

Climate Change Advisory Committee

Chatham County Board of Commissioners, Monday, August 21st



“The purpose of the Committee is to make recommendations to the Board of Commissioners ... regarding the likely climate change impacts in Chatham County and ways to adapt and mitigate these impacts...” (Mission statement)

< Rapid development, climate records broken (blowing past 1.5 C by 2030s)>

“Era of global warming has ended; *the era of global boiling has arrived*” UN Secretary Guterres>

Climate Advisory Committee believes the County can accelerate its planning by considering steps in three broad areas:

1. Electric infrastructure and EV fleet transition
2. Energy impacts of “climate resilient” homes
3. Generated-energy savings as a financing method for clean energy projects

PLAN CHATHAM’s Big Idea to “become carbon negative County,” now more urgent than ever.



1. Electric infrastructure and EV fleet

Develop an EV transition plan for County Vehicles

- One tool is a **“Route and Fleet” analysis**. Looks at route distances, travel time, traffic patterns and road conditions to identify optimal routes and EV battery range for selected electric vehicle fleets.
- Serves as a basis for transitioning County fleets to electric vehicles (Chatham Transit, transport trucks, school buses, etc.)
- Funding is potentially available. (.g., Federal DOT and Inflation Reduction Act (IRA))

We recommend the County explore the utility and available of funding for select Route and Fleet analysis as part of planning for future EV fleets.

—Climate Advisory Committee has begun to investigate the potential for a pilot EV school bus—

1. Electric infrastructure and EV fleet (continued)

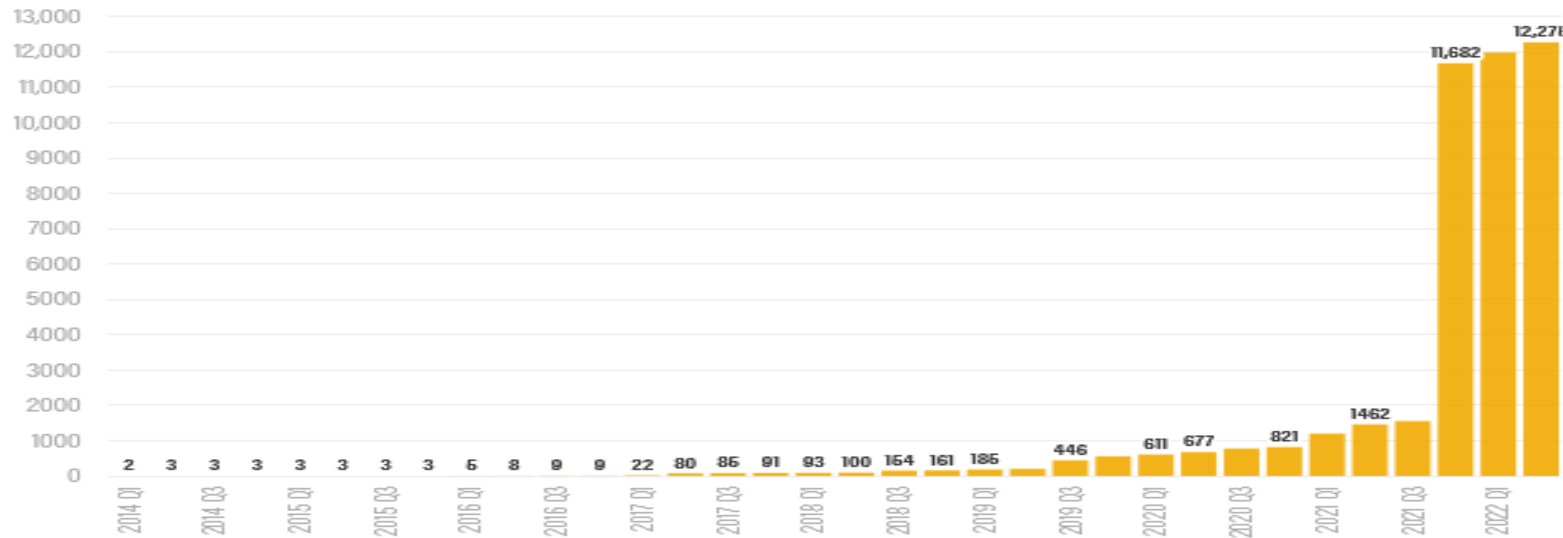
Pilot an Electric School Bus

- Nationwide: Rapid growth: 12,720 electric school buses in 38 states



Total number of committed* ESBs

■ Cumulative number of ESBs committed*



- 77 electric school buses ordered in NC.** The first 5 ESBs are operating in Cherokee NC and Randolph Co.
- EPA's Clean School Bus Program: \$5 billion over 5 years.



