

Department of Administrative Services
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Fleet Days Updates

Office of Fleet Management
Thursday, October 26, 2023



Background and Current GPS Deployment



Georgia has approximately 20,000+ Vehicle Assets comprised of: cars, trucks, vans, RV's, motorcycles, aircraft, buses & equipment.



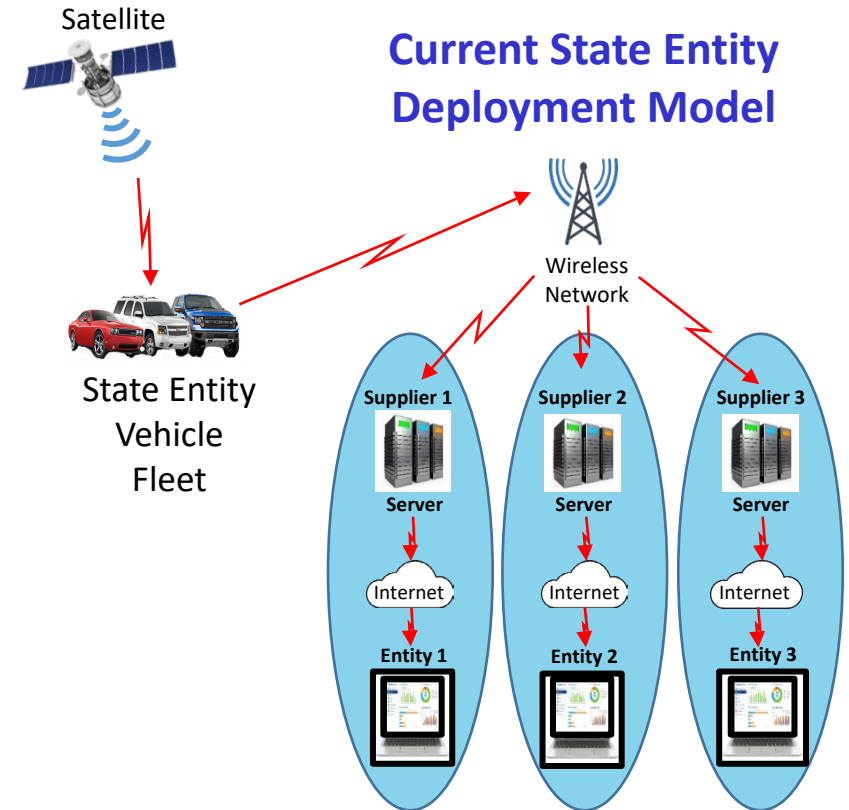
Georgia state Entities have deployed approximately 800+ vehicles with GPS



Georgia has 23 different state entities using GPS technology



State Entity rationale for implementing GPS includes: Route Optimization, Safety, Driver Behavior, and Cost Savings



GPS Telematics ROI - Benefits

Below are some benefits that Georgia could take advantage of if the state leverages this technology to provide a cost-effective solution providing benefits to state entities.

- **Risk and Safety** – State Entities can track their driver’s level of risk and safety with score carding for factors such as speeding, seat belt use, harsh braking, acceleration, and real-time driver location.
- **Driver coaching** - through notifications and reporting, entities can provide tailored training and coaching directly to drivers to help improve overall driver performance. This will also help proactive driver training and cost avoidance.
- **Data Collection** - to help collect maintenance data, vehicle diagnostic faults, current odometer readings, fuel usage, etc.
- **Knowledge Transfer** - GPS information will help when there is turnover through attrition to aid in helping with institutional knowledge has left the state entity.
- **Reactive vs. Proactive** – GPS Telematics will help us with becoming more proactive with driver alerts, notifications and help us develop more driver training to avoid unnecessary costs. Realtime alerting to the driver has the ability to send real-time alerts to your drivers when you detect unsafe driving behaviors. In addition to alerting the driver that they have committed an unsafe action, alerts can also help the Fleet Manager identify potentially unsafe driving patterns that need to be addressed. Fleet Managers can use these alerts and insights to provide better training for individual drivers and to clearly set expectations for fleet-wide driving behavior.



