DRAWDOWN GA

April 2025

GEORGIA CLIMATE SOLUTIONS REPORT

A snapshot of Georgia's best performing climate solutions and the communities where they are scaling.

EXECUTIVE SUMMARY

How Georgia Communities are Scaling Climate Solutions That Make Life Better

Georgia is making significant strides in implementing the ***Drawdown Georgia 20 Climate Solutions*** that not only reduce greenhouse gas emissions but also improve lives across the state. We call those positive impacts "Beyond Carbon."

With the launch of the ***Drawdown Georgia Solutions Tracker*** in April 2025, we are able to identify the best-performing solutions and the "bright spots" around the state where adoption of sustainable practices is scaling or emerging, and where co-benefits such as public health and environmental improvements, job creation, and greater equity are evident.

This report focuses on the top-performing climate solutions based on four factors

UPTAKE (ADOPTION PROGRESS)

Measures how widely the solution is being adopted across the state. This includes:

- Recent growth trends (e.g., enrollment in demand response programs and EV registration increases)
- Deployment levels vs. original projections (e.g., large-scale solar exceeding forecasts)
- Geographic spread across counties

ACHIEVABLE CARBON REDUCTION POTENTIAL

Refers to how many megatons of CO_2e reduction each solution can contribute toward Georgia's 2030 climate goals, based on updated modeling.

EQUITY (GINI COEFFICIENT, WHERE AVAILABLE)

Measures how equitably a solution is distributed in communities across Georgia. A Gini coefficient of 0 indicates perfect equality, while 1 indicates maximum inequality, so a lower Gini coefficient represents more equitable adoption.

AS A BONUS, CO-BENEFITS

While not strictly numerical, things such as cost savings, public health improvements, resilience, and job creation were considered as tie-breakers or "value amplifiers."

TOP FIVE CLIMATE SOLUTIONS IN GEORGIA

01

ENERGY-EFFICIENT CARS

- **Uptake:** Rapid, exceeding original projections due to updated CAFE standards for energy efficient cars.
- **Carbon Reduction Potential by 2030:** 2.03 Mt CO2e by 2030.
- **Equity:** Market-wide adoption, low inequality.
- **Co-Benefits:** Fuel savings (~$600/car), reduced emissions, improved air quality.

Drawdown Georgia defines **energy-efficient cars as light-duty vehicles that achieve higher fuel economy** such as gas-powered vehicles with advanced fuel-saving technologies (like turbocharging and direct injection), hybrids, plug-in hybrids, and vehicles with stop-start systems that reduce idling.

More Data on Energy-Efficient Cars

FUN FACTS

Electric buses are being adopted at Fort Benning and Fort Stewart military bases and in places like Wilkes County, which has become the first school district in Georgia to serve all of its 25 daily bus routes.

The Atlanta E-Bike Rebate Program launched in June 2024, offering rebates ($500–$2,000) to make e-bikes more affordable.

82%
OF E-BIKE REBATE
AWARDS GOING TO
INCOME-QUALIFIED
APPLICANTS

02

DEMAND RESPONSE

- **Uptake:** Over 335,000 households enrolled.
- **Carbon Reduction Potential by 2030:** 1.37 Mt CO2e.
- **Equity:** Moderate Gini coefficient of .70 for demand response; indirect financial benefits to all ratepayers.
- **Co-Benefits:** Lower energy costs, grid resilience, health gains from reduced peaker plant usage.

Demand response (DR) helps the power grid by encouraging people to use less electricity during busy times. This not only lowers electricity bills for people who participate, but also helps reduce prices for everyone—even those not in the program. That's because **when fewer people use power at peak times, fewer energy plants are needed in operation and energy becomes cheaper overall.**

Compared to some clean energy programs, DR can be more accessible to all state residents. But not everyone can take part easily. Low-income families or renters often have trouble shifting their energy use. They may not work from home, have flexible schedules, or own their heating and cooling systems. These challenges make it harder for them to benefit from DR programs. **To solve this, we need programs that are easier for everyone to join.**

DR also helps the environment and public health. When fewer people use energy at the same time, we rely less on dirty power plants that pollute the air. This means cleaner air and fewer breathing problems, especially in cities and lower-income areas.

DEMAND RESPONSE MAKES OUR POWER GRID STRONGER.

By reducing demand during heat waves or storms, we lower the risk of blackouts. That means more reliable electricity for everyone.

FUN FACTS

Georgia Power's smart thermostat program has 335,000 households enrolled in demand response.

