

Electric Vehicles are perfect for many fleets with their versatile applications. Electric vehicles (EVs) run on electricity stored in batteries, producing zero tailpipe emissions and reducing fossil fuel use.

- Battery Electric Vehicles (BEVs) run solely on electricity and must be recharged via a plug.
- Plug-in Hybrid Electric Vehicles (PHEVs) Use both electricity and gasoline; ideal for short electric trips and longer gas-powered drives.



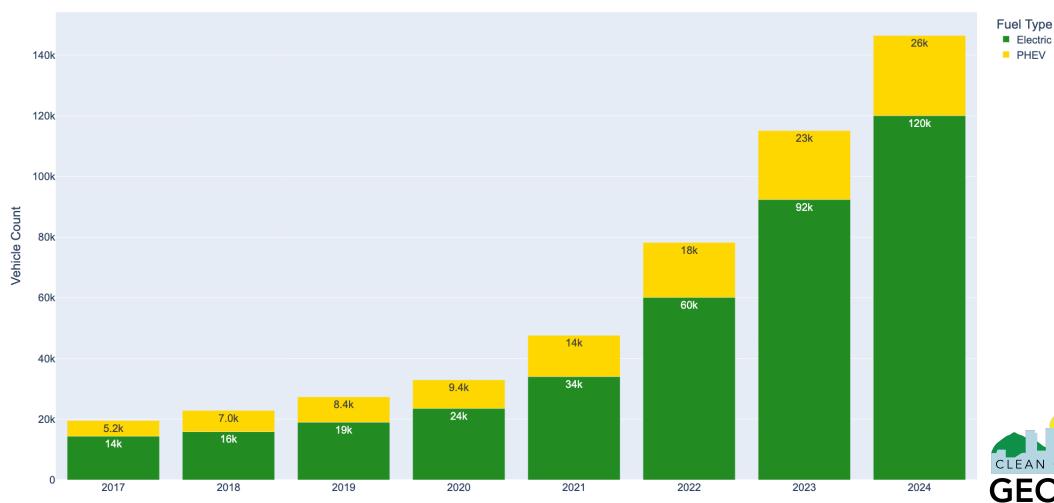






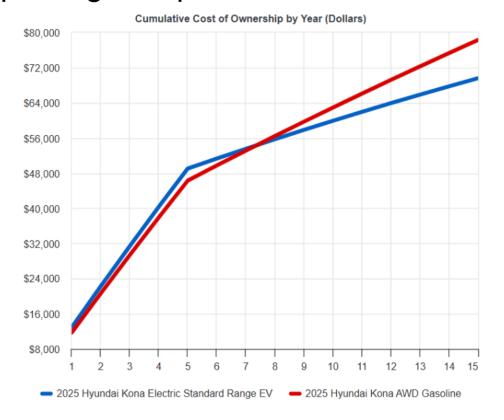
EV Numbers Continue to Rise

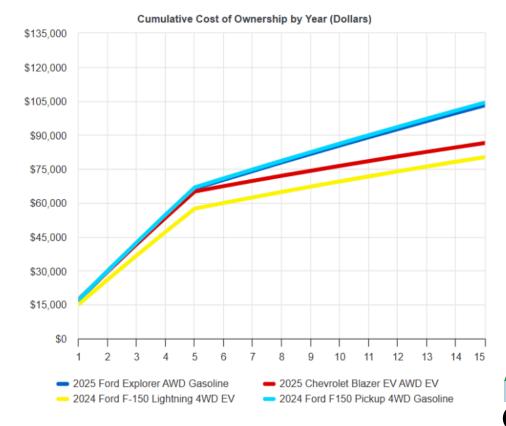
Georgia: Light Duty EV and PHEV Counts by Year



Electric Vehicles (EV)

Total Cost of Ownership (TCO) of electric vehicles can be lower than traditional fuels with their lower fuel and maintenance costs, despite higher upfront vehicle costs.







Electric Vehicle Charging Infrastructure

Electric Vehicle Charging - 3 main types of chargers

Electric Vehicle Charging Levels and Range Chart	4			
	Power	Range added per hour	Charging time	Typical application
Level 1 single phase (domestic)	1.4-3.7 kW	6 –12 miles	5-16 hours	Home
Level 2 slow single phase (domestic or pulic)	7 kW	19–28 miles	2-5 hours	Home, work, chopping centres, car parks
Level 2 fast three-phase (public)	11-22 kW	31–81 miles	30 mins-2 hou	rs Urban roadside
Level 3 fast chargre (public)	25-350 kW	93–186 miles	10-60 mins	Highways, motorways, key routes



Funding Landscape

- National Electric Vehicle Infrastructure and Charging & Fueling Infrastructure - released and moving forward
- DOT Lo or No Emission Grant vehicle replacement, released annually in Spring (closed in summer 2025)
- DOE Vehicle Technology Office FOA released annually for new & emerging transportation technologies
- EPA Diesel Emission Reduction Act: Federal and State (school buses only), potential for reduced funding in 2026
- EPA Clean School Bus Program: \$2B still available
- Clean Cities and Communities: 2026 budget includes competitive grants

Local Incentives

- EPD Clean Vehicle Charger and Converted Vehicle Tax Credits (+ Direct Pay): 10% or up to \$2,500 per charger or per converted vehicle (CNG, EV, Propane, Hydrogen)
- Georgia Power:
 - Residential Charging
 - Make Ready Program
 - Business Rebate Program
- Local EMC or MEAG Incentives





Russell Parking Management and Russell Innovation Center for Entrepreneurs

- Employee and community charging installation
- CC-GA provided technical assistance through EMPOWER Workplace Charging Grant
- Georgia Power Make Ready installation
- Placed in EV Charging Desert
- Hired local MBE and WOSB energy services, Integrated Solutions







Thank you!

