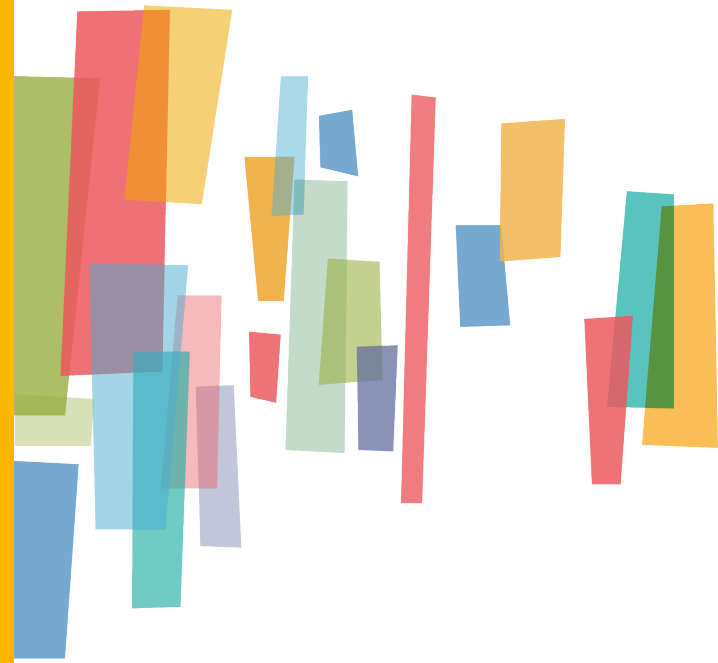


Regional Transportation Electrification Plan

Stakeholder Advisory Committee
Meeting #2

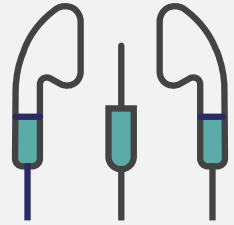
November 29, 2023



ONE
great
REGION

Technical Overview

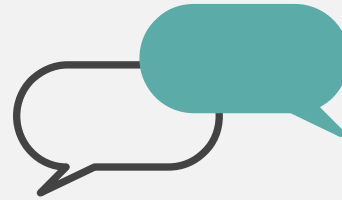
To help this meeting run as smoothly as possible, please consider the following tips:



Use headphones with a microphone



Make sure you are muted when not speaking



Send all questions & comments through the Q&A feature.



You may choose to disconnect from any VPN or third-party connection sources during the meeting to maintain connectivity and bandwidth.



Today's Agenda

Welcome and Introductions

Project Updates

- Updated Vision and Goal Areas
- Technical Work and Findings
- Breakout Discussions

Next Steps



Welcome and Introductions

Stakeholder Advisory Committee Members



Atlanta Region Transit Link Authority
Abby Marinelli, Transit Funding Manager

Fulton County Government
Jessica Lavender, Energy & Sustainability Manager

Metro Atlanta Chamber
Cynthia Curry, Senior Director of Clean Tech and Smart Cities

Southern Environmental Law Center
Brian Gist, Senior Attorney

City of Atlanta
John Seydel, Deputy Chief Sustainability Officer

Gateway85 Community Improvement District
Carolyn Bourdeaux, Special Projects

Natural Resources Defense Council
Patrick King, Transportation Advocate

Town Center Community Improvement District
Alisha Smith, Director, Projects & Planning

Clean Cities Georgia
Frank Morris, Executive Director

Georgia Department of Transportation
Beatrice Shakal, Policy Planning Coordinator

Partnership for Southern Equity
Lavonya Jones, Just Energy Director

Uber
Michele Blackwell, Senior Public Policy Manager

Cox Automotive
Stephanie Valdez-Streaty, Director of Mobility Research and Development

Georgia Green Energy Services
Gavin Ireland, CEO ★

Peachtree Corners
James Nguyen, Transportation Engineer

UGA-Carl Vinson Institute of Government
Shana Jones, Public Service Faculty



Project Updates

Project Milestones

- Completed initial presentation to the Transportation Coordinating Committee (TCC) and ARC Board
- Created project website
- Conducted some of the key stakeholder meetings to assist with existing conditions work and data
- Underway on the draft Needs Assessment report
- Finalizing project vision and goals to inform future project work, implementation strategies, and the final plan into the months ahead



Project Timeline



**Summer
2023**

Project Initiation &
Existing Conditions
Analysis



**Fall 2023/
Winter 2024**

Refining Analysis;
Defining the
Plan's Vision &
Goals



**Winter/
Spring 2024**

Developing the
Plan's
Implementation
Strategies



**Spring/
Summer 2024**

Prioritizing the
Action-Oriented
Implementation
Strategies



Updated Vision and Goal Areas

DRAFT Vision Statements and Themes



#1: Establish a Regional EV Ecosystem

Create a robust and ubiquitous regional EV infrastructure ecosystem that supports electric mobility needs regardless of transportation mode. Coordinate such infrastructure investments to advance, accelerate, and maximize the growth of the EV ecosystem and EV adoption.



#3: Advance Equitable Adoption

Become a national leader in regional transportation electrification by equitably accelerating the adoption of EVs, reducing transportation-related greenhouse gas emissions, and positioning the region's workforce to support EV investments and deployments to maximize community benefits in historically underserved communities.



#2: Economic Growth and Utilization

Concentrate targeted investments in manufacturing to benefit the region's workforce, incentivize job growth resulting in economic gains, and focus investments on EV infrastructure where utilization would be highest.

