



Joint Study Committee on Electrification of Transportation

The National Electric Vehicle Infrastructure (NEVI) Program

Jannine Miller, MPA, MBA
Director of Planning
Georgia Department of Transportation



Governor Kemp's Electric Mobility & Innovation Alliance

<https://www.georgia.org/mobility>



Launched in August 2021

Led by the Georgia Department of Economic Development

Collaboration of government, industry, electric utilities, nonprofits



#1 IN EV

Auto registrations in the Southeast US

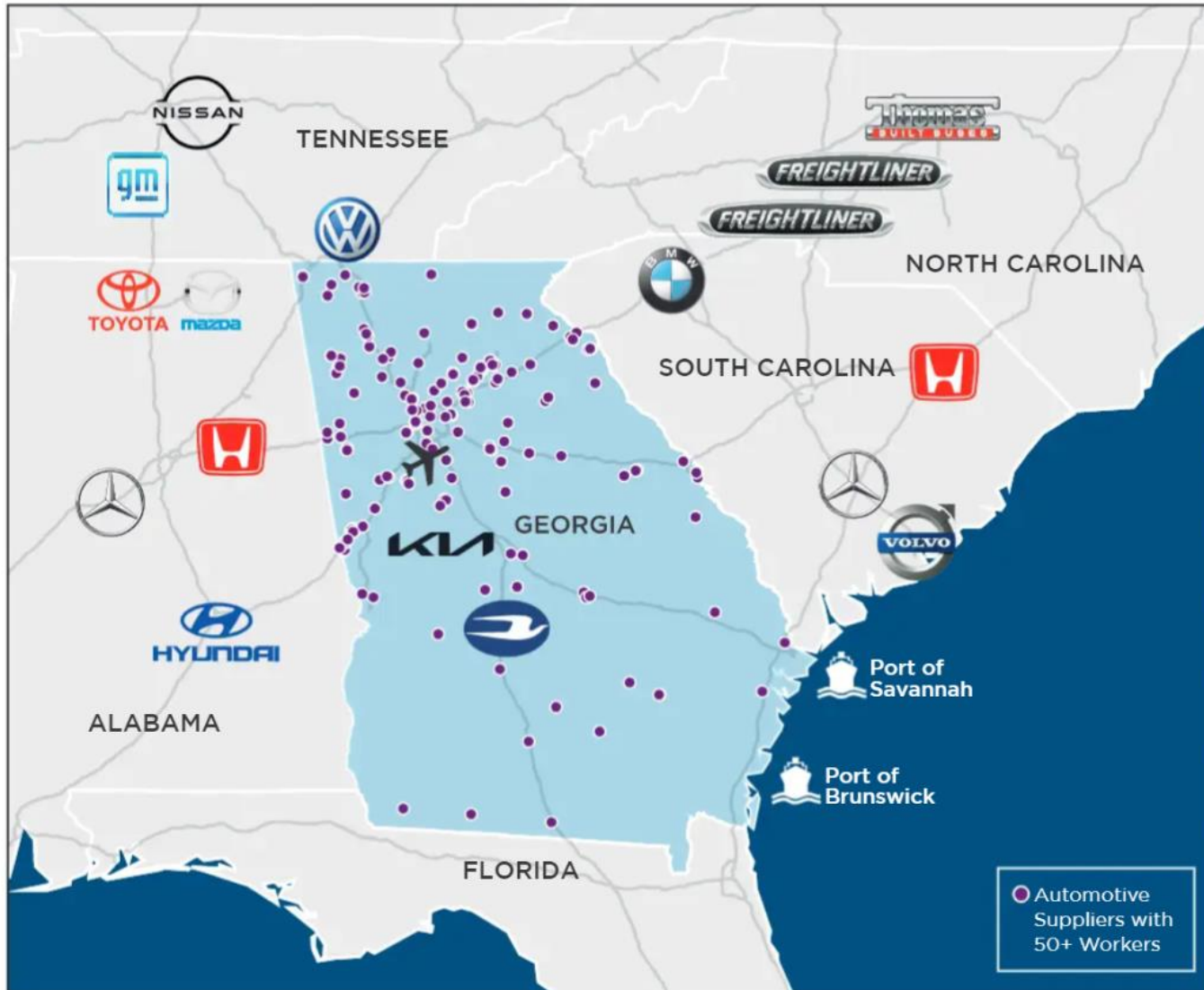
5 Committees, including Infrastructure:

- ✓ **Fleet:** OEMs, vehicle owners (personal and commercial), auto dealers, etc.
- ✓ **Charging:** equipment manufacturers, service providers, site owners
- ✓ **Electric Utilities:** GA Power, EMCs, ECG/MEAG, GA Transmission Corp.