Pilot an Electric School Bus (continued)

We've begun to investigate the *technical* feasibility of electric school buses:

- Availability of charging and maintenance facilities
- Battery replacement costs
- Potential routes for a pilot electric school bus

We've also found documented *benefits for school children*:

Older school buses often expose students to high levels of diesel exhaust. Replacing these with electric school buses have been shown to result in:

- Significant increase in respiratory health.
- Increase in cognitive performance--a "significant increase in English test scores"
- Positive impacts on classroom attendance.

We find electric school buses to be ripe for wider conversation in Chatham County .



1. Electric infrastructure and EV fleet (continued)

Increase Charging Capacity for future County EV Fleets

The County has already installed 4 EV chargers in Pittsboro, Siler City and Goldston

Nationwide, EVs to exceed 50% of vehicle sales by 2030: “20-times more charging stations will be needed than are now available, 1.2 million.” (McKinsey 2022)

As the County transitions its future fleet—including heavy trucks—will need greater capacity

We’ve learned the County may already be planning for greater capacity to charge its future fleet of EVs.



2. Energy impacts of “climate resilient” homes

Solve the “Connection Gap” for weatherizing low-income homes

Weatherizing more homes has one of the *biggest impacts in reducing GHG emissions*.

- 17% of Chatham County GHG emissions from households
- Homes are “ill-prepared for the increasing stresses of climate change” (Brookings, 2022)
- Only 2% of 38 million low-income homes are weatherized each year.

Although the County lists 2 non-profit groups providing weatherization assistance for low-income homes, there is a significant “**Connection gap**” between *local sources* for assistance and *access* by eligible low-income families.

Solve the “Connection Gap” for weatherizing low-income homes (continued)



Meanwhile, major funding is forthcoming from Department of Energy’s
Weatherization Assistance Program for low-income households.

- Funds via State Energy Office to local groups (e.g., Central Piedmont Community Action)
- Overall, NC will distribute \$89,776,045 to enhance energy efficiency in disadvantaged communities in all 100 counties of North Carolina.

There are no-cost and low-cost ways the County can help to address this Connection Gap as well as expanding energy efficient homes.

2. Energy impacts of “climate resilient” homes (continued)

Increase support for energy efficient homes (“electrify everything”)

The IRA incentivizes a shift to clean energy appliances, wiring, HVAC systems & weatherization.

REWIRING AMERICA: \$11,445 savings for average County households with IRA credits, rebates.



How much money can you get with the Inflation Reduction Act?

Enter your household information to find out.

[Reset calculator](#)

Rent or Own ⓘ

Homeowner

Tax Filing ⓘ

Single

Household Size ⓘ

1 person

Household Income ⓘ

\$65,000

Zip Code ⓘ

90210

Email address ⓘ

you@example.com (optional)

Calculate! ⌵

Get updates on Incentives, rebates, and more from Rewiring America.

Awareness of IRA tax credits and rebates remains a mystery to many homeowners and renters!



Increase access to financial support for energy efficient homes (cont.'d)

Switching from traditional hot water heaters to HEAT PUMP WATER HEATING, for example, uses *1/3 the energy* of standard water heater.

- That's the Energy Saving Equivalent of 7 solar panels and costs only 1/6 the price.
- Homeowners can get tax credits for 30% up to \$2,000 of the cost and a rebate of \$350 from Duke Energy.

Solving the problem of *CONNECTING* homeowners and renters to IRA financial assistance:

- The County may be in a position to provide relevant information and user-friendly tools for residents. *(Next)*

Addressing the “CONNECTION” problem for services

One approach could deploy County communications to encourage weatherization and household energy efficiency



- **Public Information Officer and Website:** For energy efficient HVAC and appliances, it's educating County residents on IRA tax credits, rebates, and REWIRING AMERICA's savings calculator.
- **County departments:** For *weatherization assistance*, it's Social Services, Public Health, Utilities & water, and Aging Services directing residents to groups that can arrange for WAP funding and contractors.
- **Weatherization workshops:** information on cost savings, lower energy usage, and contacts with local weatherization non-profits and contractors.

*And we also encourage at least one County official consider taking the Rewiring America's **Local Leaders for Electrification** pledge.*

3. Generated-savings as financing model for clean energy projects



A funding source from money saved as a result of cost-reducing reforms and efficiencies associated with a clean energy investment (e.g., savings from EV fleets).

- Along with the benefits associated with a project—reduced emissions—there are often measurable savings in lower operating costs. These savings are the expenditures that would otherwise be committed for the same functions.
- Such accrued savings would be accounted for and sequestered in a separate fund that can then contribute to another project.
- Such accounting could facilitate acquiring “bridge loans” from the NC “Green Bank” (Clean Energy Fund) enabling the draw down of direct payment to the County from the IRA.

We recommend Commissioners to invite Finance and Environmental Quality staff to investigate the feasibility of such a model.

Thank you!

Questions for the Committee?



Charlie Cooper (Co-Chair)

Ed Beroset

Michael Petruska

John Bonitz

Nita Dukes

John Graybeal

Robbie Cox (Co-Chair)

Keith McLaurin

Alicia Koblansky

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