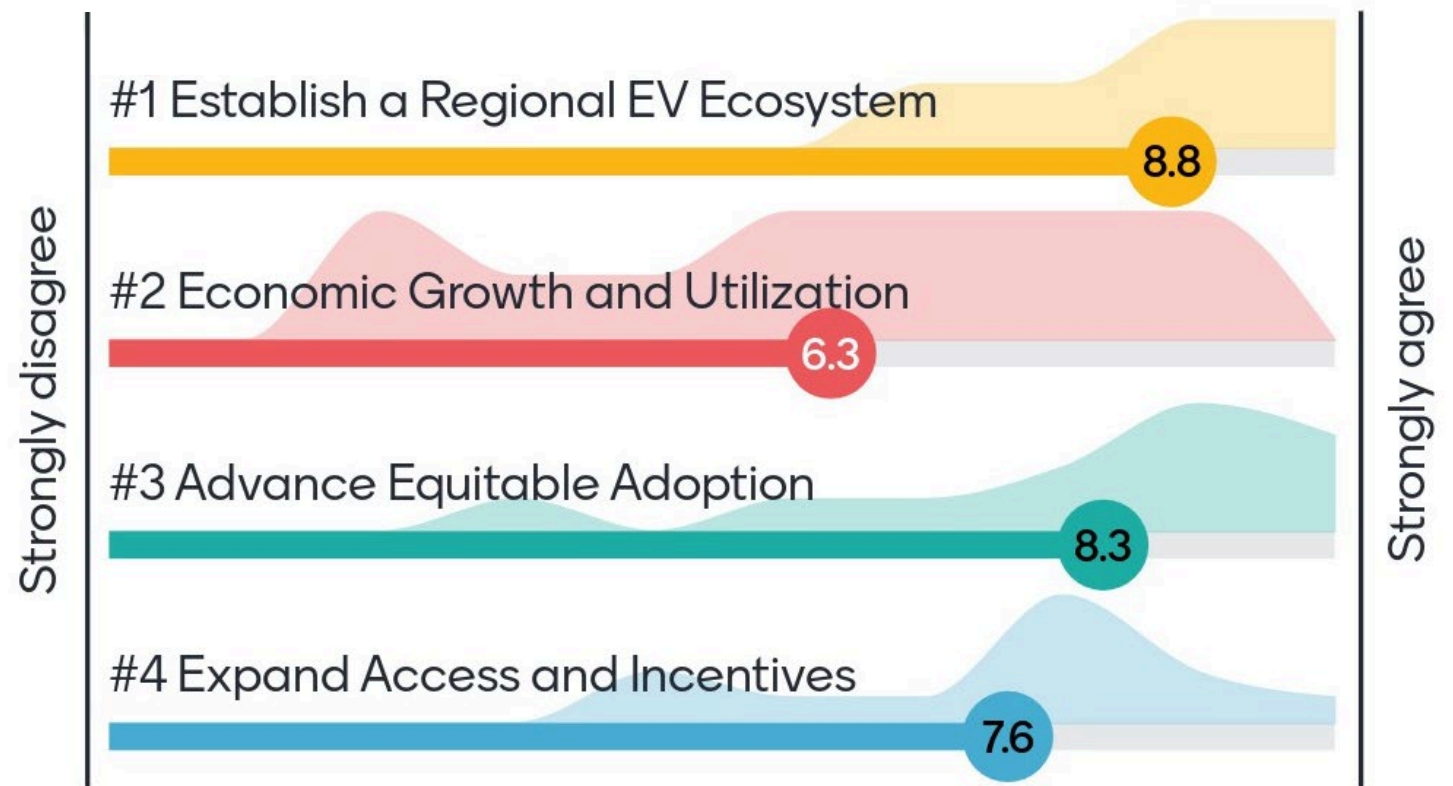


#4: Expand Access and Incentives

Expand public access to E-mobility options and EV charging by removing barriers to infrastructure access, providing incentives that accelerate EV adoption and support, and prioritizing policy actions that share the benefits of electrification with those who need the most assistance.

Meeting #1 Feedback

How well do you feel these statements capture your vision and mission for this initiative?



Meeting #1 Feedback

What, if anything is missing from this vision?

long term sustainability

consumer education

grid stability

ada access

disability

circular

equitable outcomes

safety

collaboration

quantifiable benefits

community buy in

coordinated approach

gap filling

Meeting #1 Feedback

In 2050, what are the tangible examples a resident would give to show that we reached our vision?





Updated Vision

Establish a Regional EV Ecosystem

Lead the southeast in the electrification of our transportation sector by creating a robust and widespread regional EV ecosystem. Our approach will accelerate the equitable adoption of EVs and inform regional EV infrastructure investments to guide the region and meet the needs of the future.

Updated Goal Areas

1 Coordinate Infrastructure Investments

Coordinate regional infrastructure investments to advance and maximize growth of the EV ecosystem for all modes of transportation, reduce transportation-related greenhouse gas emissions, support long term sustainability, and create a resilient and actionable planning tool to advance EV adoption.

2 Accelerate Equitable Adoption

Promote the equitable adoption of EVs and ensure equitable outcomes through robust partner engagement and measurable investments in historically disadvantaged communities.

3 Expand Access and Reduce Barriers

Reduce barriers to accessing e-mobility options and EV charging, incentivize EV use and adoption growth, and prioritize policy actions that share the benefits of electrification with those who need the most assistance.

4 Rapidly Boost Workforce Development and Economic Competitiveness

Position the region's workforce to leverage economic investments in EV related industries, expand career path opportunities, and support a prosperous region for coming generations.

5 Support Electric Grid Stability

Support electric utility grid stability through active and meaningful utility partner collaboration and thoughtful, cooperative planning to anticipate and support EV growth.

Instructions

Go to

www.menti.com

Enter the code

5538 8934



Or use QR code



Technical Work and Findings

The Promise of EVs...

EVs to surpass two-thirds of global car sales by 2030, putting at risk nearly half of oil demand, new research finds

Ford Surges to 20-Year High on Optimism Over Electric F-150

■ Demand for electric cars 'is certainly there,' executive says

Honda and GM Deepen Ties, Promise 'New Series' of Affordable EVs

The two automakers will co-develop compact-crossover models that will arrive in 2027 and could have new solid-state battery technology.

GM CEO Mary Barra Outlines Her Optimistic Vision for 2023

The industry crystal ball may be fuzzy, but GM CEO Mary Barra's future plans clearly include even more EVs and AVs.

And a few of the headlines since we last met...

10/5/2023 3:00:00 AM [Share This Episode](#)

Rivian Is Burning Billions to Build the Ultimate EV Pickup

Rivian's goal to sell the [ultimate electric pickup](#) truck attracted a lot of investors when the company went public. But it's losing money on every EV it builds, raising questions about its future. WSJ reporter [Sean McLain](#) joins host Zoe Thomas to discuss Rivian's plans to bring costs down.

GENERAL MOTORS

Honda, General Motors end partnership to develop affordable EVs together



[Jamie L. LaReau](#)
Detroit Free Press

TECHNOLOGY | PERSONAL TECHNOLOGY: JOANNA STERN

I Visited Over 120 EV Chargers: Three Reasons Why So Many Were Broken

Our columnist's Los Angeles power struggle featured out-of-order signs, payment errors and connection problems

AUTOS

Ford will postpone about \$12 billion in EV investment as buyers become more cautious

Electric vehicles [+ Add to myFT](#)

'The early adopters have adopted': US carmakers slow their EV growth plans

Consumer appetite for battery-powered cars and trucks has fallen short of industry expectations