Georgia's Automotive Industry: Epicenter of Commerce in the Southeast

Recent EV Developments in Georgia (2018-2021)

- ✓ SK Innovation invests in Lithium-ion battery facility
- ✓ Blue Bird debuts all-electric school buses
- ✓ TEKLAS creates first North American Headquarters
- ✓ EnChem Co. invests in battery electrolyte facility
- ✓ PowerPlug – green hydrogen fuel cell systems for e-mobility
- ✓ Duckyang – supplier of automotive battery modules and energy storage systems



Federal Highway Administration's EV Alternative Fuel Corridor (AFC) Designations

"Pending" Corridor

Intent to satisfy currently insufficient distance and station level/connector requirements

"Ready" Corridor

Round 1-5:

50 miles or less between charging sites and 5 miles or less off the highway

Round 6:

- Interstates preferred
- 50 miles or less between sites and 1 mile or less off the highway*

"Fully Built Out" *

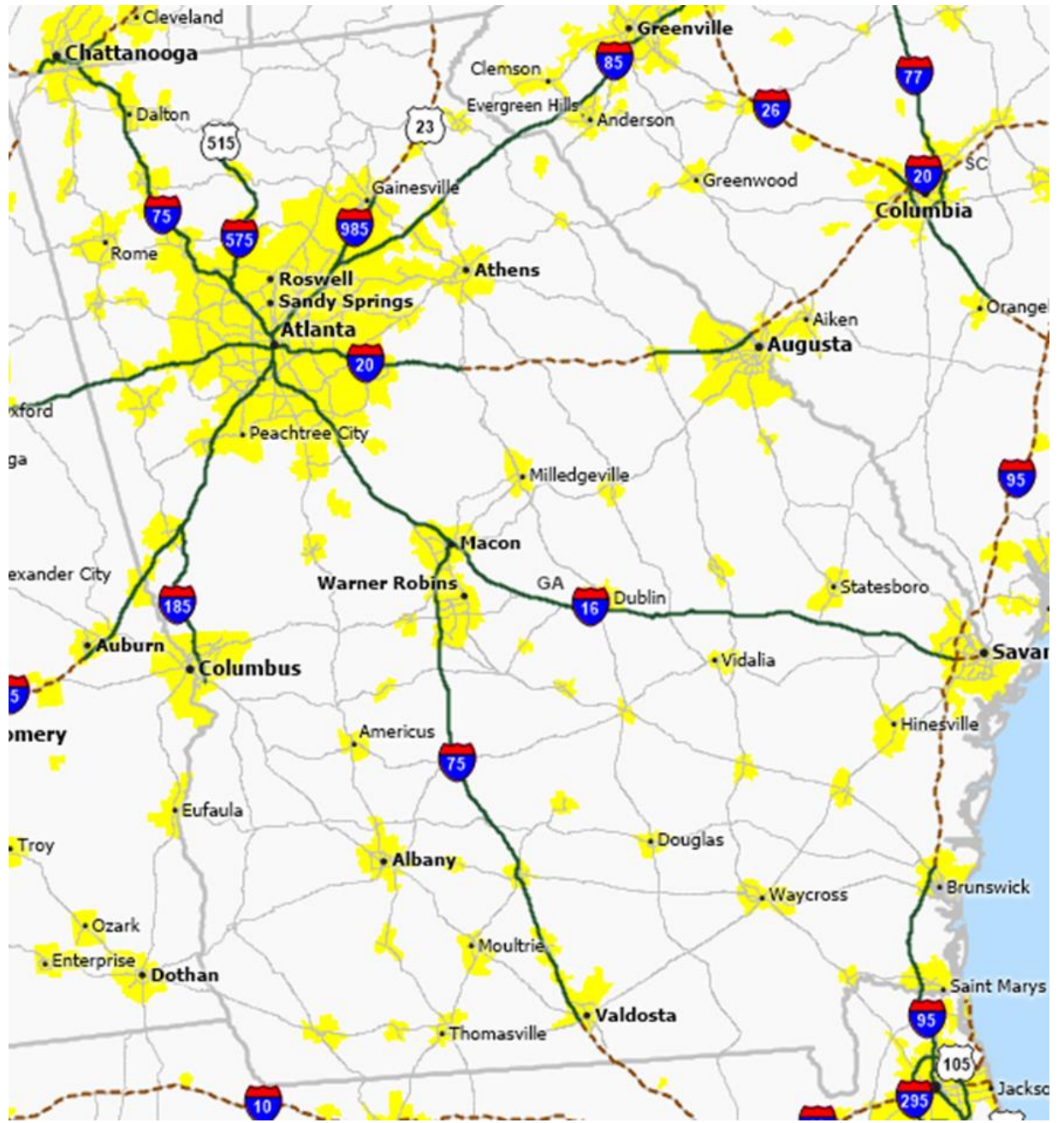
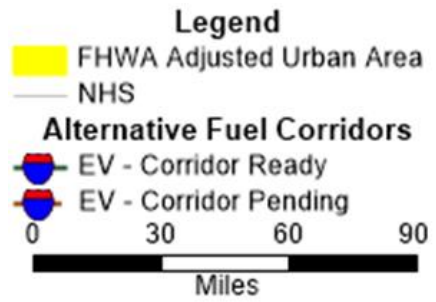
50 miles or less between charging sites and 1 mile or less off the highway

