Regional Transportation Electrification Plan

Stakeholder Advisory Committee

January 31, 2024

ARC
Atlanta Regional Commission
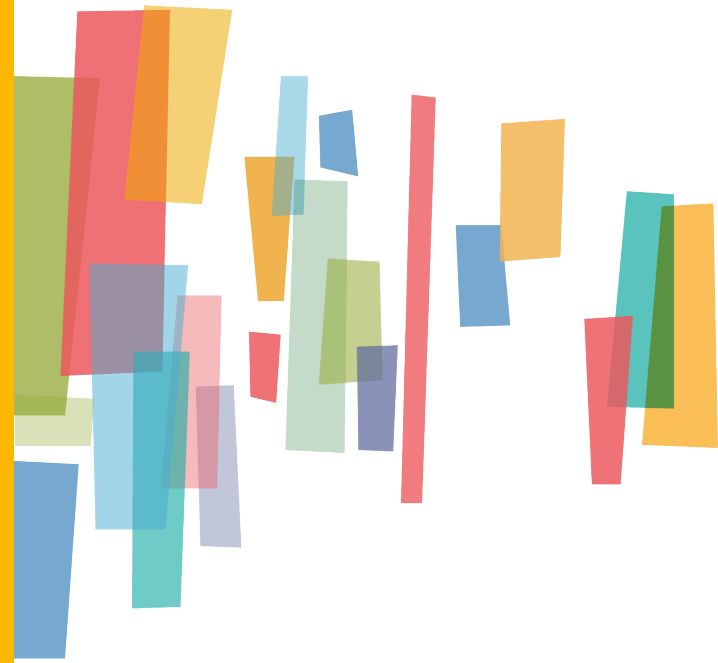
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Today's Agenda

- **Welcome and Introductions**

- **CFI Grant**

- **Engagement Summary**

- **Needs Assessment Updates**

- **EV Charger Planning Tool Demo**

- **Draft Strategies Discussion**

- **Thank You and Next Steps**

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Charging and Fueling Infrastructure Grant

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

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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 #3
Reviewing Draft Recommendations
January 31, 2024
- Project update
- Feedback on draft actions

Meeting #2
Charting the Path Forward
November 29, 2023
- Review and Input into technical work and findings
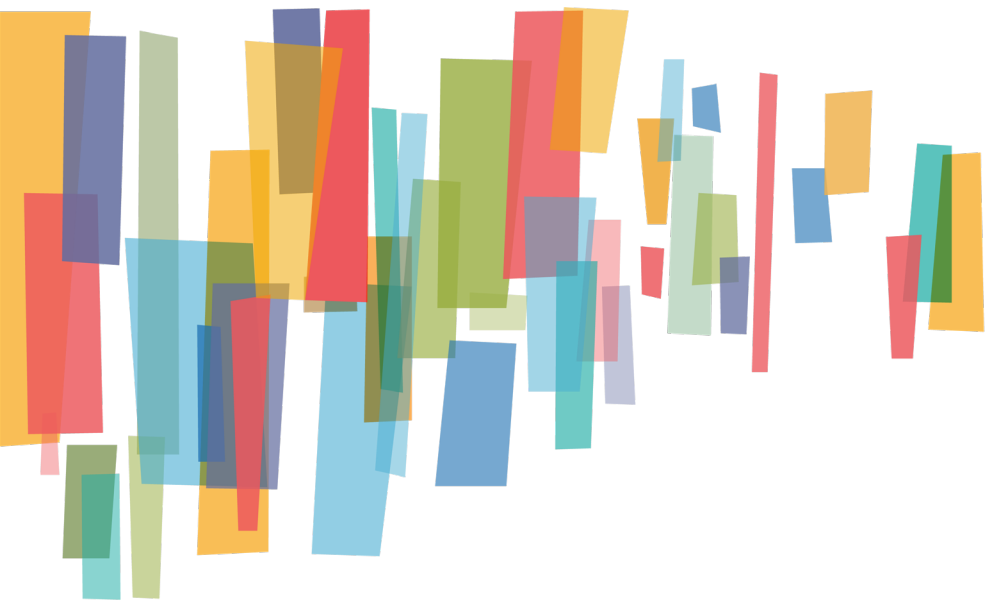- Feedback on the plan's development direction

Meeting #4
Final Plan
April/May 2024
- Presentation of the finalized plan
- Acknowledgment and appreciation of committee members' contributions

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Engagement Summary

Stakeholder Engagement Plan Goals

Outcome-Oriented Engagement Process: Implement an outcome-focused approach that ensures the public and stakeholders are integral to the decision-making process, aligning with the overarching objectives of the RTEP.

Enhanced Communication and Feedback Collection: Cultivate open lines of communication among a diverse array of agencies, stakeholders, and the Project Management Team (PMT), fostering an environment for the exchange of valuable feedback that will play a pivotal role in shaping the RTEP.

