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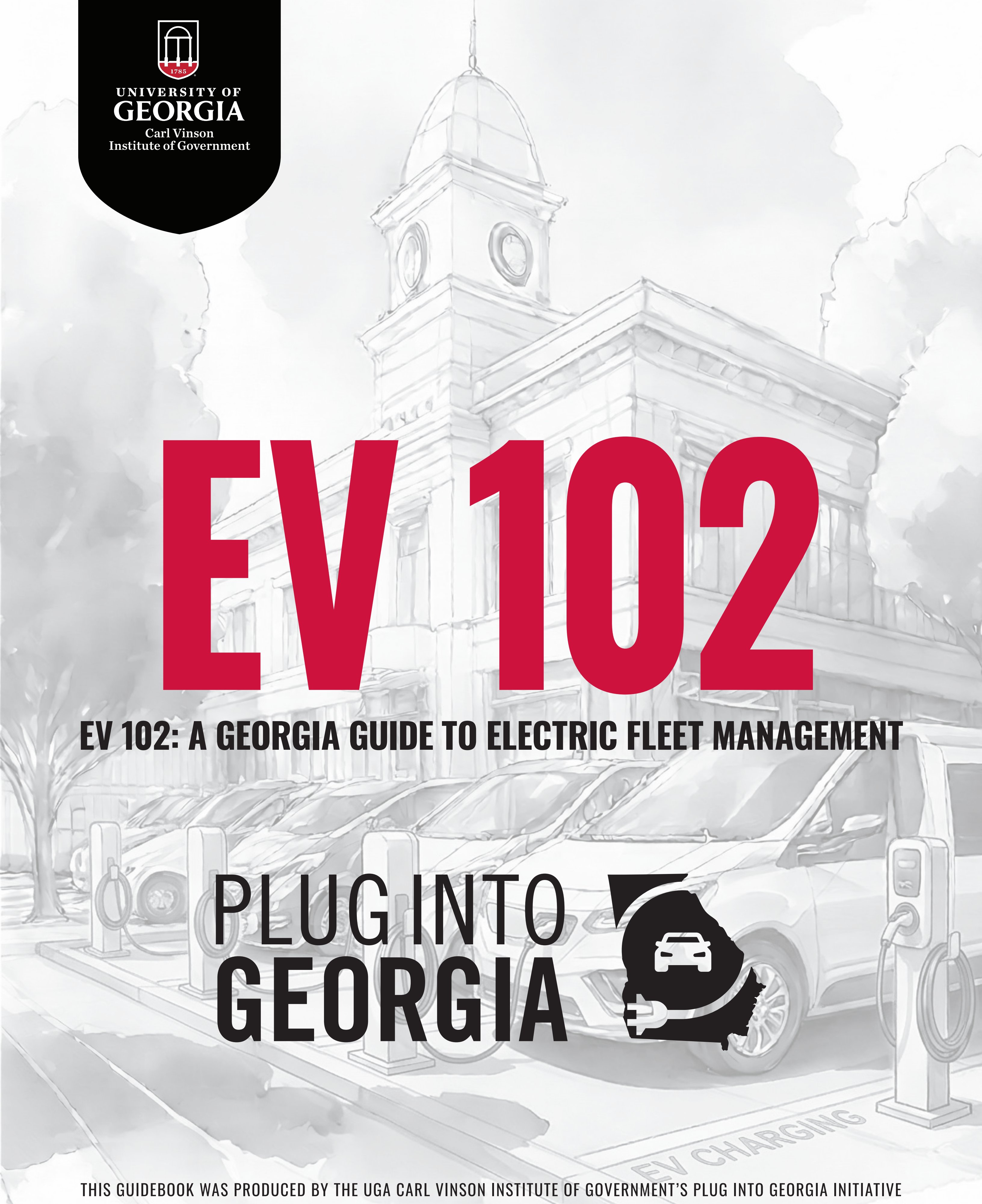

EV 102

EV 102: A GEORGIA GUIDE TO ELECTRIC FLEET MANAGEMENT

PLUG INTO
GEORGIA

THIS GUIDEBOOK WAS PRODUCED BY THE UGA CARL VINSON INSTITUTE OF GOVERNMENT'S PLUG INTO GEORGIA INITIATIVE

USING THE EV102 GUIDEBOOK

This guidebook provides a practical framework for evaluating electric vehicles (EVs) in local government fleets and can be used as a step-by-step resource or as a reference for specific topics.

Engaging stakeholders and identifying goals is a key first step followed by assessing if and how EVs fit within an existing fleet.

Most governments begin with a clear understanding of current vehicles and needs before making purchasing or infrastructure decisions.

Addressing these fundamentals early helps avoid operational disruptions, unplanned downtime, and unexpected costs.

WHILE EACH COMMUNITY WILL MOVE AT ITS OWN PACE, MOST FLEETS FOLLOW A SIMILAR SEQUENCE:

INVENTORY NEEDS & ASSESS FIT
Document current vehicles, missions, and readiness.

RIGHT-SIZE, RIGHT-TYPE ANALYSIS
Identify which vehicles are good candidates for electrification.

FUNCTIONAL PLANNING
Address operational, technology, procurement, and policy considerations across departments.

UGA'S FLEET STRATEGY (see Section 1 – page 6) demonstrates one approach to sequencing these steps.

SECTION 2 provides overarching best practices when considering fleet electrification.

SECTIONS 3 – 7 provide practical guidance for these steps. Some activities may occur simultaneously or in a different order depending on local priorities and capacity.

UNDERSTANDING LEVELS OF CHARGING

LEVEL 1: Standard household outlet.

LEVEL 2: Common public, workplace, or residential chargers.

LEVEL 3: Fast-charging (most common along high-traffic corridors).

View the EV101 guidebook for additional information on charging levels.

This guidebook was produced by the Carl Vinson Institute of Government at the University of Georgia. Project management, research, and writing were provided by Julia Dietz, McKenna Eavenson, and Asher Dozier. Editing was provided by Margaret Blanchard. Graphic design was provided by Eleonora Machado. This guidebook was developed with support and funding from Southern Company, with technical review support from the Center for Transportation and the Environment and Clean Cities Georgia. It is part of the Institute of Government's Plug Into Georgia initiative.

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PLUG INTO GEORGIA

This guidebook is part of the Plug Into Georgia initiative and it provides a practical framework for evaluating electric vehicles in local government fleets.

