

ENERGY ISSUES IN RURAL AREAS

TRENDS IN ELECTRIC VEHICLES, FUTURE MOBILITY AND
IMPLICATIONS FOR RURAL AND LONG RANGE PLANNING

INTRODUCTION

ABOUT ME

DIRECTOR, STRATEGY AND PARTNERSHIPS

EDITOR-IN-CHIEF



PART I

WHY EV HEADLINES CAN FEEL CONFUSING

If you only watched the headlines, you'd think EV adoption is collapsing...

GM to take \$6 billion writedown on EV pullback

By Kalea Hall and Nora Eckert

January 9, 2026 2:13 PM EST · Updated January 9, 2026



US EV sales are down, but not out. Here's why automakers won't pull the plug

JUL 19, 2026 ▾

By  Chris Isidore



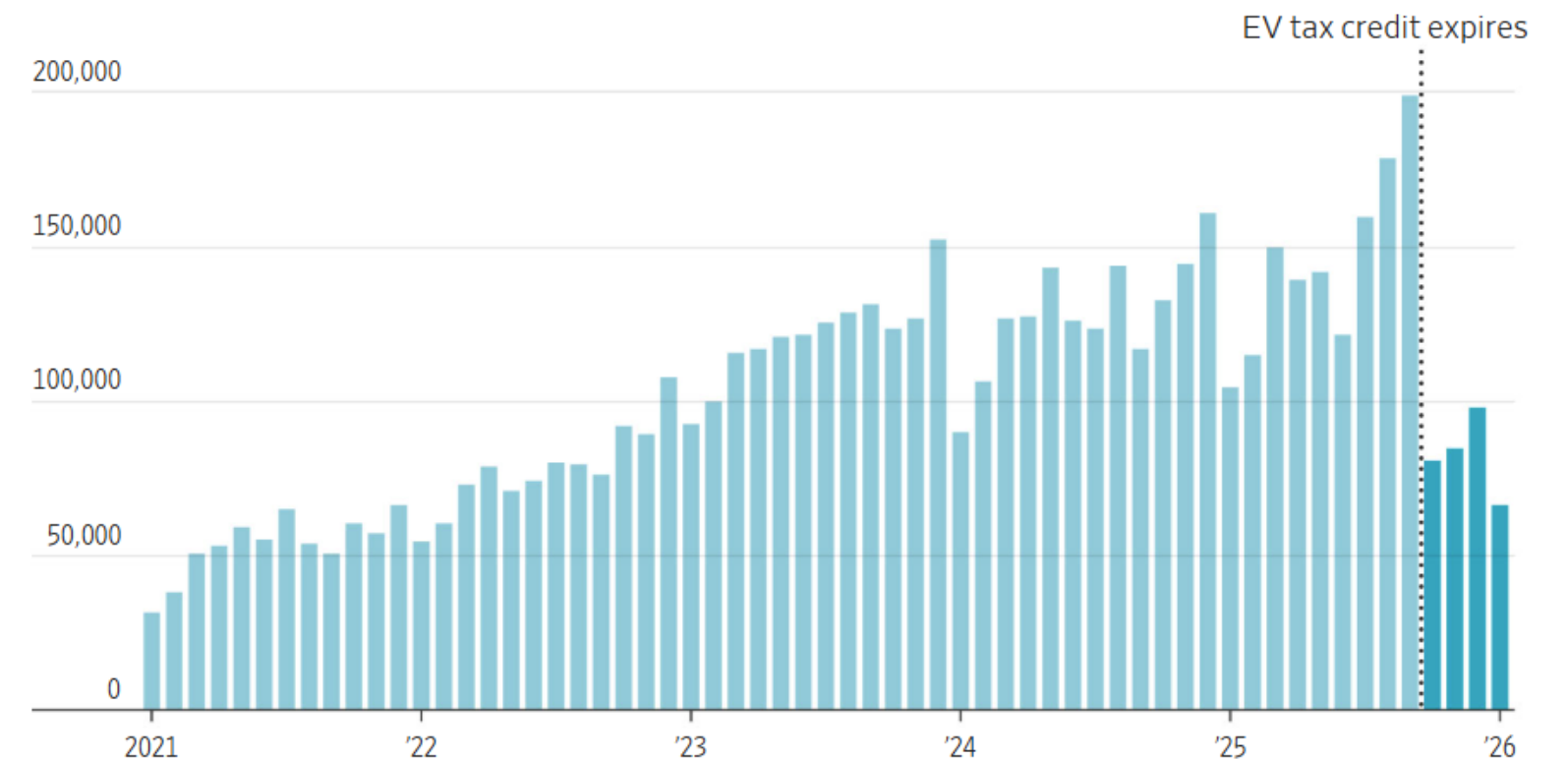
BUSINESS | AUTOS

Detroit Automakers Take \$50 Billion Hit as EV Bubble Bursts

Companies are taking big losses and making moves to reduce electric-vehicle capacity amid regulatory changes and cooling demand

Share Resize 1289 Listen (2 min)

U.S. electric-vehicle sales, monthly



Note: For passenger cars and light-duty vehicles. Includes plug-in hybrid electric vehicles.
Source: Benchmark Mineral Intelligence

**If you only watched the headlines,
you'd think EV adoption is
accelerating, collapsing, or being
replaced by hybrids.**

But what's actually happening is market fragmentation

MARKETPLACE
Search For & Place Classifieds

The Detroit News
SERVING MICHIGAN SINCE 1873

News Sports Autos [Business] Michigan Life + Home Entertainment Opinion Obituaries

Used EVs under \$25,000 propel sales even as new models languish

Kyle Stock Bloomberg
Feb. 16, 2026, 9:52 a.m. ET

[f](#) [X](#) [✉](#) [↗](#)



 **THE FREEPRESS**

EXTRA! Looking For Love? Free Press Cupid Is Back!

NEWSLETTERS SIGN IN SUBSCRIBE

The Car World Is Going Electric, Without America



After \$50 billion in squandered investments, will U.S. auto companies finally get serious—or just watch while China wins?

By Michael Dunne

02.16.26 —U.S. Politics

U.S. Politics
Breaking news, deep investigations, and eye-opening commentary that favor no party.

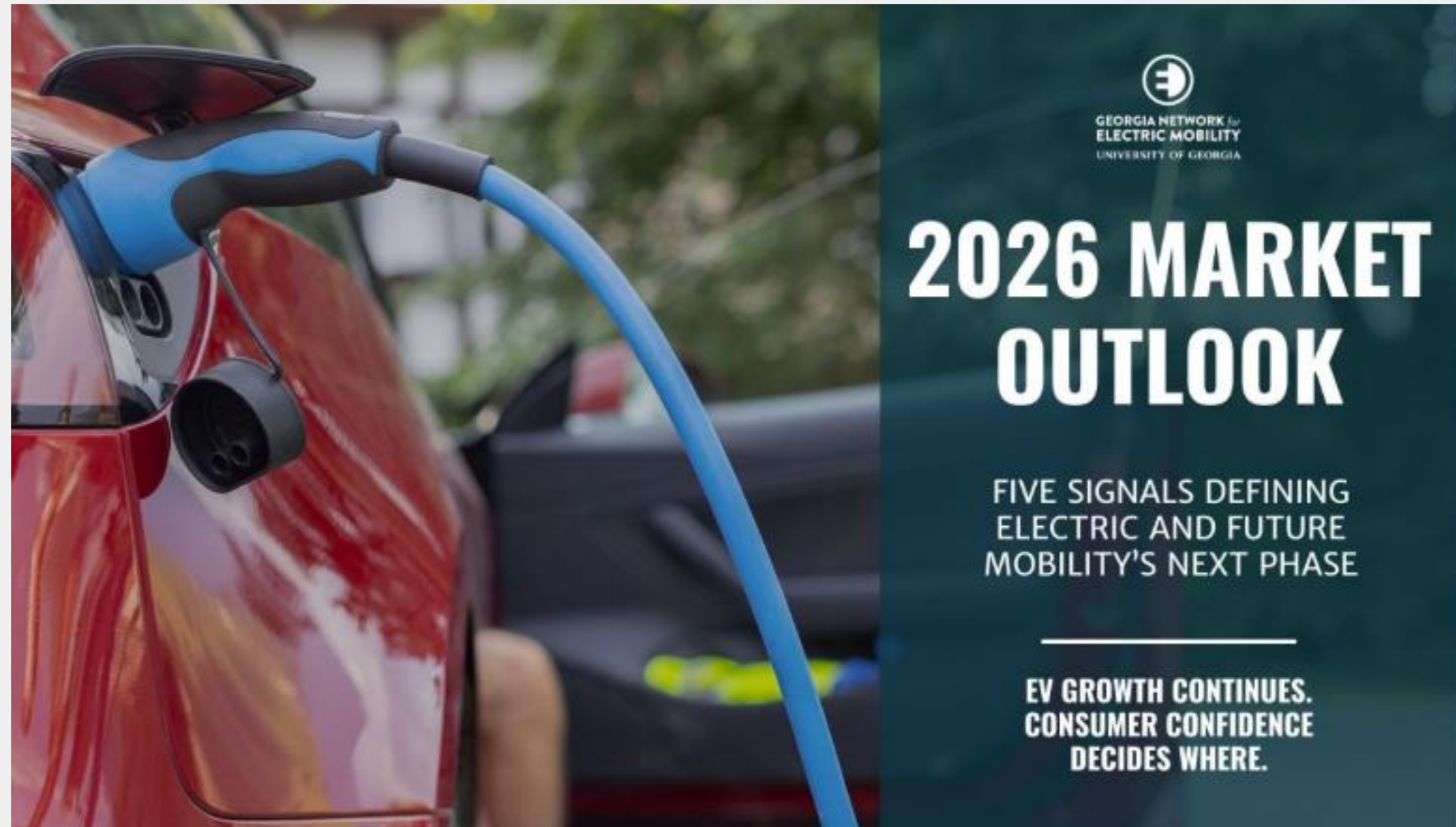
FOLLOW TOPIC 

FOR A DEALER, EVERY EV SOLD REPRESENTS YEARS OF LOST SERVICE INCOME. (COURTESY/FUTURE PUBLISHING VIA GETTY IMAGES)

Three Realities Happening at the Same Time:

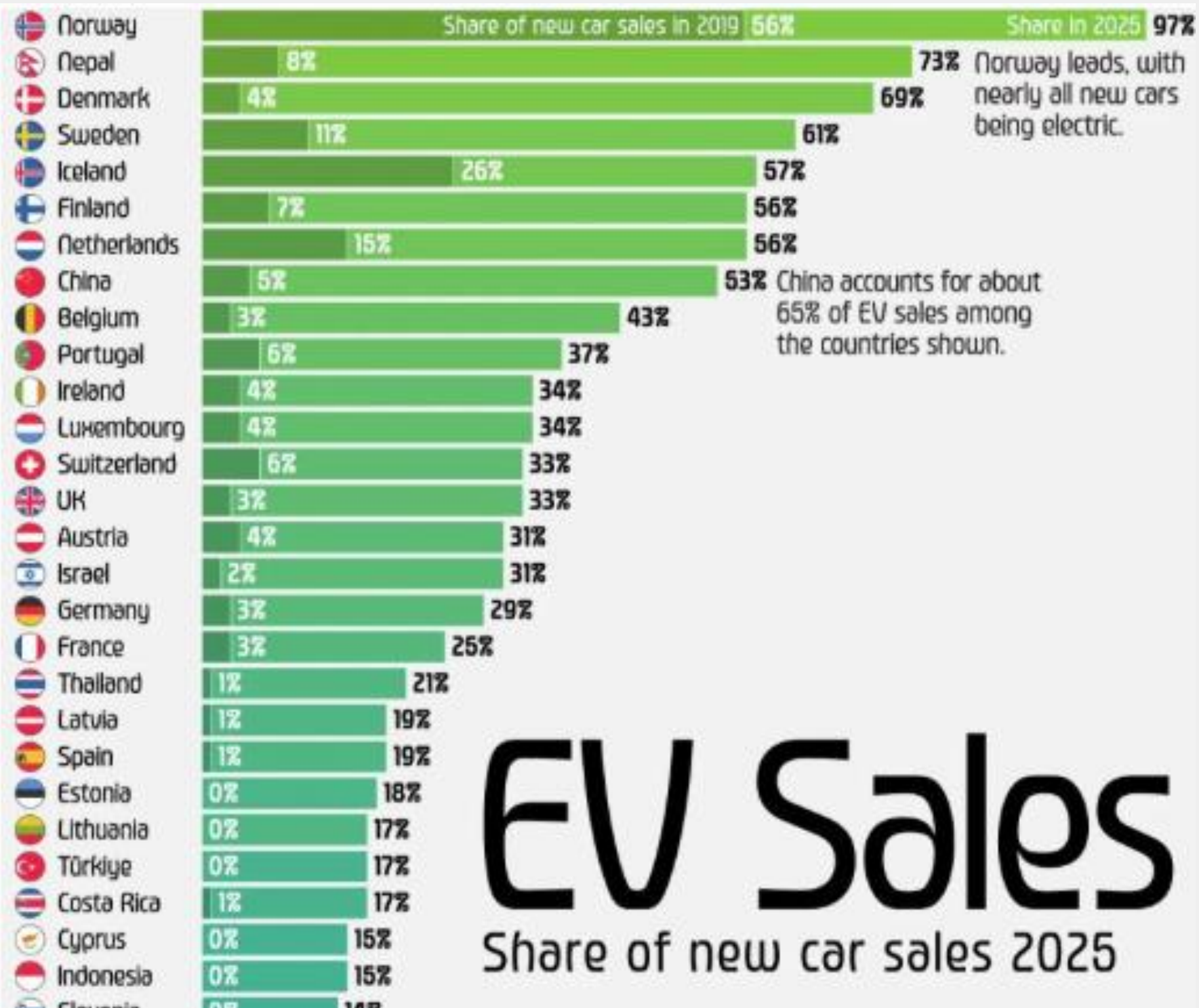
- **EV adoption continues globally**
- **Growth is moderating in some markets**
- **Electrification pathways are diversifying**

FIVE SIGNALS SHAPING THE NEXT PHASE OF EV AND ADVANCED MOBILITY



1. Demand recalibration
2. Hybrid diversification
3. Autonomy scaling
4. Battery supply chain competition
5. Charging reliability





Ember analysis of publicly available national data for Jan-Oct 2025. EVs include plug-in hybrid electric vehicles and battery electric vehicles.

Sales figures for 2025 are estimates, assuming the year-on-year change observed so far in 2025 continues through year-end. Source: IEA (2019 data)

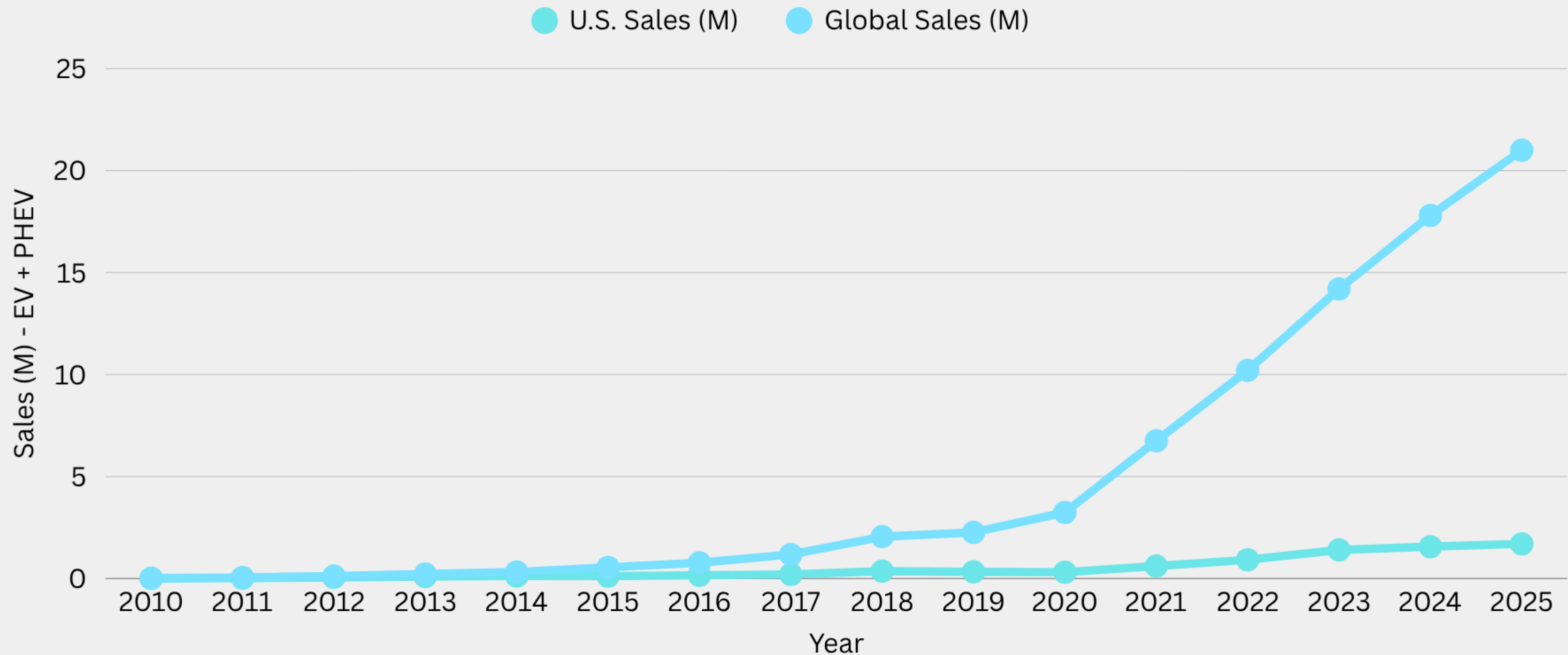
GLOBAL EV POLICY SHIFT OVERVIEW (2022 - 2027)

REGION	 NORWAY	 EUROPEAN UNION	 CHINA	 UNITED STATES	
				FEDERAL	STATE LEVEL
POLICY DIRECTION	Gradual normalization of EV tax advantages	Reduction or elimination of direct incentives	End of direct subsidies; reduction of tax exemptions	Restructured incentives with tighter eligibility	Targeted expansion in select states (CA, CO, NY, NJ, MA, WA, MD)
TIMING	Adjustments 2023 - 2027	Major cuts 2023 - 2024; continued tightening through 2026	Subsidies ended 2022; tax benefits reduced 2026 - 2027	Changes began 2023; constraints tightening through 2025 - 2026	Ongoing, varies by state and funding cycles
MARKET IMPACT	Transition toward market driven adoption	Greater price sensitivity and uneven adoption	Increased price competition and demand variability	Reduced effective access to incentives	Fragmented adoption driven by geography

ELECTRIC POWERTRAIN MIX BY MARKET - INCLUDING ADOPTION ARCHETYPES (2025)

ADOPTION ARCHETYPES	 NORWAY <i>Fully aligned policy and infrastructure</i>	 EUROPEAN UNION <i>Policy-driven, adjusting to incentive changes</i>	 CHINA <i>Scale, industrial policy, rapid iteration</i>	 UNITED STATES <i>Fragmented adoption, infrastructure constraints</i>
	High Adoption	Mixed	High Volume	
BATTERY EV	~90%+	~15-20%	~25-30%	~7-8%
PLUG-IN HYBRID	Minimal	~8-10%	~10-15%	~2-3%
HYBRID	Minimal	Strong	Growing	Rapid Growth
EV SHARE OF NEW SALES	~90-95%	~25-30%	~50%+	~10%
FLEET CONTEXT	~1M EVs in ~3M total vehicles	~15-20M EVs in ~250-280M total vehicles	~30-50M NEVs in ~330M total vehicles	~7-10M EVs in ~290M total vehicles

Over the past decade global EV sales have risen to 20M+ vehicles and 25%+ of new vehicle sales



SOURCE: IEA, BLOOMBERG NEF

THE 3 PHASES OF THE ELECTRIC MOBILITY TRANSITION

2010–2018



PHASE 1:
BATTERY TECHNOLOGY

0.5-1M+

Can EVs
work at all?

2018–2023



PHASE 2:
MANUFACTURING SCALE

5-30M+

Can we produce millions
affordably?

2023–Now

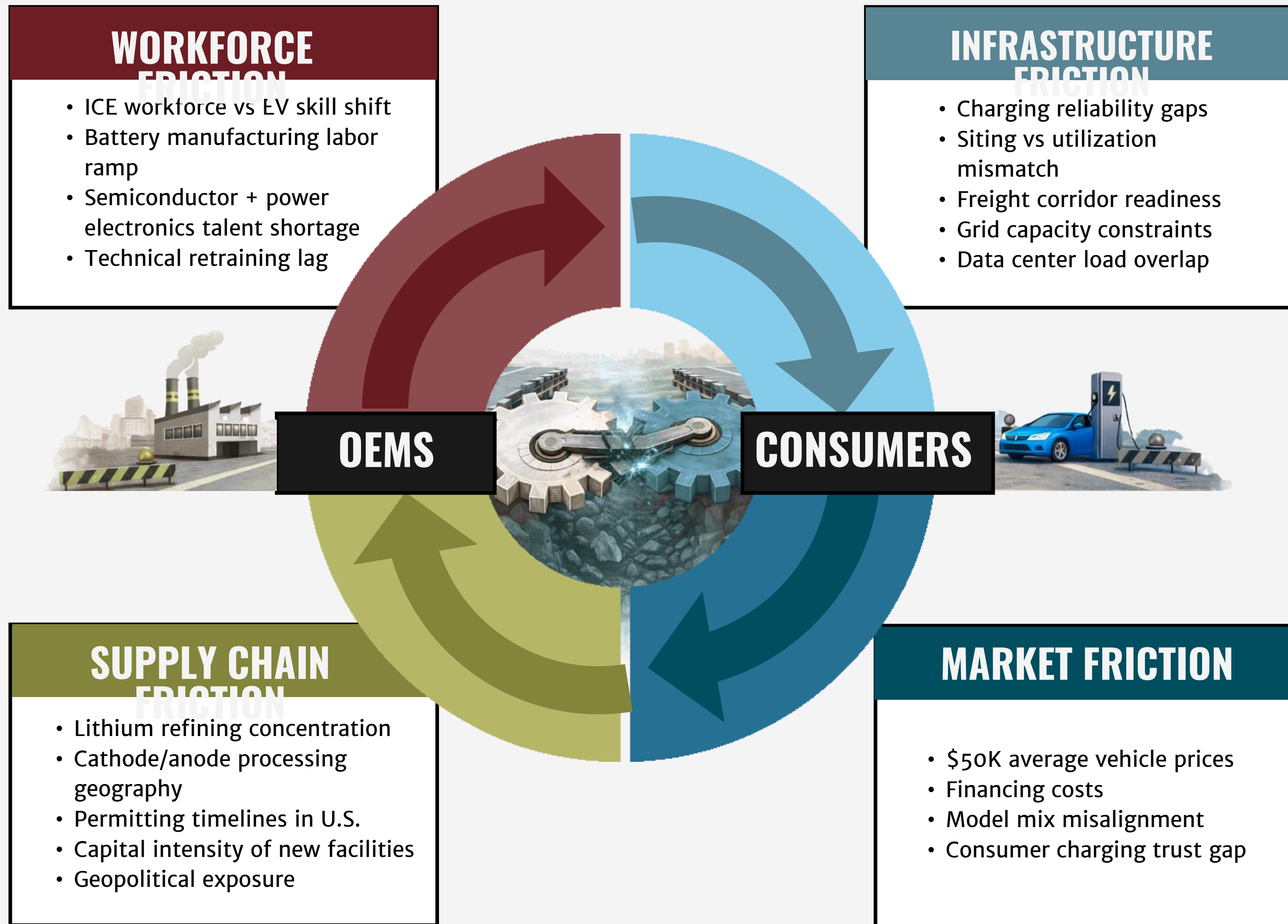


PHASE 3:
SYSTEM FRICTION

50-80M+

Can the ecosystem
support mass adoption?