HOME > TRANSPORTATION

Ford is losing dealers' trust after a rocky year for the EV transition

Nora Naughton Nov 7, 2023, 3:13 PM EST



Planning for Uncertainty is Essential

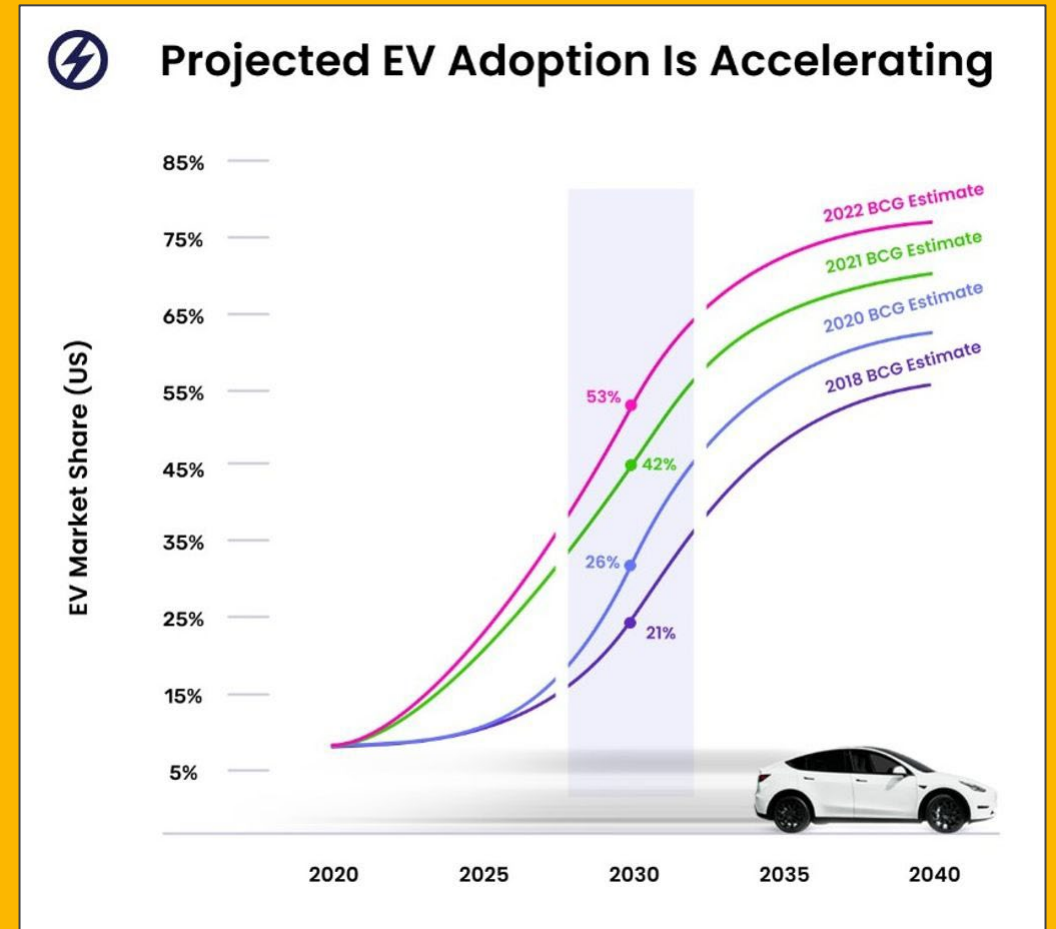
- Developed a Private Adoption forecast to model potential EV growth across the 20-County region.
 - Four different growth scenarios allow for the uncertainty and unpredictability in the market.
- Adoption forecast will inform an estimate of regional charging infrastructure needs.
- Coordination across and within governments, workforce, site hosts, utilities and others will be critical.



Private Adoption of EVs are Forecasted to Grow Exponentially

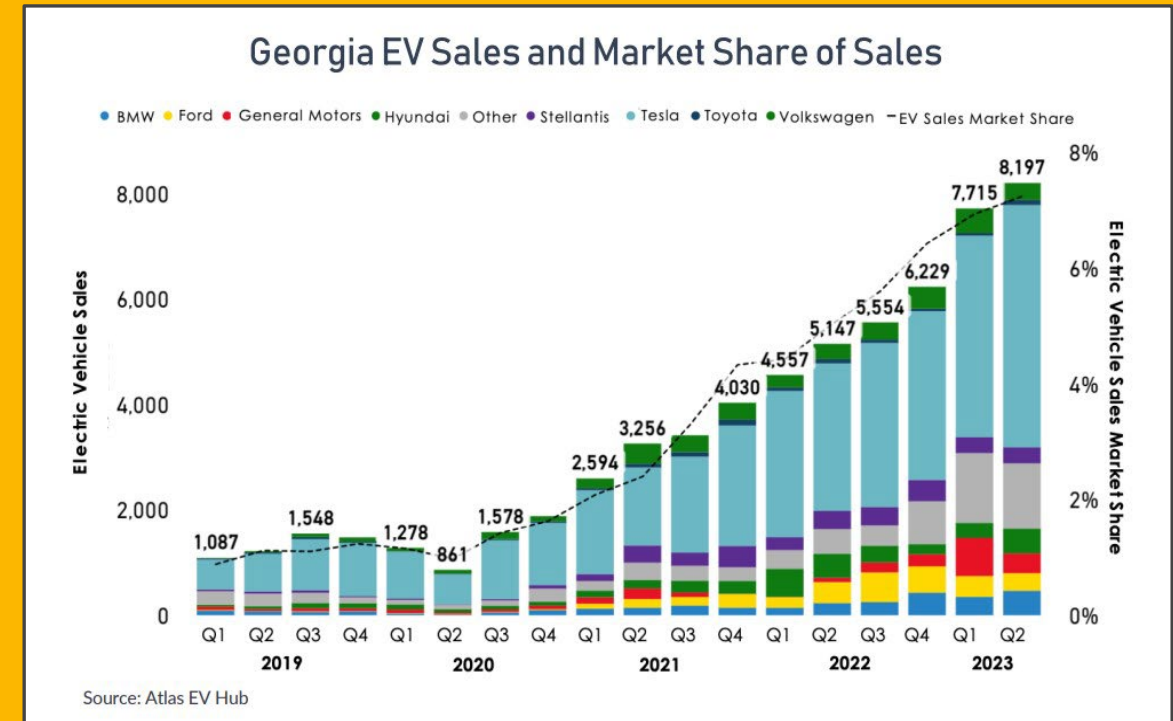
- EV adoption tends to accelerate when EVs represent 5% of new vehicle sales in a given market.
- The S-Curve approach is utilized by Boston Consulting Group, Rocky Mountain Institute, and the International Energy Agency, to model EV growth.

