AI Data Centers 101

Why Eastern NC counties should protect their residents against the harmful industry of AI data centers

Speaker info: Joanna Rutter

Lives in Oak City, Martin County

Masters of Social Work student at UNC-Chapel Hill, specialization in community management and policy practice, focus on environmental justice

Intern with the NC Environmental Justice Network

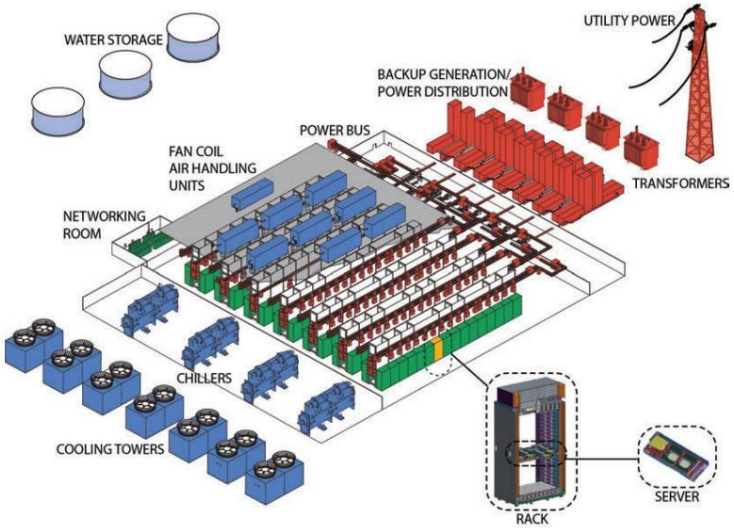
Organizer with Edgecombe Neighbors for Data Center Accountability

Former software/tech industry marketer

What is an AI data center and how does it work?

While often described as a “data center,” the project is actually a combined facility that includes:

1. Servers - “the brain of the computer” (usually ~100-300 MW)
    a. Thousands and thousands of chips
    b. Running 24/7 (never turns off)
    c. Runs at about 140 degrees Fahrenheit
2. Connection to local electricity grid
3. On-site natural gas backup power generation
4. Battery storage
5. Possible carbon “capture” components
6. Cooling methods (usually water and fans)



Defining Generative AI

To understand generative artificial intelligence (GenAI), we first need to understand how the technology builds from each of the AI subcategories listed below.

Expert System AI

Programmers teach AI exactly how to solve specific problems by providing precise instructions and steps.

Artificial Intelligence

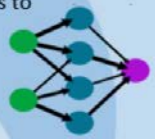
The theory and methods to build machines that think and act like humans.

Machine Learning

The ability for computers to learn from experience or data without human programming.

Deep Learning

Mimics the human brain using artificial neural networks such as **transformers** to allow computers to perform complex tasks.