PHASE 3 SYSTEM FRICTION: THE END OF EASY TAILWINDS



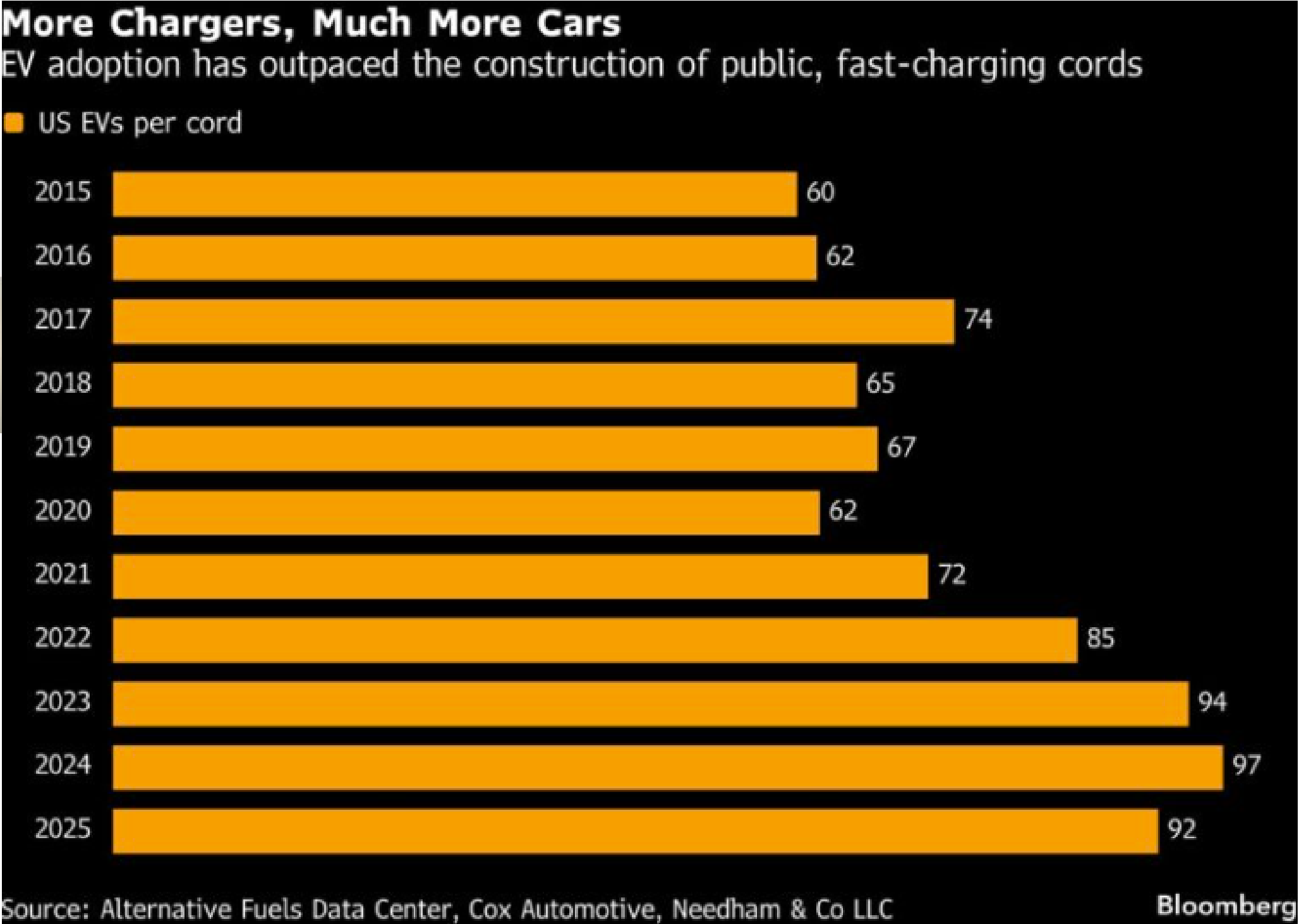
PART II

WHY WE STILL NEED MORE EV CHARGING INFRASTRUCTURE

More infrastructure being built than at any point in the past decade

Why EV Chargers Are Booming Despite Slumping New Car Sales

By Kyle Stock | March 5, 2026



And we still need more

US CHARGING INFRASTRUCTURE GROWTH DECOUPLED FROM SALES IN 2025

U.S. fast-charging networks expanded meaningfully in 2025, adding approximately 18,000 new DC fast-charging ports, a ~30% year-over-year increase.

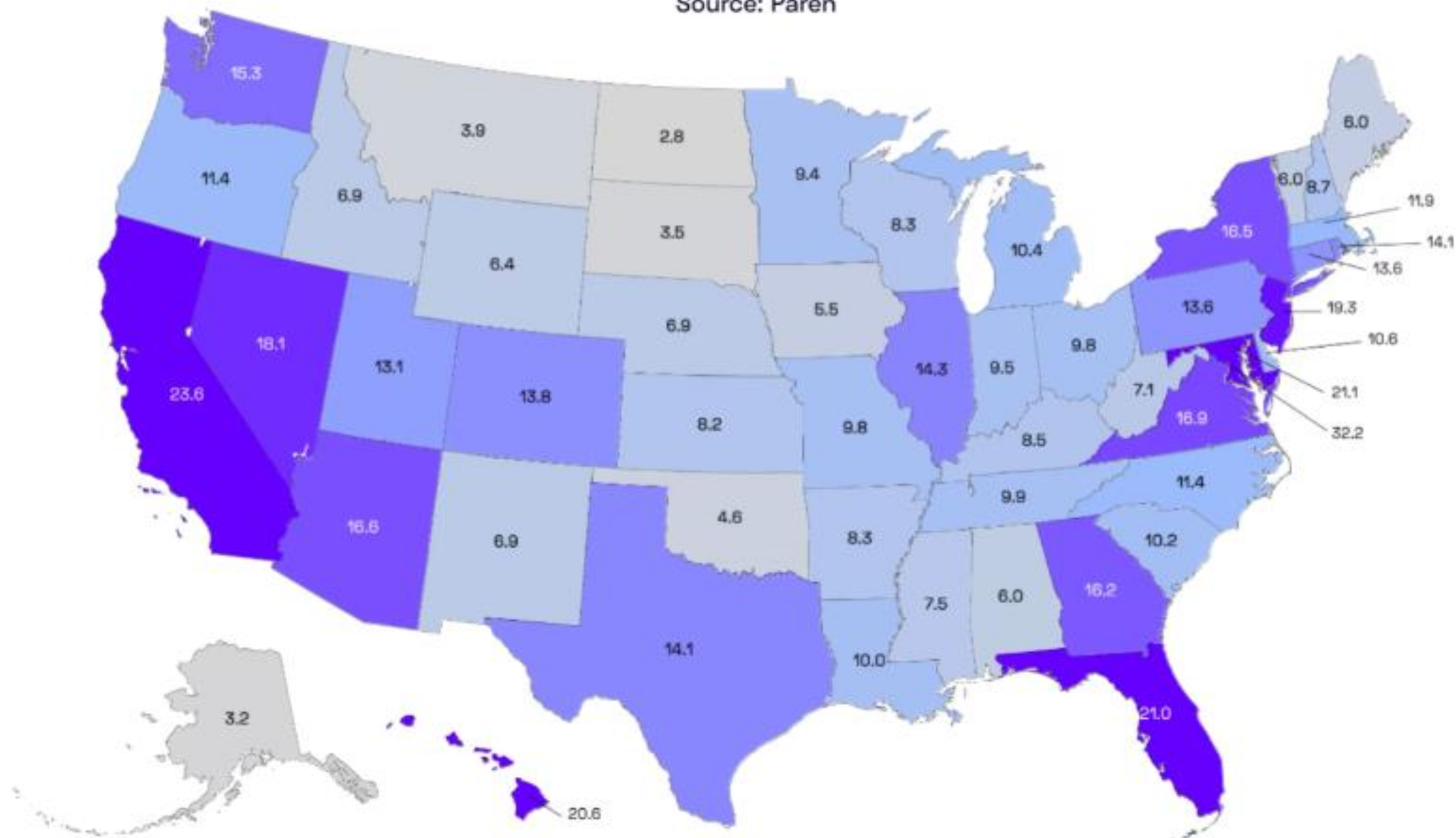
**Fast-charging demand reached a record 141M sessions, increasing by +30%
YoY**

