

# Regional Electrification Plan

GAMPO

09.26.2022



# Agenda



- Why?
- Opportunities
- Current Context
- Regional Electrification Plan

**Why?**

**ARC**

# Electric Vehicle Advantages

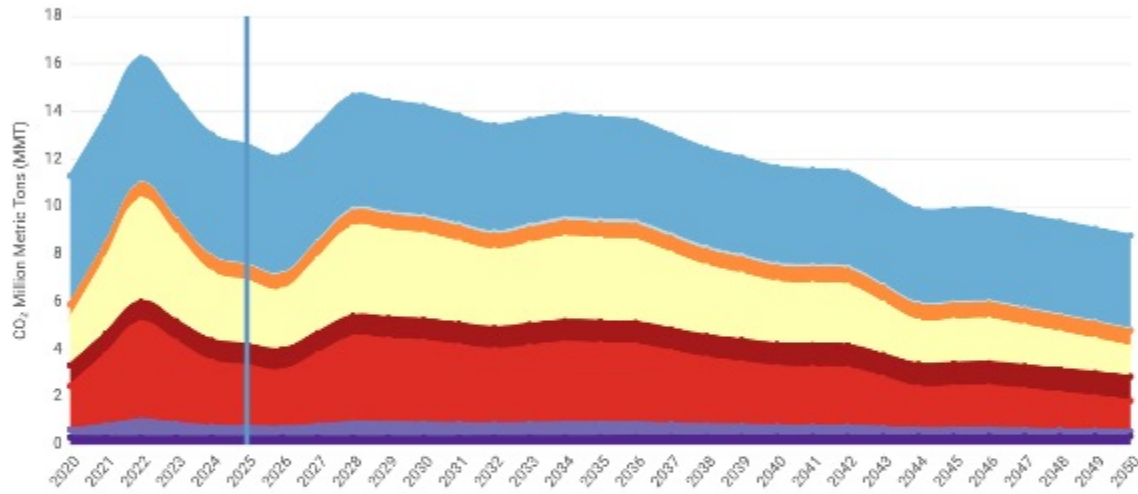
- No tailpipe emissions
- Less maintenance
- Charge using a variety of energy sources
- Flexible energy use
- Will achieve cost parity with ICE (internal combustible engine) vehicles by 2023



# SLOPE Scenario Planner

## Scenario 2: Reference Case

CO<sub>2</sub> Emissions - Fulton, Georgia



### Data Filters ⓘ

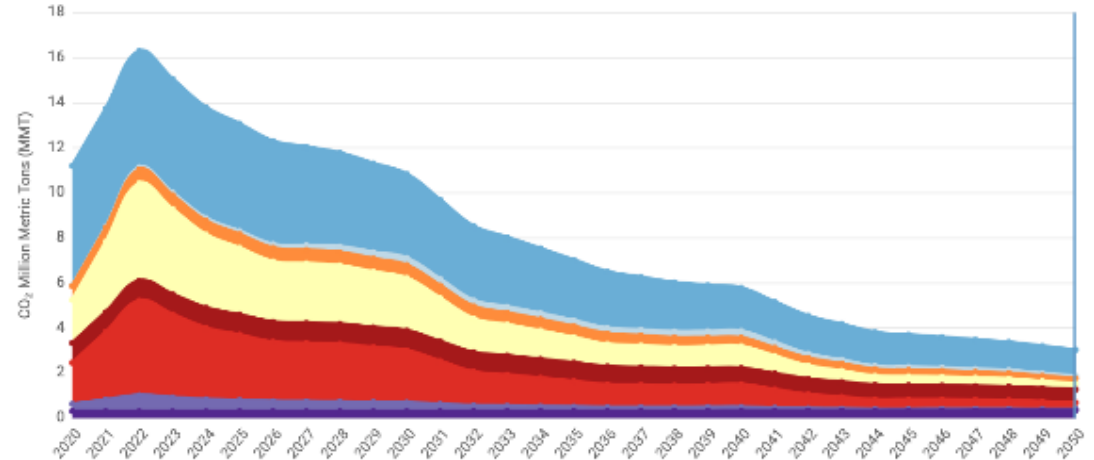
- Transportation Non-Electricity\*
- Residential Non-Electricity\*
- Commercial Non-Electricity\*
- Industrial Natural Gas
- Transportation Electricity
- Residential Electricity
- Commercial Electricity
- Industrial Electricity

\* Non-electric energy demand includes solid, liquid, and gaseous fuels and steam consumed within the buildings, industrial, and transportation sectors