Minimum of 4CCS ports that can simultaneously charge 4 electric vehicles

At least 150 kW per port

**Per the Bipartisan Infrastructure Law*

Georgia's EV Alternative Fuel Corridors: Pending and Ready *(through 2021)*



Expanding Georgia's EV AFCs: GDOT's Assessment

Determining nominations for AFC Rounds 6 based on customer-driven corridor evaluation criteria

AADT/Mile

Link length x AADT from GDOT 2019 traffic count ÷ total length

Real Estate Feasibility

Clusters of hotels, gas stations, retail/shopping centers along corridors

Evacuation Route Impact

Overlaying AFCs with GEMA's evacuation route map



Geographic Balance

Impact on balance of coverage across regions

Tourism

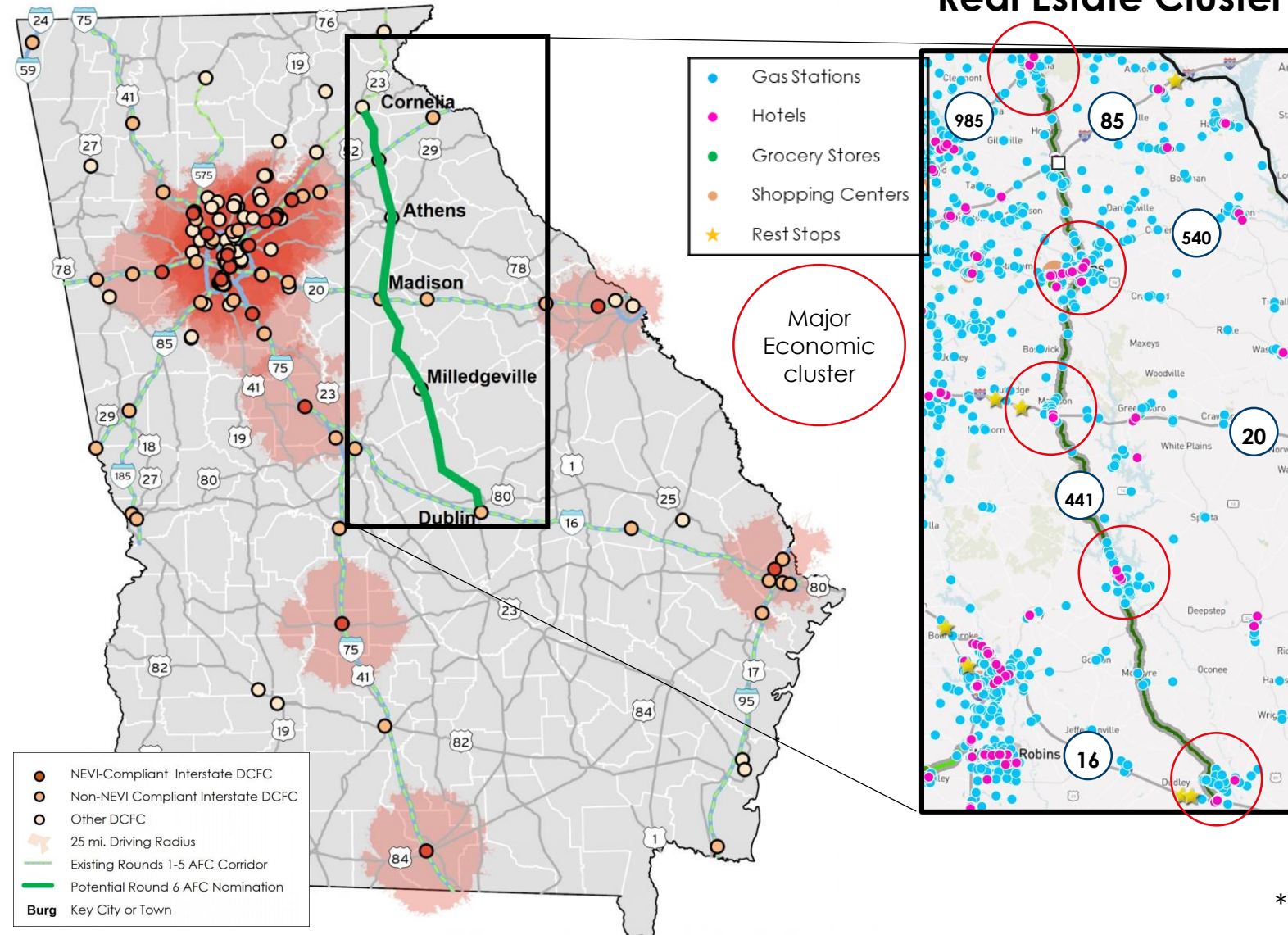
Based on proximity and density of tourist destinations