TERMINOLOGY

MAKE READY / TURNKEY	Make-ready refers to the electrical and site preparation work required before EV chargers can be installed, including trenching, wiring, and upgrades to panels or transformers. Turnkey means a single vendor handles the entire process, from design and site prep to installation and commissioning, which can simplify procurement but may come at a higher cost.
MAKE READY PROGRAM	A utility or grant-funded program that covers part or all of the infrastructure upgrade costs between the grid to the charger. These programs can significantly reduce upfront capital expenses but often have eligibility requirements and deadlines that must be met to receive funding.
NETWORKED CHARGER	An EV charger that connects to a software platform for monitoring usage, processing payments, and controlling load. These chargers typically require ongoing subscription fees and can provide valuable data for fleet management and cost recovery.
DEMAND CHARGES	Additional fees on a commercial electricity bill based on the highest period of electricity usage in a billing cycle. High-powered chargers, especially DC fast chargers, can trigger significant demand charges if not managed carefully.
LOAD MANAGEMENT	Technology that controls when and how fast EVs charge to avoid exceeding electrical capacity or incurring high demand charges. This can reduce operational costs and allow more chargers to be installed without major utility upgrades.
TOTAL COST OF OWNERSHIP	An analysis that considers the full lifecycle cost of a vehicle, including purchase price, fuel/energy, maintenance, and resale value. TCO often shows that EVs can be more cost-effective than gasoline vehicles over their operational life with fuel and maintenance savings.
OCPP (OPEN CHARGE POINT PROTOCOL)	An open standard that allows EV chargers and software from different vendors to communicate. Using OCPP-compliant chargers helps avoid vendor lock-in and can lower long-term operating costs.
DEPOT CHARGING	A charging strategy where EVs return to a central facility for overnight or scheduled charging. Depot charging can be more cost-effective than public charging and allows for controlled, predictable energy use.
V2G / V2X (VEHICLE TO GRID / VEHICLE TO EVERYTHING)	Technologies that allow EVs to send electricity back to the power grid (V2G) or to directly power anything else such as equipment or buildings (V2X). These capabilities can provide backup power during outages or peak demand periods or generate revenue through grid services.
CHARGER UPTIME GUARANTEE	A contractual requirement that EV chargers remain operational for a specified percentage of time, typically 97–99%. Uptime guarantees help ensure reliability and can include penalties or service credits for downtime.
INTERCONNECTION AGREEMENT	A formal agreement with the electric utility that defines how EV chargers will connect to the power grid. This process can take months and is critical to project timelines, as no charging equipment can operate without it.
NEVI (NATIONAL ELECTRIC VEHICLE INFRASTRUCTURE PROGRAM)	Federal standards under the Bipartisan Infrastructure Law that set requirements for publicly funded EV charging projects. NEVI standards cover factors such as charger speed (minimum 150 kW for DC fast), connector type, network uptime (97%+), payment methods, and data reporting. Even if a project does not use NEVI funding, following these standards can help ensure interoperability, futureproofing, and eligibility for future grant programs. The Georgia Department of Transportation has received funding for and is actively implementing a statewide NEVI plan to deploy fast chargers along key routes.
REGENERATIVE BRAKING	System that converts energy generated by the friction from braking a vehicle into electricity and stores it in the battery. This reduces wear on brake components and recharges the battery.

Supporting Local Governments IN THE TRANSITION TO ELECTRIC FLEETS

INTRODUCTION

EV 102: A GEORGIA GUIDE TO ELECTRIC FLEET MANAGEMENT

In 2025, through the Plug Into Georgia initiative, the University of Georgia Carl Vinson Institute of Government hosted four workshops and three webinars to provide foundational education on electric vehicles (EV) and public charging infrastructure. Nearly 175 government officials and staff from 60 counties participated, and post-workshop surveys showed increased knowledge, comfort, and confidence in addressing electric mobility issues. Participants identified economic development and lower operating costs as the most important community benefits of EV adoption, while citing range and charging availability as the top barriers. Across Plug Into Georgia events and presentations, participants also requested additional guidance on vehicle fleet decision-making.

EVs are increasingly viable for government fleets for the same reasons as consumer adoption: declining vehicle prices, improved battery ranges, and expanded model options. Total cost of ownership (TCO) can be lower in some applications, and electrification can reduce air and noise pollution. As of 2024, only 14% of fleets included EVs, but industry trends indicate fleet adoptions of EVs will increase over the next few years.[1] However, not all use cases are appropriate, and thoughtful planning, budgeting, and operational evaluation are needed to determine where EVs make financial and operational sense. Grounded in applied research and experience, this guidebook is designed to support informed, practical decisions in local government leadership by helping evaluate needs and readiness when considering EVs in their fleets.