GPS Telematics ROI – Benefits (continued)

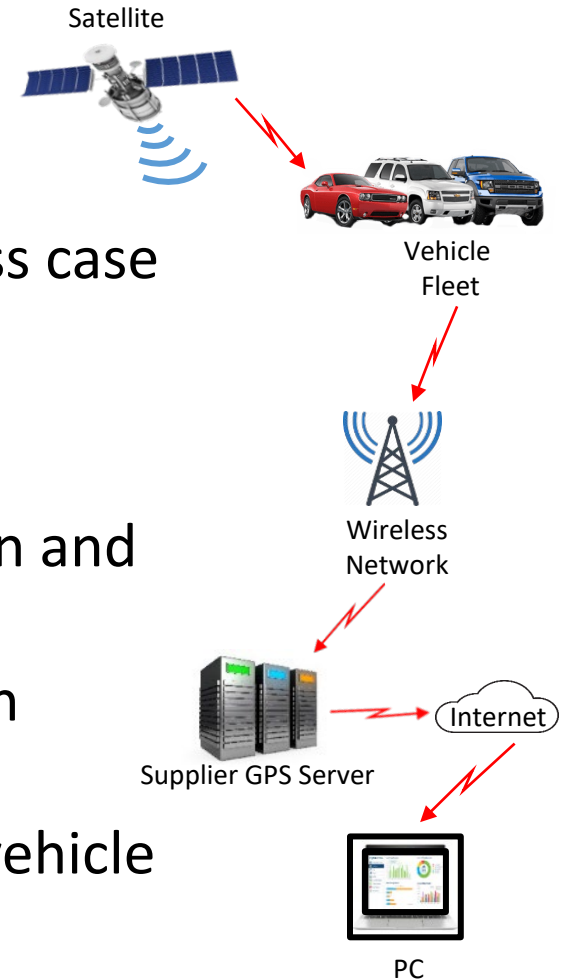
Operational Efficiencies

- **Excessive Idling** – GPS tracking systems works with the cars sensor and calibration table to monitor fuel consumption. By reducing excessive idling, the state could save on fuel costs. According to research by Argonne National Laboratory (Argonne), a compact sedan uses 0.16 gallons of non-diesel fuel per hour of idling.
- **Route Optimization** – provide entities with route optimization and geofencing to better manage their drivers and the routes that they use for efficiencies and potential cost savings.
- **Real-time mileage and utilization**
- **Vehicle in-reverse activities** – GPS Telematics technology can detect when the vehicle is reversing and notifies the driver to be extra cautious.
- **Scheduled Maintenance Efficiencies** – Helps planning for scheduled maintenance through alerts. These types of alerts can notify the fleet manager of certain preventative maintenance items like engine logs, diagnostic data, and more.
- **GPS Tracking Alerts** – In some GPS Telematics systems, fleet managers can create and manage alerts to increase real-time visibility into their operations. Fleet Managers can choose to be alerted via email or SMS text messages and can choose who in the organization should be notified. Depending on year, make, and model, alerts can be setup to notify fleet personnel if the vehicle is experiencing mechanical failure.
- **Vehicle Electrification** - Being able to monitor charging status along with the state of charge percentage assures vehicles will be charged and ready when needed. Range anxiety is the fear that a lot of drivers have by not having enough range to complete their routes on a single charge. Using the alerts and reports from an EV friendly telematics system to manage both use and charging not only solves range anxiety but gives you the data needed to identify where EV adoption is most beneficial.



Where are we now?