EV Adoption

% of areas with EV market share

Newly Designated AFC*: US-441 (Dublin to Cornelia)

Real Estate Cluster Analysis



Corridor Benefits

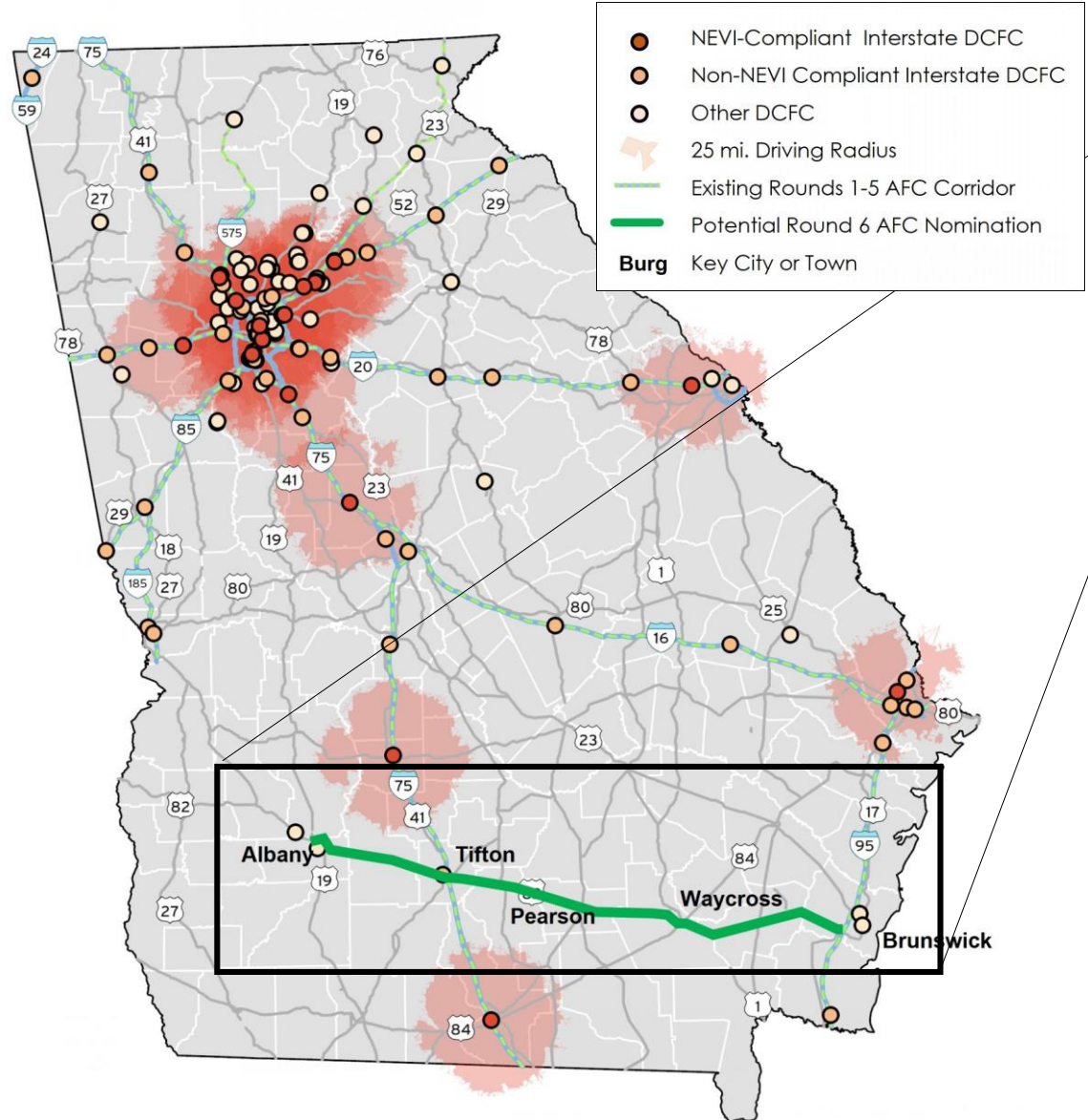
- Strong site host potential with 5 major economic clusters
- Popular tourist sites
- Relatively high EV share of new vehicle sales in majority of counties