Utilization held steady at ~16% despite rapid expansion

40-50% as many charging stations as gas fueling stations nationally

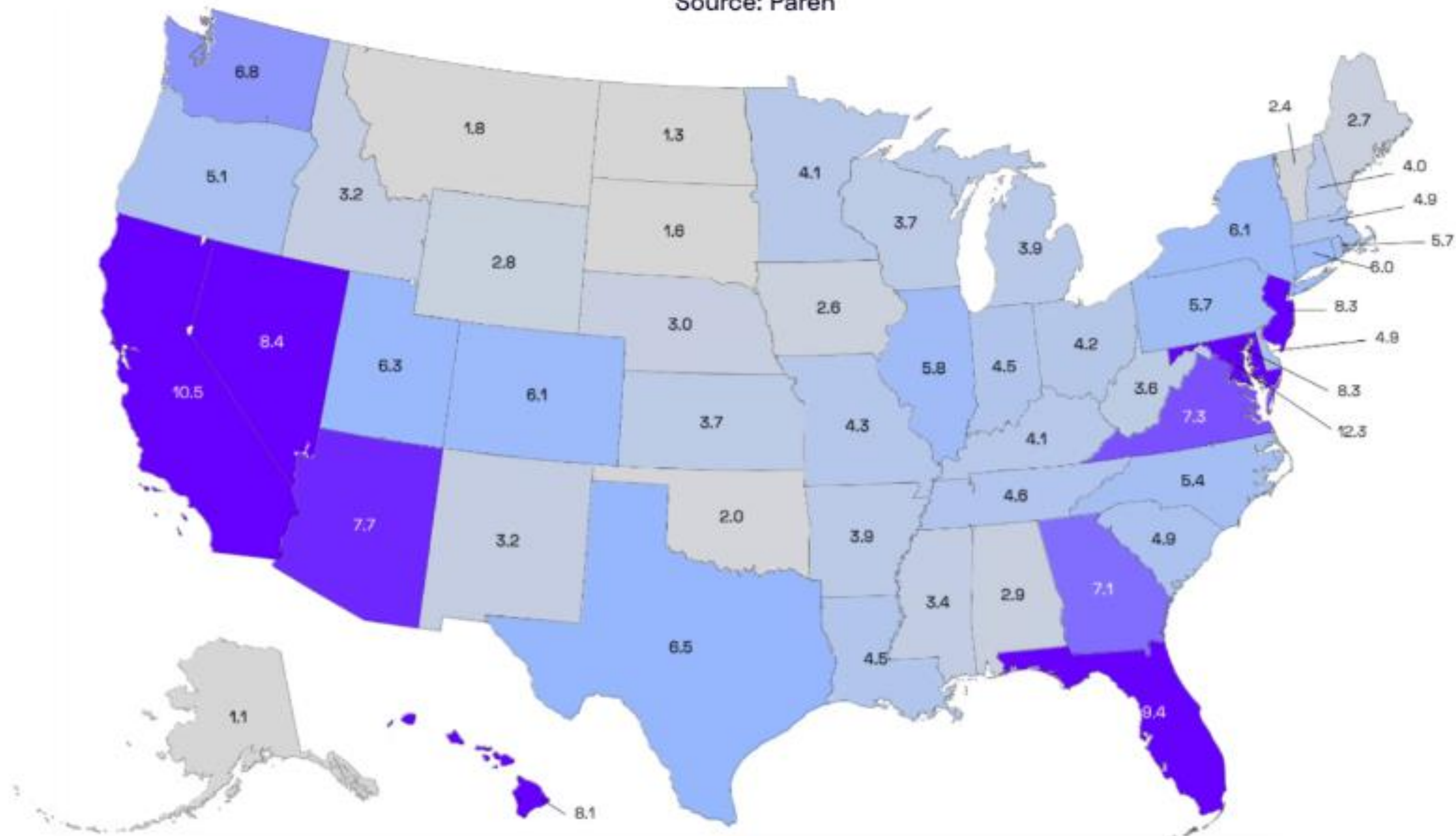
2025 Average Utilization Rates by State

Source: Paren



2025 Sessions per Port per Day, by State

Source: Paren



Illinois and Georgia doubled the number of ports deployed in 2025 in comparison to 2024.

In Georgia, Tesla alone deployed 300 ports along the I-95, I-75 and I-20 corridors, while Mercedes Benz HPC, Ionna and bp pulse deployed multiple, large stations in similar areas.

Leaderboard: Top States By Deployment #s			
Based on New DCFC Ports Opened — 2025			
Source: Paren			
STATES	2025	YoY Growth	All Time
California	3,793	35%	17,296
Texas	1,501	41%	4,892
Florida	1,398	36%	4,577
Illinois	993	118%	2,414
New York	984	36%	3,205
Georgia	675	92%	2,116
Massachusetts	669	69%	1,764
Pennsylvania	518	72%	1,837
New Jersey	512	0%	1,999
Washington	495	4%	2,078
Other States	6,503	14%	27,832

CHARGING INFRASTRUCTURE ROADMAP



Scan QR code to
read full Part 1
guide



BEYOND AVAILABILITY: THE MARKET SHIFT TOWARDS USABLE, SEAMLESS COVERAGE



GEORGIA'S CHARGING INFRASTRUCTURE ROADMAP

ABOUT GEORGIA'S CHARGING INFRASTRUCTURE ROADMAP

Georgia currently has the most extensive public charging network in the Southeast, leading the region in both total coverage and per capita access. The state ranks highest in public charging ports per 1,000 residents and in EV registrations per 1,000 vehicles. However, this rapid expansion has not been fully comprehensive, making data-driven insights and forecasting tools essential for guiding future planning and equitable growth.

GNEM's flagship report series, Georgia's Charging Infrastructure Roadmap provides a comprehensive, data-driven view of the state's public charging network and its evolution within the broader Southeast mobility ecosystem. By giving a clear understanding of today's and tomorrow's trends and needs, it charts a forward-looking path for continued economic development and movement.

A GNEM FLAGSHIP REPORT SERIES: DELIVERED IN ACROSS 3 CORE PARTS

Part 1 introduces the concepts of usability and usable coverage, illustrating the driver experience and how much, reliability, and safety a driver can find, access, and complete a charging session. Usable coverage extends that idea to the network level, representing how much of today's public charging infrastructure consistently delivers that same high-quality experience. Together, these measures define how access, usability, and driver experience shape real-world market performance and confidence.

Part 2 builds on these findings by modeling the geographic and market-based gaps identified in Part 1, to analyze existing trends driving charging infrastructure growth, as well as, where and how charging infrastructure must evolve to meet future energy demand, travel behavior, and adoption trends across Georgia.

Part 3 expands the framework further by connecting a high-performing public charging network to its broader economic potential, including grid resilience, workforce development, and the growth of Georgia's advanced automotive and battery manufacturing economy.

Together, these reports form one of Georgia's most comprehensive frameworks for guiding equitable, efficient, and economically sustainable charging infrastructure deployment. In future years, GNEM plans to extend the charging infrastructure framework to include commercial and fleet infrastructure and expand its scope to the broader Southeast Battery Belt, and address how the EV and advanced transportation ecosystem, better integration, and equity issues growth. By aligning infrastructure planning with workforce, energy, and manufacturing strategy, GNEM is helping position Georgia and the Southeast as leaders in the nation's next-generation mobility economy.

After we complete publishing the subreports for the 2023 edition of the roadmap, all maps, data tables, and tools will be made available on our website as a resource for industry, government, and other public decision makers.

THE EV CONSUMER JOURNEY

1 FINDING A STATION

DATA / RELIABILITY

Best check multiple apps (e.g. EVgo, ChargePoint, PlugShare, etc.) to find a station. Location data can be superior or inferior to what is shown on app. ChargePoint's "actual" charge location. Some users report that the location is not accurate. ChargePoint's "actual" charge location. Some users report that the location is not accurate.

OVERALL CONVENIENCE ISSUES

Charging speed is slow. Some users report that the charging speed is slow. Some users report that the charging speed is slow.

2 ARRIVING AT THE CHARGER

DATA / RELIABILITY

Some users report that the charging speed is slow. Some users report that the charging speed is slow. Some users report that the charging speed is slow.

OVERALL CONVENIENCE ISSUES

Charging speed is slow. Some users report that the charging speed is slow. Some users report that the charging speed is slow.

3 STARTING SESSION/PAYMENT

DATA / RELIABILITY

Some users report that the charging speed is slow. Some users report that the charging speed is slow. Some users report that the charging speed is slow.

OVERALL CONVENIENCE ISSUES

Charging speed is slow. Some users report that the charging speed is slow. Some users report that the charging speed is slow.

4 ACTIVELY CHARGING

DATA / RELIABILITY

Some users report that the charging speed is slow. Some users report that the charging speed is slow. Some users report that the charging speed is slow.

OVERALL CONVENIENCE ISSUES

Charging speed is slow. Some users report that the charging speed is slow. Some users report that the charging speed is slow.

5 OVERALL EXPERIENCE

DATA / RELIABILITY

Some users report that the charging speed is slow. Some users report that the charging speed is slow. Some users report that the charging speed is slow.

OVERALL CONVENIENCE ISSUES

Charging speed is slow. Some users report that the charging speed is slow. Some users report that the charging speed is slow.

EXECUTIVE SUMMARY

Public charging infrastructure in the United States has grown at an extraordinary pace in recent years, increasing by roughly 25 percent per year since 2019. From mid-2022 to early 2023, total public charging ports rose from 15,000 to 22,000, including a 10 percent increase in DC fast-charging and a 20 percent increase in Level 2 units (EVT, 2023). These gains reflect major federal, state, and private investments through programs such as the National Electric Vehicle Infrastructure (NEVI) program, network expansion by Tesla, Electrify America, EVgo, and ChargePoint, and new retail and hospitality entrants including Walmart, Costco, Maroon, etc., Hyatt, and Hilton (McKinsey & Company, 2023; EVgo, 2023).

Despite rapid infrastructure expansion, the EV market faces a system-wide usability and branding problem. Many drivers still experience inconsistent reliability, broken or outdated equipment, and incompatible payment systems (Chargemix, 2023; J.D. Power, 2023). Differences in hardware, software, and customer interface have created brand fragmentation across networks, making public charging feel inconsistent and less trustworthy. As a result, confidence in the infrastructure is not keeping pace with the scale of deployment, and usability has become a decisive factor in adoption. The next evolution of public charging will require a service standard that prioritizes reliability and consistency, shifting the focus beyond infrastructure availability toward usability and consumer confidence.

Georgia offers a clear view of this national inflection point. The state now has roughly 3,400 public charging stations and about 6,200 ports, including more than 400 fast-charging sites, an increase of over 100 percent since 2020. Yet dozens of counties across Georgia and the Southeast still lack fast-charging access, underscoring persistent regional gaps and the work that remains to achieve full, equitable coverage.

Building charging infrastructure is complex and capital-intensive, and technology rollouts are costly. However, rapid rollouts have revealed technical issues such as outdated hardware, broken equipment, and delayed firmware updates. For drivers, these challenges translate into inconsistent performance and declining confidence in public charging. According to Chargemix's most recent industry report, only 21 percent of charging attempts succeed on the first try, meaning nearly one-third fail initially despite network operators' best efforts.



FINDING A STATION

Fragmented data and confusing maps



ARRIVING AT THE CHARGER

Blocked, hidden, or offline stations



STARTING A SESSION

Inconsistent payment and authentication



ACTIVELY CHARGING

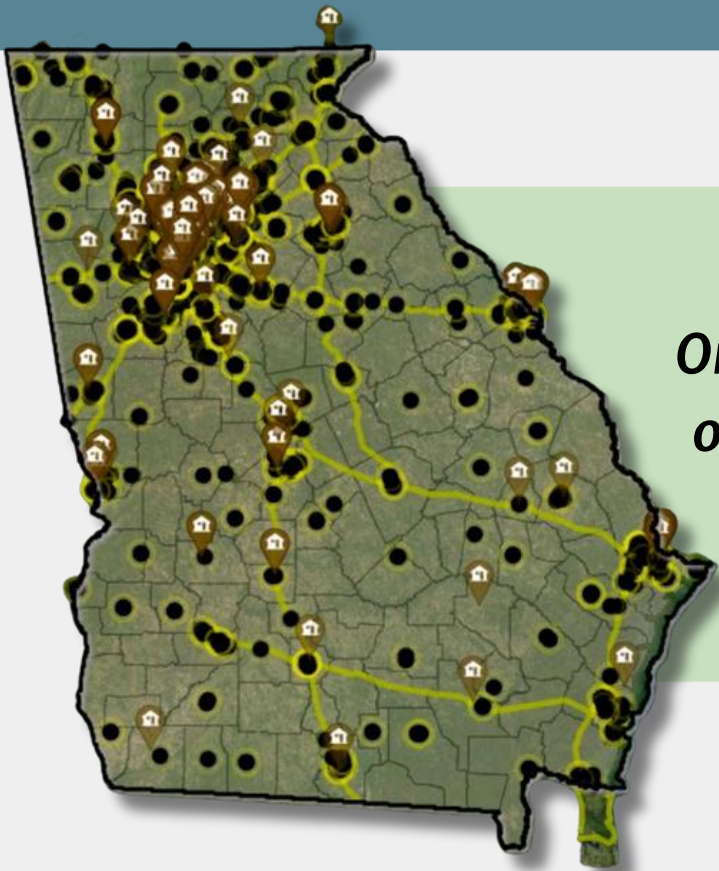
Variable speed, weather impacts, and failures