Stakeholder Education and Empowerment: Develop educational initiatives that empower stakeholders with comprehensive knowledge about electric vehicles, charging infrastructure, and the broader benefits of electrified transportation, enabling informed contributions to the RTEP process.

Transparent Expectation Management: Provide clear guidance on how stakeholder input will be utilized in the decision-making process, establishing realistic expectations for the role and impact of feedback within the context of the RTEP.

Stakeholder Outreach and Engagement

Entity	ARC Committees	Stakeholder Advisory Committee	Listening Sessions
Membership	Comprises members from existing ARC Committees.	Composed of key stakeholders who are not currently represented on existing ARC Stakeholder Committees.	Consists of stakeholders with potential interests or impacts related to electrification infrastructure.
Role	Provide guidance and strategic direction to inform decision-making and planning processes within the ARC framework.	Assist in prioritizing technical work related to the RTEP process.	Contribute valuable insights that inform decision-making processes.
IAP2 Engagement Goal	Engage in consultation with community members and stakeholders to gather their input and perspectives, enhancing the inclusivity of decision-making.	Collaborate with stakeholders in order to incorporate a diverse range of perspectives, fostering a cooperative approach to transportation and electrification planning.	Involve stakeholders in meaningful discussions and dialogues to ensure that their perspectives are considered during planning and decision-making related to electrification infrastructure.

What we've heard so far

20 STAKEHOLDER SESSIONS

8 UTILITY MEETINGS

100+ STAKEHOLDERS ENGAGED

- Strategic Placement of EV Charging Stations

- Funding, Policy, and Community Engagement for EV Infrastructure

- Coordination and Market Alignment

- Recruitment and Workforce Development

- Economic Development and Small Business Engagement in EV

- Infrastructure Needs and Challenges in EV Adoption

- Public Awareness, Education, and Regional Coordination

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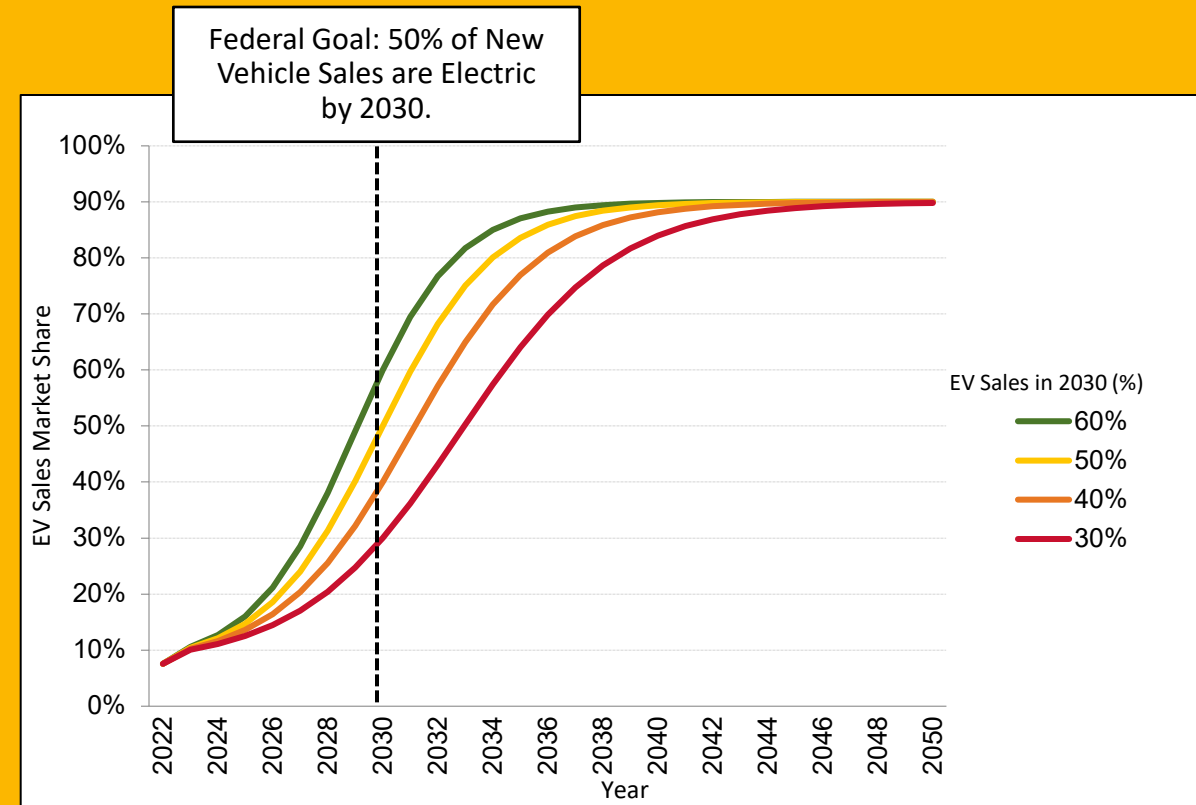
Needs Assessment Updates

Planning for Uncertainty is Essential

- We developed an adoption forecast to model light-duty EV growth across the 20-County region.