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For more information visit:

www.cleancitiesgeorgia.org www.driveelectricgeorgia.org

Plugged In: Trends, Opportunities and Insights into Georgia's E-Mobility Landscape

Folashade Alao, PhD
Principal, Transportation
Planner

October 9, 2025







The Atlanta Regional Commission is the federally required Metropolitan Planning Organization (MPO) for a 19-county region which is currently home to about 6.1 million people. This is expected to grow to 7.9 million by 2050.



Vision ONE GICA TREGION

Mission

Foster thriving communities for all within the Atlanta region through collaborative, data-informed planning and investments.

Values

Excellence | Integrity | Equity

Goals



Healthy, safe, livable communities in the Atlanta Metro area.



Strategic investments in people, infrastructure, mobility, and preserving natural resources.



Regional services delivered with **operational excellence** and **efficiency**.



Diverse stakeholders engage and take a regional approach to solve local issues.



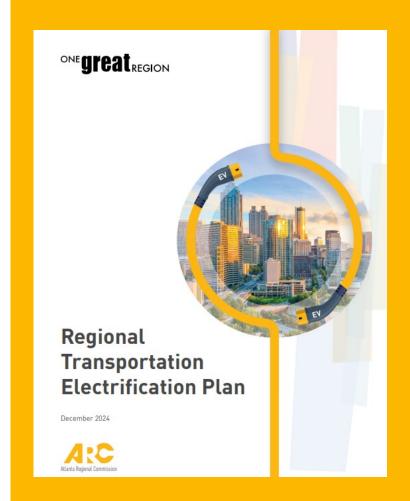
A competitive economy that is inclusive, innovative, and resilient.





Regional Transportation Electrification Plan

- Adopted in January 2025
- MPO boundary-19 counties
- The purpose of this plan was to understand the regional EV ecosystem and develop a policy strategy and approach.
- Understand current EV infrastructure and light-duty vehicle ownership in the region. Forecast potential EV growth and future charging infrastructure needs
- Identify actions to strengthen EV ecosystem in the region, e.g. workforce development, EV planning resources for local government





RTEP Plan Structure

- EV Overview and State of the Practice
 - EV Charging Consumer Preferences
- Stakeholder Engagement
- Regional EV Needs Analysis
 - Existing Registration by County
 - Existing Charging Infrastructure and Networks
 - Factors Shaping Adoption
 - EV Adoption Model
 - Snapshot of Fleet Electrification (TNC, Public Fleets, Public Transit)
 - Snapshot of Medium and Heavy-Duty BEV
 - School Bus Fleet Overview
 - Micromobility (Design and Charging Considerations)
 - Home Ownership and EV Adoption
- Policy Framework

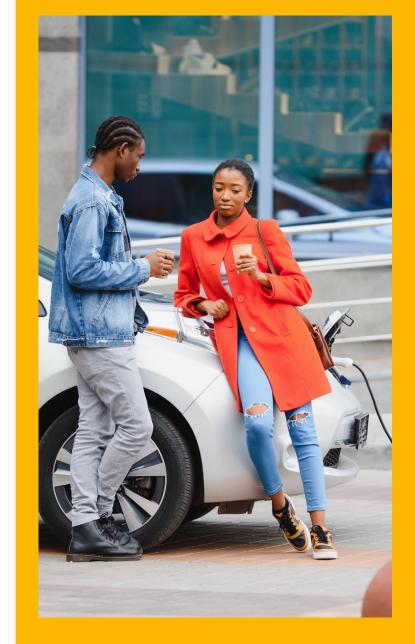






Regional Transportation Electrification Plan

Key Vehicle Data for Metro Atlanta GA				
Total # of Registered Vehicles in Metro Atlanta (8/25)	5,415,684			
Total # of Registered EVs in Metro Atlanta (8/25)	110,498			
Total projected # of EVs in Metro Atlanta fleet by 2030 (Based on 50% annual sales rate in 2030)	515,000			
Level 2 (shared private and publicly accessible)	Additional Ports Needed: 47,100			
DCFC	1,800			

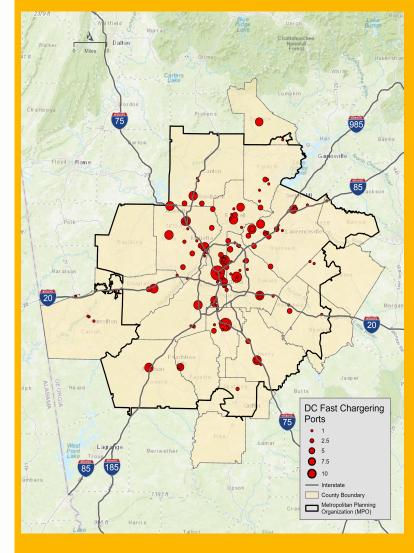




Major Takeaways from the Needs Assessment

- Light duty EV sales are promising around the region, and the state.
- Planning for uncertainty is essential.
 - Four adoption scenarios help convey a range of future forecasts and rates of anticipated growth.
- Most existing EV chargers are located north of I-20.
- A large gap exists between existing EV charger inventory and forecasted future growth.
 - Careful planning is needed to ensure charger installations support forecasted growth.
- Further study is in needed on medium and heavy-duty alternative fuels markets, planning and infrastructure.