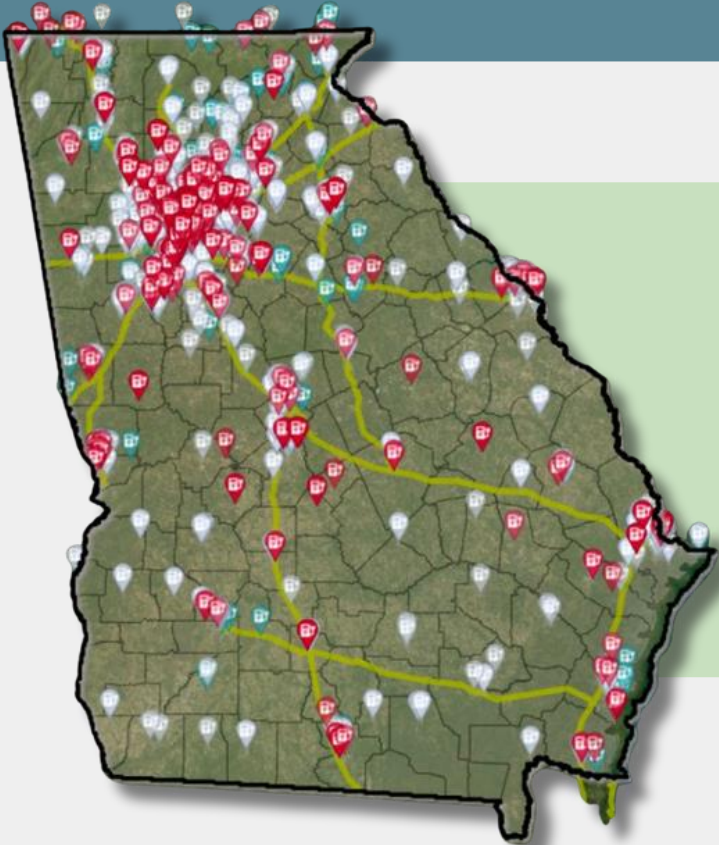
AMENITIES & DWELL TIME

Lack of restrooms, lighting, or comfort

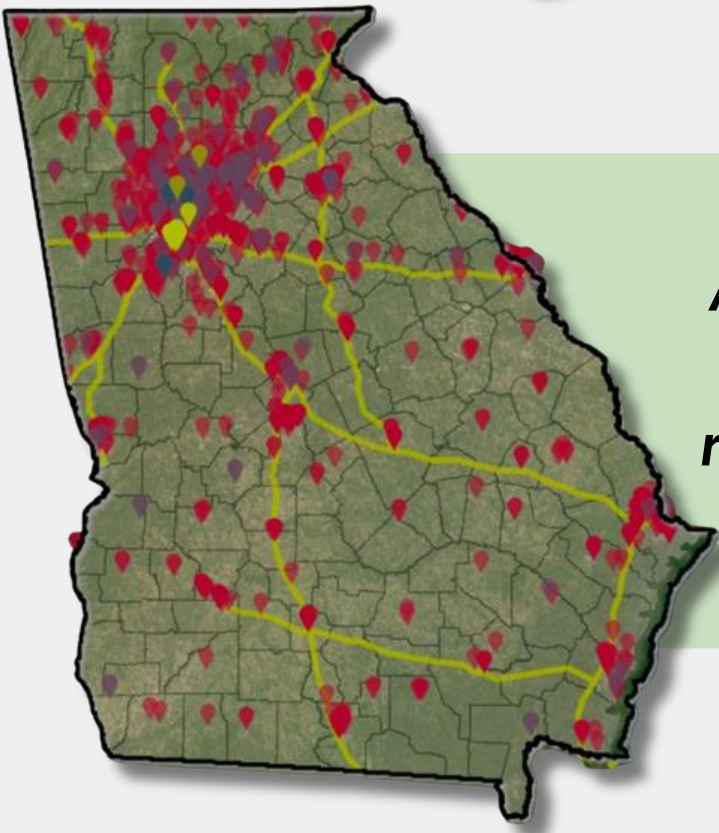
INFRASTRUCTURE & DEMAND FORECASTING



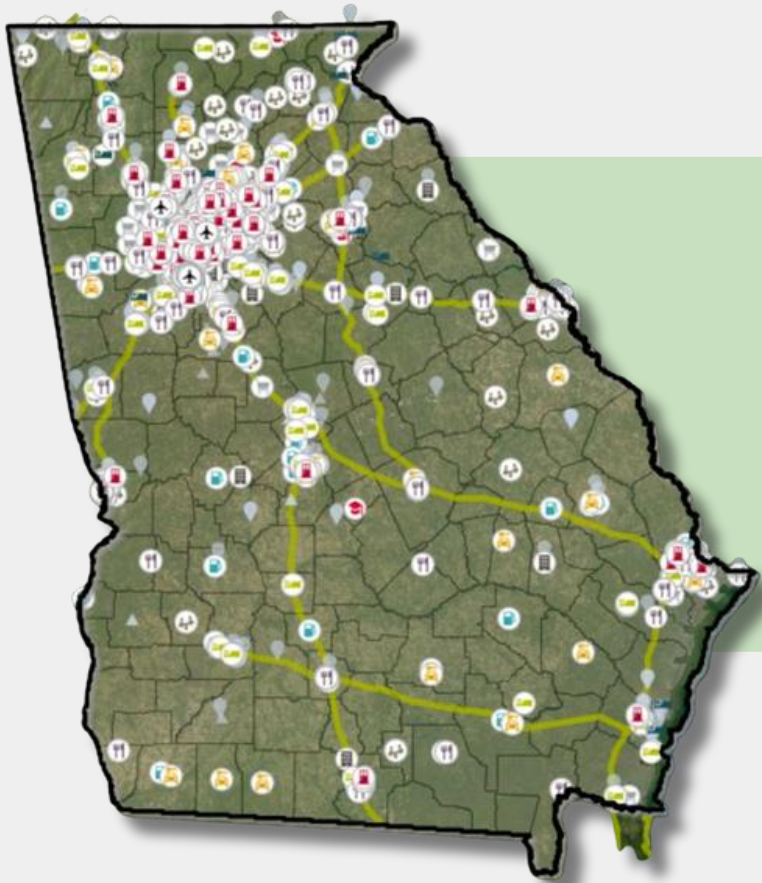
Only about 25% of charging stations offered shaded or covered charging areas



*Only about 60% of stations statewide were truly public, while roughly 25% were semi-public and 16% were private or restricted in access in some way.***



About 75% of sites had a bathroom on-site, another 20 to 25 percent required a short walk (2, 5, or 10-15 mins) to the nearest facilities



There was a wide range of destination and road-trip amenity types across sites, but these categories were not always clear from the information provided in existing charging applications.