Corridor Characteristics

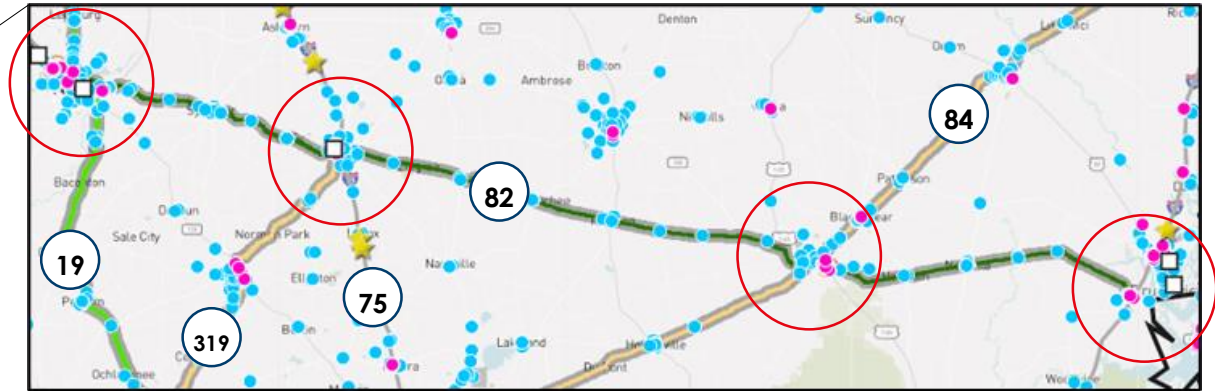
- Length = 165 miles
- Estimate 5 stations, 3 could overlap other AFCs (US-23, I-20, I-16)

*Designated by FHWA

Newly Designated AFC*: US-82 (Albany to Brunswick)



Real Estate Cluster Analysis

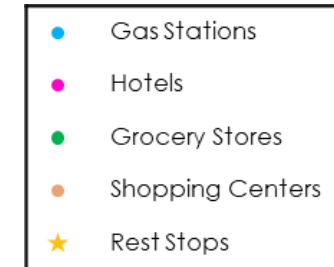


Corridor Benefits

- GEMA Evacuation Route
- Serves SE Georgia

Corridor Characteristics

- Length = 163 miles
- Estimate 5 stations, 3 could overlap other AFCs (US-19, I-75, I-95)