- **What has been accomplished in the last year**
 - Completed development of business case for telematics
 - Finalized research and recommendations to prepare final business case presentation to OPB.
- **What's to come in this FY and possibly the next**
 - Develop procedural guide for GPS telematics in vehicle acquisition and update existing policy documents
 - Develop and conduct solicitation for Telematics provider selection
 - Develop implementation plan and training materials
 - Amend Policy 10 and Fleet Manual regarding mandatory policy (vehicle acquisition and rollout)
 - Measure and ensure 100% compliance on vehicle telematics when required



2023 Fleet Days Electric Vehicles (EVs)

EV
Telematics

HEV

Hybrid Electric Vehicles

PHEV

Plug In Hybrid Electric Vehicles

BEV

Battery Electric Vehicles



Electric Vehicles (EVs) for Georgia

Overview

- Georgia is currently in the planning and execution stage of building out its electric mobility infrastructure with the goal of establishing an interconnected EV charging network that meets customer demands, reduces range anxiety, facilitates data collection, and ensures secure, convenient, equitable access to publicly available charging infrastructure.
- This Electric Vehicle Infrastructure Deployment Plan sets forth the State of Georgia's approach to utilizing its apportionment of \$135 million in formula funding (subject to appropriation) from the National Electric Vehicle Infrastructure (**NEVI**) Program in conformance with the guidance published by the Joint Office of Energy and Transportation.
- The Georgia Department of Transportation (GDOT) developed this plan with input from the Georgia Department of Economic Development (GDEcD), the Georgia Emergency Management Agency (GEMA), the Georgia Environmental Finance Authority (GEFA), the Governor's Office of Highway Safety (GOHS), the Department of Administrative Services (DOAS), the Department of Natural Resources (DNR), the Georgia Division of the Federal Highway Administration (FHWA), several regional planning councils and MPOs, electric utilities, community-based advocacy groups, electric vehicle charging station providers, potential site hosts, and others.



GPS Telematics and Electric Vehicles (EVs)

While GPS Telematics technology aids efficient operations in any fleet, telematics data becomes the lifeblood 🩸 for fleets operating electric vehicles.

- Electric vehicle fleets have a fundamentally different operational and maintenance model than conventional vehicle fleets. Sensors and equipment that measure and analyze vehicle fuel consumption need to be replaced with technologies that measure battery energy use and track long-term battery degradation.
- Modern telematics technologies have been well prepared to help fleet managers track all the electric fleet metrics so that they can make informed data-driven decisions based on the data collected.
- As Georgia looks toward this future, transitioning some of its fleet to electric vehicles will become a part of the fabric of fleet management for the state of Georgia. As such, Georgia will need to be positioned to better understand how often electric vehicles are on the road, when they are or are not moving, how often they are shut off and turned on, and how much energy is being used with driving functions. GPS Telematics will be a critical tool to help Fleet Managers address these questions.
- The Department of Administrative Services (DOAS) is well positioned as a strategic partner to all state entities and will be an integral part of this transition. DOAS State Purchasing Division (SPD) along with the Office of Fleet Management (OFM) can provide the necessary support to help state entities navigate this transitional process through purchasing decisions, state-wide contracts, educational opportunities, policies and guidelines.



State of Georgia Electric Vehicle Roadmap

DOAS OFM developed an EV Roadmap for state entities to plan for the consideration of purchasing electric vehicles. This will provide entities with background information and guidance on selecting electric vehicles that best fits their needs and to provide an update on the charging stations being developed across the state of Georgia.



The National Electric Vehicle Infrastructure Formula Program (NEVI) was derived from the 2021 enactment of the Infrastructure Investment and Jobs Act (IIJA). The goal of the NEVI Program is to deploy a national network of electric vehicle (EV) charging stations that provide a convenient, reliable, affordable, and equitable experience for all users.

The program requires that funding first be used to build out EV charging stations designated Alternative Fuel Corridors (AFC) to help create a national network that enables drivers to travel coast to coast comfortably. Alternative fuel corridors are federally designated routes on major highways that allow for inter-city, regional, and national travel using lower-emission vehicles.