Level 3 DCFC Charging Infrastructure





Clean Tech Accelerator

- 11-county area
- Skill and scale entry-level clean tech workforce
- Partners: ARC's WorkSource and Goodwill of North Georgia
- Pilot Program (2023) and 5-year implementation phase (EVSE and Heat Pump)
- Technicians/Installers: EVSE Technician, Heat Pump Installer, Solar Panel Installer
- Graduates: 82 graduated (number does not include the EVSE cohort that just graduated)





EV Sales, Credits and Costs

- Increase in sales for passenger cars and growing sales in commercial medium and heavy-duty EV markets
- Continued growth in new, used and leased EVs
- EV transaction price trending down, narrowing gap with ICE vehicles
- Elimination of Federal EV Tax Credits (New Clean Vehicle, Used Clean Vehicle)

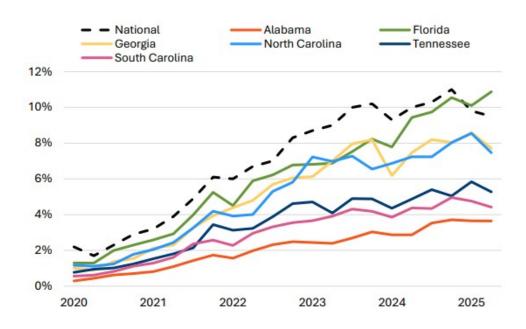
Infrastructure

- Significant growth in DCFC (charging infrastructure)
 - 29% year over year growth in DCFC in Georgia
- Need for growth in MDHD DCFC infrastructure class (2b-8) trucks

Manufacturing

- Second to Michigan, GA has second most anticiapted EV manufacturing jobs
- Rivian Georgia Manufacturing Plant restart construction in 2026, production to start 2028

EV Sales Market Share for Passenger Vehicles in the Southeast



This figure depicts EV sales as a percentage of new passenger vehicle sales from 2020 to the end of June 2025. EV includes both BEV and PHEV sales.

Source: Atlas EV Hub [2] for the Southern Alliance on Clean Energy



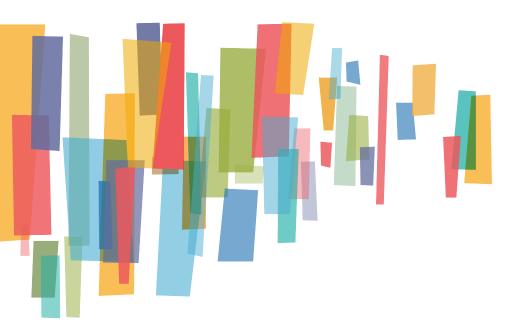


Sustainable Freight Cluster Plans

- Freight Clusters: Regionally important concentrations of logistics, warehousing, and industrial activity that generate significant amounts of freight trips.
- Freight Cluster Plans (FCPs): Competitive grants to local sponsors to conduct freight cluster plans.
- FCPs address transportation planning, traffic operations, safety, and related planning needs, and identify recommended projects and policy changes to address those needs.
- Two Sustainable FCPs awarded: South Fulton CID and Gateway 85 CID
- Sustainable FCPs focus areas: alternative fuels and energy sources in freight, sustainable employee access to work sites, workplace charging, site-specific sustainability measures, sustainable supply chain management