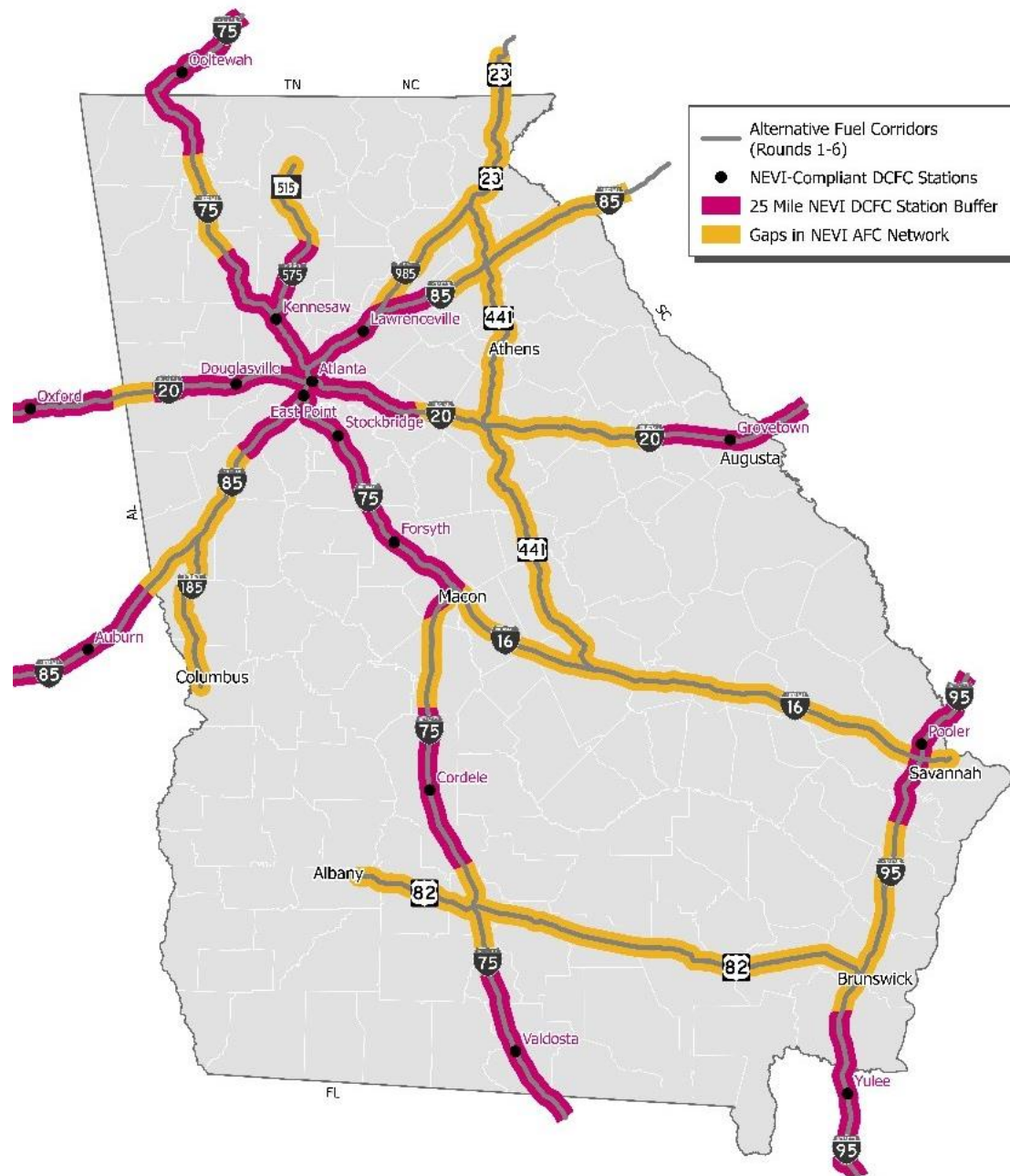


Major Economic cluster

*Designated by FHWA

Georgia's Current EV Alternative Fuel Corridors for Build-Out

Investing across the state



Georgia's EV AFCs

- 12 corridors
- 1,556 miles

FHWA's National Electric Vehicle Infrastructure Program: Nationwide Allocation of \$7.5 billion through FY2026

\$4.2 billion Federal Formula Funds to State DOTs

- Strategic deployment of EV charging infrastructure for an interconnected network to facilitate data collection, access, and reliability.
- Build out the national network of EV “Alternative Fuel Corridors”, particularly on Interstate Highway System
- Public-private partnerships encouraged

\$500 million of Federal Grants to fill gaps in AFCs

\$300 million for the new “Joint Program Office” of U.S. Departments of Transportation and Energy

\$2.5 billion of Federal Discretionary Grants

- Corridors
 - Communities
- for EV charging plus infrastructure for hydrogen, propane, and natural gas fueling*