PART II

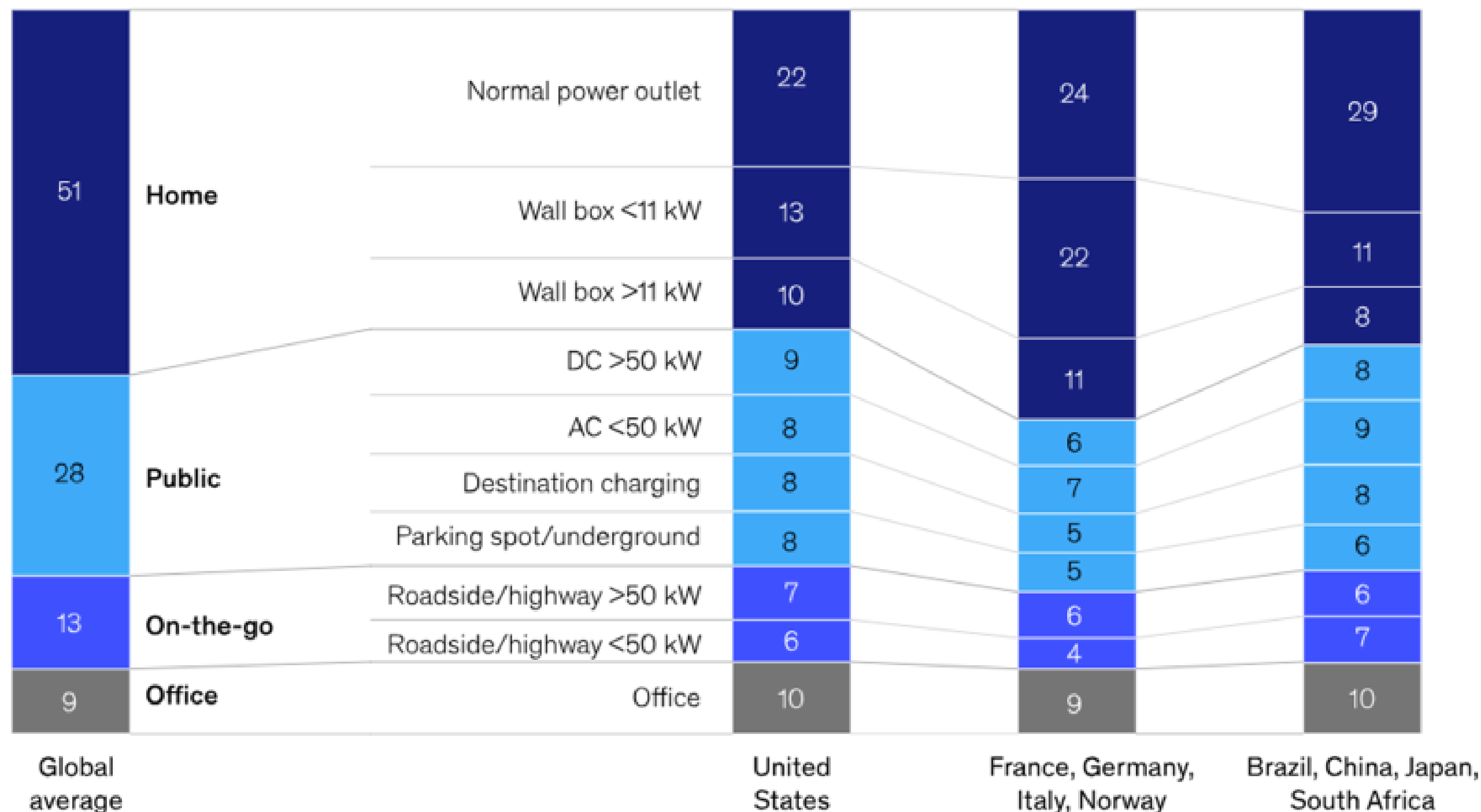
WHY EV CHARGING INFRASTRUCTURE FORECASTING MATH HAS CHANGED

Charging Infrastructure Math is changing



GEORGIA NETWORK for
ELECTRIC MOBILITY
UNIVERSITY OF GEORGIA

Charging split for current electric-vehicle (EV) owners, % per location



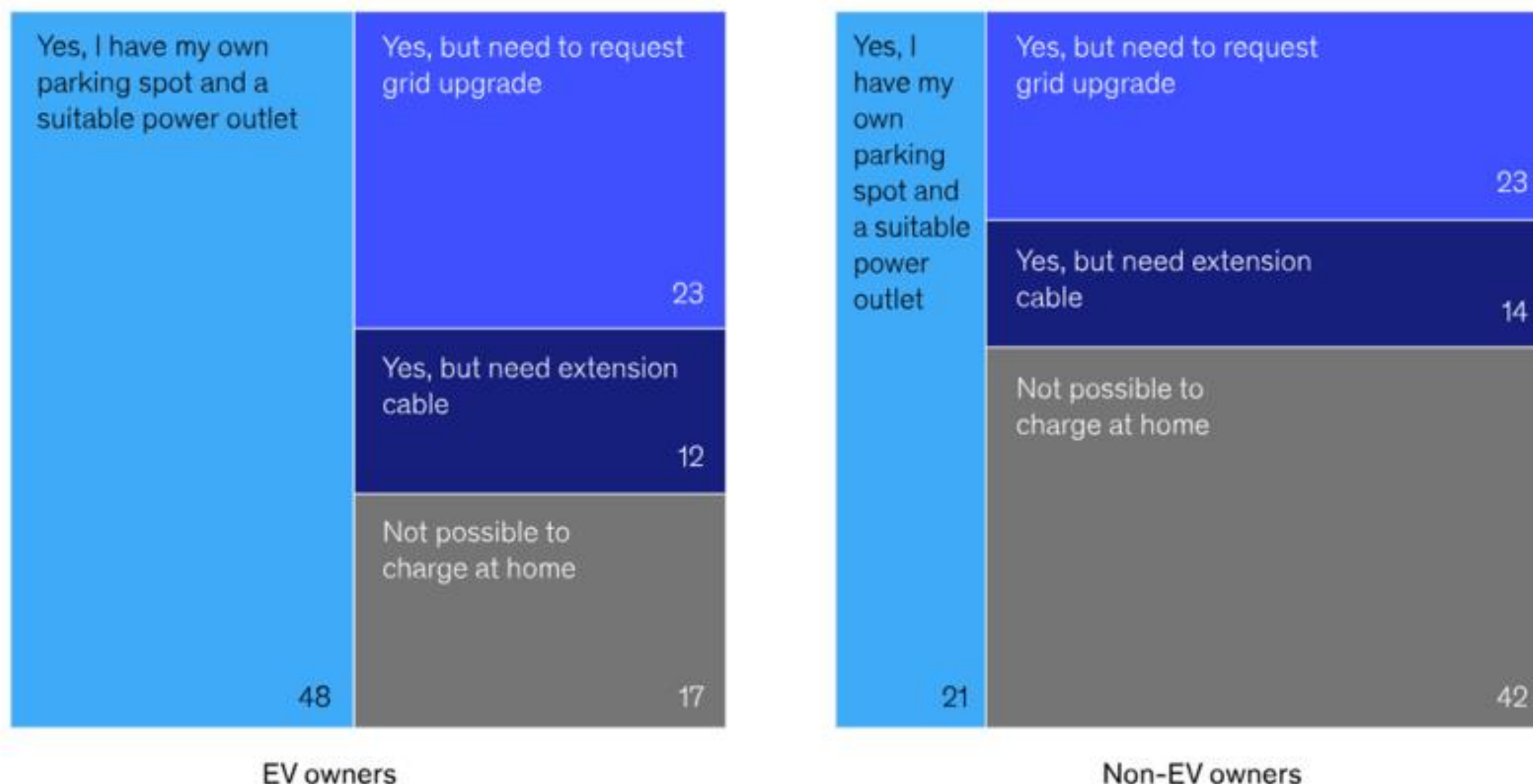
Source: McKinsey Center for Future Mobility (MCFM) Insights; MCFM Consumer Pulse Survey, December 2022; based on detailed information available for Brazil, China, France, Germany, Italy, Japan, Norway, South Africa, and the United States (n = 27,869)

Future electric vehicle owners will increasingly rely on public infrastructure



GEORGIA NETWORK for
ELECTRIC MOBILITY
UNIVERSITY OF GEORGIA

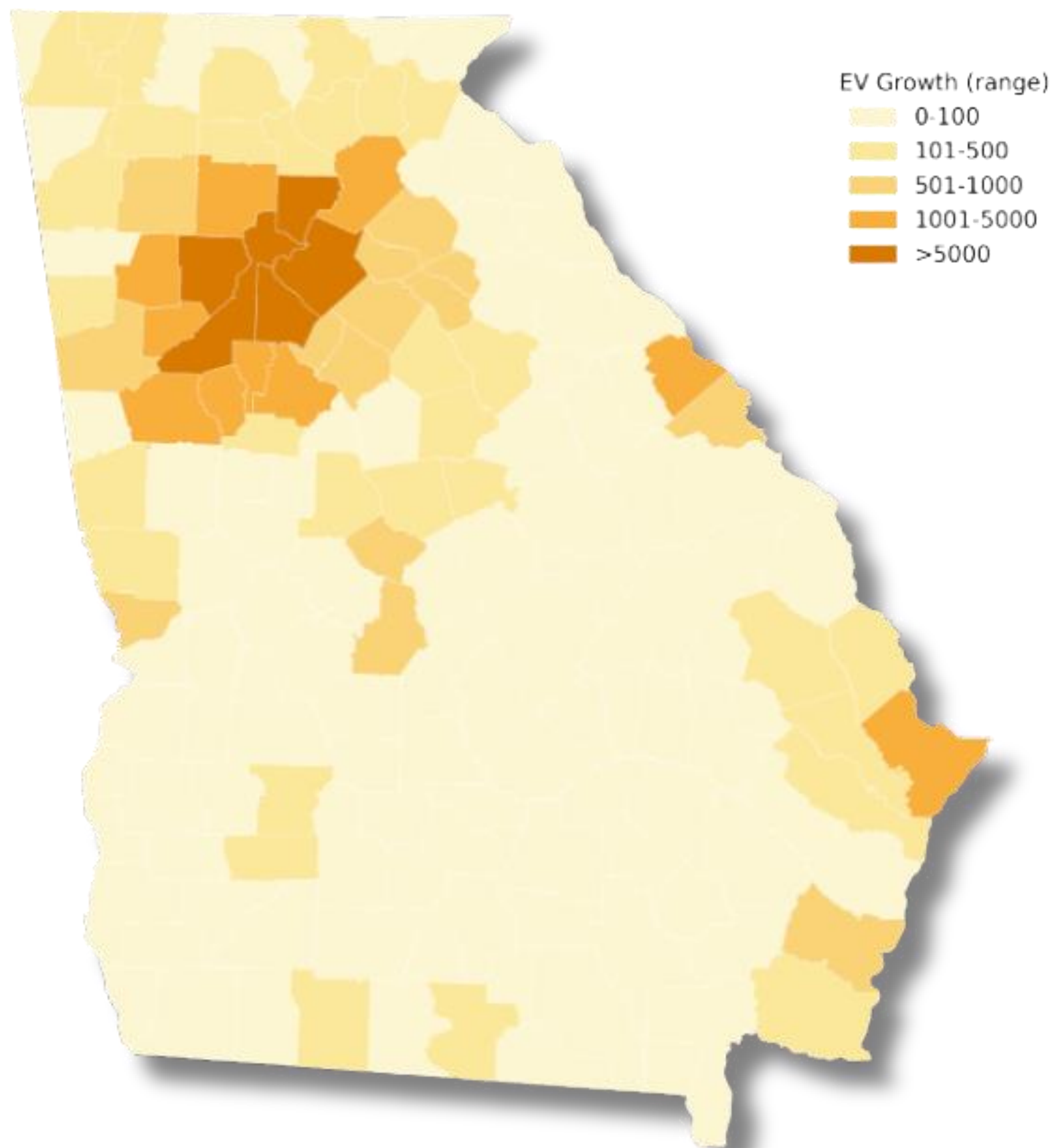
Ability to charge at home for electric-vehicle (EV) owners and non-EV owners, % of respondents



Source: McKinsey Center for Future Mobility (MCFM) Insights; MCFM Consumer Pulse Survey, December 2022; based on detailed information available for Brazil, China, France, Germany, Italy, Japan, Norway, South Africa, and the United States (n = 27,869)

4 KEY TRENDS AFFECTING CHARGING INFRASTRUCTURE NEEDS MATH

Trend Factor	Early Market Trend	Current + Future Growth Trend
Housing + Charging Access	Homeowners with garages → at-home fueling	Renters and shared parking → limited home charging
Usage Intensity	Low-mileage, occasional public charging	High-mileage rideshare, logistics, tourism
Affordability + Market Mix	New EV buyers with higher means	Used EV buyers expanding fastest