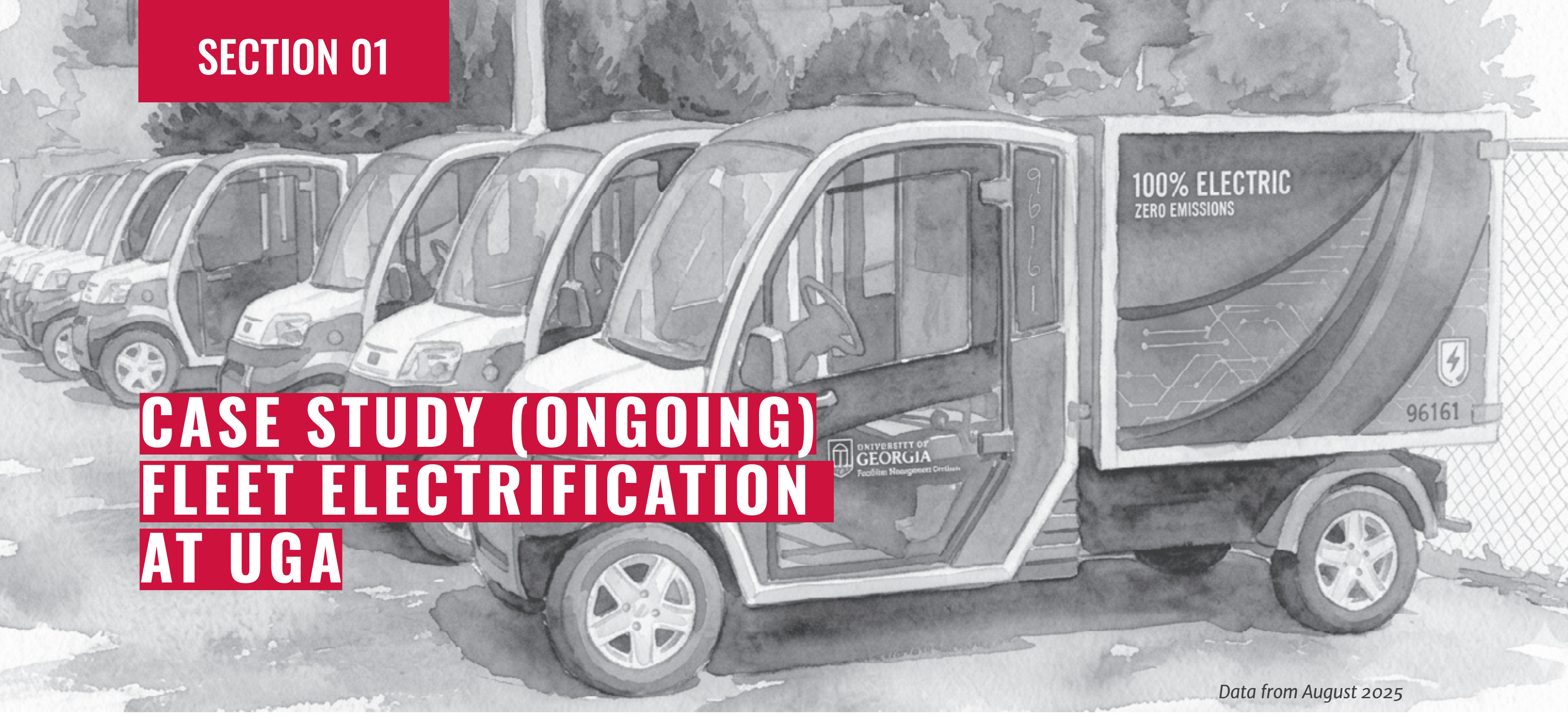
[1] Source: 2024 Cox Automotive "The Path To EV Adoption" Fleet Report

FOR BACKGROUND, EV101: A GEORGIA GUIDE TO PUBLIC CHARGER SUCCESS is available on the Institute of Government's website. The guide includes an overview of EV and charger technologies, as well as best practices for planning, acquiring, and installing EV charging infrastructure in communities. The resource library also includes case studies from UGA and communities across Georgia and webinar recordings.

ABOUT THE PLUG INTO GEORGIA INITIATIVE

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

SECTION 01



CASE STUDY (ONGOING) FLEET ELECTRIFICATION AT UGA

Data from August 2025

In the last five years, the State of Georgia and the University of Georgia have established themselves as leaders in electric mobility innovation, research, and outreach. The state has announced over $29 billion in investment and over 36,000 jobs in the sector, while UGA has invested in electric mobility-focused faculty and become an early adopter of electric vehicles across its fleet and grounds equipment.

As of 2025, 8% of the fleet in UGA's Facilities Management Division (FMD) is electric, which includes 22 low-speed vehicles, six EV sedans, and one hybrid SUV. The next focus will be on trucks and vans. With the existing electric fleet, UGA's FMD has learned valuable lessons, established a business case for electrification, and developed a strategy that can be replicated by other institutions and communities across Georgia.

The Office of Sustainability within FMD is a partner in the recently concluded Interdisciplinary Presidential Seed Grant coordinated by UGA's Carl Vinson Institute of Government. The Institute is working with the Office to translate UGA's on-campus experiences into outreach materials such as this to support electrification decision-making for other government institutions in Georgia.

FMD'S FLEET ELECTRIFICATION STRATEGY

Inventory existing vehicles to assess needs

Perform a "Right-Size, Right-Type" analysis to determine which types of EVs meet specific organizational needs

Vet vehicles, hold demos for staff, and start procurement process

Plan for charging infrastructure

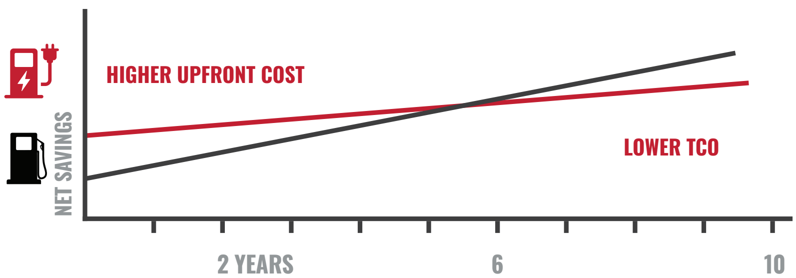
Set up vehicle data analysis systems

Build vehicle replacement into budget strategy

GASOLINE AND REPAIRS MAKE UP NEARLY HALF OF FMD'S FACILITY SHOP EXPENSES

Outside of personnel, gas vehicle fuel and repairs make up nearly half of FMD's facility shop expenses. UGA FMD modeled potential savings of converting fleet vehicles to electric and found*:

- Electrifying the eight trucks and vans in the AC/Refrigeration Shop could result in $14,000 in annual savings.
- Electrifying all 218 trucks and vans in the FMD fleet could result in more than $360,000 in annual savings.
- Despite somewhat higher initial market prices, an electric vehicle's total cost of ownership is still cheaper over the 10-30+ year life of an FMD fleet vehicle, with the increased cost of an electric vehicle being recovered after a few years.



WHY IS THE TCO LOWER?

- Gas costs $0.15-$0.17 more per mile than electricity (78% less efficient).
- EV maintenance costs are approximately 50% less than gas vehicle maintenance costs.

GAS COSTS $0.15-0.17 MORE PER MILE

ELECTRIC VEHICLE MAINTENANCE 50% LOWER

**All calculations based on data available in 2025 from the UGA Facilities Management Division*

KEY CONSIDERATIONS:

1. CHARGING & SITE READINESS

Start with a charging plan. Level 1 and Level 2 are often sufficient for low speed or electric equipment, but electric infrastructure may still need to be upgraded before charging can be installed. Ensure sites are assessed for infrastructure before purchasing an EV.

2. DEMO & DUE DILIGENCE

Thoroughly compare EV options with operational needs through demos and analyses before making a decision, and work with vendors to identify the best fit options and potential financial incentives.

3. START WITH LOW-SPEED EVS

Low-speed EVs offer a good starting point for fleet electrification because they are lower in cost and can utilize Level 1 charging (traditional outlets). However, there are regulatory limitations in where low-speed vehicles can travel (must avoid busy roads).