Thank You



SCAN ME









TRENDS, **OPPORTUNITIES AND INSIGHTS IN GEORGIA'S E-MOBILITY** LANDSEARE

Director – Strategy and Partnerships, Georgia Network for Electric Mobility





GABRIELLE PIERRE

Director – Strategy and Partnerships, Georgia Network for Electric Mobility











GNEM IS A PUBLIC-PRIVATE PARTNERSHIP NETWORK AND FUTURE MOBILITY THINK TANK













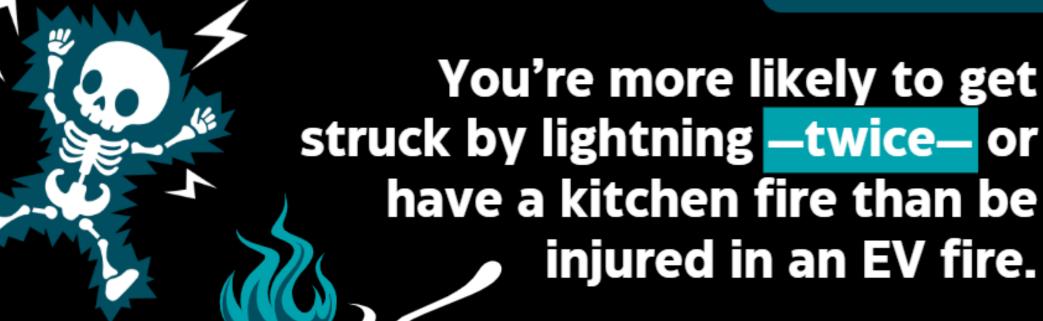
EV FIRE SAFETY 2025 TECHNICAL GUIDE



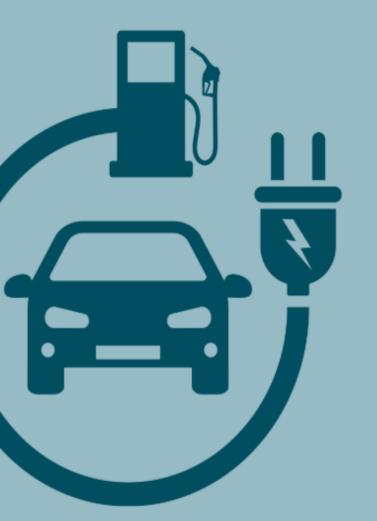
2025 GEORGIA EV FIRE SAFETY BRIEF Gasoline vehicles are

20 times more likely to catch
fire than electric vehicles.





COMPARATIVE SAFETY CHART



FEATURE DIESEL/GAS

Fire incident rate

1 in ~1,200

Fuel leaks, heat

Battery thermal runaway

ELECTRIC

1 in ~30,000-

100,000

Fire cause

Pump/Charger fires

Severity if fire occurs

~5,000/year (U.S.)

Moderate

Very rare (<100/year est.)

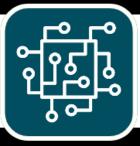
High intensity, rare

What actually causes an EV fire?

A common misconception is that EV batteries can spontaneously combust. However, data shows that battery ignition generally requires an external trigger such as:







Severe physical impact (e.g., traffic collision)

Exposure to sustained high temperatures or open flame Significant manufacturing defect or electrical short circuit

These triggers can cause **thermal runaway** which occurs when a battery cell overheats uncontrollably, triggering a chain reaction in adjacent cells. This can cause fires or explosions if not contained

EVs are significantly less likely to catch fire than gas vehicles but...

EV fires require specialized

MONITORING AND MAINTENANCE CRITICAL RESPONSE TIME LIMITING GAS EFFECTS AND CROSS PROPAGATION

DECOMMISSIONING /DISCHARGING THE BATTERY FIRE SUPPRESSION AND EXTINGUISHING

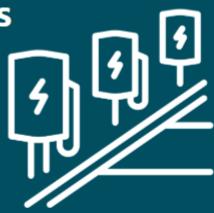
BEST PRACTICES FOR FLEET OPERATORS

Design and retrofitting



- Improve airflow/ventilation
- Separate/buffer charging areas in enclosed spaces
- Add thermal/smoke detection near chargers

Charger placement in parking decks and lots



- Avoid tight alcoves or hard to reach areas in the center of the decks where possible; these can impede first responders
- Favor near entry/exits; EVSE in dead-end corners heightens risk
- Provide signage & shutoff switches
- Limited ventilation can trap toxic gases (like hydrogen fluoride), especially in older structures lacking fire monitoring upgrades

Fire Safety training



 Facility staff & local fire crews need EV-specific response training and equipment where possible

GNEM PRESENTS

GEORGIA'S CHARGING INFRASTRUCTURE ROADMAP



GNEM PRESENTS

GEORGIA'S CHARGING INFRASTRUCTURE ROADMAP



WHERE ARE WE

Howard and infrastructure do we have today?

WHERE DO WE NEED TO GO?

Where are gaps and new trends emerging?

And how do we as planners think about closing those gaps?



TODAY'S EV USER EXPERIENCE: UNDERSTANDING USABLE COVERAGE

Usable Coverage = charging that's reliable, accessible, and practical enough to rival the gas station experience

- Goes beyond counting plugs or sites → focuses on real usability
- Reliable: high uptime and redundancy at each site
- Accessible: ADA-compliant, easy payment, universal plug options
- Practical: safe, convenient layouts with amenities for drivers
- Key benchmark for broad, mainstream EV adoption