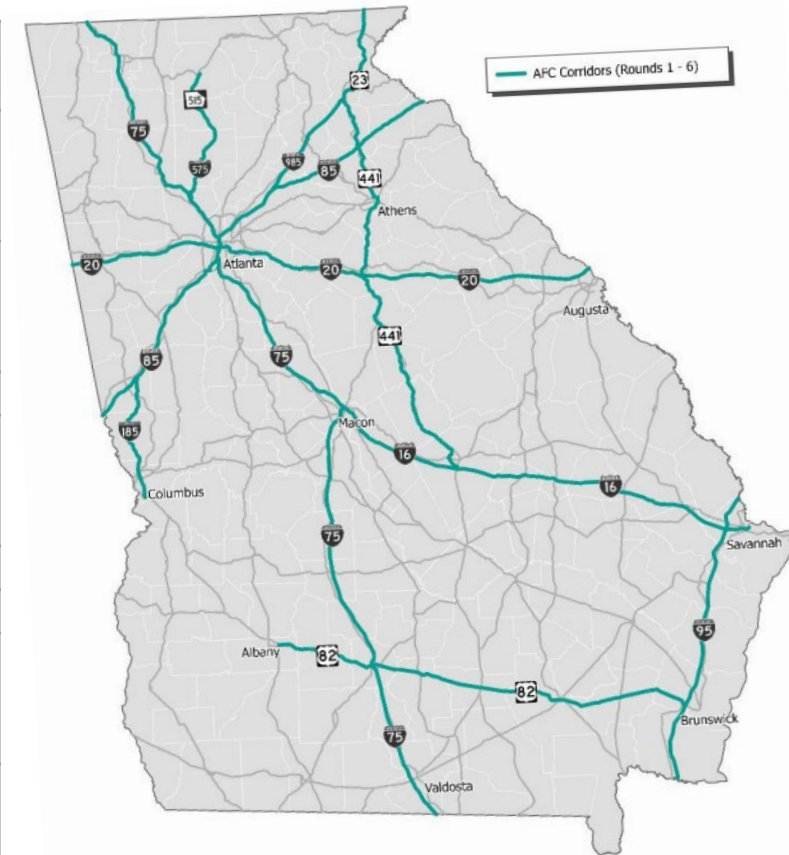
The State of Georgia has identified 10 AFCs for EVs. See following list that were identified and the corresponding map.