APPROACHING FLEET ELECTRIFICATION

Incorporating electric or other advanced technologies into a fleet is more than just a vehicle purchase. It affects daily operations, administration, staff training, budgeting, facilities, and employees who drive and maintain the vehicles. An intentional approach helps reduce disruption, confront challenges early, and coordinate government functions before making broader commitments. This section outlines practical governance and change management steps to support that process.

ENGAGE STAKEHOLDERS EARLY AND CONTINUOUSLY

Fleet transitions affect staff beyond fleet management. Finance offices may encounter new budgeting and reimbursement structures, IT departments may be responsible for networked charging systems or data security, HR and training staff may need to address new safety protocols or certifications, and facilities staff may manage site access and electrical upgrades.

BEST PRACTICES FOR ENGAGING INTERNAL STAKEHOLDERS:

1. IDENTIFY
Identify key staff from fleet, purchasing, IT, HR, facilities, and administration early.

2. FORM
Form a small cross-functional working group to coordinate decisions.

3. CREATE
Create clear points of contact internally for questions or concerns.

4. CHECK-IN
Check in regularly and align with budget cycles and capital planning timelines.

This helps ensure decisions reflect operational and administrative capacity, not just vehicle availability or funding.

COORDINATE EARLY WITH EXTERNAL PARTNERS

Coordinating early with external stakeholders such as utilities, engineers, and funding partners can reduce delays and improve infrastructure, rate, and financing outcomes. These partners can help assess power capacity, timelines, and available incentives or financial support.

IDENTIFY GOALS FOR FLEET ELECTRIFICATION

Before proceeding with planning, clearly identify what your government wants to achieve with fleet electrification. Establishing goals guides decision-making throughout the process and provides a framework to measure success. Goals may focus on:

- ☐ Reducing fuel and maintenance costs.
- ☐ Improving reliability and reducing downtime.
- ☐ Reducing air or noise pollution.
- ☐ Supporting sustainability commitments.
- ☐ Preparing for future regulations or funding opportunities.
- ☐ Diversifying the fleet to better match operational needs.

CONSIDER A PHASED, PILOT APPROACH

Starting with “demo day” or a small pilot for EVs on existing routes allows time to evaluate performance, identify gaps, adjust policies before making larger investments or operational changes. Hands-on experience helps staff gain familiarity with new systems, reduces uncertainty, and provides an opportunity for practical feedback.

DURING A PILOT, GOVERNMENTS CAN ASSESS:

- Whether EVs consistently meet daily mission requirements.
- How charging schedules align with staffing, dispatch, and facility operations.
- Impacts on budgeting, reimbursement, and capital planning processes.
- Dependence on IT systems, software platforms, and data management practices.
- Implications for training, job classifications, and safety procedures.
- Gaps in new or updated vehicle policies and procedures.

DOCUMENT AND REVIEW BEFORE EXPANDING COMMITMENTS

At the end of each phase, compile a brief internal review to guide next steps, including:

- ☐ Vehicle performance relative to mission requirements.
- ☐ Feedback from drivers, supervisors, and administrative staff.
- ☐ Infrastructure, utility, and IT system impacts.
- ☐ Budget, reimbursement, and total cost implications.
- ☐ Policy, HR, or legal adjustments identified.

This documentation supports transparent, defensible decisions for administrators, elected officials, and finance staff. It also helps determine whether and how fleet electrification should expand.

SECTION 03

INVENTORY NEEDS & ASSESS FIT

INVENTORY EXISTING VEHICLES TO ASSESS NEEDS

The first step in evaluating whether EVs are a good fit for a fleet is to understand your current fleet assets, how they are used, and the infrastructure and staff that support them.

KEY ELEMENTS TO INCLUDE IN A FLEET INVENTORY:

VEHICLE MISSION

Primary duty (transporting people, cargo, towing, specialty equipment).

FLEET UTILIZATION

Daily/annual mileage, route patterns (stop-and-go, highway); parking and idle time; towing or equipment needs; operating conditions (terrain, weather).

LIFECYCLE STATUS

Vehicle age & condition; replacement cycles and procurement timing.

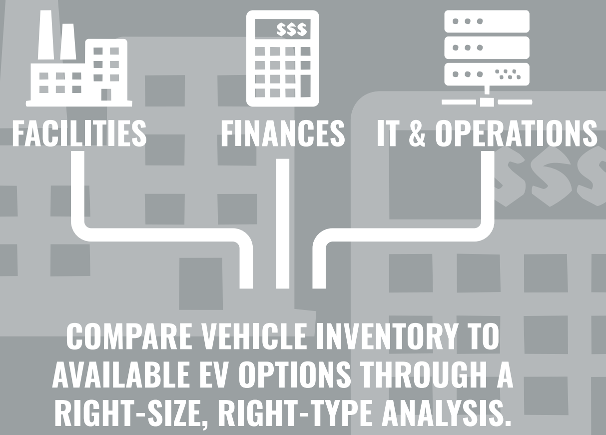
OPERATING COSTS

Fuel; maintenance and repair history; insurance and administrative costs.

FLEET COMPOSITION

Vehicle types and classes; fuel types and efficiency; departmental assignments (e.g., inspections, parks, public safety).

The next step is to compare this vehicle inventory to available EV options through a Right-Size, Right-Type analysis.



COMPREHENSIVE INVENTORY

A comprehensive inventory should include input from facilities, finance, IT, and other divisions to assess existing utility infrastructure, capital planning schedules, and workforce readiness to support EVs. Considerations for operations, IT, procurement, and administrative staff are discussed later in this guidebook.

PERFORM A RIGHT-SIZE, RIGHT-TYPE ANALYSIS

Fleet vehicles serve different functions, travel different distances, and follow different daily schedules. A right-size, right-type analysis helps identify where EVs are a good fit and where gasoline or hybrid vehicles remain the better option. This includes evaluating charging infrastructure needs.

Auto manufacturers (commonly referred to as original equipment manufacturers or OEMs), utilities, and third-party fleet providers offer tools and assistance to support this process, often placing vehicles in three categories:

SUITABLE	POTENTIALLY SUITABLE	NOT CURRENTLY SUITABLE
Complete daily missions on a single charge and recharge during normal downtime.	May require midday charging, operational adjustments, or infrastructure upgrades.	Do not yet meet mission needs due to range, towing capacity, specialty requirements.

Revisit this assessment periodically as technology and pricing change.

FLEET VEHICLES SERVE DIFFERENT FUNCTIONS, DISTANCES, AND SCHEDULES.