Generative AI

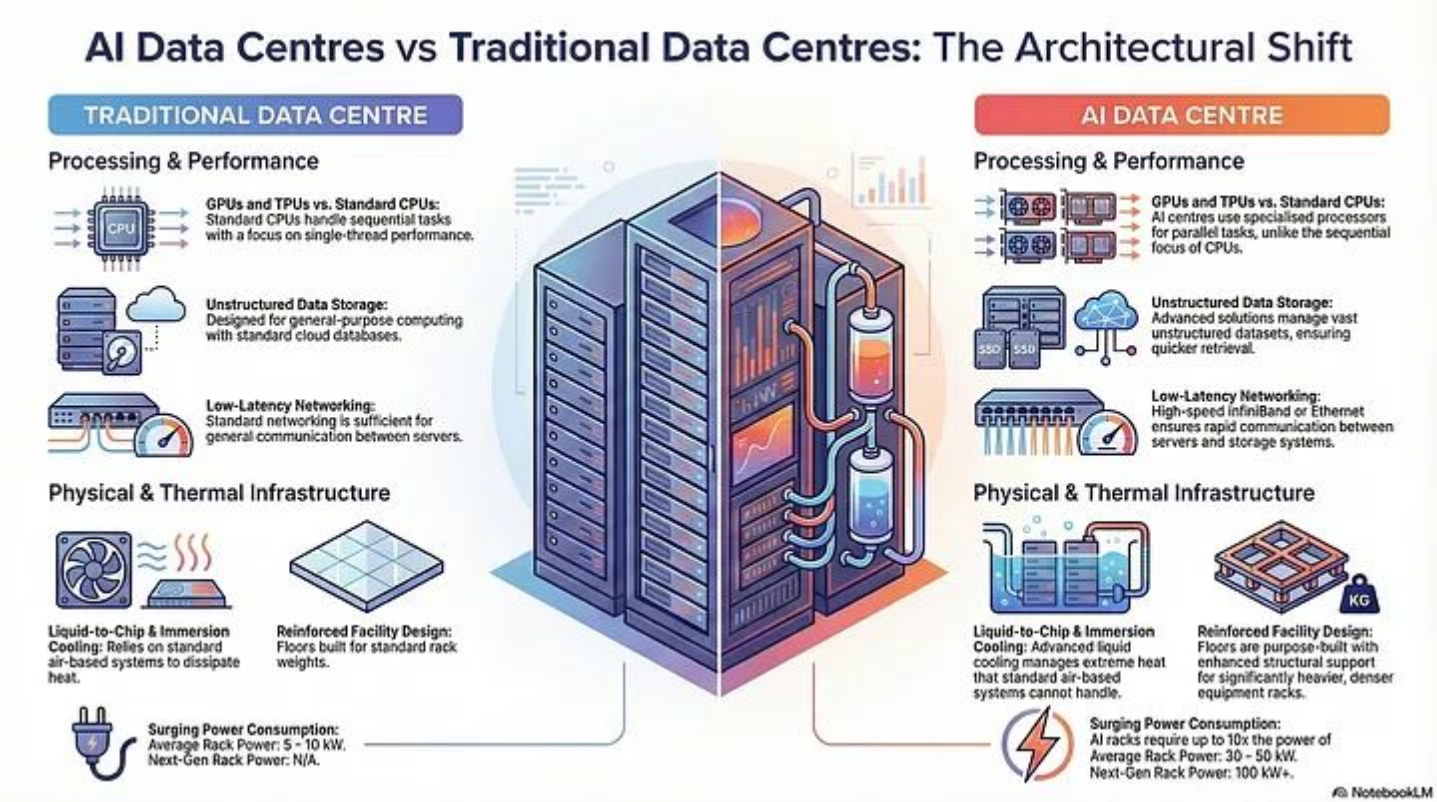
Generates new text, audio, images, video or code based on content it has been **pre-trained** on.