  - Four different growth scenarios allow for uncertainty and unpredictability in the market.

- The adoption forecast informs the estimate of regional charging infrastructure needs.

- Coordination across and within governments, workforce, site hosts, utilities and other partners will be critical.
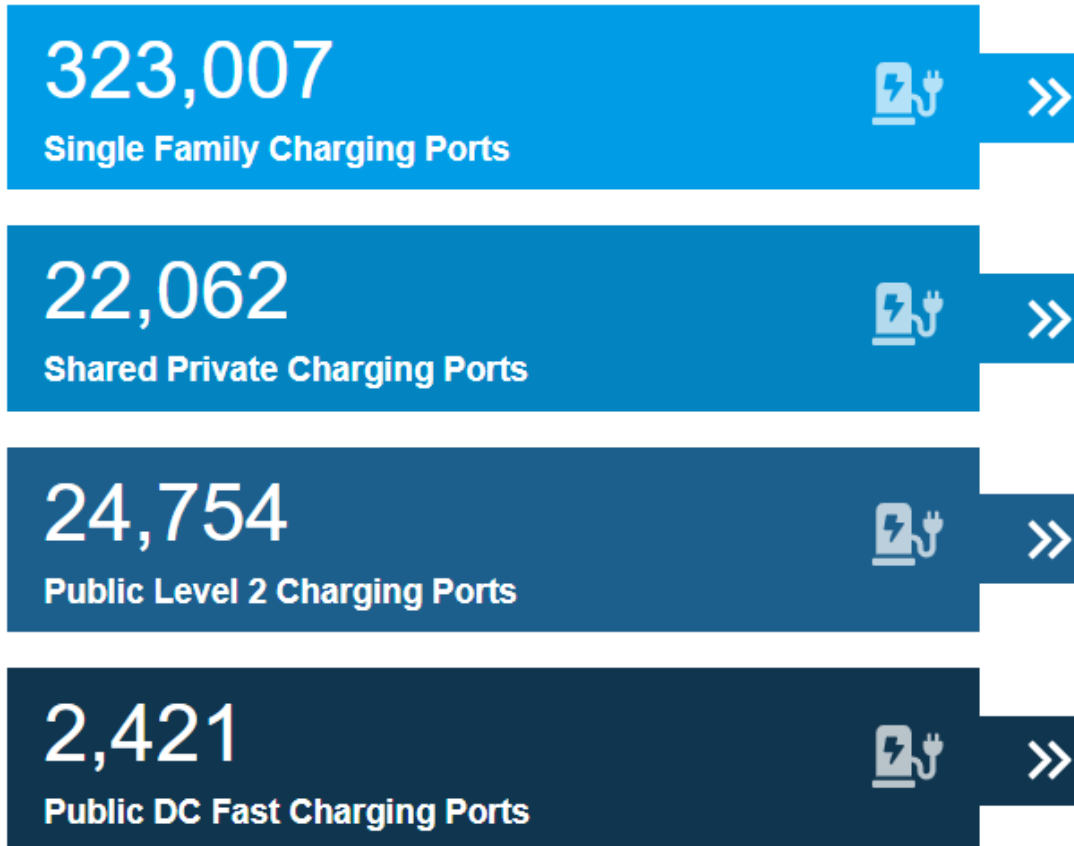
ARC EV Adoption Model

🔋 EV Market Share – the % of new vehicle sales that are EVs.

🔋 Benchmark year is 2030, in alignment with federal 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

Federal Goal: 50% of New Vehicle Sales are Electric by 2030.

EV Sales in 2030 (%)
— 60%
— 50%
— 40%
— 30%

Charging Port Demand

50% EV Market Share Results by 2030

323,007
Single Family Charging Ports

22,062
Shared Private Charging Ports

24,754
Public Level 2 Charging Ports

2,421
Public DC Fast Charging Ports

- Utilized the **National Renewable Energy Laboratory's EVI-Pro Lite tool** 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
  - Public Charging: DCFC.

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Utility Takeaways

- **New EV rate structures promote overnight residential charging.**
  - Utilities are encouraging EVs to charge at night through specific rate structures

- **Additional EVs may add to Peak Demand.**

- **Grid Hotspots, such as freight clusters, auto-dealers, etc., will require early-planning for the distribution grid**
  - Long-lead times for key equipment such as transformers.

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Data Snapshot

EV Registrations by County

- Fulton County leads EV adoption among the region, followed by northern and eastern counties.

- Counties to the south and bordering the MPO boundary have the fewest EV registrations.