IN GENERAL, STRONG EV CANDIDATES CAN:

- COMPLETE THE DAILY ROUTE WITHOUT A MIDDAY CHARGE.
- HAVE REGULAR DOWNTIME FOR CHARGING WITHOUT INTERRUPTING THE ROUTE.
- HAVE A PROJECTED LIFETIME COST EQUAL TO OR LESS THAN THE GAS EQUIVALENT.

TYPES OF EVS AND THEIR COMMON USES

	VEHICLE TYPE	TYPICAL ELECTRIC RANGE	BEST USE CASE	CHARGING NEEDS
BEV	BEV: Battery EVs	150-400+ miles	Best For: Predictable daily routes, light-duty	Charging: Level 2 depot, DC fast as needed
HEV	HEV: Hybrid EVs	Minimal to no electric-only range	Best For: Improving fuel efficiency without charging infrastructure	Charging: None; gasoline only
PHEV	PHEV: Plug-In Hybrid EVs	20-50 miles on electric power*	Best For: Short daily trips with occasional longer travel	Charging: Level 1 or 2
LIGHT-DUTY	Light-Duty (Pickup trucks and vans)	100-250+ miles	Best For: Local delivery and service routes, daily depot return	Charging: Level 2 for overnight, DC fast charging for higher utilization
MEDIUM-HEAVY DUTY	Medium-Heavy Duty (Buses, utility trucks, tractor trailers)	100-500+ miles	Best For: Fixed routes with scheduled downtime	Charging: High-power Level 3 DC charging, sometimes Level 2 depending on utilization

** Note: Extended Range Electric Vehicles (EREVs) are similar to a plug-in hybrid but have a 100-200 miles battery range.*

INCREMENTAL ADOPTION OPTIONS

Starting with smaller or lower-power equipment at lower costs and without major infrastructure upgrades can provide an opportunity to gain experience with charging, maintenance, and operations before making decisions to invest in standard EVs.

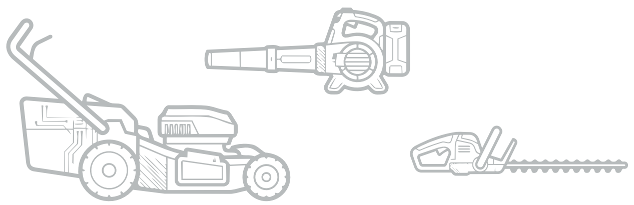
LOW-SPEED VEHICLES

Electric low-speed vehicles like golf carts, bicycles, and utility carts typically have a limited range, with top speeds around 25 mph, and are intended for controlled environments.

- Typical benefits include reduced noise and air pollution and minimal infrastructure requirements, since they can be charged using standard household outlets (Level 1).
- They are best suited for use in parks, on-site facilities, short-distance campus transport, event management, or inspections.

ELECTRIC EQUIPMENT

Grounds and facilities maintenance equipment can also be transitioned to electric with minimal changes to operations. Such equipment shares the benefits of low-speed vehicles (reduced noise and air pollution, Level 1 charging, and lower maintenance costs).



COBB COUNTY

UGA FMD

Cobb County deployed electric motorcycles for officers patrolling parks and trails. First, officers tested the bikes on their entire daily routes with positive feedback. Once implemented on patrol, trail users reported an increase in enjoyment with less noise disturbance and the absence of exhaust smoke. Officers also reported an increased effectiveness in reconnaissance operations, where the quieter bikes allowed them to more effectively stop crime and keep the trail safe.

The University of Georgia's Facilities and Management Division (FMD) designated certain areas of campus to be maintained using electric mowers, blowers, and hedge trimmers. They found:

- Charging the equipment was over 25 times less expensive than the cost of gasoline, with an estimated annual savings of over $80,000.
- Gas-powered equipment can exceed OSHA noise exposure and air pollutant limits and can be disruptive to classes, meetings, and activities on campus. Switching to electric remains below these OSHA standards, and also received positive feedback from operators and those in adjacent areas around campus.

SECTION 04

OPERATIONS

EV MAINTENANCE REQUIREMENTS

EVs require maintenance and inspections like any other fleet vehicle, but the type and frequency of service differ from gas vehicles.

Key differences include fewer moving parts, fewer fluids, reduced brake wear due to regenerative braking, and increased electrical and software components. EVs are typically heavier than comparable gas vehicles and tire selection needs to match vehicle weight and duty.

As a result, scheduled maintenance is often less frequent, while repairs are more likely to involve electrical or software components. In early adoption phases, parts availability and diagnostic capacity may affect downtime, depending on the OEM and region.

TECHNICIANS AND WORKFORCE TRAINING

Introducing EVs may require new skills for both technicians and drivers, as many repairs involve electrical or software components. Training needs will depend on whether maintenance is handled in-house or provided externally, and should consider:

SAFETY PROTOCOLS

High-voltage systems require appropriate safety procedures and protective equipment. In some cases, electrician or EV-specific training or certifications may be required.

EDUCATIONAL PIPELINES

Technical colleges, OEMs, and industry associations are expanding EV workforce training offerings.

INDEPENDENT SHOPS & DEALERS

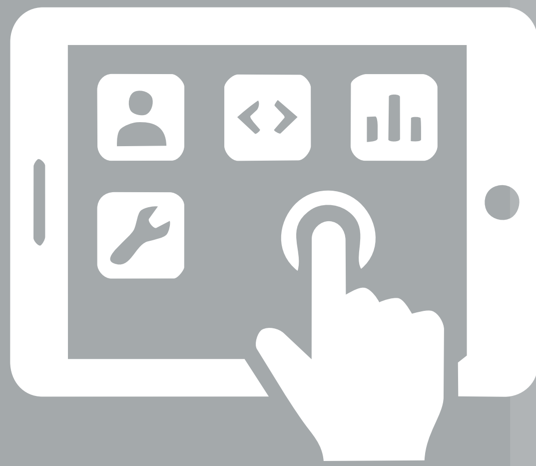
Independent shops and dealerships are rapidly expanding EV service capabilities, but availability may vary by geography.

OUTSOURCED MAINTENANCE

Many local governments outsource EV maintenance through OEM dealers or independent shops, especially during initial deployment. OEMs may also provide ongoing support for maintenance and software updates.

TRAINING PARAMETERS

Driver and administrative training will also be an important step in the process. Range awareness, charging habits, temperature effects, and software interfaces are new to many operators and dispatchers and can influence performance and efficiency.