Sources: Alliance for Automotive Innovation, Boston Consulting Group



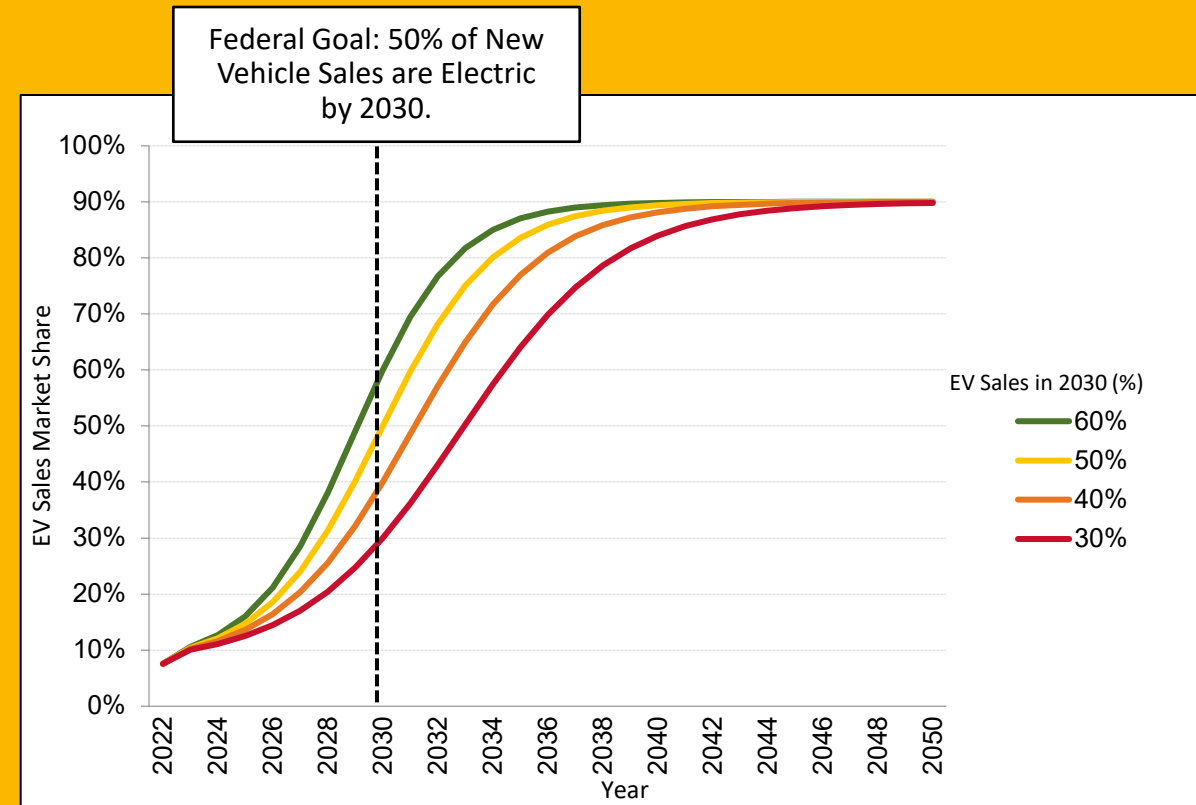
Current State of EVs in Georgia and the ARC region

- EV Market Share in Georgia mirrors U.S. trends
- 84% of registered EVs in Georgia are in the ARC region. Internal forecast results should align closely with statewide projections.
- 2023 Metro Atlanta Speaks: 1 in 3 respondents plan to buy an EV in the next 5 years.



ARC EV Adoption Model

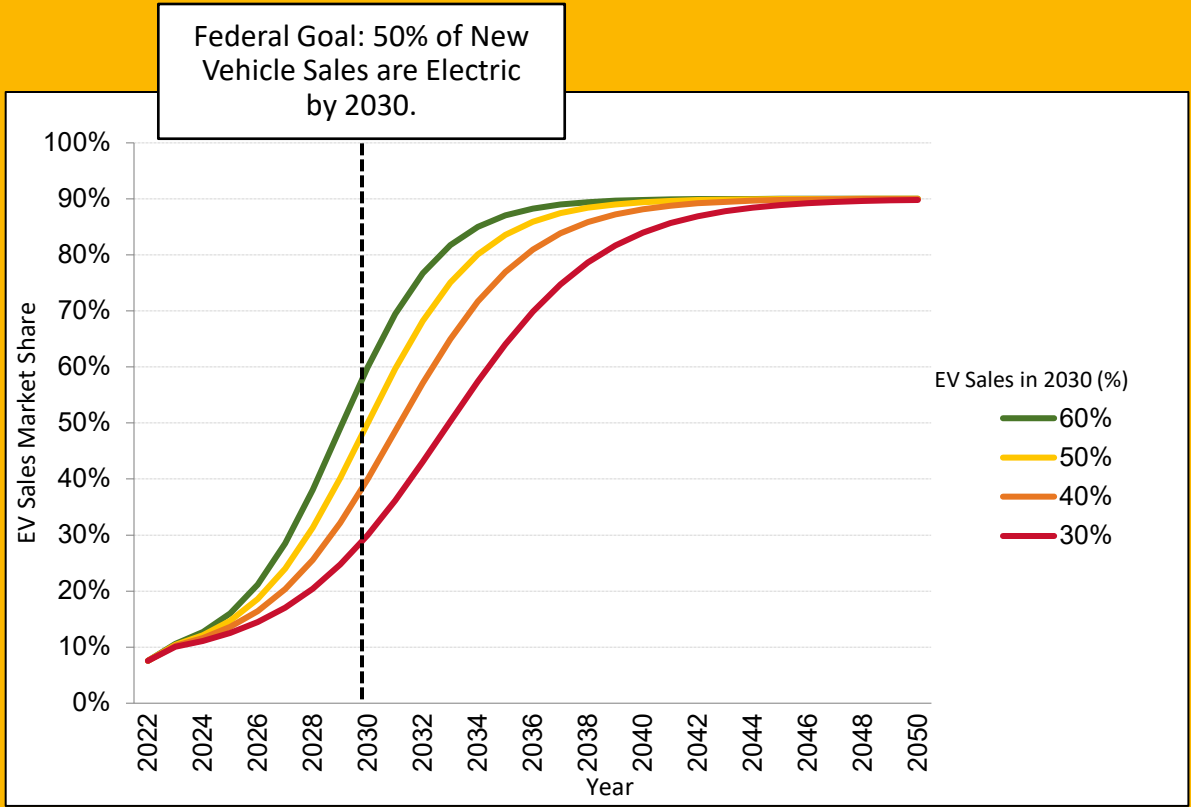
- EV Market Share – the % of new vehicle sales that are EVs.
- Benchmark year is 2030, in alignment with public goals and private industry sales targets.
- Four scenarios:
 - 30% EV Market Share by 2030
 - 40% EV Market Share by 2030
 - 50% EV Market Share by 2030
 - 60% EV Market Share by 2030



ARC EV Adoption Model: New EV Sales

	EV Market Share Scenario			
	30%	40%	50%	60%
Year	New EV Sales			
2022*	18,000	18,000	18,000	18,000
2030	84,000	112,000	140,000	168,000