The highest levels of adoption are concentrated in the suburbs and exurbs of the Atlanta metro area, particularly in regions served by electric membership cooperatives such as Snapping Shoals and Sawnee.

More Data on Demand Response

03

RETROFITTING HOMES

- **Uptake:** Expanding via IRA rebates and federal assistance programs.
- **Carbon Reduction Potential by 2030:** 1.64 Mt CO2e.
- **Equity:** Very equitable for heat pumps (Gini 0.22) and LED lighting (Gini 0.09).
- **Co-Benefits:** Energy savings, job creation, indoor comfort, lower utility bills.

Retrofitting buildings—making upgrades like adding insulation or switching to LED lighting—is a powerful solution for reducing energy use and lowering bills. Many retrofits are widely accessible and have already reached households across income levels. For example, adoption of LED lighting, wall insulation, and ceiling insulation shows very low inequality, with Gini coefficients of 0.09, 0.12, and 0.15, respectively.

More Data on Retrofitting Homes

However, not all retrofitting measures are equally available to everyone. **More expensive upgrades—like installing heat pumps or earning eco-building certifications—show higher levels of inequality.** Heat pump installations have a Gini coefficient of 0.22, and eco-certified building adoption is at 0.39, indicating that these benefits are skewed toward wealthier communities.

The most extreme disparity is seen in eco-certified schools, with a Gini coefficient of 0.71, showing that students in lower-income areas are much less likely to learn in energy-efficient buildings.

FUN FACTS

Georgia's Home Energy Rebates program (up to $14,000 for upgrades) is helping homeowners install energy-efficient appliances.

Heat pumps are the dominant form of heating equipment in Georgia's rural counties and are not widely used in metro Atlanta.

RECYCLING

04

- **Uptake:** Over 54% of residents participate regularly.
- **Carbon Reduction Potential:** 1.72 Mt CO2e.
- **Equity:** Broad access, strong industrial reuse infrastructure.
- **Co-Benefits:** Waste reduction, circular economy development, local manufacturing support.

The Drawdown Georgia recycling solution is based on diversion of paper waste from landfills, with a specific focus on recycling at least 20% of currently disposed paper waste annually, as well as an increase in commercial and household recycling.

In the broader Buildings and Materials sector, **recycling is considered one of the more widely adopted and equitable practices,** based on survey data. While a precise Gini value isn't available for recycling, the overall distribution suggests moderate equity compared to other ***Drawdown Georgia Climate Solutions.***

More Data on Recycling

FUN FACTS

Georgia has **over 120 manufacturers using recovered materials,** including the paper pulp and carpet industries.

THE PEACE OF MIND GLASS RECYCLING

initiative in Atlanta has recycled over 12,000 lbs of glass and newcomer Ripple Glass is quickly accelerating the rate of glass recycling in Atlanta.

05

LARGE-SCALE SOLAR

- **Uptake:** Far exceeds 2022 projections (now 4.1 GW).
- **Carbon Reduction Potential:** 4.29 Mt CO2e.
- **Equity:** Widely deployed in rural counties despite community solar inequality. Overall Gini coefficient of .90 for community scale solar; and .97 for utility scale solar.
- **Co-Benefits:** Rural job creation, cleaner grid, economic development.

While Georgia has rapidly expanded its solar capacity, challenges remain in ensuring equitable access to solar benefits across different communities. Rural landowners and utility-scale developers capture most of the financial gains, while urban consumers see limited direct cost savings.

More Data on Large-Scale Solar

GEORGIA NOW RANKS 5TH IN THE U.S. FOR SOLAR INSTALLATIONS AND 2ND FOR SOLAR MANUFACTURING.

Solar farms have contributed to significant job creation, with some estimates that Georgia's solar sector has generated thousands of jobs, with continued growth expected as more projects come online.

Large solar farms require significant land area, which can disrupt habitat. Best practices include co-locating solar installations with agricultural land (agrivoltaics) or prioritizing brownfield and reclaimed sites to mitigate impacts.

With a Gini coefficient of 0.90, community solar is heavily concentrated among a small percentage of the Georgia population, while the vast majority of residents—especially those in disadvantaged communities—have little to no access.

FUN FACTS

Battery energy storage projects (like the ***Hammond BESS project***) optimize solar grid use.