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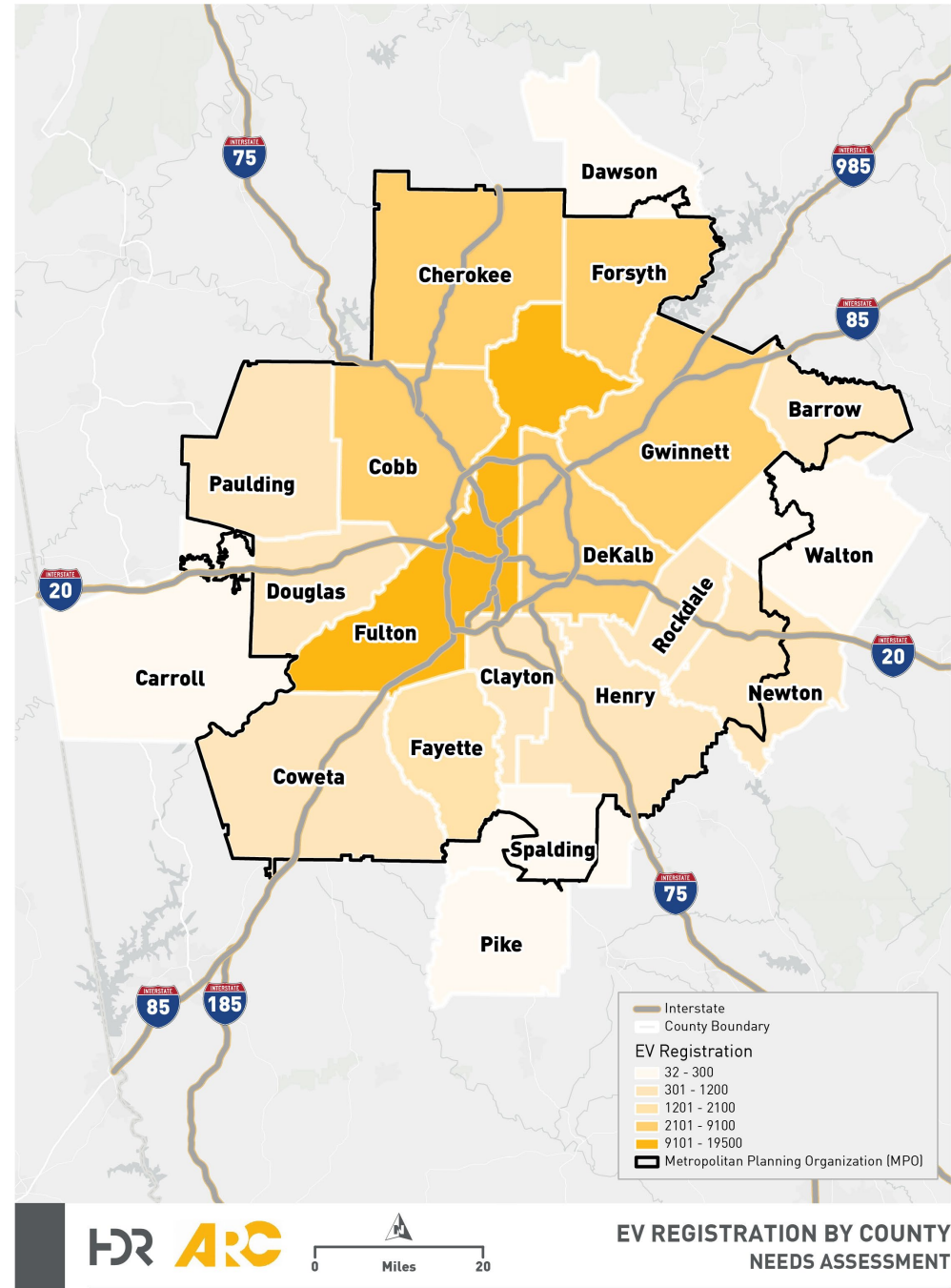
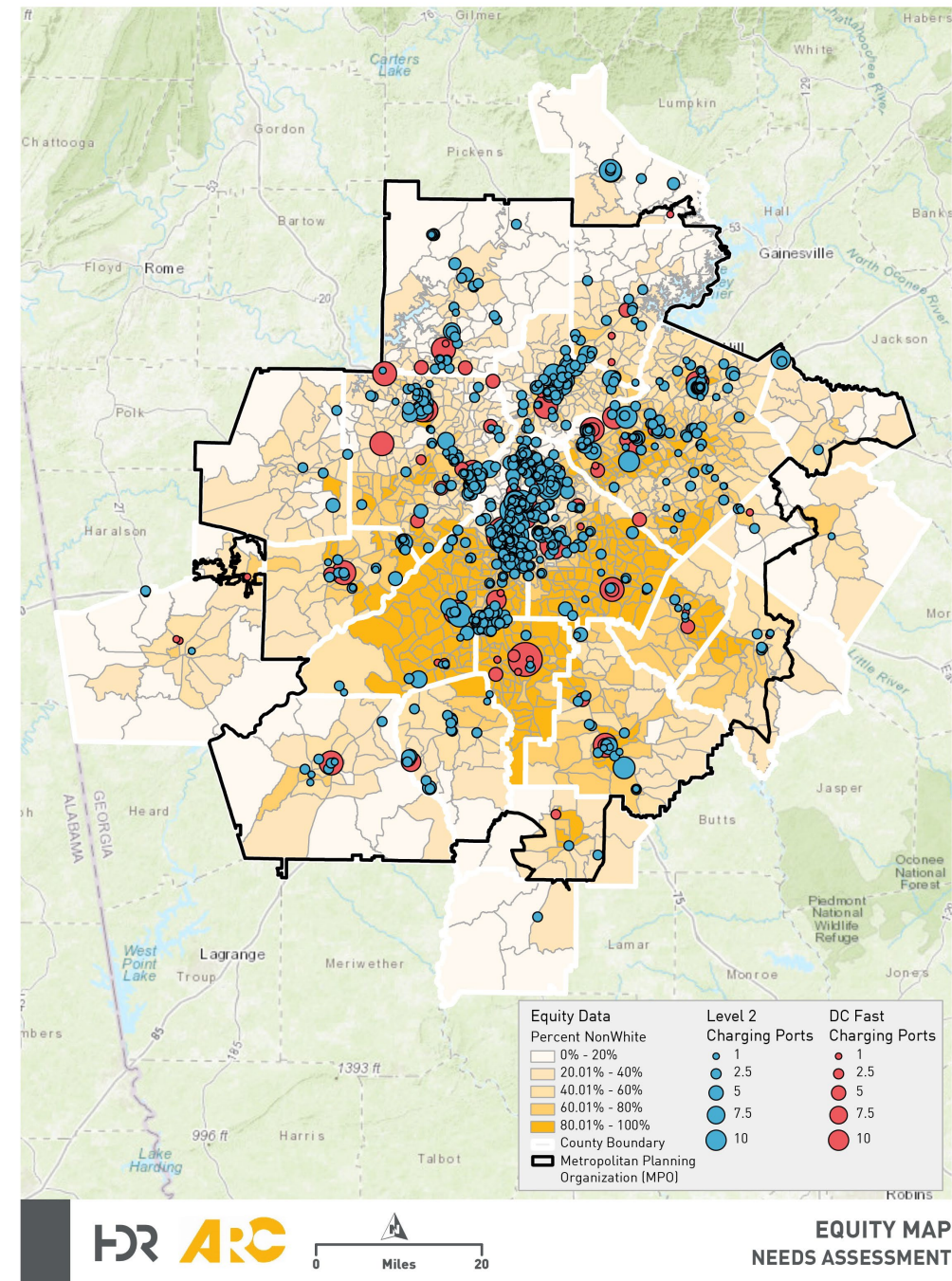# Data Snapshot