**Estimated for the ARC region based on statewide sales data*

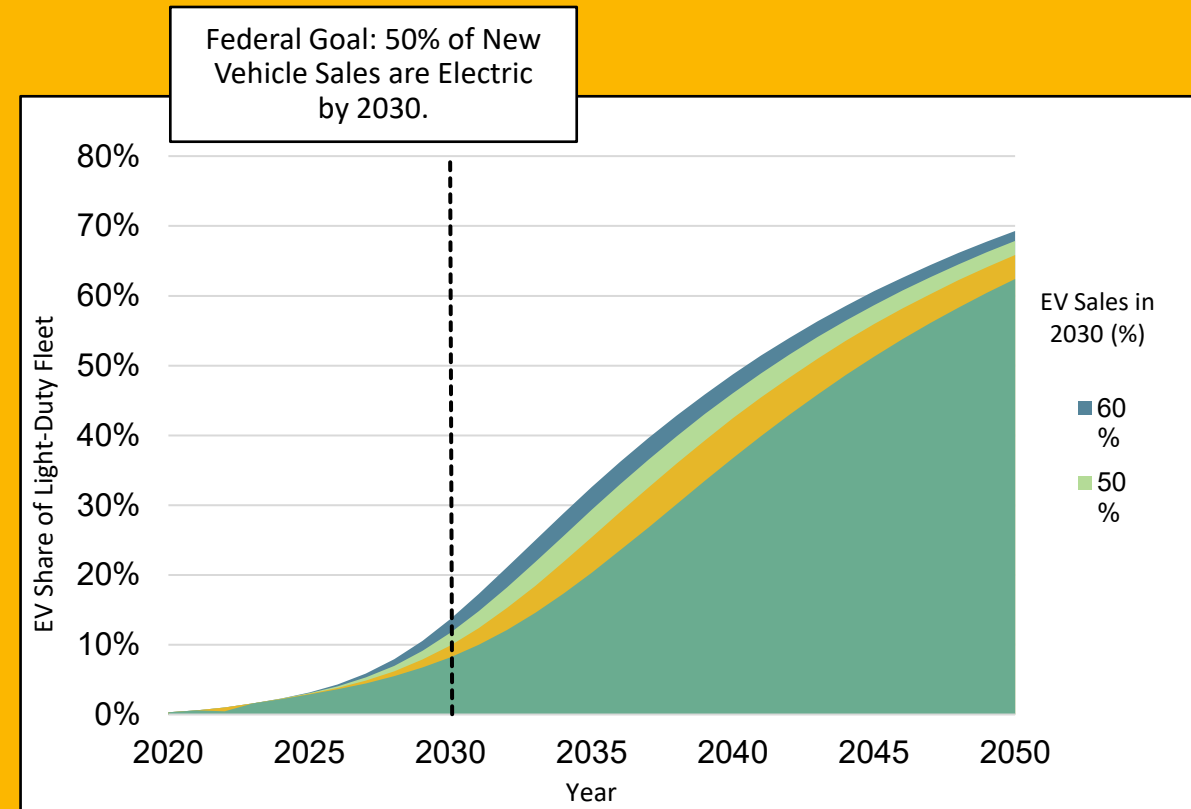


If trends continue, ARC region may experience a 5-9x growth in EV sales over the next 6 years.

ARC EV Adoption Model: EVs as a % of Vehicles on the Road

	EV Market Share Scenario			
	30%	40%	50%	60%
Year	EV Share of Overall Light-Duty Fleet (%)			
2030	8%	10%	12%	14%

Despite potential rapid growth in sales, EVs will remain a small percentage of the overall fleet on the road.



Approach to Modeling Charging Infrastructure

Projected # of EVs on the Road (2030)	30% Adoption Forecast	40% Adoption Forecast	50% Adoption Forecast	60% Adoption Forecast
# of EVs on the road	360,000	436,000	515,000	603,000

As of September 2023, there were 60,000 EVs registered in the ARC region.

- Utilized the **National Renewable Energy Laboratory's EVI-Pro Lite tool** has a total to model EV Charging Infrastructure.
- Strong approximation for regional charging needs.
- Results include needs based on:
 - Single-Family Residential
 - Shared-Private Charging
 - Public Charging: Level 2 and DCFC.



How many charging ports does the ARC region need?

Approach to Modeling Charging Infrastructure

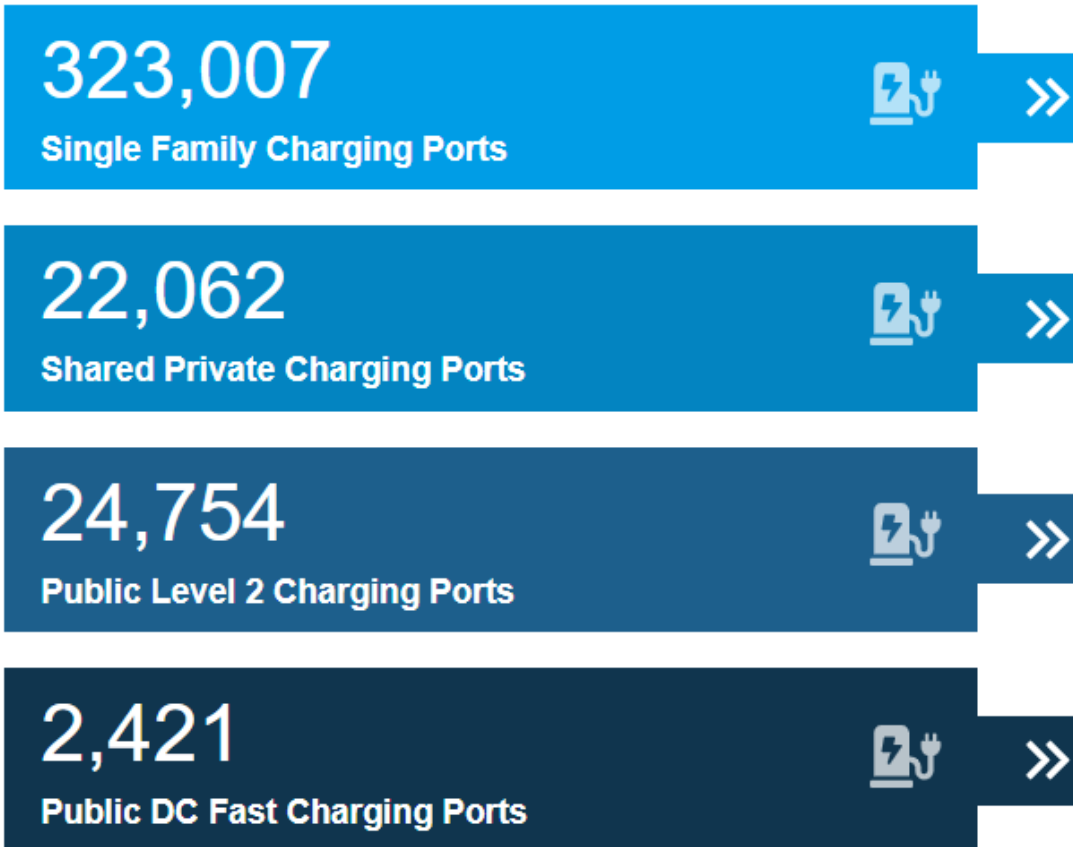
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Charging Port Demand

50% EV Market Share Results by 2030



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- Strong approximation for regional charging needs.
- Results include needs based on:
 - Single-Family Residential
 - Shared-Private Charging
 - Public Charging: Level 2 and DCFC.