100 MW of distributed generation solar ***to be procured in 2026–2027***.

CLIMATE SOLUTIONS TOP PERFORMERS IN GEORGIA

DRAWDOWN GA	CLIMATE SOLUTION	UPTAKE LEVEL	KEY CO-BENEFITS
01	Energy-Efficient Cars	High	Fuel savings, air quality
02*	Demand Response	High	Energy savings, health benefits
03*	Retrofitting Homes	Moderate-High	Comfort, cost savings, air quality
04	Recycling	Moderate	Waste reduction, manufacturing inputs
05*	Large-Scale Solar	Very High	Job creation, cleaner grid
06*	Composting	Moderate	Soil health, landfill diversion
07	Reduced Food Waste	Moderate	Food access, methane reduction
08*	Electric Vehicles	High	Clean air, reduced fossil fuel use
09*	Climate Smart Agriculture	Growing	Soil quality, farm resilience
10*	Plant-Based Diet	Modest	Health improvement, food system shift

*** More data available in the Drawdown Georgia Solutions Tracker**

CLIMATE SOLUTIONS ON THE RISE IN GEORGIA

COMPOSTING

06

- **Uptake:** Expanding via CompostNow and Georgia Composting Council.
- **Carbon Reduction Potential:** 0.47 Mt CO2e.
- **Equity:** Some disparity (Gini 0.82), mitigated by BIPOC farmer support and free pilot programs.
- **Co-Benefits:** Soil health, landfill diversion, urban agriculture.

Composting facilities are not evenly distributed in Georgia, and the overall Gini coefficient shows a high level of inequality—0.82.

Nine counties in Georgia have composting facilities. Most are near cities, and six of the nine have populations with less than 40% disadvantaged communities, meaning wealthier areas are more likely to benefit.

Two exceptions—Clarke and Barrow counties—don't have major cities but still have composting, likely due to their connection to the University of Georgia's agricultural programs. Similarly, Tift County is home to a UGA Agricultural Extension Center, which offers education on composting and sustainable gardening through programs like 4-H. This may help explain higher composting awareness in nearby rural areas.

FUN FACTS

The Georgia Composting Council was established in 2024.

CompostNow's expansion includes free curbside pickup for 750 families in Avondale Estates.

More Data on Composting

07

REDUCE FOOD WASTE

- **Uptake:** Statewide momentum from Goodr, Bagel Rescue, and Chick-fil-A Shared Table.
- **Carbon Reduction Potential:** 1.20 Mt CO2e.
- **Equity:** Broad outreach and high potential benefit to food-insecure communities.
- **Co-Benefits:** Hunger reduction, economic savings, methane mitigation.

Drawdown Georgia defines **Reduced Food Waste as efforts to cut down the amount of edible food that is thrown away**, especially at the household level. The goal is to reduce about 12% of Georgia's current food waste by 2030.

More Data on Food Waste

FUN FACTS

Goodr and Bagel Rescue are leading food waste reduction efforts, redistributing food to shelters.

Chick-fil-A's Shared Table program has provided over

30 MILLION MEALS

to communities in need.

08

ELECTRIC VEHICLES

- **Uptake:** Scaling with infrastructure in 110 counties, driven by National Electric Vehicle Infrastructure (NEVI) and IRA incentives.
- **Carbon Reduction Potential:** 1.11 Mt CO2e.
- **Equity:** Moderate Gini coefficient (0.48); adoption is still higher in affluent areas.
- **Co-Benefits:** Cleaner air, reduced noise pollution, fuel independence.

Drawdown Georgia defines **Electric Vehicles (EVs) as a climate solution focused on replacing gasoline-powered light-duty vehicles with battery electric vehicles** (BEVs) that produce zero tailpipe emissions.

More Data on Electric Vehicles

FUN FACTS

EV ownership is expanding beyond metro Atlanta, tracking major highways and coastal counties.

Georgia has been allocated

$135 MILLION

under the NEVI program for charging infrastructure.

09

CLIMATE SMART AGRICULTURE

- **Uptake:** Growing through USDA programs (EQIP, CSP, RCPP).
- **Carbon Reduction Potential:** 0.26 Mt CO2e.
- **Equity:** Moderate--all elements of the solution have a Gini coefficient of <.40.
- **Co-Benefits:** Soil fertility, water management, farm resilience.

The Climate Smart Farmer Program (CSFP) is a partnership between Georgia Organics and McIntosh SEED to support Black and Brown farmers from Southeast Georgia with the **adaptation and mitigation tools that build resilience and maintain productivity** in the face of climate change.

More Data on Climate Smart Agriculture

FUN FACTS

Georgia has 9,953,730 acres of land used by farms, with 3,628,707 acres of harvested cropland.

One in seven Georgians works in agriculture, forestry or related fields.

Agribusiness is Georgia's leading industry, with more than

$74 BILLION

in economic impact every year.