USABLE COVERAGE – ARTICULATING CONSUMER NEEDS AND PREFERENCES NOT CURRENTLY COVERED IN CHARGING APPS

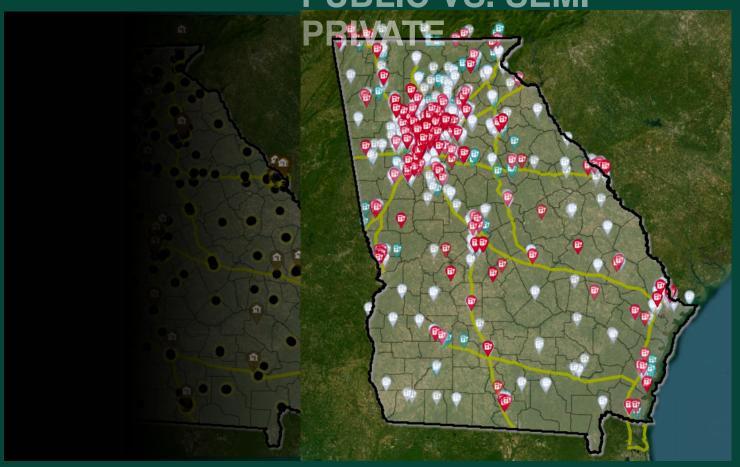
SHADE/





USABLE COVERAGE – ARTICULATING CONSUMER NEEDS AND PREFERENCES NOT CURRENTLY COVERED IN CHARGING APPS

PUBLIC VS. SEMI-





USABLE COVERAGE – ARTICULATING CONSUMER NEEDS AND PREFERENCES NOT CURRENTLY COVERED IN

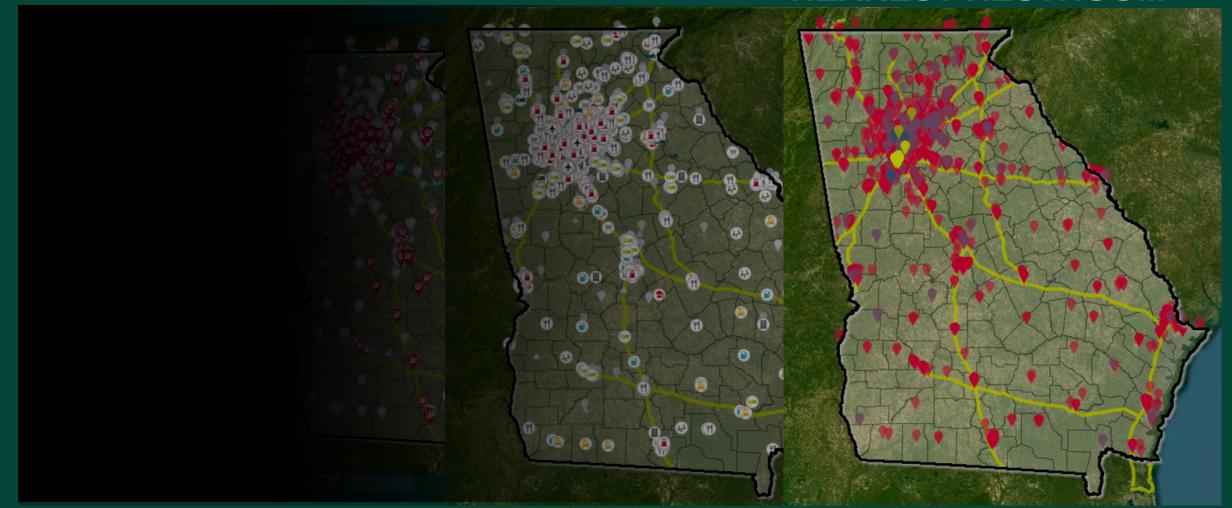
CHARGING APPS AMENITIES/CATEGORY





USABLE COVERAGE – ARTICULATING CONSUMER NEEDS AND PREFERENCES NOT CURRENTLY COVERED IN CHARGING APPS

NEAREST RESTROOM





Home charging is no longer a given

Majority of households will likely not rely on home charging as a baseline

We often hear that **70-80** % of charging will happen at home — but that only holds if people own their homes.

Nationally and statewide, about **65** % of households own their homes.

But in cities (and especially in the places with the highest EV registrations in Georgia, like **Atlanta** and **Savannah**) homeownership is much lower:

- In Atlanta, the homeownership rate is about 46.3 %
- In Savannah, the homeownership rate is about 44.4 %



Private sector arms race is accelerating non-home charging

Non-home charging grew by about 35 percent, with fast charging up 56 percent YOY

In Q2 2025 alone, 703 new high-speed charging stations were added in the United States, one of the largest quarterly expansions on record

Private sector arms race for EV charging infrastructure coverage as a long-term investment play and as a beneficial, ROI driving amenity

Charging infrastructure growth beginning to decouple from pure EV sales growth demand



Established Networks Retail & Hospitality Automakers











HYATT





- Employers adding EV charging as a perk to smooth return-to-office mandates.
- ~70% of prime U.S. office buildings now include chargers (CBRE).



Rideshare and autonomous operators creating an additional semi-public layer of fast charging





3

Rideshare and autonomous operators creating an additional semi-public layer of fast charging

Pivet Atlanta (Cox Automotive + Georgia Power + ChargePoint): includes ~20 Level-2 fleet chargers, 6 DC fast chargers for fleet, and 6 DC fast chargers open to the public — supports programs like Lyft Express Drive

Mercedes-Benz Charging Hub (Sandy Springs): 400 kW fast chargers that can support fleets among other users

Autonomous vehicle deployments in Atlanta:

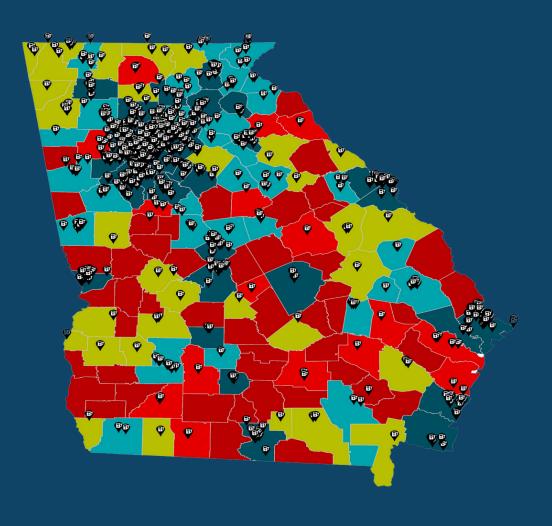
- Lyft + May Mobility: robotaxi pilot launched in Midtown Atlanta.
- Waymo + Uber: Waymo's robotaxis now carrying riders in Atlanta as part of their expansion
- **Zoox:** launched a test fleet of retrofitted SUVs in downtown Atlanta for mapping/data collection, with plans to expand autonomous testing.