Charging Port Demand: Single Family

Key Considerations

- Most EV Charging currently takes place at home.
- This ratio is likely to decrease as non-single-family homeowners and renters become EV owners.

323,007 Single Family Charging Ports



241,545 Single Family Home Level 2 Charging Ports ⓘ

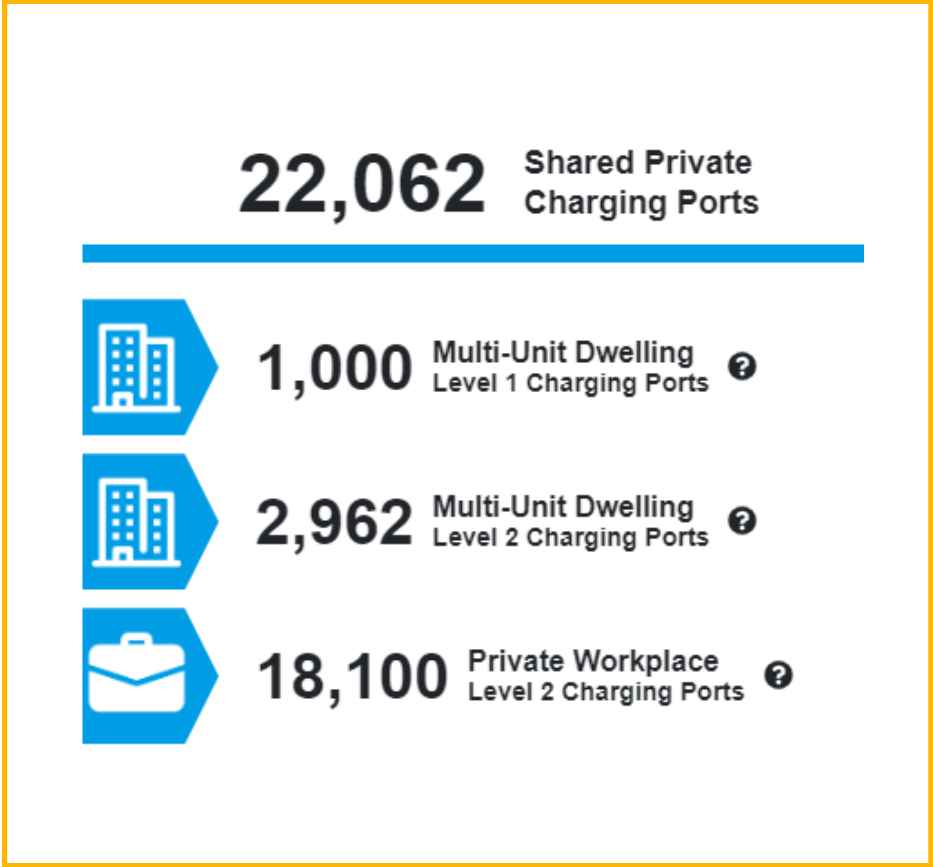


81,462 Single Family Home Level 1 Charging Ports ⓘ

Charging Port Demand: Multi-family and Private Workplace

Key Considerations

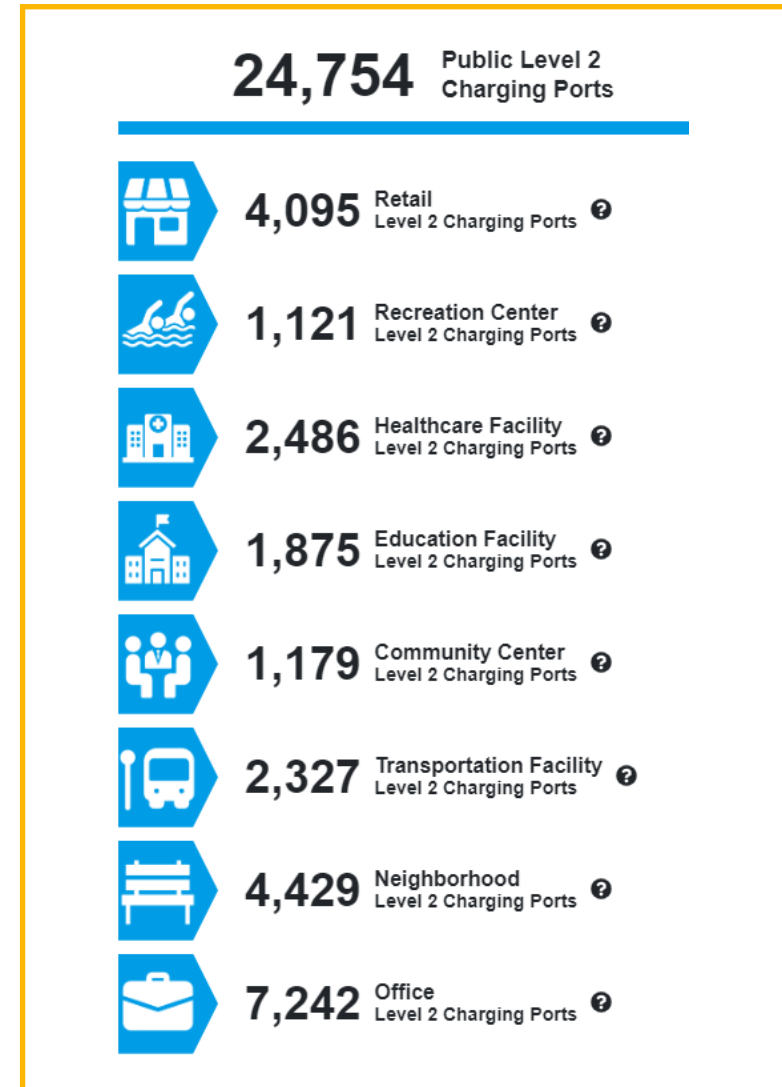
- Shared private charging ports will be necessary to promote EV adoption in non-single family residential populations
 - City of Atlanta’s “EV Ready” Ordinance requires 20% of spaces in commercial and multi-family parking structures be EV ready.