BATTERY LIFESPAN & REPLACEMENT

EV batteries are designed to last for many years and miles. Capacity gradually declines over time, influenced by mileage, temperature, charging behavior, and operational demands. Most manufacturers provide warranties of 8–10 years or around 100,000 miles, typically guaranteeing that batteries will retain a minimum capacity during that period. In practice, many vehicles are powered by their original batteries well beyond the warranty window, though long-term data is still emerging as adoption increases.

BATTERY PLANNING CONSIDERATIONS:

BATTERY MANAGEMENT: Charging practices and operating conditions can affect battery life. Prioritizing Level 2 charging for routine charging and reserving Level 3 for operationally necessary situations is the most significant way to improve battery lifespan.[1] Limiting exposure to extreme temperatures by parking indoors or in the shade can also help.

REPLACEMENT COSTS: Outside of warranty, battery replacement can be a significant capital expense. Current estimates for passenger vehicles range between $5,000 - $16,000, depending on battery size, manufacturer, labor, and parts availability.[2] While many fleet vehicles may not require battery replacement during their service life, some fleets incorporate replacement scenarios into lifecycle planning and TCO modeling.

END OF LIFE: When EV batteries no longer meet performance standards (commonly around 70% or less of original capacity), they may be discarded, recycled, or repurposed for "second life" uses such as stationary energy storage systems. Recycling and reuse markets are expanding and may play a role in domestic materials supply chains. For most local governments, end-of-life is managed through OEMs or specialized recyclers rather than fleet staff.

RESALE MARKET: The used EV market is still developing and varies by vehicle type, battery condition, and model availability. Battery health reports and transferable warranties can influence resale value. More data will become available as vehicles reach replacement age.

TYPICAL BATTERY EXPECTATIONS

- ☐ Warranty: 8–10 years / ~100k miles
- ☐ Gradual capacity decline
- ☐ Often last longer than expected
- ☐ End of life market still developing
- ☐ Resale affected by battery health

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1 EV Battery Health: Key Findings from 22,700 Vehicle Data Analysis (2026) | Geotab
2 Battery pricing has been trending downward as markets mature and stabilize, but it does remain dynamic and actual costs vary.

CHARGER MAINTENANCE & MONITORING

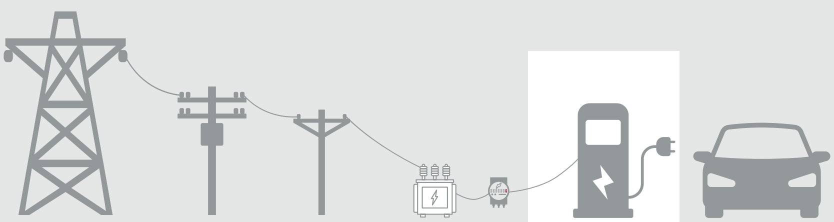
With fleet electrification, local governments may also be responsible for maintaining charging infrastructure and associated software. Charging stations can be owned by the local government, a utility, or a third-party provider, depending on procurement approach and contracts. Ownership influences who performs maintenance, pays for repairs, and manages software updates.

SERVICE PLANS AND NETWORKED CHARGERS:

Many charging station providers offer service agreements and remote monitoring capabilities, which may include hardware maintenance and repair, software updates and remote diagnostics, and alerts. Networked chargers can quickly detect outages or faults, allowing issues to be resolved faster and reducing downtime.

BUDGETING FOR REPAIRS AND REPLACEMENT:

Grants typically support capital costs but rarely cover ongoing operations and maintenance. Fleet budgets must account for electricity costs, software subscriptions, networking fees, and/or hardware repairs or replacement components.



UTILITY PROVIDER
Owns and maintains the infrastructure from the grid to the meter. May assist with infrastructure upgrades and provide funding programs.

CHARGING STATION OWNER
Responsible for site operation and maintenance.

CONSUMER
EV drivers who rely on the station to recharge their vehicle's battery.

HOW CAN A PUBLICLY ACCESSIBLE CHARGING STATION BE OWNED?

PUBLICLY OWNED
Local government owns, operates, and collects revenue from the station on public land.

SHARED OWNERSHIP
Local government and charging company share costs, revenue, and responsibilities.

PRIVATELY OWNED
A private company operates and collects revenue from the station through agreements to use public land.

EV101: A Georgia Guide to Public Charger Success includes a general overview of charging ownership and management options.

Scan the QR Code to download the EV101 guidebook.

EV FIRE SAFETY PROTOCOLS

STATISTICAL CONTEXT: EV fires are statistically less common than fires in gasoline vehicles*.

SUPPRESSION TACTICS: When fires do occur, they require different suppression methods and more time to extinguish.

VEHICLE DISABLING: Methods for disabling EVs vary by manufacturer and differ from gasoline vehicles.

RESPONDER PREPAREDNESS: First responders will benefit from EV and charging infrastructure safety training.

**Source: Electric Vehicles – An Overview of Current Issues – Part 2 – Infrastructure and Road Safety. Guzek, M. et al. 2024.*

RELIABILITY & EMERGENCY PREPAREDNESS

Just as local governments plan for continuity of operations for gasoline and diesel fleets, electric fleets should plan for reliable charging and power access during outages or emergencies.

Power disruptions can affect access to charging in the same way that storms, fuel shortages, or supply chain disruptions can affect access to gasoline. Local governments should identify critical fleet vehicles (e.g., emergency response, public safety, utility crews) and ensure they can be charged during an outage.