Existing Chargers and Justice40 Communities

- The federal Justice40 Initiative is a series of changes to improve how government ensures equitable distribution of the benefits of many programs.

- Overlaying existing chargers and Justice40 communities highlights the lack of current EV charging infrastructure across both urban and rural Justice40 communities in the region.

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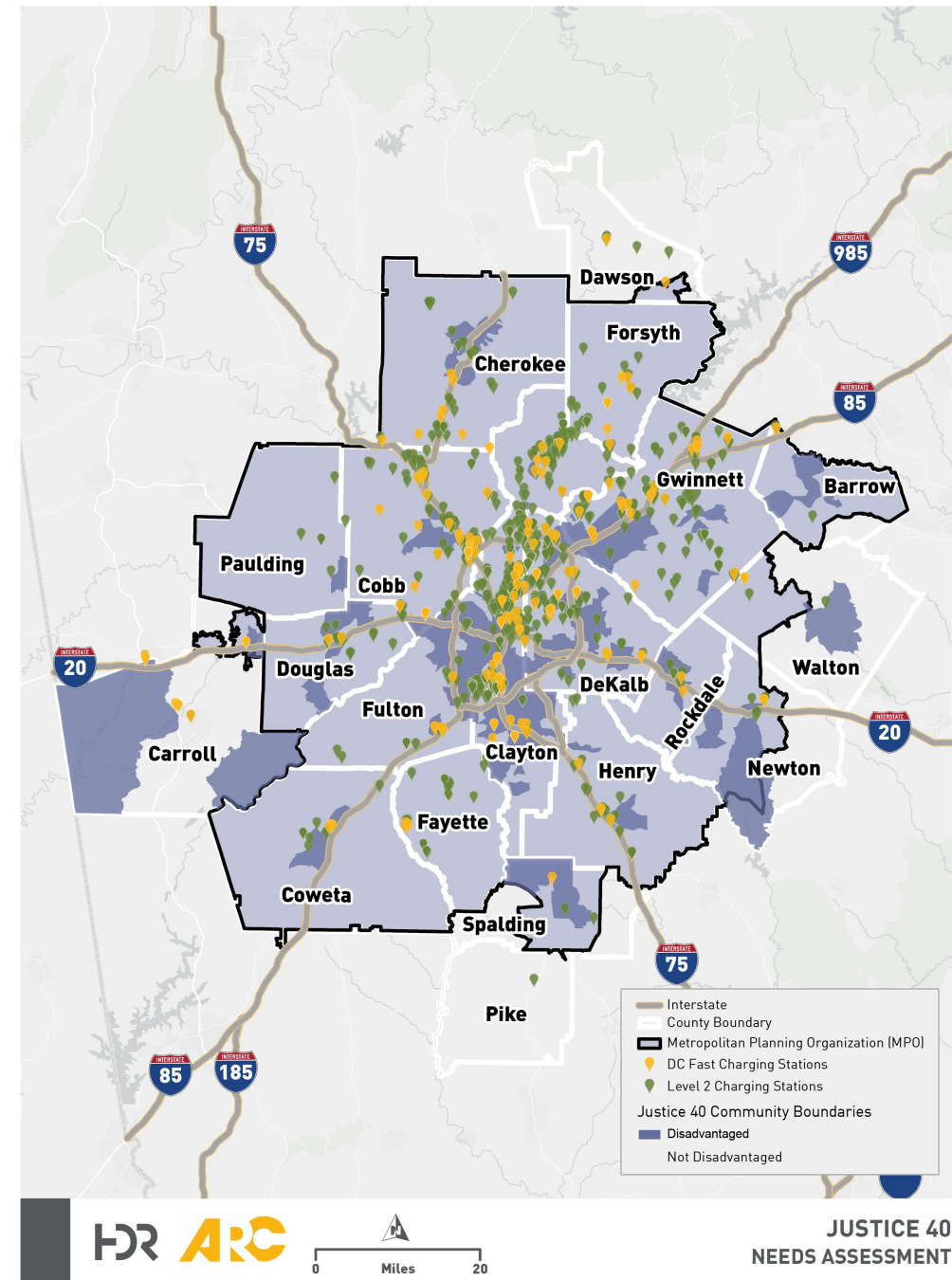
Data Snapshot