ChatGPT Midjourney Bard

AI for Education

aiforeducation.io

“Don’t we need data centers?” Yes, but not AI ones

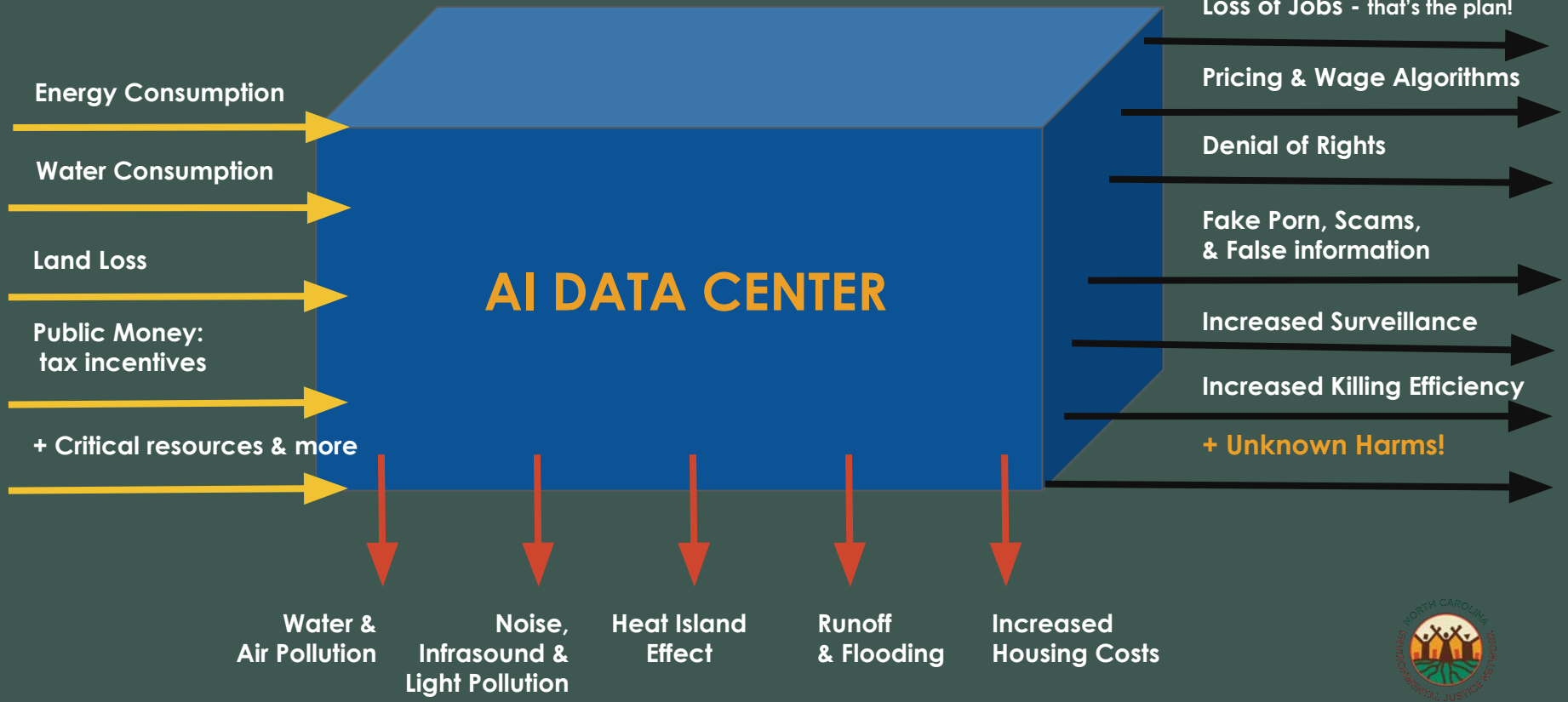


Pros and cons of AI data centers

What’s the upside to a data center in my community?

1. Tax revenue funds local education and infrastructure
    a. Sales tax
    b. Property tax
2. Job creation (~20-50 permanent, 100-500+ in temporary construction)

AI Data Centers: An Extractive Industry



Waterlogged

A midsize data center uses roughly as much water as about 100 acres of almond trees or three average hospitals, and more than two 18-hole golf courses.

Approximate annual water usage, in gallons*

*Use varies depending on climate and other factors

Sources: California Department of Water Resources (orchards); James Hamilton (data centers); U.S. Department of Energy (hospitals); Golf Course Superintendents Association of America (golf courses)

THE WALL STREET JOURNAL.

THE ENERGY-WATER NEXUS

THE "CLOSED-LOOP" LIE

Tech companies claim to save water with "closed-loop" cooling. This is a deception.

These systems require massive amounts of electricity—up to **1.3 Gigawatts** for a single campus. To generate that power, coal and gas plants must burn more fuel and withdraw more water.

The result: We are poisoned by emissions to protect their servers.

Water use risks

Approximately 80% of the water (typically freshwater) withdrawn by data centers **evaporates**, with the remaining water discharged to municipal wastewater facilities.

The large volume of wastewater from data centers may overwhelm existing local facilities, which were not designed to handle such a high volume.

Loudoun County in Virginia, with approximately 200 operational data centers, used around 900 million gallons of water in 2023. This has led Loudoun Water, the county's water authority, to rely heavily on potable water for data centers rather than reclaimed water.

Data Centers Consumption of the US Grid & Data Centers Currently Under Construction