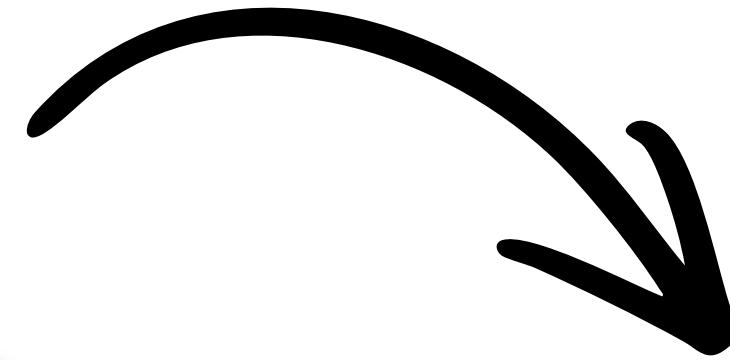
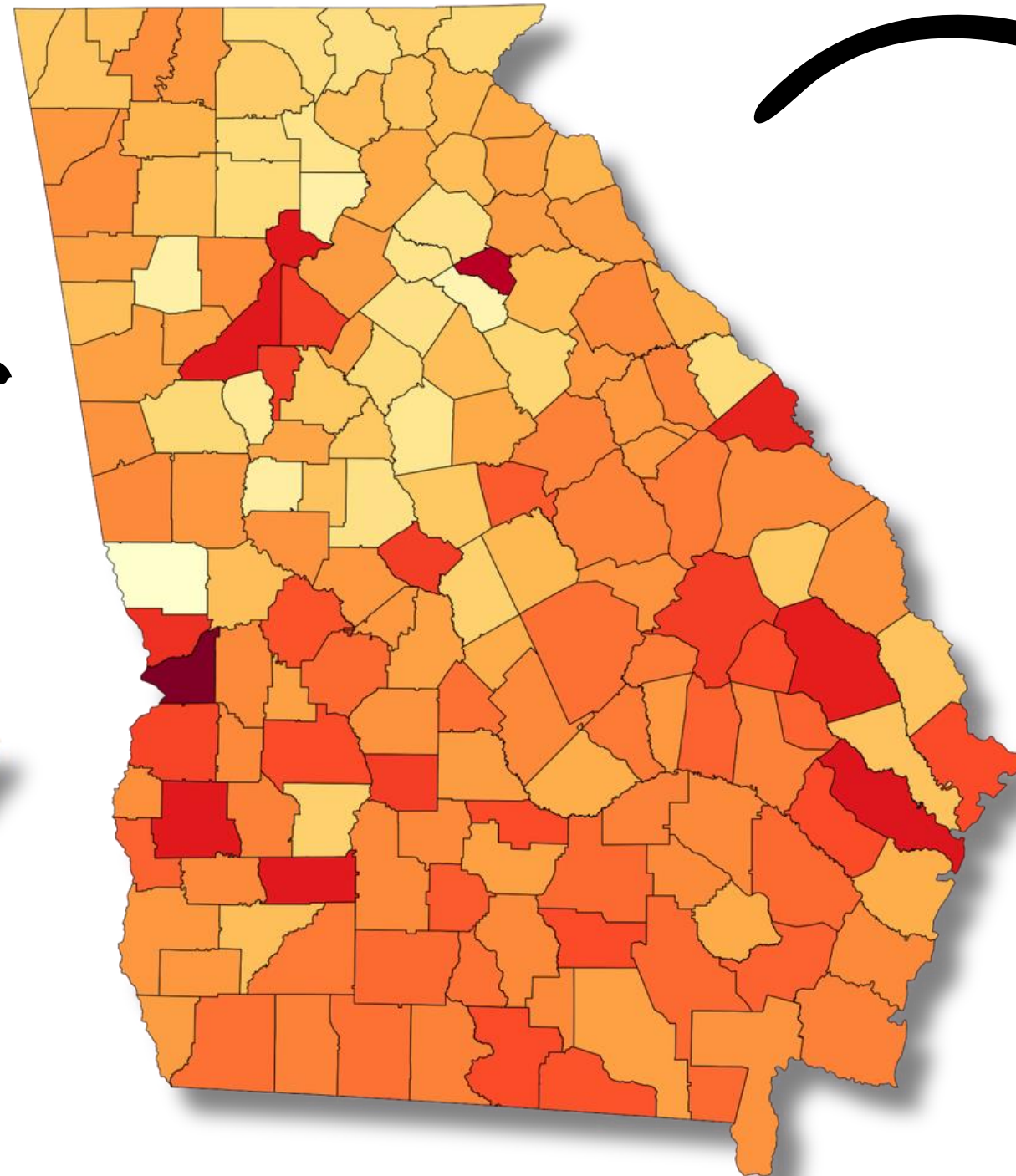
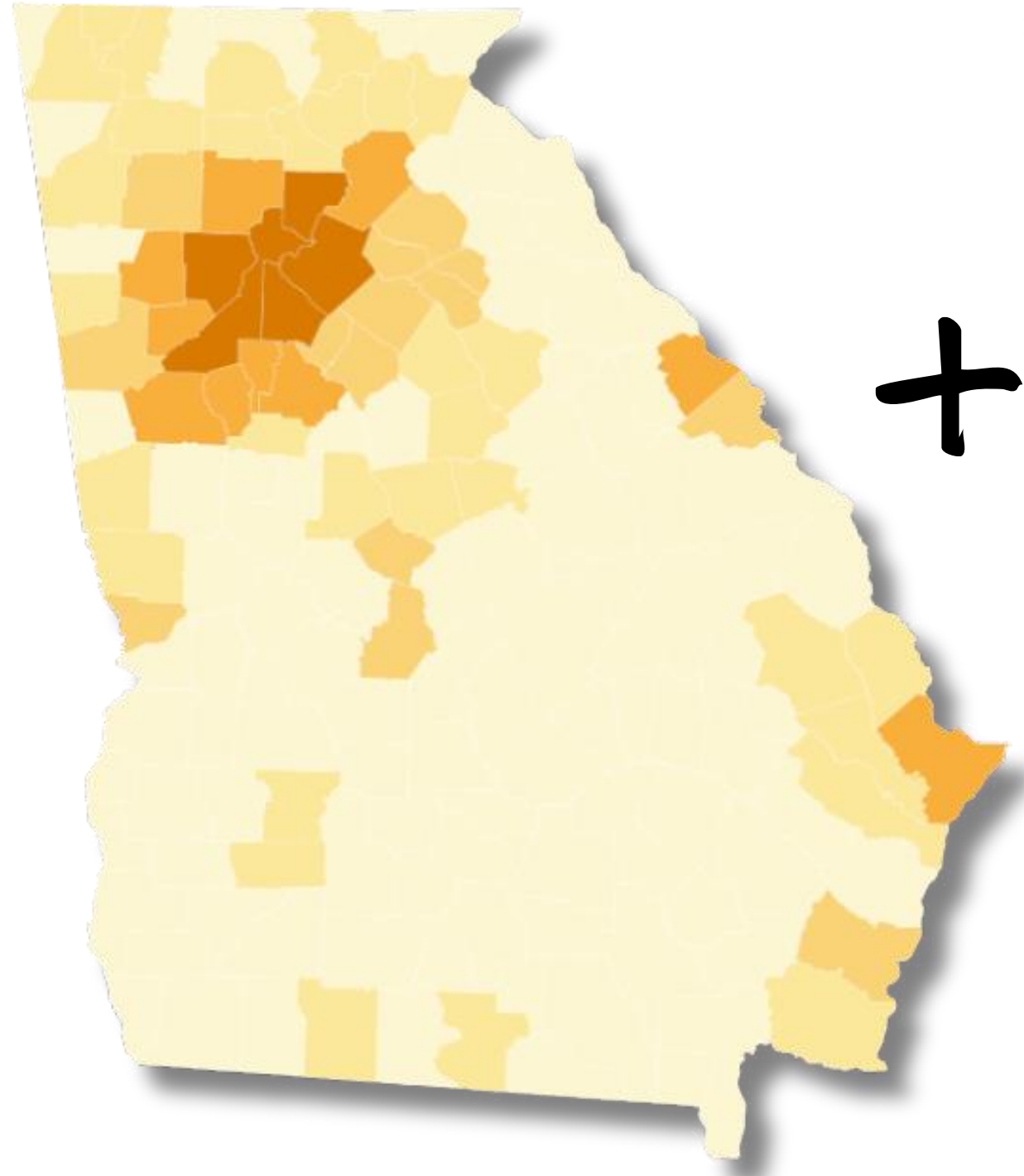
Top MSAs by Absolute EV Growth (2020–2025)

MSA	EV 2020	EV 2025	Δ EV	CAGR %
Atlanta (ATL)	19,743	119,311	+99,568	43.3
Savannah (SAV)	365	3,569	+3,204	57.8
Augusta (AGS)	294	2,348	+2,054	51.5
Athens (ATH)	373	1,808	+1,435	37.1
Macon (MAC)	119	844	+725	47.9
Non-MSA	1,898	13,918	+12,020	49.0