Charging Port Demand: Public Level 2

Key Considerations

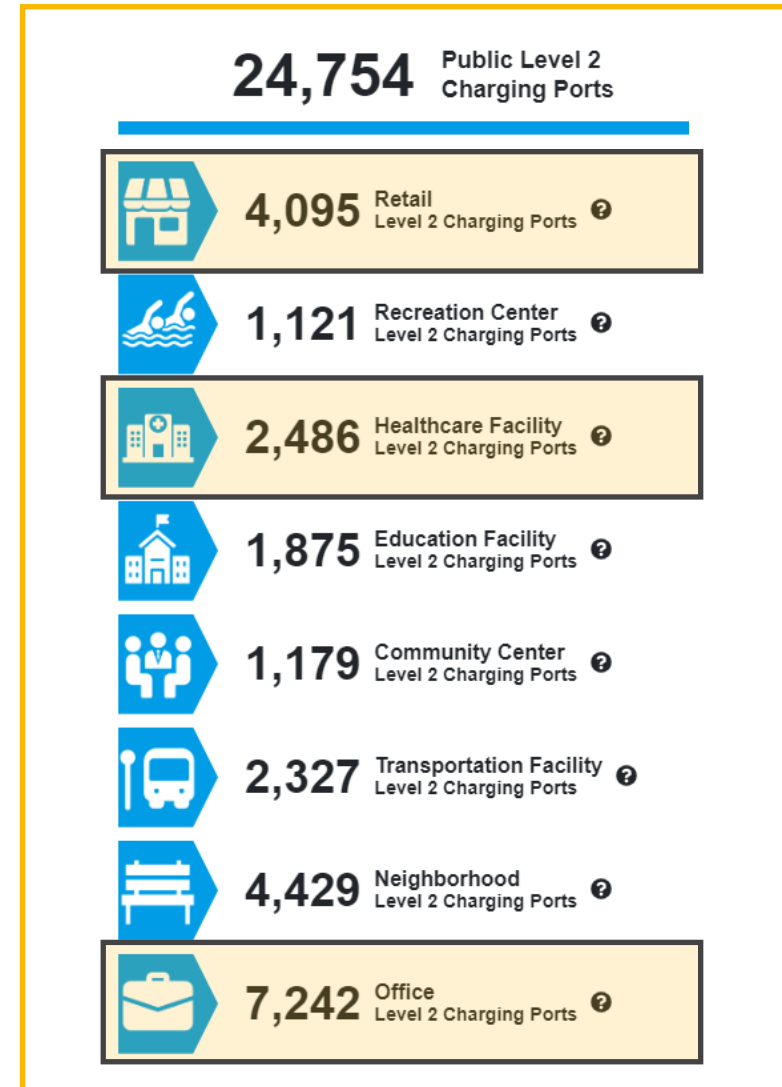
- Publicly accessible level 2 chargers offer an important opportunity to:
 - Improve equitable access to charging across the region.
 - Support additional regional goals (such as supporting small businesses with charging).
 - Require continued coordination between private landowners, private charging manufacturers, and local governments.



Charging Port Demand: Public Level 2

Key Considerations

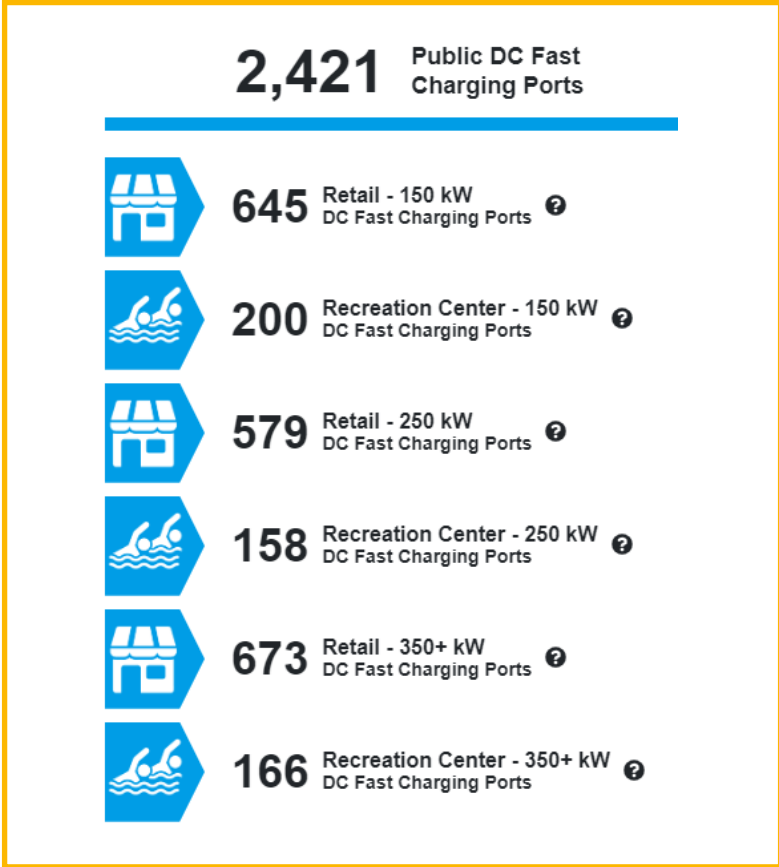
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Charging Port Demand: Public DCFC

Key Considerations

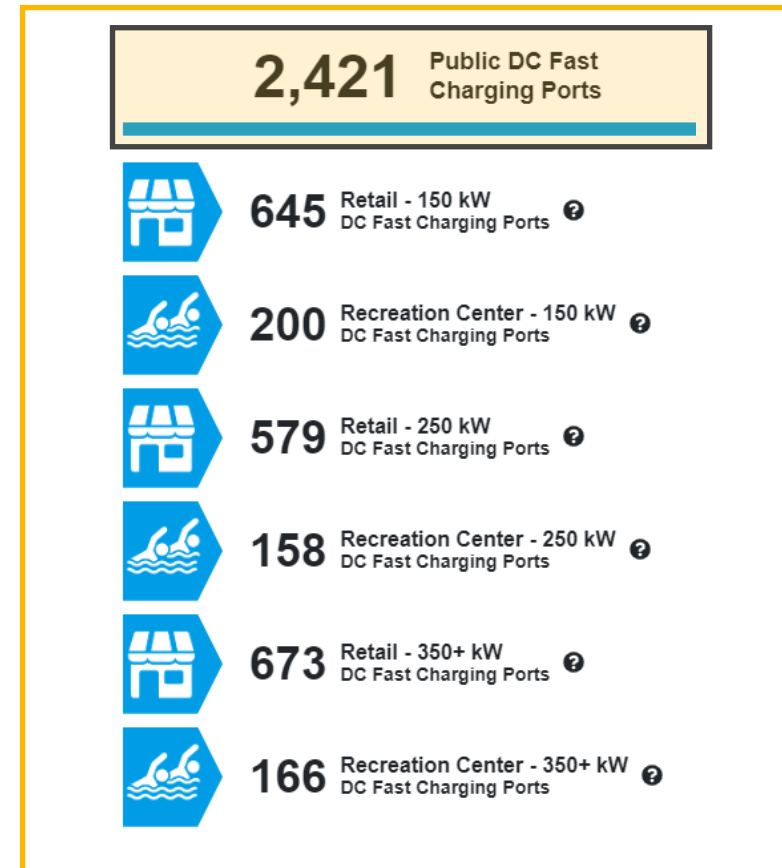
- Infrastructure required is expensive (\$1,000 to \$2,000 per kW)
- DCFC is akin to today's fueling stations