USDOT & USDOE National Electric Vehicle Infrastructure (NEVI) Program

Purpose

- Create a nationwide network of 500,000 EV chargers by 2030
- Ensure a convenient, reliable, affordable, and equitable charging experience for all users

USDOT / USDOE Goals

- Accelerate equitable adoption of EVs, including for those who cannot reliably charge at home
- Position U.S. industries to lead global transportation electrification efforts

NEVI Program Overview



Federal Funding

- Total NEVI funding is \$5B over federal FY 2022 – 2026
- \$135M* apportioned to Georgia with maximum 80% federal share



NEVI Plan

- NEVI required GDOT to prepare a plan compliant with federal requirements from FHWA/Joint Office of Energy and Transportation (JPO) guidance, FAQs, notice of proposed rulemaking (NPRM) and webinars
- Key elements of the plan include considerations for:
 - ✓ Station “uptime”
 - ✓ 24/7 accessibility by the general public
 - ✓ Cybersecurity
 - ✓ Stakeholder engagement
 - ✓ Equity benefits / Justice40
 - ✓ Workforce development

NEVI Plan: GDOT's Stakeholder Engagement To-Date



Different stakeholder types provide insight on unique interests and considerations



Private Businesses

- Inform private sector of GDOT's customer-driven approach
- Laws and structure unique to GA
- Best procurement practices, vendor/site host business models and recommendations for O&M models



Equity Communities

- Conformance with Justice40
- Opportunities that may arise in relation to delivery of services in disadvantaged communities



Utilities

- Assess grid power availability/site upgrade costs needed for EVSE
- Strategies for approaches to ownership and make-ready
- Rates/tariffs and grid/load management for EVSE*

*Electric vehicle supply equipment

GDOT's NEVI Goals

GDOT will seek to invest in a way that catalyzes further investment in EV charging stations across the state where utilization is anticipated but the private sector may not otherwise be economically motivated to install and operate EV charging stations.



Compliance with federal requirements:

Sites will be developed in accordance with federal rules and requirements and result in 100% of Georgia's Interstates and AFCs being fully built out to NEVI Formula program standards.



Customer-driven deployment:

Convenient and sufficient charging investment where EV drivers prefer to charge, regardless of whether private sector investment can fully fund.



Economic development:

Sites should be placed so that they optimize the economic development opportunity from electric vehicles.



Private sector ownership and operation (including non-profits):

Sites will be delivered and operated by non-state entities.



Sustainability and reliability of operations:

Sites will be developed to ensure that charging achieves high operational performance.

Federal Rules and Regulations for NEVI Fund Deployment



Requirements



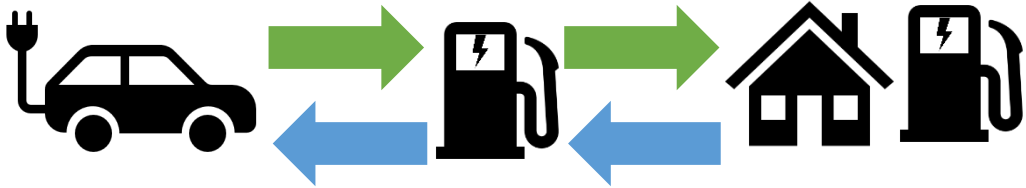
- Fully build out Alternative Fuel Corridors first
 - Minimum of four 150kW (total 600kW) Direct Current (DC) fast chargers with Combined Charging System (CCS) ports at each station
 - Minimum 50 miles apart and 1 mile from the corridor
 - 11 NEVI-compliant stations currently fully built out along AFCs
 - 30-35 gaps to fill with new/upgraded sites
- Satisfy Justice40 requirements
- Buy America compliance
- Other



Evolving Guidance

- Original guidance provided in February
- Notice of Proposed Rule Making / Q&A released in June
- Additional ADA guidance provided in August
- Final rulemaking (e.g., cybersecurity, data) TBD