Georgia's EV Roadmap

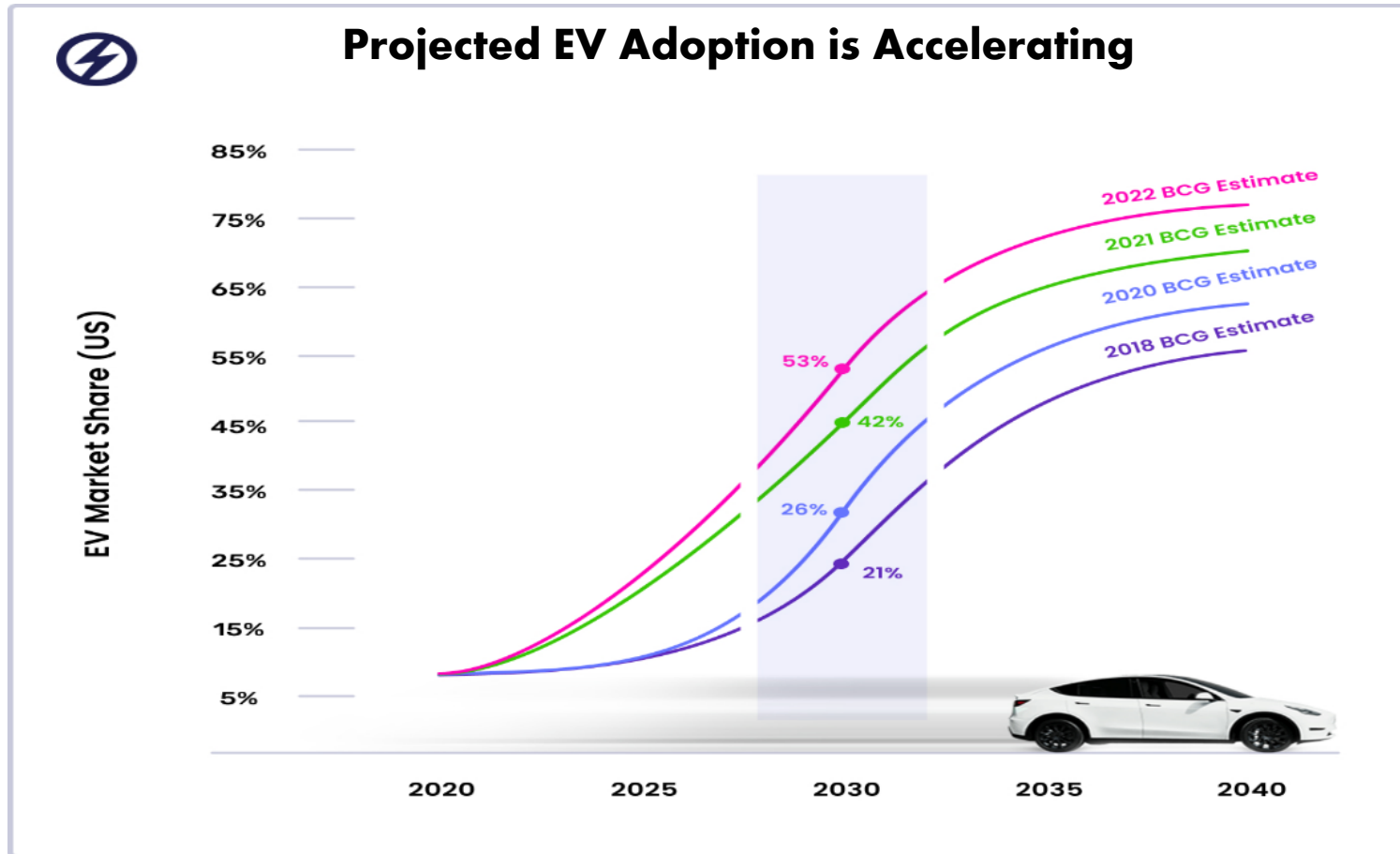
Below are the listing of the 10 Alternative Fuel Corridors listed in Georgia's plan for the EV infrastructure and the corresponding map locations.

Corridor	From	To	Length (Miles)	AFC Round	Status per FHWA (as of June 2022)
I-75	Florida	Tennessee	355	1-5	Ready from Valdosta to TN border Pending from FL border to Valdosta
I-20	Alabama	South Carolina	201	1-5	Ready from AL border to Madison Pending from Madison to Thomson
I-85	Alabama	South Carolina	180	1-5	Ready
I-16	Macon	Savannah	167	1-5	Ready from Macon to I-95 Pending from I-95 to Savannah
US-82	Albany	Brunswick	166	6	Pending
US-441	Dublin	Cornelia	165	6	Pending
I-95	Florida	South Carolina	112	1-5	Ready from FL border to Brunswick Pending from Brunswick to SC border
I-985/US-23	Buford	North Carolina	84	1-5	Ready from I85 to Gainesville Pending from Gainesville to NC border
I-575/GA515	Town Center	Ellijay	55	1-5	Ready
I-185	Columbus	LaGrange	49	1-5	Ready