PLANT-BASED DIET

- **Uptake:** Led by cultural shifts and brands like Slutty Vegan, which has grown into one of the country's fastest-growing vegan chains with 11 locations.
- **Carbon Reduction Potential:** 0.38 Mt CO2e.
- **Equity:** Gini coefficient of .73, attributed to access to vegan restaurants; public health data supports expansion.
- **Co-Benefits:** Reduced chronic disease risk, lower food system emissions.

Drawdown Georgia defines a **Plant-Based Diet as a shift in eating habits where 25% of Georgians adopt diets that include less meat and more plant-based foods**, such as vegetables, fruits, grains, legumes, and plant-based proteins.

While not a vegan diet per se, the climate solution benefits from the availability of vegan restaurants, which are concentrated in urban areas like Atlanta, Warner Robins, and Albany are having noticeably higher prevalence than other cities.

More Data on Plant-Based Diets

FUN FACTS

Atlanta-based Slutty Vegan is one of the country's fastest growing vegan chains with 11 locations, seven of which are in Georgia.

Researchers found that plant-based diets can decrease a person's greenhouse gas emissions by 29% and their land use by 51%!

CASE STUDIES: LOCAL CLIMATE ACTION IN GEORGIA

There are bright spots across the state of Georgia where ***Drawdown Georgia 20 Climate Solutions*** are scaling, and in some cases, equity (realized or potential) is also present and measurable. While the metropolitan Atlanta area is a large and populous bright spot, **there is strong evidence that climate solutions are emerging and even scaling in other cities and rural and coastal communities in Georgia.**

1

City of Atlanta (Fulton County):

Atlanta is a statewide leader in implementing climate solutions, including:

- E-bike adoption via the city's rebate program
- Composting pilots with CompostNow
- Food waste recovery through Goodr
- Electric vehicle infrastructure expansion

Co-benefits:
Air quality improvements, waste diversion, low-carbon transit access, green jobs.

Read more from Goodr

2

Fort Benning & Fort Stewart

Army installations like Fort Benning and Fort Stewart are deploying electric buses to reduce emissions from their vehicle fleets.

Co-benefits:
Public health improvements, cost savings, and lower greenhouse gas emissions.

Read more from Army.mil

CASE STUDIES: LOCAL CLIMATE ACTION IN GEORGIA

3

AVONDALE ESTATES:

The city partnered with CompostNow to pilot free curbside composting for 750 homes.

Co-benefits: Increases access to composting, reduces landfill load, and builds community engagement.

Read more on Decaturish

4

JONES COUNTY:

This rural county has exceeded expectations in rooftop solar adoption, even with lower technical potential.

Co-benefits: Rural energy resilience and household cost savings.

5

CLARKE AND BARROW COUNTIES:

Proximity to the University of Georgia supports widespread composting infrastructure and training.

Co-benefits: Soil fertility for local agriculture and access to organic amendments.

6

FLOYD COUNTY:

The former Plant Hammond coal facility is now home to a 57.5 MW battery energy storage project.

Co-benefits: Enhances grid resilience and repurposes old fossil fuel infrastructure.

Details from Georgia PSC

GEORGIA CLIMATE SOLUTIONS
BRIGHT SPOTS BY CATEGORY

GEORGIA CLIMATE SOLUTIONS BY LOCATION

What's Possible by 2030?