The 2050 business-as-usual scenario projects a 22% emissions reduction from 2020 levels

## Scenario 2: 95% Grid Decarbonization by 2050 & Widespread Electrification

CO<sub>2</sub> Emissions - Fulton, Georgia



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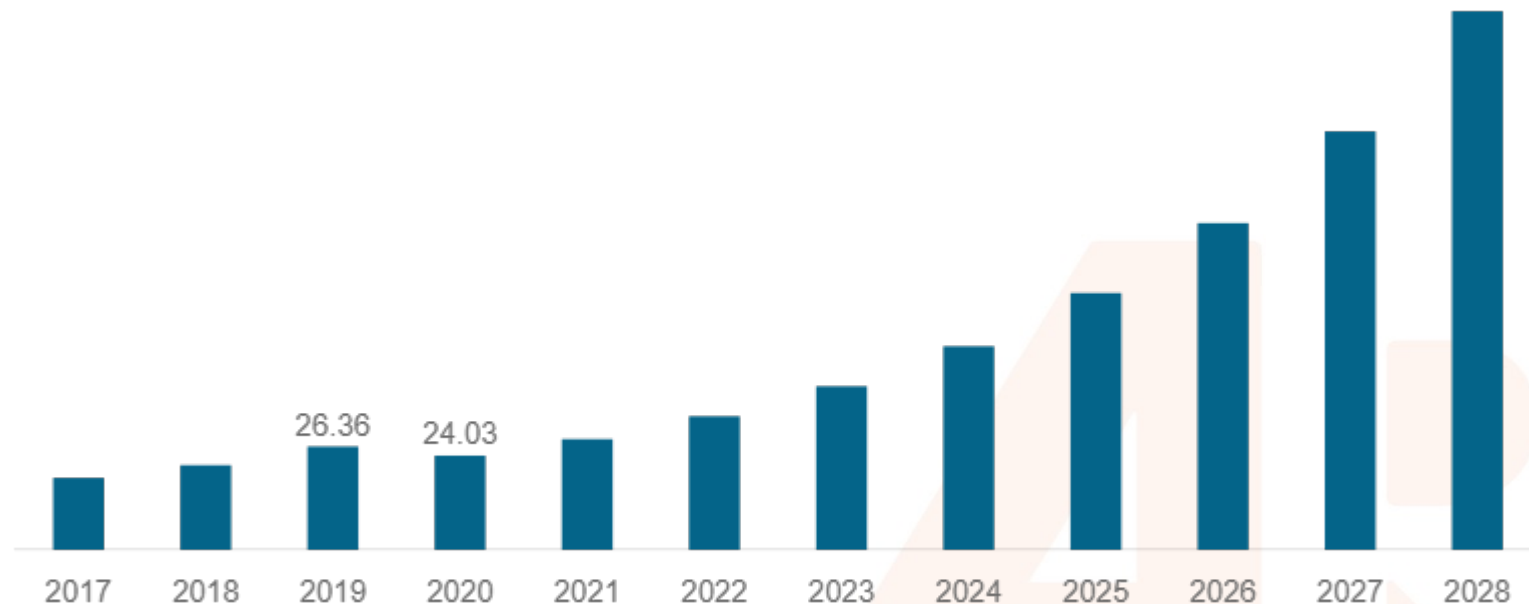
\* Non-electric energy demand includes solid, liquid, and gaseous fuels and steam consumed within the buildings, industrial, and transportation sectors

95% electricity grid decarbonization would reduce emissions 24% by 2050. Widespread adoption of electric vehicles achieves 75% emissions reductions by 2050

# EV Market Growth

- EV share of all new vehicle sales in the US to grow from 3.4% (2021) to 8.5% (2025)
- GA is growing in market share
- EVs will dominate global powertrains by 2037 (49 new models to be released over the next three years, with a range of 200 miles or more - most at 300)

U.S. Electric Vehicle Market Size, 2017-2028 (USD Billion)



**Opportunities**

ARC

# Opportunities & Challenges

- Relative lower cost of electricity in GA
- Gov't, Freight, and Transit Fleet Transitions
- Utility Companies Advancing Electrification
- Inequitable Access to EVs & Charging
- Petroleum Companies Evolving
- Battery Technology and Supply
- Grid Modernization
- Land Use/Built Environment Compatibility
- Shared Mobility Demand and Access
- Local Revenue Generation
- Future Proofing
- State Energy Policies & Programs