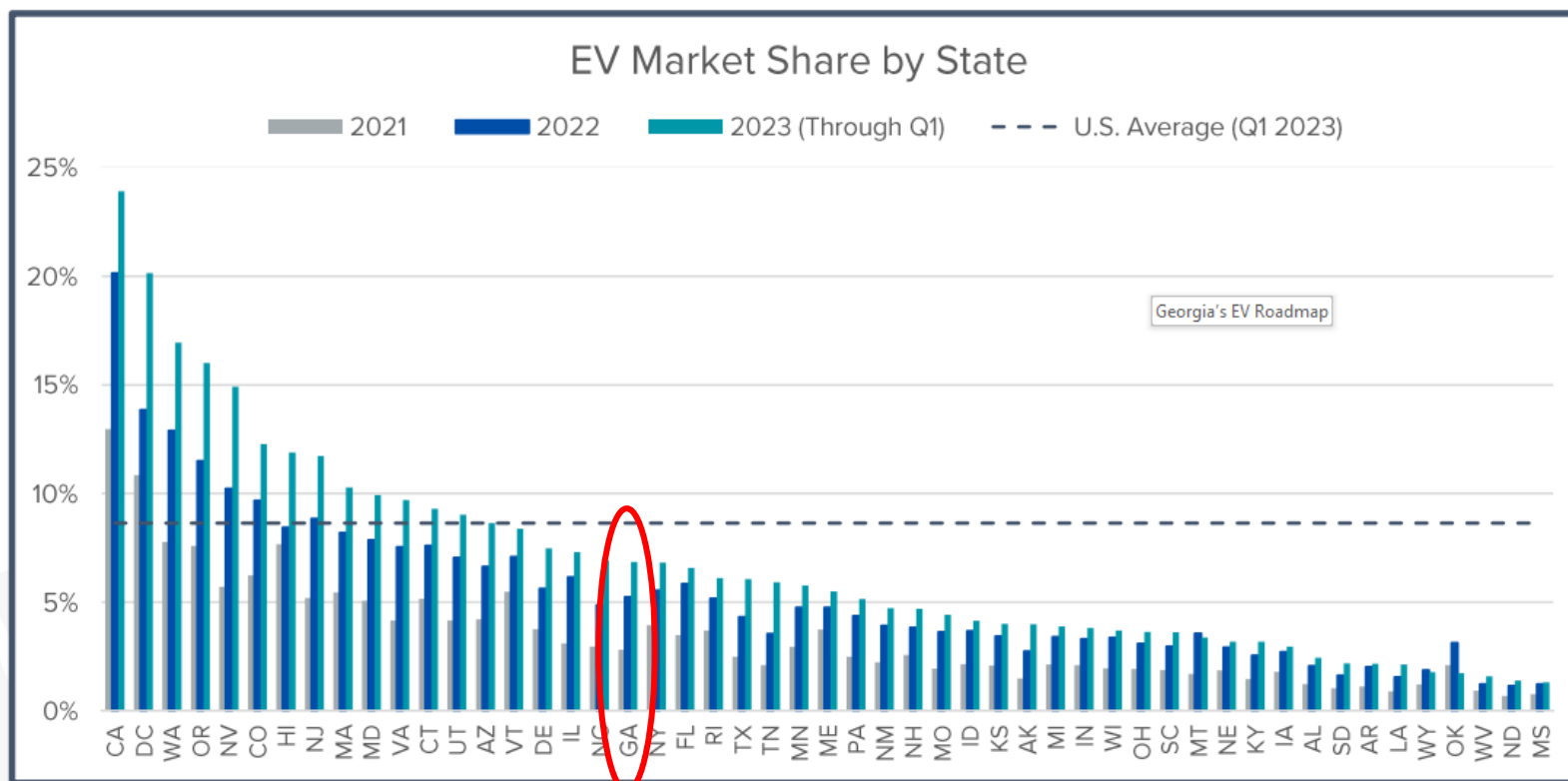
EV Adoption

Almost every year since 2018, the Boston Consulting Group (BCG) has released a market projection for EV adoption. Courtesy of Recurrent, they combined the last 4 projections to demonstrate how the projections have changed over the years. Since Recurrent spend most of their time focused on the American EV market, they broke out US sales projections from each of these BCG reports.^[1]