Existing Chargers and Percent of Non-White Population

- High percentages of non-white residential areas (deeper yellow in color) have large gaps in existing charging ports.

- Together, these maps provide a visual representation of the inability of existing charging infrastructure to meet the needs of majority non-white or Justice40 communities.


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EQUITY MAP
NEEDS ASSESSMENT

ARC REGIONAL TRANSPORTATION ELECTRIFICATION PLAN

Non-Privately Owned Light-Duty Vehicle Electrification

Ride-share (Pictured to the right).

- Uber and Lyft have made strong commitments to transition to electric vehicles by 2030.

- 115,000 trips on an average weekday across the region.

- Key origin and destination hubs, include downtown Atlanta, the airport, and suburban office clusters.

Government Fleets

- Difficult to estimate the number of government owned vehicles in the region.

- Tax-exempt entities are eligible for the Commercial Clean Vehicle Credit.

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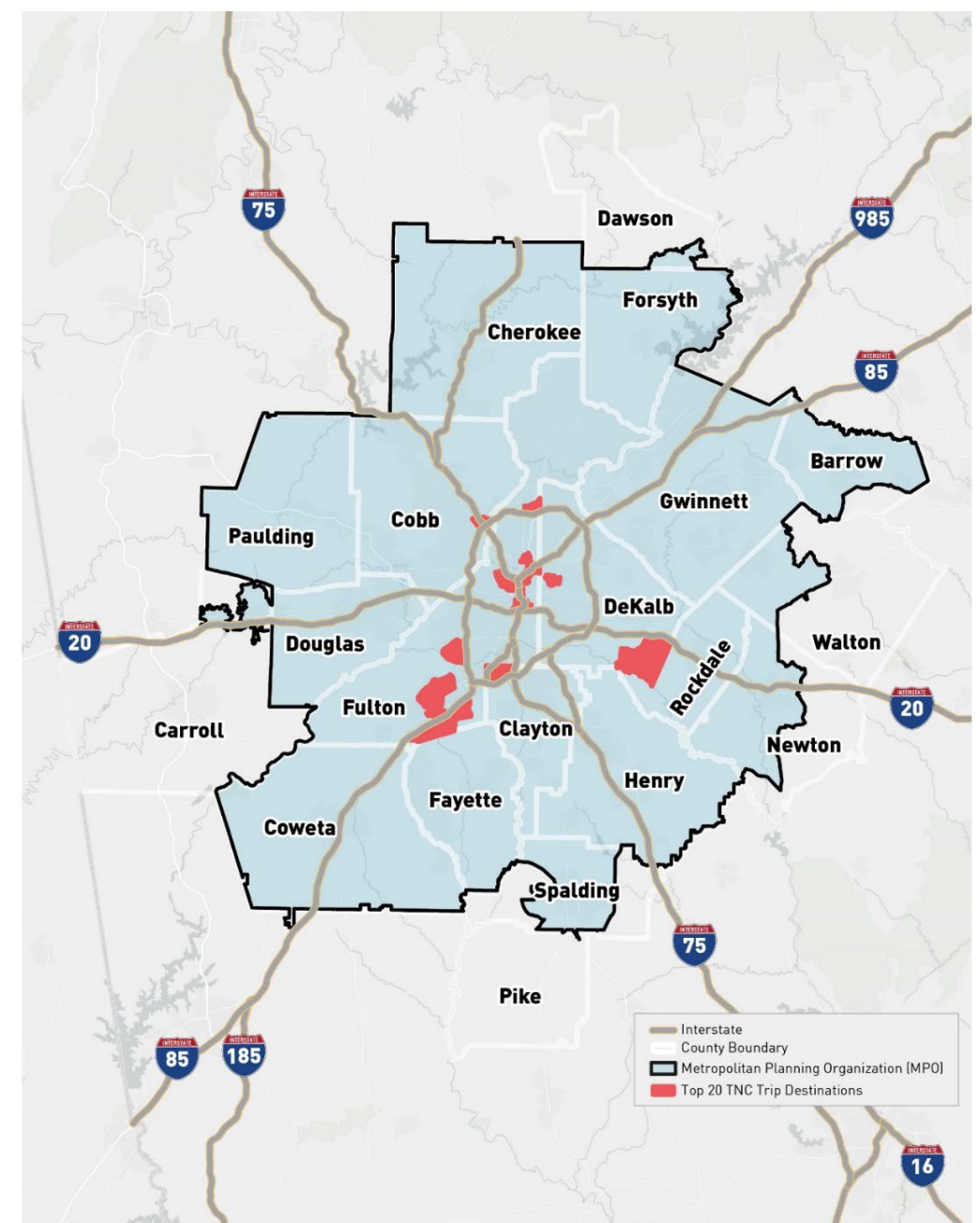
Non-Privately Owned Light-Duty Vehicle Electrification