## Gov't, Freight, & Transit Fleets

- 650,000 U.S. gov't EVs by 2040
- UPS reserves 125 Tesla Tractors
- 100,000 Amazon EVs by 2030
- Entire FedEx fleet by 2040
- MARTA deploying six e-buses this year
- Local fleet transitions
- School Districts



# Land Use & Built Environment

- Planning & Zoning
- Building Codes
- Parking Design
- Gas Stations
- Retail & Shopping
- Single-Family vs. Multi-Family Residential accommodations
- Curbside Management



**Current Context**

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# Recent Policies and Programs

- Bipartisan Infrastructure Law
  - Georgia will receive \$115 million in EV charging infrastructure funding
- GDOT : National Electric Vehicle Infrastructure (NEVI) Plan
  - Must complete by 8/1/22 before BIL funds can be spent
- ATL : Zero Emission Transition Plan
  - \$1 million plan currently in selection process
- City of Atlanta building code requiring pre-wiring for charging in new construction
- Walton EMC investing in charging infrastructure
- Cox Automotive PIVET fleet electrification program
- Georgia Power ([georgiapower.com/ev](http://georgiapower.com/ev)) :
  - Community Charging
  - Make Ready

# Regional Electrification Plan



# Regional Electrification Plan Overview

## ➤ Timeline

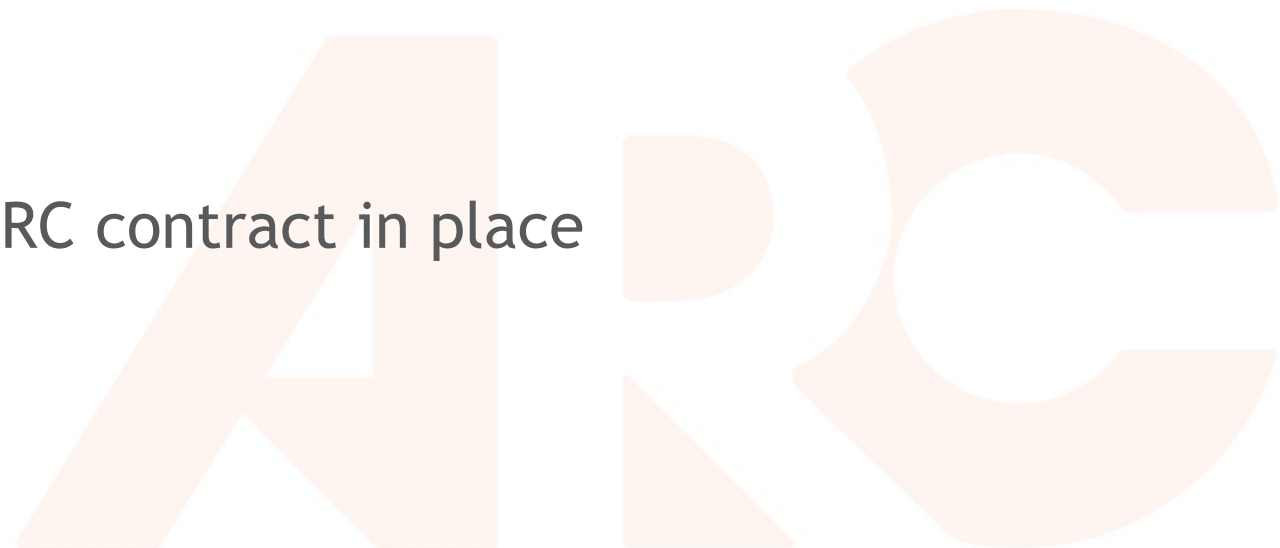
- 12 Month Contract w/ option to extend

## ➤ Budget


- \$500,000

## ➤ Schedule

- Currently working to get GDOT-ARC contract in place
- RFP Announcement to follow



# Regional Electrification Plan Tasks

- Project Management & Stakeholder Plan
  - Needs Assessment (equity, environmental factors, land use, grid capacity, freight, travel patterns, industry conditions, etc.)
  - Regional Transportation Electrification Vision
  - Implementation Strategy Development
  - Final Plan
- 