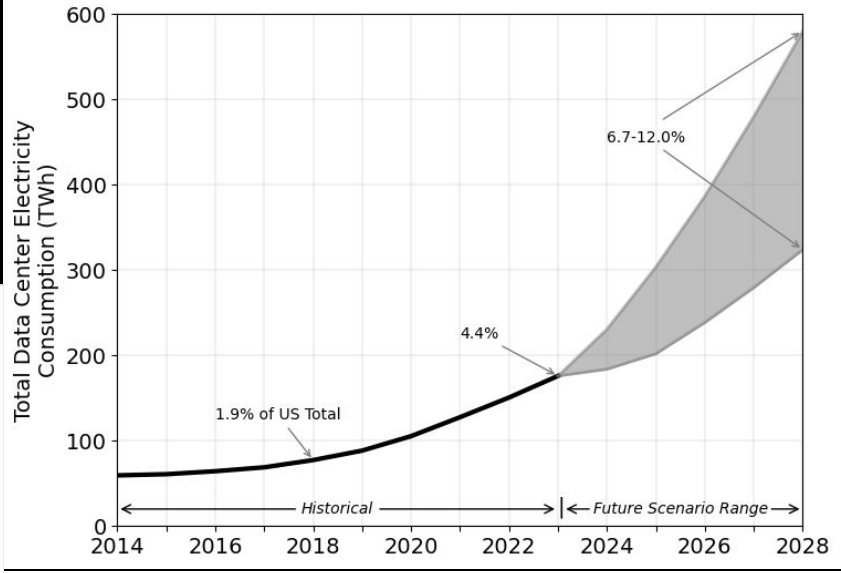
2025 USAC Data Center Projects

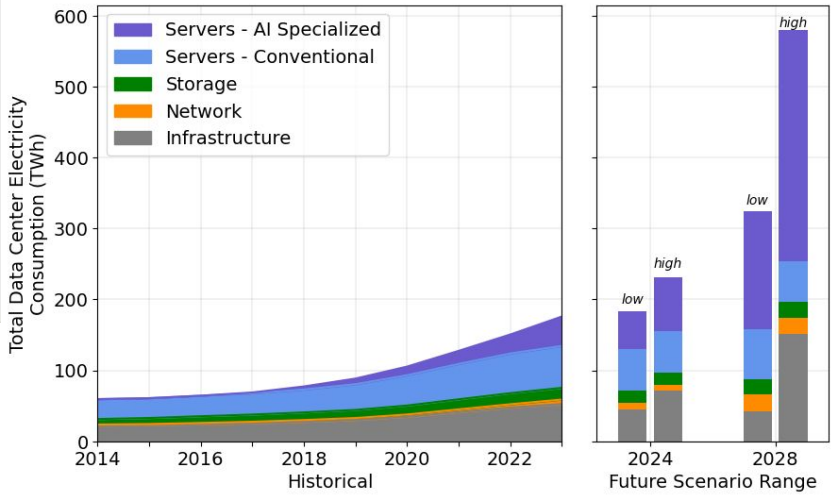
480 Projects
$203B TIV

Top Markets

Locations	Projects
D.C / Virginia	99
Chicago	30
Atlanta	27
DFW	29
Phoenix	24
Columbus	24
Silicon Valley	15
Austin	13

3M





Energy use = higher bills, dangerous air pollution

Data centers accounted for 4% of total U.S. electricity use in 2024. Their energy demand is expected to more than double by 2030.

- Meta's Hyperion data center in Louisiana, for example, is expected to draw **more than twice the power of the entire city of New Orleans once completed.**
- Another Meta data center planned in Wyoming will use **more electricity than every home in the state combined.**

Data centers are projected to **increase electricity bills ~8%** as utilities race to expand grid capacity and build new gas plants for speculative demand – while passing off these costs onto consumers.

- 80% of Duke Energy's projected demand in NC is for data centers
    - From 2000 to 2025: electricity demand increased 7% in NC
    - From 2025 to 2040 - projected electricity demand is between 16% to 60%; 80% of that demand is from these hyper scale data centers

It's estimated that data-center-driven air pollution will **add 600,000 asthma cases** and **cause 1,300 premature deaths in Americans a year** by 2030

Tax breaks in NC

- New state budget ended the sales-and-use tax exemption for electricity used by data centers
- Does not repeal the full suite of data center tax breaks on support equipment, software, and certain business property
- Local tax exemptions often offered as well
- Google’s data center in Lenoir, NC paid only $5 million in county taxes over 10 years but received $73 million back in tax rebates—14 times what the county received

Existential threats to human rights

Labor

- As AI evolves, it could displace 400 million workers worldwide.
- A McKinsey report predicts that between 2016 and 2030, AI-related advancements may affect around 15% of the global workforce.
- 40% of employers expect to reduce their workforce where AI can automate tasks.

Healthcare, housing and more

- All 92 million low-income people in the U.S. have some basic aspect of their lives decided by AI (Medicaid, housing)

Palantir, ICE, and surveillance

- Palantir Technologies plays a central, enabling role in the mass deportation campaign carried out by ICE.
  - ELITE system – identifies and maps targets for deportation using large datasets.
  - Investigative Case Management (ICM) – a massive data platform aggregating personal information across agencies to build cases.
  - ImmigrationOS – enhances tracking, prioritization, and logistics of deportations, including “self-deportation” monitoring.
  - AI-enhanced tip processing – uses AI to analyze and translate public tips.
- Palantir donated more campaign money to Democrats than Republicans
- Feb 2026 $1 billion deal with Homeland Security
- Data centers power the systems of oppression that put people in detention centers like the one coming to Rivers Correctional Facility

“We’re currently releasing the most powerful, inscrutable, uncontrollable, omni-use technology we’ve ever invented, one that’s already demonstrating the self-preservation, deception and escape behaviors we previously thought only existed in science fiction movies, and we’re deploying it faster than we’ve deployed any other technology in history, under the maximum incentives to cut corners on safety.”