Transit Vehicles and Infrastructure

- Federal funding has increased significantly in recent years, and vehicle purchases and associated facility upgrades are eligible expenses.

- Local matching funds remain a challenge to access the federal funds.

- Many local agencies are actively planning for fleet transitions and infrastructure upgrades and testing new vehicles and equipment.

- Compared to existing diesel fleets, new zero emission fleets have higher capital costs for buses and initial infrastructure, while still evaluating the total cost of ownership.

- Major decisions are still soon to come regarding the rate of transition and bus choices.

Major Takeaways from the Needs Assessment

- Projected 515,000 light-duty EVs on the road by 2030 (50% Market Share Scenario).

- This market share scenario will require 50,000 non single-family charging ports.

- Given the location of existing charging infrastructure, equity should remain an important priority in the development of the EV Tool.

- Utilities are planning for EVs across the region through incentive programs, rates, and advance planning.

- Federal funding is available to support significant EV adoption in transit, school buses, and municipal fleets.

Locating EV Charging Stations in the ARC Region

Key Assumptions for the EV Tool

- Those with access to at-home charging prefer to charge at home, often overnight.

- Where EVs and autos park throughout the day is a major consideration for charger placement, among other factors.

- The presence of EV Chargers can help drive growth in EV adoption.

The tool will identify key subareas and corridors in the ARC region where EV charging is likely to occur.

EV Charger Planning Tool: Approach and Considerations

- Approach
  - Creates a decision-making tool to help prioritize EV charging corridors and subareas.
  - The web-based tool, **still under development**, will accompany the delivery of the final plan.
  - Tool uses data from American Community Survey, HUD, and Council on Environmental Quality.

- Considerations
  - The tool uses data from an Activity-Based travel simulation that includes electric vehicles.
  - The tool considers housing type, daily miles driven, stop length and land use.
  - The presence of EV chargers will likely shape EV Adoption.

- Use of the EV Charger Planning Tool to guide an ultimate strategy supporting the deployment of charging infrastructure will require further consideration of the unique needs and goals of ARC and its member governments.

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EV Charger Planning Tool: Three Broad Principles