009 Mt
ELECTRICITY

004 Mt
LAND SINKS

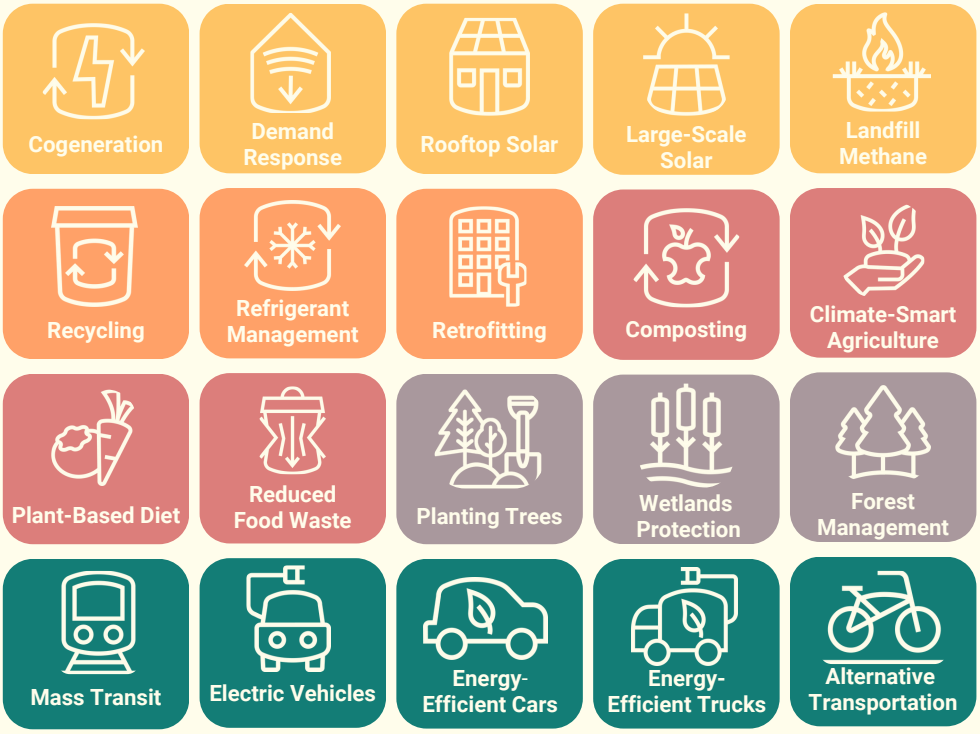
003 Mt
FOOD & AGRICULTURE

007 Mt
TRANSPORTATION

004 Mt
BUILDING & MATERIALS

CITY/COUNTY	CLIMATE SOLUTIONS	CO-BENEFITS
Atlanta	Mass transit expansion, rooftop solar adoption, CompostNow composting, e-bike rebate program, food waste recovery	Improved air quality, mobility for underserved communities, reduced food waste, urban heat reduction, equitable e-bike access
Fulton County	Electric bus adoption in schools	Clean transportation, public health improvement, educational equity
Fort Benning (Chattahoochee County)	Electric bus deployment	Clean mobility, improved air quality on military base
Fort Stewart (Long County)	Electric bus deployment	Clean mobility, improved air quality on military base
Jones County	Higher-than-expected rooftop solar adoption	Equitable energy access despite lower technical potential
Floyd County	Hammond Battery Energy Storage Site	Grid modernization, repurposed coal plant site, highlighting adoption disparity
Gwinnett County	Bagel Rescue, food waste reduction in schools	Food access, waste diversion, community support
Cobb County	Composting facility	Waste diversion, equitable composting access
Clarke County	Composting facility near UGA, organic fertilizer use	Soil health, higher compost use in agriculture
Barrow County	Composting facility near UGA	Support for conservation agriculture
Tift County	Tift County Ag Extension Center (implied support for composting)	Support for local farmers and composting
Chatham County	Composting facility	Waste diversion in coastal urban area
Muscogee County	Composting facility	Improved soil and waste management
Warner Robins	Higher concentration of vegan restaurants	Access to plant-based diets, dietary shift benefits
Albany	Higher concentration of vegan restaurants	Health co-benefits, food system diversification
Avondale Estates	CompostNow free pickup pilot	Equitable composting access, household engagement
Polk County	SolarCycle solar panel recycling facility	Waste diversion and resource recovery
Laurens County	Composting Facility	Waste diversion and resource recovery
Metro Atlanta	High EV and rooftop solar adoption, mass transit, demand response programs	Air quality, transportation equity, energy bill savings
Dade County	Composting facility	Waste diversion and resource recovery
Fayette County	Composting facility	Household and community composting potential
Butts County	Composting facility	Expanded composting infrastructure
DeKalb County	MARTA transit improvements	Mobility access, reduced car dependency
Clayton County	MARTA transit improvements	Transit access for underserved communities

GEORGIA LEADING THE WAY IN
SCALING CLIMATE SOLUTIONS



Click on the icon for a solution to learn more

Georgia communities are stepping up to lead the way in scaling climate solutions that don't just reduce emissions, but also improve lives and livelihoods.

While challenges remain—especially in equity and rural access—**this report shows promising progress in scaling solutions** that improve air quality, reduce costs, and build a more resilient state. From cities like Atlanta and Savannah to rural counties in middle and southern Georgia, **localized innovation is accelerating climate solutions with measurable impact.**

With targeted policies, inclusive planning, and continued investment, Georgia is well-positioned to lead the South in advancing climate solutions that deliver shared prosperity.

REFERENCES

The following Open Access publications provide additional detail on the analysis of Georgia's climate solutions.

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Drawdown Georgia Research is led by the Climate and Energy Policy Lab in the School of Public Policy at Georgia Tech

Georgia Tech

THANK YOU
BRING CLIMATE SOLUTIONS HOME
FOR HELPING US

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