**EV Registration
Growth**

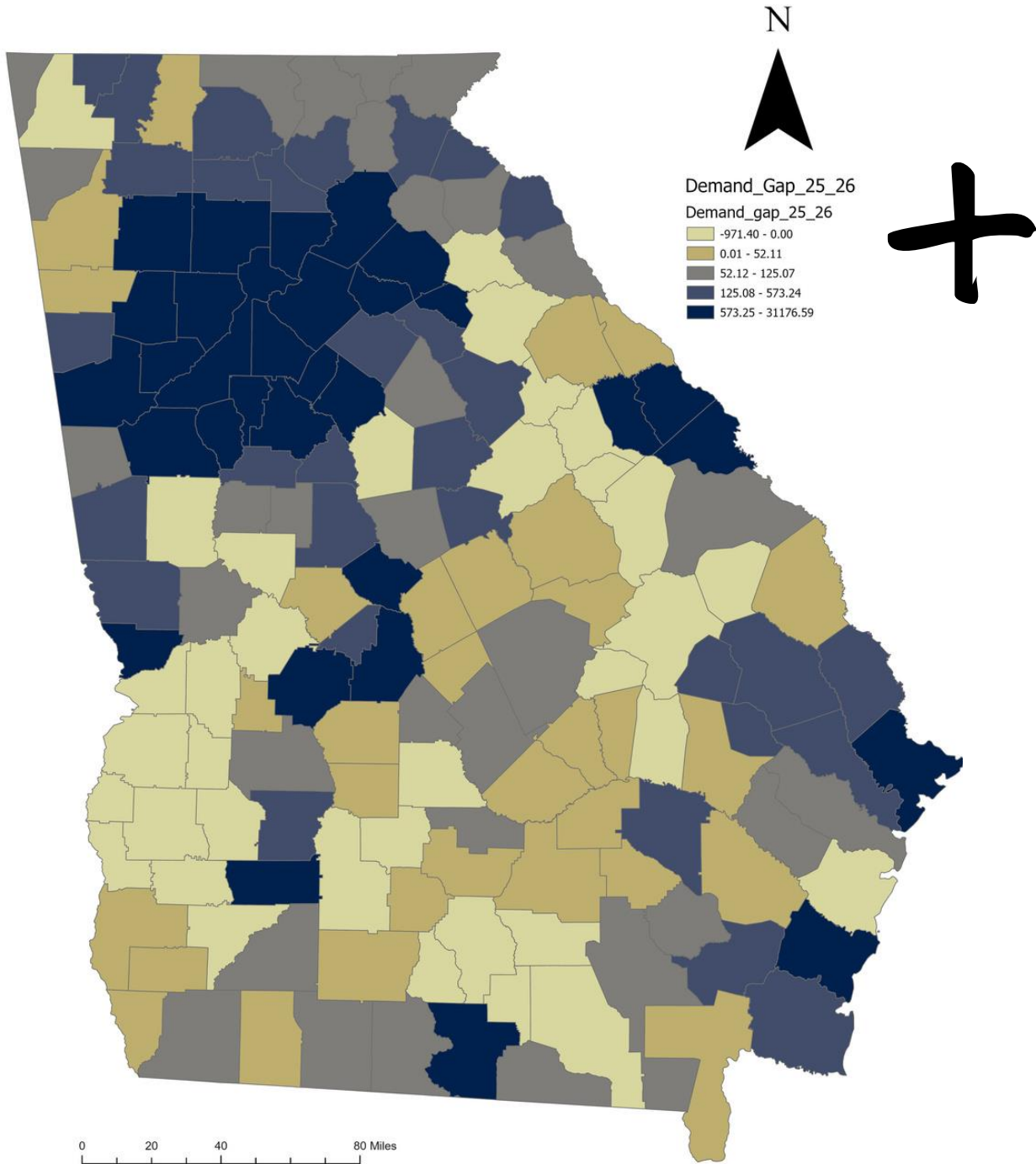
**Public Charging
Need (%)**

+



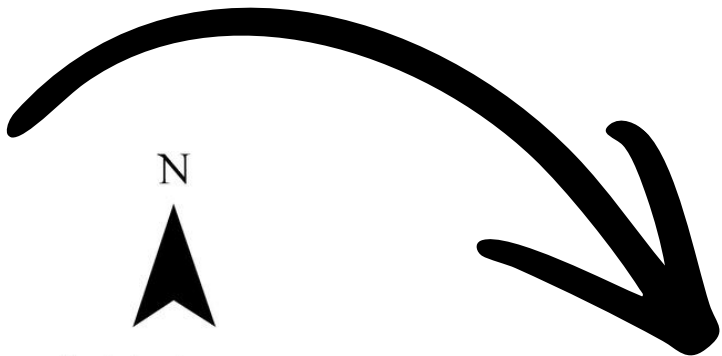
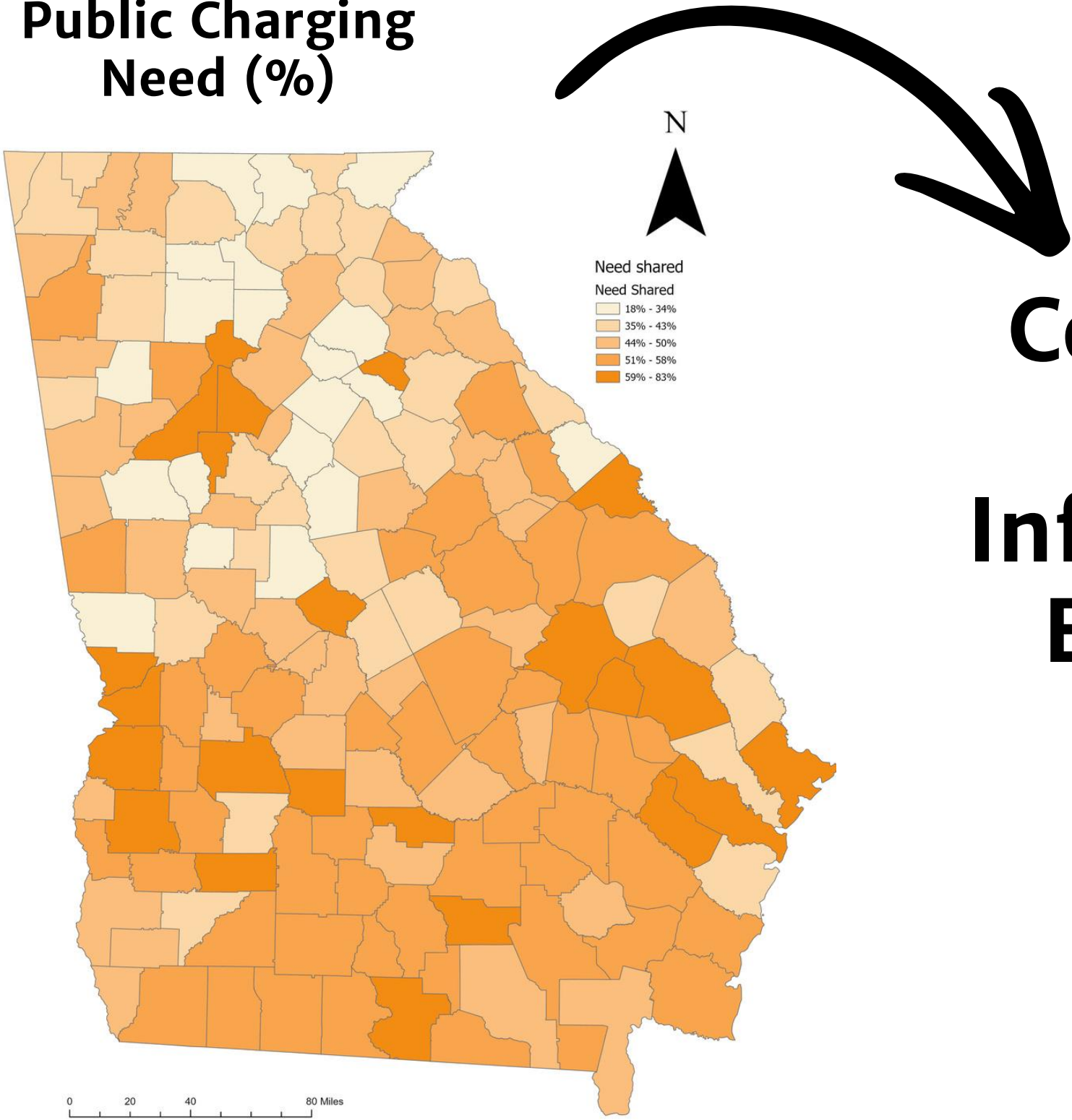
**County-level
Public
Infrastructure/
Energy Gap**

**Public
Infrastructure
Demand Growth –
YOY 2025 to 2026**

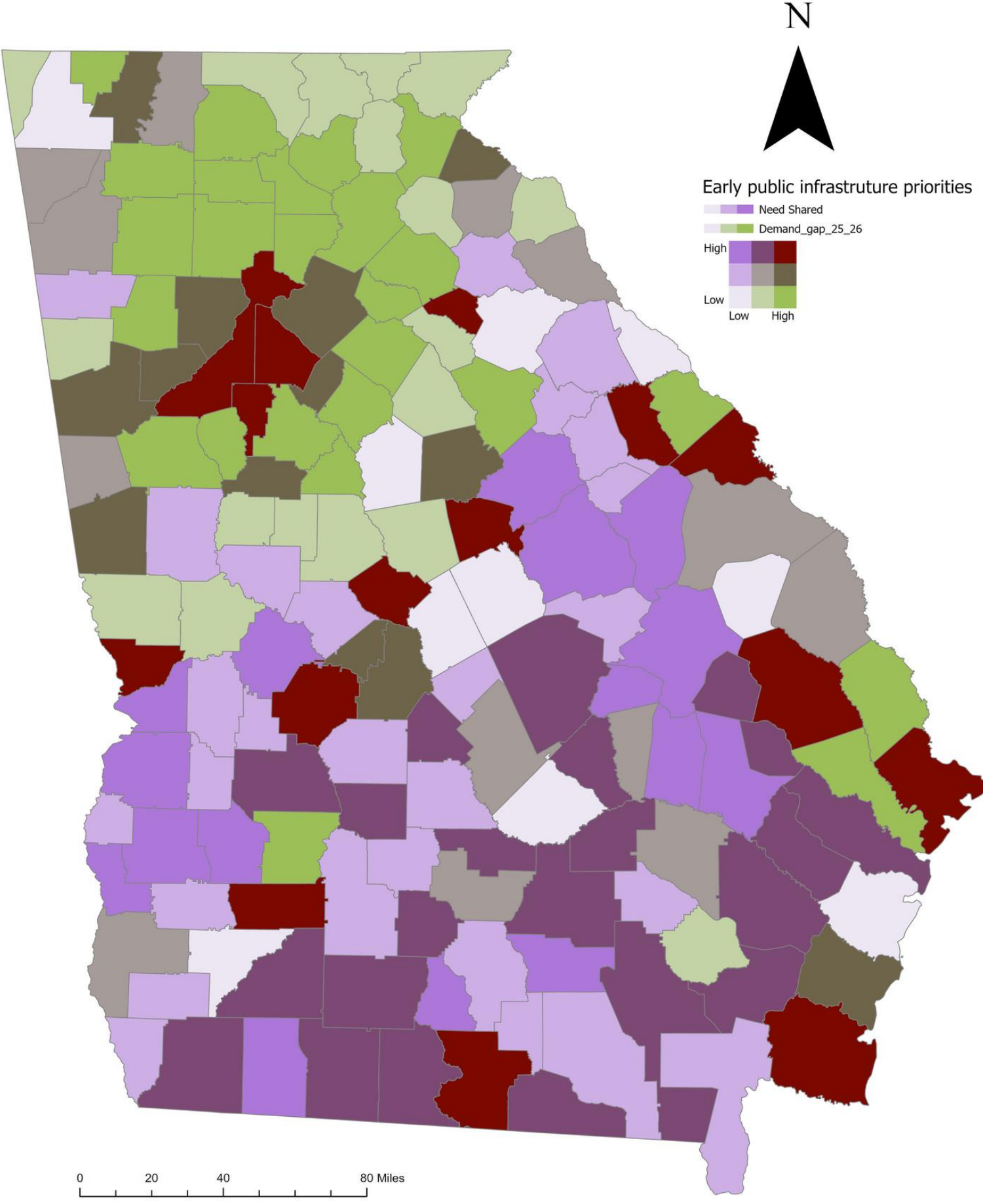


+

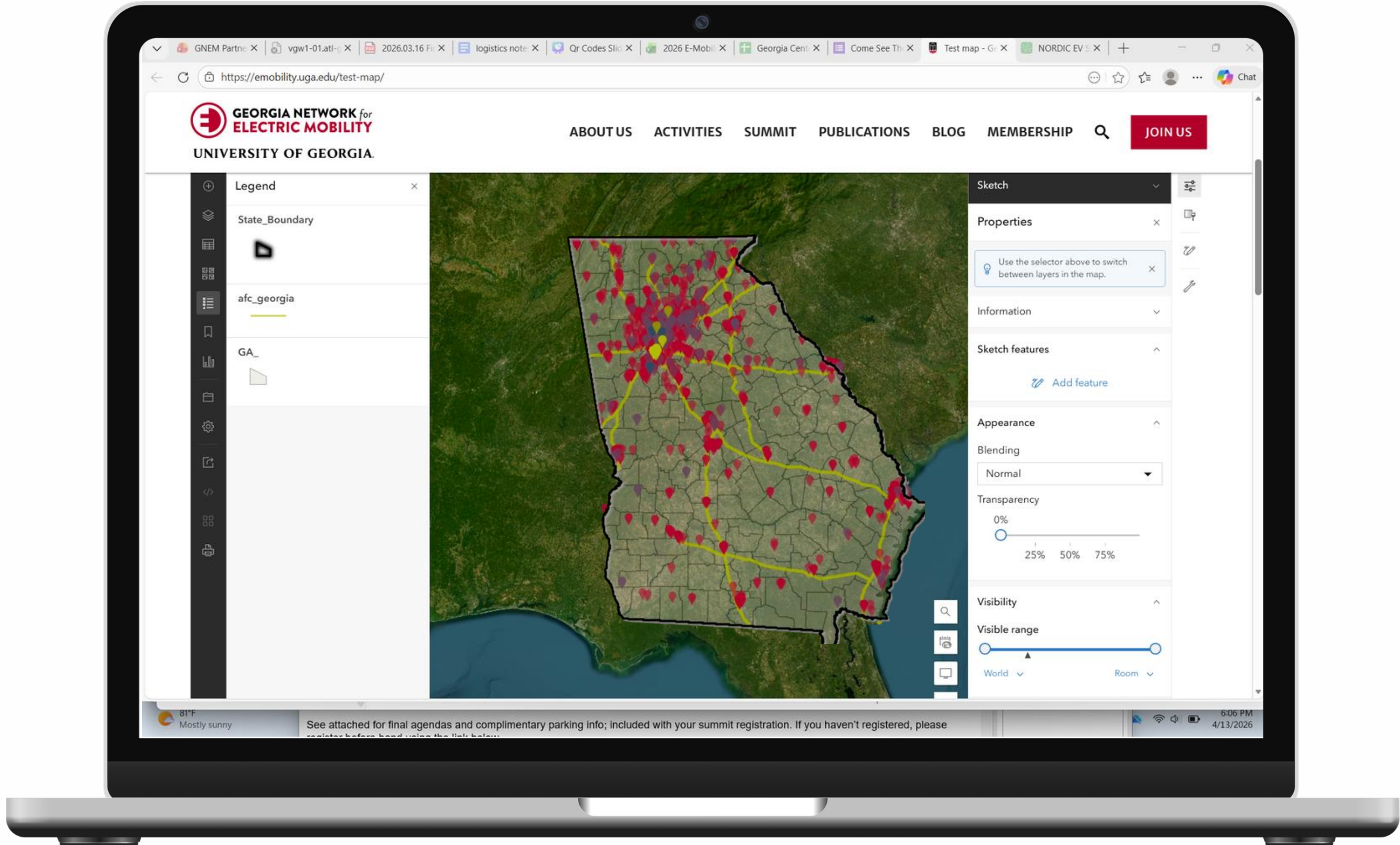
**Public Charging
Need (%)**



**County-level
Public
Infrastructure/
Energy Gap**



INFRASTRUCTURE & DEMAND FORECASTING





GEORGIA NETWORK *for*
ELECTRIC MOBILITY
UNIVERSITY OF GEORGIA



Linked in

CHECK US OUT ON LINKEDIN FOR
EVENT UPDATES, WEBINARS,
PODCASTS, AND MORE