UNDERSTANDING TODAY'S PUBLIC CHARGING ENERGY GAP

COUNTY-LEVEL ANALYSIS OF EV DEMAND VERSUS AVAILABLE STATIONS CAPACITY











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EV FIRE SAFETY 2025 TECHNICAL GUIDE

PLUGINTO GEORGIA





Plug Into Georgia

Informing Government Decision-Making around Electric Mobility and Energy

Georgia Planning Association October 9, 2025



UGA PUBLIC SERVICE AND OUTREACH UNIT

SINCE 1927
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in Georgia and the southeastern U.S.





INFORM

ENHANCING GOVERNMENT THROUGH TRAININ

INSPIRE

BUILDING COMMUNITIES WITH VISION

INNOVATE

ADDRESSING CRITICAL CHALLENGES THROUG





PLUG INTO GEORGIA Initiative

This initiative provides user-friendly tools, educational opportunities, outreach, engagement, and technical assistance to help communities navigate the transition to electric transportation. By convening subject matter experts and partnerships, offering neutral, data-driven education, and providing technical support, Plug Into Georgia aims to strengthen connections between the University of Georgia and local communities while helping leaders make informed decisions.



PARTNERS

The UGA Carl Vinson Institute of Government, with collaboration and support from Southern Company, is engaging local governments through the Plug Into Georgia initiative.

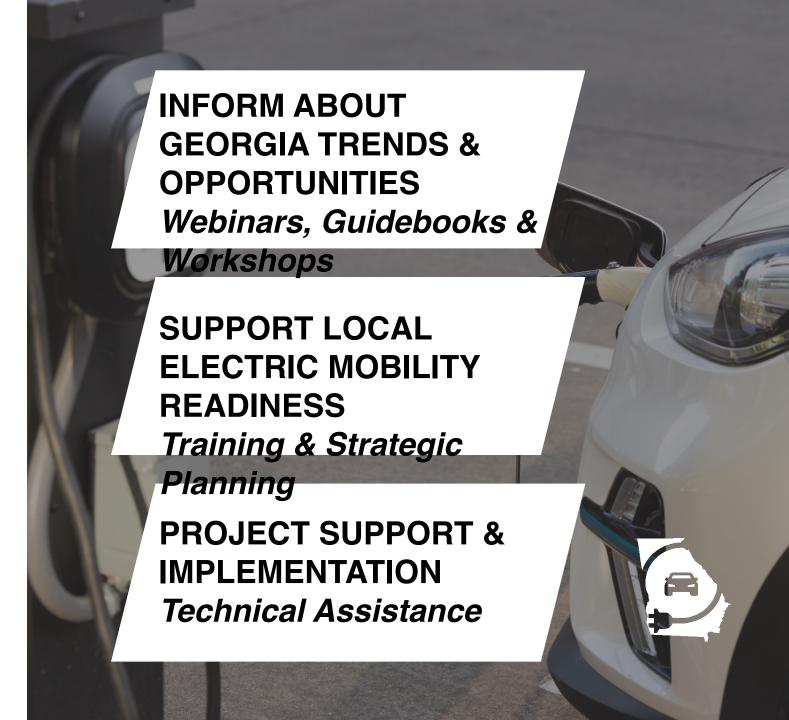
The Institute of Government, as a partner in UGA's Georgia Network for Electric Mobility, is leading public service and outreach efforts to enhance the economic competitiveness of the state through informing, educating, and supporting communities as they navigate emerging electric mobility technologies.