^[1] <https://www.recurrentauto.com/research/ev-adoption-us>

EV Adoption – Georgia¹



2023 EV MARKET SHARE BY STATE (THROUGH Q1)														
1	CA*	23.92%	11	VA*	9.7%	21	FL	6.6%	31	ID	4.13%	41	KY	3.18%
2	DC	20.14%	12	CT*	9.3%	22	RI*	6.1%	32	KS	3.99%	42	IA	2.95%
3	WA*	16.93%	13	UT	9.0%	23	TX	6.1%	33	AK	3.97%	43	AL	2.42%
4	OR*	16.00%	14	AZ	8.6%	24	TN	5.9%	34	MI	3.88%	44	SD	2.18%
5	NV*	14.92%	15	VT*	8.4%	25	MN*	5.8%	35	IN	3.81%	45	AR	2.15%
6	CO*	12.28%	16	DE	7.5%	26	ME*	5.5%	36	WI	3.69%	46	LA	2.12%
7	HI	11.89%	17	IL	7.3%	27	PA	5.1%	37	OH	3.62%	47	WY	1.78%
8	NJ*	11.73%	18	NC	6.9%	28	NM	4.7%	38	SC	3.62%	48	OK	1.72%
9	MA*	10.27%	19	GA	6.8%	29	NH	4.7%	39	MT	3.37%	49	WV	1.58%
10	MD*	9.91%	20	NY*	6.8%	30	MO	4.4%	40	NE	3.18%	50	ND	1.39%
												51	MS	1.31%

Electric Vehicle Transition Guide/Checklist

Overview

DOAS OFM developed an EV transition checklist as a guide to help state entities plan and implement steps to add electric vehicles (EVs) to their fleets. While not all inclusive, it's intended to provide guidance as state entities begin to consider adding EVs to their fleets and is flexible to accommodate how individual entities operate. The first six steps involve planning; the last four steps involve procurement, construction, and implementation.

Fleet Managers Play a Key Role

Fleet Managers are a key stakeholder in this transition as Georgia considers transitioning a portion of its fleet from internal combustion engine (ICE) vehicles to Electric Vehicles (EV). This transition provides key benefits to Georgia and allows Georgia to continue to reduce its carbon footprint while reducing our greenhouse gasses and becoming more efficient in our fleet operations. Technological advances in EVs and EV Supply Equipment (EVSE) requires planning and coordination among many different resources in the state. This checklist guide presents the process as a series of steps to:

- Identify key team members and set goals for various planning stages.
- Include recommended activities and technical information needed to navigate this process and coordinate with local electrical utilities and equipment vendors.
- Direct state entities to complete vehicle and electrical assessments to streamline charging station installations.
- Provide scenarios to consider while deploying EV charging infrastructure so savings and other benefits of fleet electrification are quickly realized, and common roadblocks are avoided.
- Identify key topics, design specifications, and best practices to help fleet managers develop a site assessment, from initial inquiry through layout and design, to the RFP or procurement process.

Electric Vehicle Transition Guide/Checklist – Table of Contents

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Summary

As the Georgia Department of Transportation (GDOT) continues to build out the electrification infrastructure throughout the state of Georgia via the Alternative Fuel Corridors, and car manufacturers begin to offer more electric vehicle models, state entities can begin determining the appropriate strategy to begin introducing electric vehicles within their fleet.

GDOT's timeline for building out these corridors is over a 5-year period beginning in the fall of 2022. State entities will need to monitor this timeline to determine the latest status of the build-out.

OFM will continue to communicate options for electric vehicles as car manufacturers introduce new models and their availability. OFM will continue to work with the DOAS Purchasing group to solidify contracts for electric vehicles.