Charging Port Demand: Public DCFC

Key Considerations

- Infrastructure required is expensive (\$1,000 to \$2,000 per kW)
- DCFC is akin to today's fueling stations



Public Charging Needs, ARC Region

Port Charging Level*	Number of Existing Ports**	Number of Ports Needed by 2030	Additional Ports Needed***
Level 2	2,900	47,000	44,100
DCFC	600	2,400	1,800
Total	3,500	49,400	45,900

* Existing and required ports are rounded.

**Charging infrastructure is tracked via Alternative Fuels Data Center (AFDC) database

***Doesn't include single-family residential charging



EV Charging Station Locations



EV charging stations' locations can support additional regional objectives...



Example Objective

Utilize Solar Assets for EV Charging

Ensure Equitable Access to EV Charging

Improve Air Quality

Support Local Businesses

Suggested Location for EV Charging Stations

- Locate EV charging stations where vehicles are likely to be located during the day.
- Locate charging in both residential and workplace locations.
- Locate EV charging on heavily polluted corridors.
- Locate Level 2 or DC Fast Charging stations at restaurants, businesses, and shopping centers.



Building the EV Ecosystem

Breakout Discussions

Building the EV Ecosystem



Mission & Vision

What we are trying to achieve



Goals

How we will measure success



Strategic Roadmap

What we need to build to get there



Strategic Roadmap Focus Areas

- Infrastructure Needs
- Workforce Support
- Partner Preparation
- Public Awareness & Education
- Regional Coordination

Breakout Rooms

Group #1

Infrastructure
Needs

Group #2

- Workforce Support
- Partner Preparation

Group #3

- Public Awareness & Education
- Regional Coordination

Breakout Group Discussion

- What are the primary challenges and opportunities associated with the adoption of EV transportation within your focus area (Infrastructure Needs, Workforce Support, Partner Preparation, Public Awareness & Education, Regional Coordination)?
- How can collaboration be improved to facilitate the transition to EV transportation, and what role does each focus area play in fostering these partnerships?
- What are the short-term and long-term strategies that should be implemented in each focus area to ensure a smooth and efficient integration of EV transportation into the existing systems?
- Are there any themes missing from our strategic roadmap?



Next Steps

Upcoming Listening Sessions

Workforce Development

- Tuesday, December 5, 2023
- Invitees
 - ▶ Georgia Green Energy Services - SAC
 - ▶ WorkSource Atlanta
 - ▶ Technical College System of Georgia
 - ▶ Atlanta North Georgia Labor
 - ▶ Atlanta Iron Worker Union
 - ▶ Goodwill of North Georgia
 - ▶ Lanier Technical College
 - ▶ IBEW Local 613
 - ▶ IBEW Local 84
 - ▶ UGA Electric Mobility Initiative

Community Improvement Districts

- Wednesday, December 6, 2023
- Invitees
 - ▶ Town Center CID - SAC
 - ▶ Gateway 85 CID - SAC
 - ▶ ATL Airport CIDs
 - ▶ Buckhead CID
 - ▶ South Fulton CID
 - ▶ Perimeter CID
 - ▶ Fulton Industrial CID
 - ▶ Midtown Improvement District

Meeting Schedule



Meeting #1

Setting The Vision

October 4, 2023

- Committee education
- Receive consensus on draft vision, mission, and goals
- Identify key areas of concern



Meeting #2

Charting the Path Forward

November 29, 2023

- Review and Input into technical work and findings
- Feedback on the plan's development direction



Meeting #3

Reviewing Draft Recommendations

January 31, 2024

- Project update
- Feedback on draft recommendations



Meeting #4

Final Plan

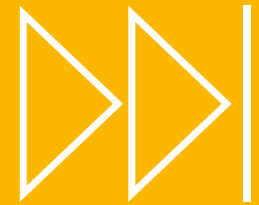
March/April 2024

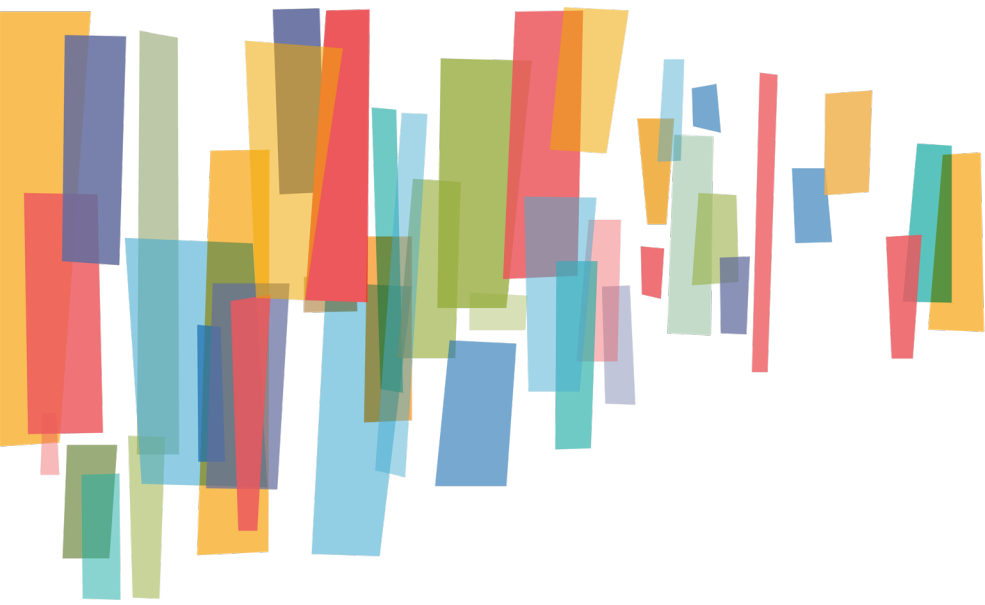
- Presentation of the finalized plan
- Acknowledgment and appreciation of committee members' contributions

Next Steps

Near-Term Priority Actions:

- Hold Listening Sessions
- Refine the Needs Assessment
- Continue to receive feedback from the Technical Coordinating Committee (TCC), Transportation and Air Quality Committee (TAQC), and Land Use Coordinating Committee (LUCC)





Thank You