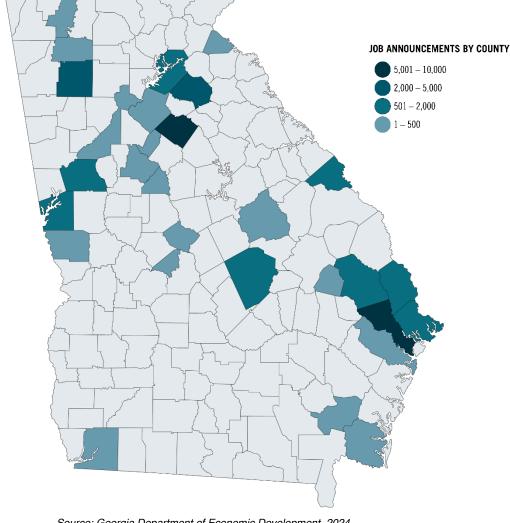
THE **ELEMENTS** OF THE PLUG INTO **GEORGIA** INITIATIVE



E-MOBILITY RELATED ECONOMIC DEVELOPMENT IN GEORGIA, 2018-2024



Over 36,000 jobs across 31 counties

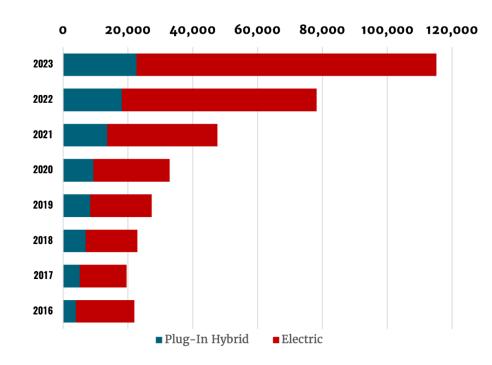


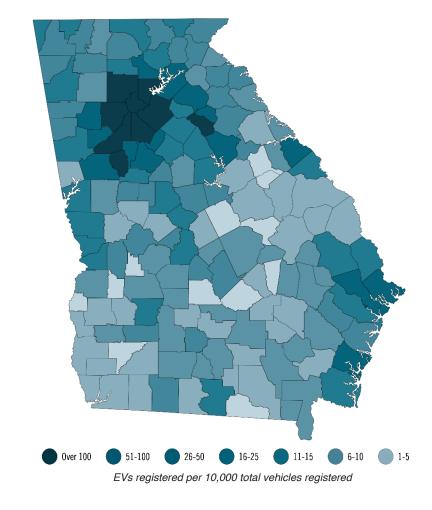
Source: Georgia Department of Economic Development, 2024 Map: E-Mobility Manufacturing Workforce Needs Snapshot, Carl Vinson Institute of Government, 2024





EV REGISTRATIONS IN GEORGIA ARE GROWING





Sources: U.S. Department of Energy, 2024; Georgia Department of Revenue, 2024





Regional Workshops

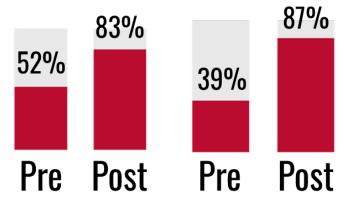








Survey Feeback



The percent of people who are somewhat to very comfortable initiating partnerships with utility and power companies increased from 52% to 83%.

The percent of people who are moderately to extremely knowledgeable about the necessary preparation for EV grant applications increased from 39% to 87%.

86% of participants stated that public interest in personal EV ownership should have at least a moderate impact on the

responsibilities

and initiatives of

Range anxiety is seen as the greatest barrier to EV adoption.

In-Person Workshops are reported as more valuable than webinars because of connections with other attendees.

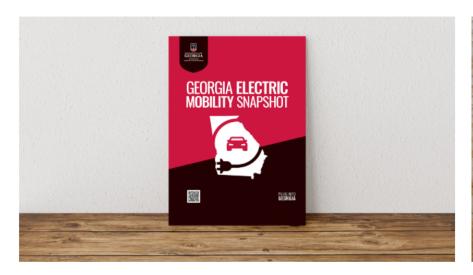
A lot of questions remain for local governments including fleet management, workforce needs, public safety, and infrastructure planning.



ELECTRIC MOBILITY AND ENERGY

Tools and Resources

We are building a growing library of tools and resources related to electric mobility and energy. Find guidebooks, webinar recordings, reports, and more on this page.



New! Georgia Electric Mobility Snapshot

The Georgia Electric Mobility Snapshot provides statistics and trends on the electric mobility landscape in the state today.





New! EV 101: A Georgia Guide for Public Charger Success

This guidebook is part of the Plug into Georgia Initiative, and it provides strategies and best practices for local governments to plan, acquire, and install public EV chargers in rural small-town communities.

View Guidebook 🐘

Case Study Library



QUESTIONS? CONTACT US! ELECTRIC MOBILITY AND ENERGY TEAM: ENERGY@CVIOG.UGA.EDU



PUBLIC EV CHARGING AS A REGIONAL SOLUTION

In the face of a looming economic threat tied to air quality concerns, Middle Georgia Regional Commission (MGRC) turned a challenge into an opportunity Georgia regional commission (March, Jurnes a challenge into an opportune) by investing in clean transportation. After being designated as a non-attain-ment area for air qualify in 2003, Middle Georgia faced growing concern over potential economic impacts from this designation, including possible reduction in operations at Robins Air Force Base – a major employer and levy cluded solar energy, rail emission reductions, and clean transportation efforts

in the region, MGRC has prioritized reducing vehicle emissions as it represents one of the greatest opportunities to improve air quality for residents, visitors and businesses.

Understanding this, MGRC identified one major barrier to EV adoption: th lack of visible and accessible charging infrastructure. To bridge this gap, they mapped out key locations, created incentives for installation, and ultimately secured a \$15 million federal grant to deploy public chargers across the re gion, ensuring both environmental and economic benefits

% OF EMISSIONS*







ACTIONS TAKEN TO IMPROVE AIR QUALITY:



101

- . Added solar to offset needs from Plant Scherer, a nearby coal plant, including 128MW facility on Robins AFB
- . Worked with Norfolk Southern to convert locomotives to low-emission
- · 2 grant-funded electric Macon Transit Authority buses and charging infrastructure
- buses in Bibb County
- . Implemented a regional cost-share
- program for clean air projects



serve more than just drivers, they development. In Forsyth, a city Identified 111 proposed EV charging northwest of Macon along I-75. stations that would ensure all there has been a noticeable number Middle Georgians are within 15 of EV drivers parking at the installed minutes of a public charger chargers and walking downtown.

Public EV charging stations

Forsyth Mayor Eric Wilson noted that the city's EV charger was frequently in use around lunchtime as hungry drivers would pull off the interstate

KEY LESSONS LEARNED:

together to implement large-scale infrastructure projects that provide both economic and public benefits.

regional strategy significantly strengthened MGRC's ability to attract grant funding.