BACKUP POWER OPTIONS

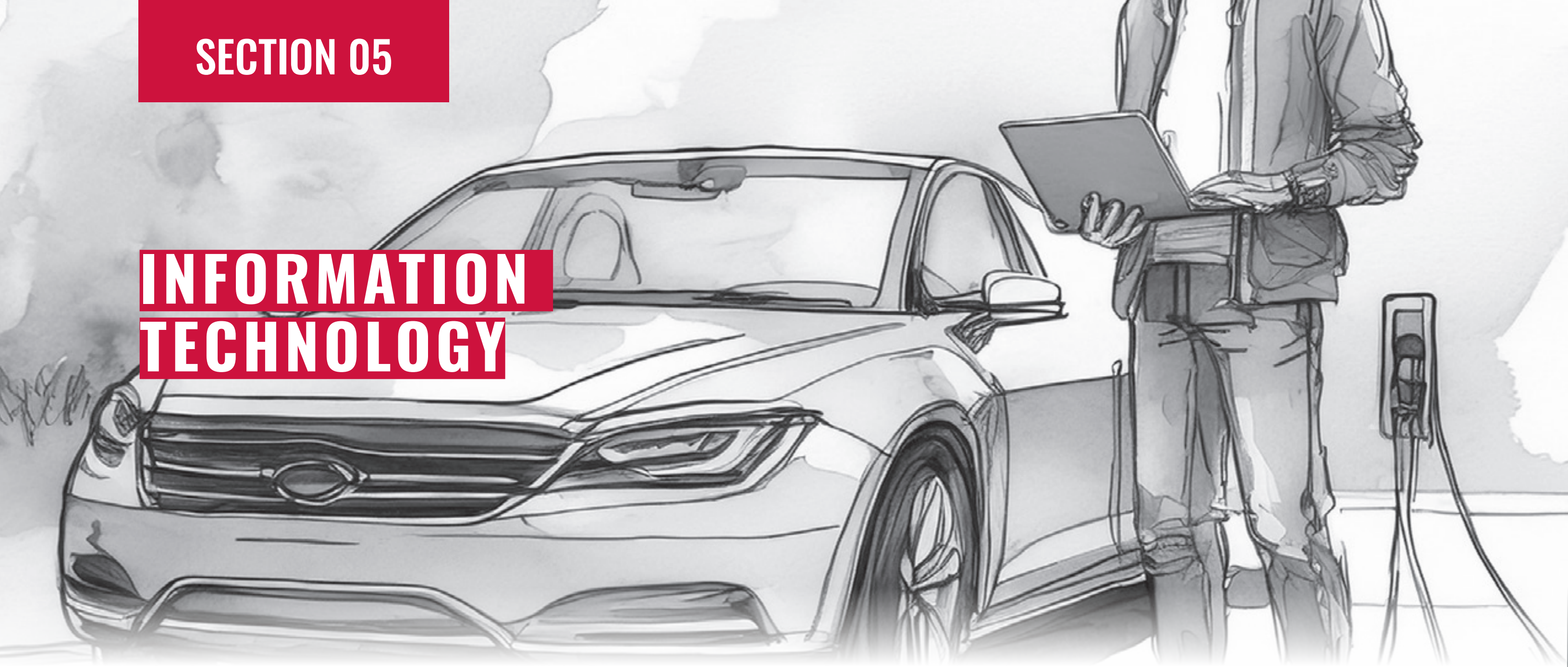
Traditional backup power plans often rely on gas or diesel generators. These remain viable solutions where fuel is available. Some governments are exploring additional options to improve reliability, including mobile chargers, solar with battery storage, or solar-powered generators to offset fuel demand and costs, or establishing redundant charging locations for critical vehicles.

EMERGING TECHNOLOGY

Innovative approaches, such as Vehicle-to-Grid (V2G) or Vehicle-to-Building systems, allow certain EVs to supply energy stored in the battery back to a building or the electric grid. In some pilot projects, large, non-emergency fleets like school buses have been used to provide supplementary power to offset peak loads or serve as backup power. These technologies are still emerging, require significant infrastructure upgrades, and typically require coordinated pilots with utilities and OEMs.

SECTION 05

INFORMATION TECHNOLOGY

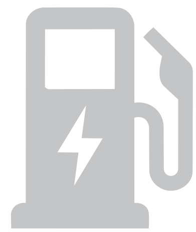


Fleet electrification often introduces networked chargers, software platforms, and new data streams. IT and fleet staff may play a role in system setup, cybersecurity, and ongoing data management.

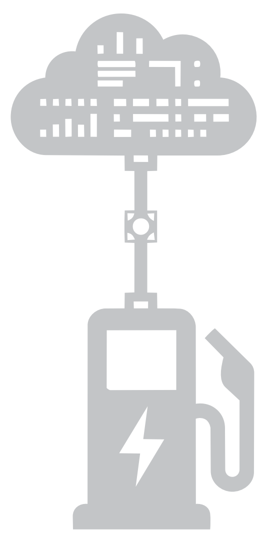
NETWORKED CHARGERS

Charging stations can be installed as standalone hardware or as networked devices, allowing for remote monitoring and data collection.

While a networked charger comes with additional software or subscription costs, they support remote usage tracking and billing, TCO calculations, access control, scheduled charging, and remote diagnostics and alerts. These features can reduce downtime and increase billing accuracy and improve reimbursement processes.



STANDALONE HARDWARE



NETWORKED DEVICE

RISK MANAGEMENT

As with any network-connected device, standard cybersecurity practices should be applied to ensure the reliability of operations and data security. Most EV charging companies are continuously evaluating and implementing a range of cybersecurity measures to protect their infrastructure and users. This should be considered during procurement and policy updates.

VEHICLE DATA

Electrification provides new opportunities for data-based decision-making. Available tools allow managers to monitor performance, efficiency, and battery conditions of vehicles. This can detect battery performance issues early on, inform scheduled charging, and lower costs with accurate battery management. Data collected can inform replacement and infrastructure planning. When selecting software, ensure it fits operational needs and meets risk management and security standards.

POLICIES & PROCEDURES

Fleet electrification introduces new operational and administrative scenarios that may require updated or additional policies and procedures. Consider addressing:

DRIVER ACCESS AND TRAINING

Who is approved to drive the EV? Is additional driver or dispatch training required?

CHARGING PRIORITY RULES

Do certain vehicles receive priority at charging stations? Who determines priority and how?

SCHEDULING FOR VARIABLE RATES

When should vehicles be charged and where? Who sets charging schedules?

POWER MANAGEMENT

How is charging managed during periods of high demand or limited power? What power needs are prioritized?

TAKE-HOME VEHICLE CHARGING AND REIMBURSEMENT

Will employees charge at home? Will at-home charging be reimbursed? Who owns or maintains any home charging equipment or infrastructure? Are vehicles expected to be fully charged when arriving for shifts?

DATA COLLECTION AND REPORTING

What operational or billing data should be tracked? Who is responsible for reporting and analysis?

CYBERSECURITY AND SYSTEM ACCESS

Who has access to charging networks and fleet software? How are devices, accounts, and data secured according to existing IT policies?

MAINTENANCE, WARRANTY, AND SERVICE COORDINATION

Who is responsible for routine charger maintenance and repairs? How are warranty claims handled? What is the process for coordinating service with vendors or OEMs?

INSURANCE AND LIABILITY COVERAGE

How is coverage different for EVs? What coverage is needed for charger hardware?