# Equity

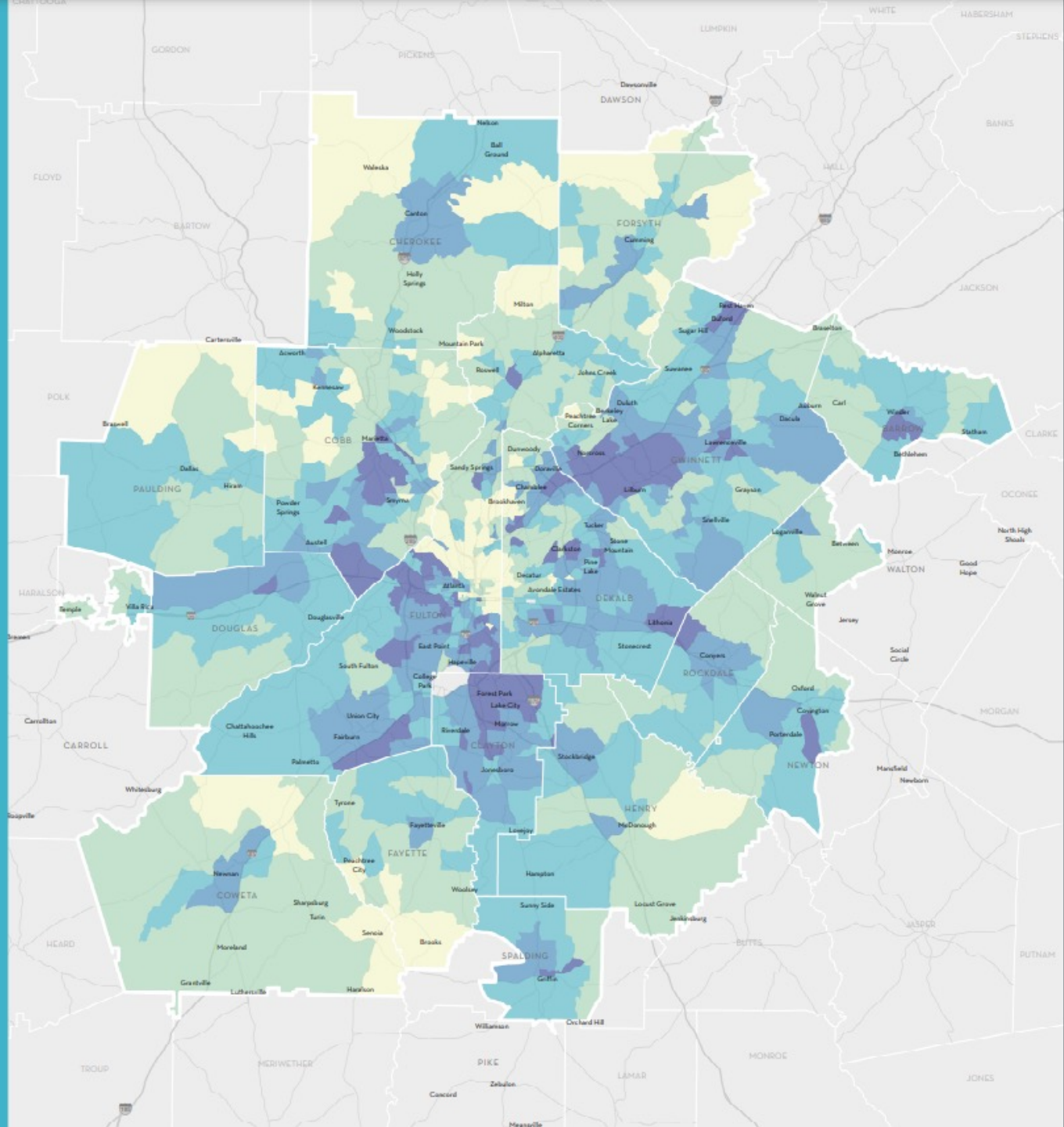
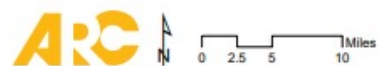
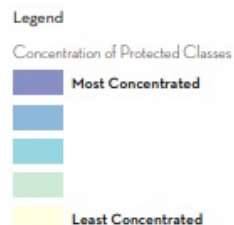
- Accelerating equitable adoption of EVs
- Reducing transportation-related greenhouse gas emissions
- Positioning the region's workforce to support resulting investments and deployments

## Equity Analysis: Protected Classes Model

The adjacent map reflects concentrations of specific demographic and socioeconomic criteria at the census tract level across the region. This analysis is used throughout ARC to demonstrate compliance with Federal guidance and to support equitable treatment of populations identified through environmental justice legislation.

The analysis criteria includes:

- Older Adults
- Youth
- Females
- Racial Minority
- Ethnic Minority
- National Origin
- Limited English Proficiency
- People with Disabilities
- Low-Income



# Thank you

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