Equity

- Median Household Income
- Population in Non-Single-Family Housing
- Proximity to Jobs
- Stops by Justice40 Residents
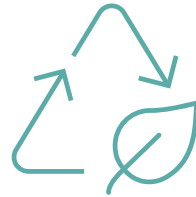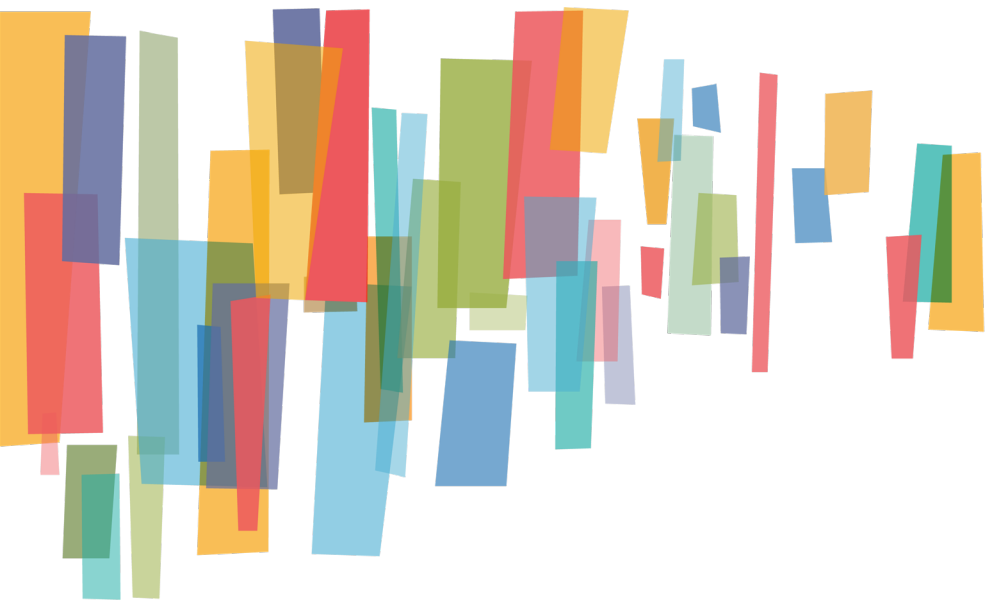
Environment

- Proximity to Traffic
- Air Pollution

Demand

- Stops by EVs
- Stops by Combustion Autos

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EV Charger Planning Tool and Demo

Draft Strategies & Actions Discussion

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Vision

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Mission

Foster thriving communities for all within the Atlanta region through collaborative, data-informed planning and investments.

Values

Excellence | Integrity | Equity

Goals

Healthy, safe, livable communities in the Atlanta Metro area.

Strategic investments in people, infrastructure, mobility, and preserving natural resources.

Regional services delivered with **operational excellence** and **efficiency**.

Diverse stakeholders engage and take a regional approach to solve local issues.

A competitive economy that is inclusive, innovative, and resilient.

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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

Project Vision Statement

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.

Site Hosts
Multi-family, workplace, retail, destination, and public locations where chargers would be located

Local Governments
Ensuring appropriate permitting, zoning, etc. is in place to support charging infrastructure buildout

Utilities
Responsible for managing electric load, ensuring required power is available to be delivered to planned charging infrastructure

Chambers of Commerce and Advocacy Groups
Promoting EVs, marketing and education throughout the region

Workforce
Trained workforce required to build and maintain charging infrastructure

ARC
Champion of a vision to lead the southeast United States in transportation electrification

Local EV Ecosystem

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Plan Strategies

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.

Draft Actions Should ....

- Describe what is needed to carry out the established vision and strategies

- Include both near-term and long-term action steps and recommendations

- Specify if action is regional in nature, a local government action, or a key partner responsibility

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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.

Actions
Align regional funding opportunities and prioritize regional goals, corridors and priority areas.
Create a communications and outreach campaign that increases awareness of available benefits and opportunities of transportation electrification.
Host a regional electrified mobility clearinghouse website with information such as sample templates, educational materials, sample ordinances, steps to make multi-family developments EV-Ready, and how to install a home charger.
Develop community-specific EV Guidebooks.

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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.

Actions
Engage regularly with underserved communities to listen and understand what is working and what is not working to advance electrification efforts.
Measure increases in access to charging utilizing Justice40 criteria and regional priority datasets to identify gaps and inform investment decisions.
Develop and maintain an equity focused EV Resource Guide.
Measure and increase neighborhood access to free-to-access chargers.

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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.

Actions
Develop zero emission fleet transition plans to reduce lifecycle GHG emissions and advance progress towards achieving air quality targets.
Plan for mobility hubs and e-mobility sharing programs in underserved communities to provide increased access to all forms of electrified mobility options.
Communicate cost savings to residents through reduced maintenance and fueling costs, and available rebates for vehicles and chargers.
Install L2 EV charging curbside within the street furnishing zone adjacent to the sidewalk.

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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.

Actions
Develop local training and apprenticeship programs with community partners to support a growing EV market that leverages the region's competitive advantages.
Leverage and expand upon regional partner programs already underway to provide technician training with community colleges, vocational schools, industry partners, and OEMs.
Champion continued industry and business growth in the region and the state related to all aspects of electrified mobility.

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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.

Actions
Carefully plan EV charger installations to inform grid investments that promote resiliency for growing EV charging demand into the future.
Refine time-of-use charging rate structures to best match demand and capacity supply into the future.
Support an increased share of renewable energy inputs into the grid to increase clean energy powering electrified transportation into the future.

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Thank You and Next Steps

Next Steps

Near-Term Priority Actions:

- SAC Homework: Please share additional strategies and actions by Friday, February 9th

- Project team will incorporate SAC feedback into the Implementation Strategies, Interactive Tool, and Draft Report to ARC

- Project team will Report back to ARC Leadership, TCC and TAQC