SECTION 07

PROCUREMENT

BEST PRACTICE #1:

PLAN BEFORE YOU PURCHASE

Mitigate risk by aligning vehicle procurement, charger installation, and utility upgrades to avoid costly delays and stranded or idle assets.

PROCUREMENT & PURCHASING

- ☐ Confirm vehicle lead times and align orders with budget cycles.
- ☐ Review federal, state, and local purchasing requirements (e.g., Buy America).
- ☐ Consider cooperative purchasing contracts.
- ☐ Coordinate purchases with vehicle replacement schedules.
- ☐ Develop a charging and infrastructure plan before purchasing vehicles or chargers.

CHARGING INFRASTRUCTURE & SITE READINESS

- ☐ Engage your utility and an electrical engineer early.
- ☐ Determine whether upgrades are needed on the utility or customer side.
- ☐ Plan for long lead times; major upgrades may take months to years.
- ☐ Review EV101 Guidebook for charger installation best practices.

SITING & OPERATIONAL USE

- ☐ Prioritize locations where vehicles sit for long periods (e.g., overnight depot).
- ☐ Determine whether charging is public, "behind the fence," or mixed-use.
- ☐ Set policies for take-home vehicles (see page 19).
- ☐ Assess whether networked chargers are needed (see page 18).
- ☐ Ask OEMs about maintenance and service plans.

RATES, PRICING & MANAGED CHARGING

- ☐ Understand utility time-of-use rates and demand charges.
- ☐ Explore fleet-specific or priority rate options.
- ☐ Consider managed charging to avoid peak demand and lower costs.

INCENTIVES & FUNDING ALIGNMENT

- ☐ Identify utility make-ready programs and rebates.
- ☐ Confirm eligibility for state or federal tax incentives, grants, or loans.
- ☐ Coordinate funding timelines with vehicle and infrastructure delivery.

BEST PRACTICE #2:

THINK TOTAL COST, NOT JUST STICKER PRICE

Vehicle procurement decisions are most effective when evaluated over the full useful life of the vehicle, not just the purchase price. TCO incorporates both upfront and ongoing costs, as well as long-term operating and maintenance savings that may not be reflected at the time of purchase.

COMMON MYTHS

"ALL EVS NEED FAST CHARGING." → Most fleet charging is Level 2.

"BATTERIES ALWAYS NEED REPLACING AROUND YEAR 8." → Batteries tend to last beyond warranty periods.

"EVS CANNOT TOW OR HAUL." → Some can, depending on model and mission.

"EVS ARE ALWAYS CHEAPER." → Depends on mission, usage, rates, and duty pattern.

COMMON FACTORS INCLUDE:

UPFRONT COSTS

- ☐ Purchase price
- ☐ Charging hardware
- ☐ Installation
- ☐ Utility upgrades

OPERATING COSTS

- ☐ Electricity
- ☐ Network fees
- ☐ Insurance

MAINTENANCE COSTS

- ☐ Tires/Routine Service
- ☐ Battery warranty or replacement
- ☐ Repairs

END OF LIFE

- ☐ Anticipated service life
- ☐ Depreciation/resale value

TCO outcomes vary based on how a vehicle is used, local energy pricing, and maintenance needs. OEMs, utilities, and third-party providers offer tools that allow fleets to evaluate specific vehicles or entire inventories using local data. TCO modeling can also support budgeting and replacement planning when coordinated with capital plans, infrastructure timelines, and across internal departments.

Using TCO analysis, UGA identified meaningful fuel and maintenance savings for certain vehicle types when switched to electric (see pages 6-7).

DRIVING GEORGIA'S ECONOMIC FUTURE

COLLABORATION FOR COMMUNITY GROWTH

Development of this project was guided by faculty and staff from the University of Georgia Carl Vinson Institute of Government with support provided by the Southern Company.

As the parent company of Georgia Power, Southern Company is a leading energy provider committed to supporting the growth and prosperity of communities across Georgia. With deep roots in the Southeast, Southern Company has been a key player in driving economic development by expanding electric mobility infrastructure and ensuring that local communities are equipped to meet the energy needs of the future. Through strategic investments in electric vehicle (EV) charging networks and reliable energy solutions, Southern Company is helping foster economic opportunities through community support and the advancement of energy and transportation systems.

By partnering with local governments, businesses, and community organizations, Southern Company enhances connectivity, supports job creation, and contributes to the region's long-term economic success. Their leadership ensures that communities across Georgia, both urban and rural, benefit from the evolving energy landscape and are positioned for continued growth.

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INSTITUTE OF GOVERNMENT'S MISSION

We inform, innovate, and inspire so that governments, large and small, can be more efficient and responsive to citizens, address current and emerging challenges, and serve the public with excellence.

THE ROLE OF THE INSTITUTE OF GOVERNMENT

At the University of Georgia Carl Vinson Institute of Government, we know government. As a comprehensive public service organization, we are a trusted partner and resource for the highest quality educational programming, data-driven research, and technical assistance designed to inform decision-making and address the state's most pressing needs. Our approach is straightforward: to be a good partner and an objective, nonpartisan problem solver. We are committed to working with Georgia's government leaders to build solutions and opportunities that move the state forward. As a Public Service and Outreach unit, we are proud to be an integral part of the University's land and sea-grant-based mission to make UGA knowledge work for Georgia.

ENERGY TEAM

Government leaders across Georgia are facing critical infrastructure, policy, and funding decisions in the rapidly developing area of energy. Energy planning is deeply interconnected with transportation networks, land use, resource management, emergency preparedness, and community development. This creates opportunities and challenges for local and state governments. At the Institute of Government, the Energy Team partners with governments to support informed, strategic decisions to meet their unique needs and goals.

GEORGIA NETWORK FOR ELECTRIC MOBILITY

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.

PARTNER WITH US

SHANA JONES
Associate Director

Senior Public Service
Associate Faculty

ASHER DOZIER
Public Service
Assistant Faculty

JULIA DIETZ
Public Service
Assistant Faculty

MCKENNA EAVENSON
Program Coordinator

For more information on how your government agency can collaborate with the Energy Team, contact us at

ENERGY@CVIOG.UGA.EDU

SCAN THE QR CODE TO VIEW ADDITIONAL ENERGY AND ELECTRIC MOBILITY RESOURCES ONLINE.

EV 102: A GEORGIA GUIDE TO ELECTRIC FLEET MANAGEMENT

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