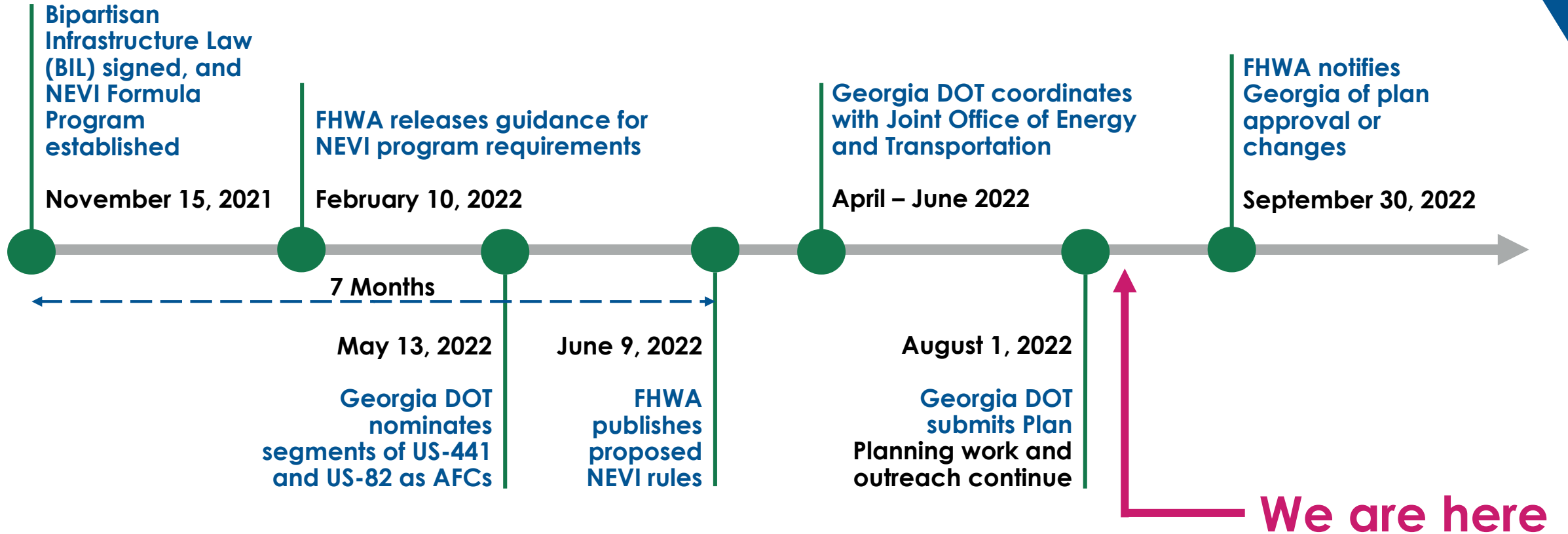
Customer Driven Deployment: EV Trip Types

Trip	Description	Typical charger type	Federal Eligibility for New EV Program
Short, local trips <ul style="list-style-type: none"> • Charge at/near home • E.g., Atlanta - Marietta 	Charges at home and can complete entire trip in one-charge 	Level 2 Chargers	✗
Long trips (100 – 250 miles) <ul style="list-style-type: none"> • Charge overnight at location • E.g., Atlanta – Augusta 	Charges at home and utilizes level 2 or DCFC charging at destination 	Level 2 Chargers	✗
Very long-trips (250+ miles) <ul style="list-style-type: none"> • Requires charging mid-route • E.g., Atlanta – Jacksonville 	Charges at home, utilizes DCFC charging mid-trip and level 2 or DCFC at destination 	DC Fast Chargers (DCFC)	✓

GDOT's Initial Evaluation of Potential Private-Sector Ownership and Operation for a Sustainable and Reliable Network

Considerations	Land Use Type							Others	
	Big Box	Hotel	Gas	Restaurant	Grocery	Other Retail	Rest Areas	Utility	EV Charging Provider
Availability of power infrastructure									
Real Estate factors, including site locations									
Preference for EVSE ownership									
Ability and willingness to manage O&M									
Preference for DC Fast Charging									
Ability to satisfy other Federal requirements									

NEVI timeline



GDOT's Next Steps

- Approval of GDOT's NEVI Plan by Federal government (pending)
- Monitor outcomes of the work of this Joint Study Committee
- Further engagement with stakeholders and general public
- Continued analysis of location options based on customer-driven factors, Federal requirements, and State law
- Review and comply with federal guidance & rules, and engage with U.S. Departments of Transportation & Energy Joint Program Office

THANK
YOU!



@GeorgiaDOT



@GADeptofTrans



@gadeptoftrans

GDOT's NEVI Plan → <https://nevi-gdot.hub.arcgis.com/>
(pending Federal approval)