[NFRASTRUCTURE DRIVES ADOPTION]: Public charging visibility boosts consumer confidence, leading to increased EV sales and adoption. MGRC have lagging EV sales. SLOW PROGRESS IS STILL PROGRESS: MGRC's efforts to increase electric

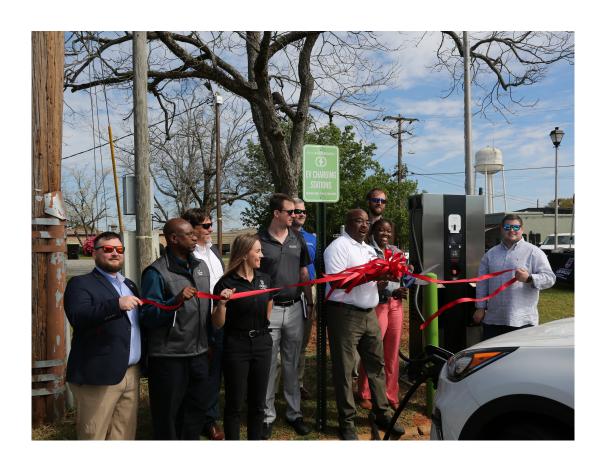
spurred by public investments to support tourism. Infrastructure

LOOKING FORWARD:

MGRC is exploring partnerships with third-party owner and operator firms to manage the ongoing maintenance and support of the charging system as required under federal grant regulations. The regional commission is also looking to expand partnerships related to education and workforce development to better prepare future workers for good-paying

QUESTIONS? CONTACT US! ELECTRIC MOBILITY AND ENERGY TEAM: ENERGY@CVIOG.UGA.EDU

Buena Vista Technical Assistance



TIMELINE

August 2022: Decisions Made April 2024: Funding Secured July 2024: Permits Approved September 2024: Installation March 2025: Operational

LESSONS LEARNED

Leverage Networking Opportunities
Appoint a Project Manager
Maintain Adaptability & Patience





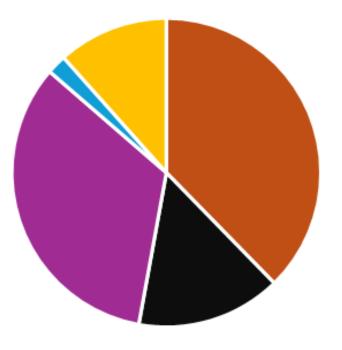
PLUGINTO GEORGIA

What's Next

- Continue offering electric mobility resources & technical assistance
- Community of practice & EV readiness designation coming in 2026

 Electric mobility is part of a larger energy conversation in Georgia

Georgia Net Electricity Generation by Source June 2025 - US EIA



■ Natural Gas-Fired ■ Coal-Fired ■ Nuclear ■ Hydroelectric ■ Renewables

Increasing Energy Demand

Over the next six years, Georgia Power projects approximately 8,500 megawatts (MW) of electrical load growth, an increase of more than 2,600 MW in peak demand by the end of 2030 when compared to projections in the 2023 IRP Update.

Where is that demand coming from?

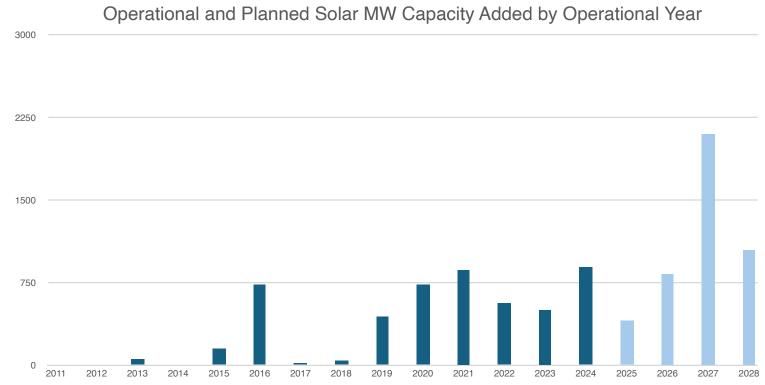
What does this mean?

Where will that new generation come from?



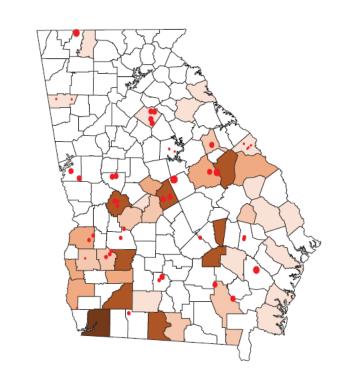
Georgia Solar Land Use Report Preview



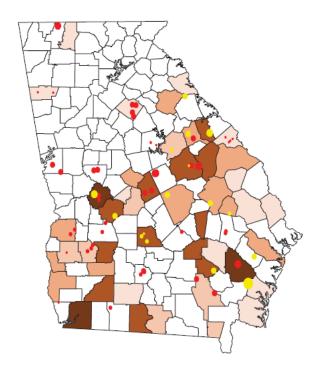


Georgia Solar Land Use Report Preview

DRAFT NOT FOR DISTRIBUTION



Operational Solar as of June 2025



Planned Solar as of June 2025

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