-Tristan Harris, Center for Humane Technology

Data center activity in Northeastern NC

Nearby projects and status

Edgecombe County, Tarboro

Anaconda Rd.

Town council voted against special use permit, developer suing over quasi-judicial process, in court

Edgecombe County, Rocky Mount

Kingsboro CSX

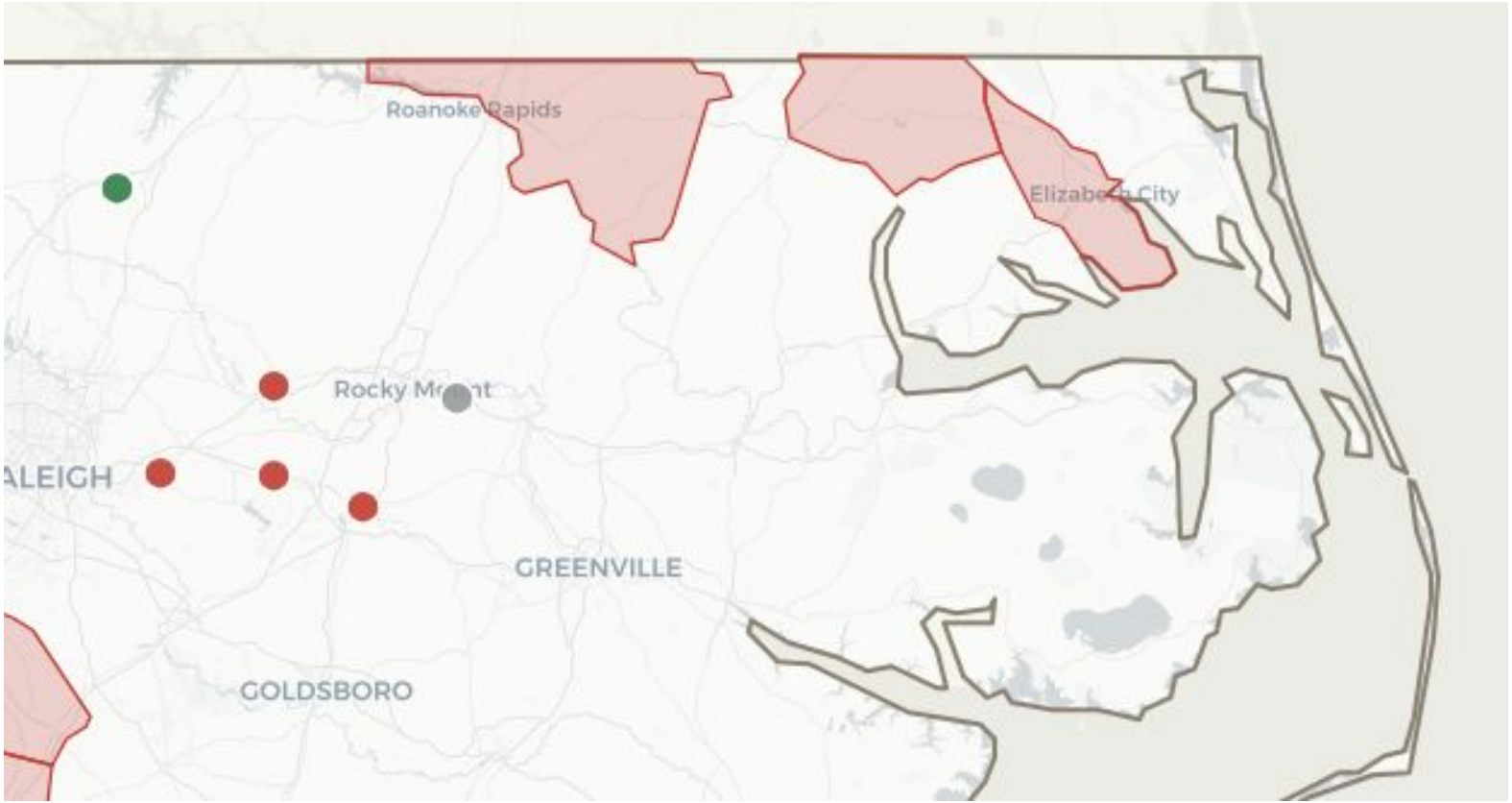
Developer recently withdrew project due to community opposition (YAY)

County considering 2-year moratorium

Nash County, Rocky Mount

Arrow/Dozier Rds

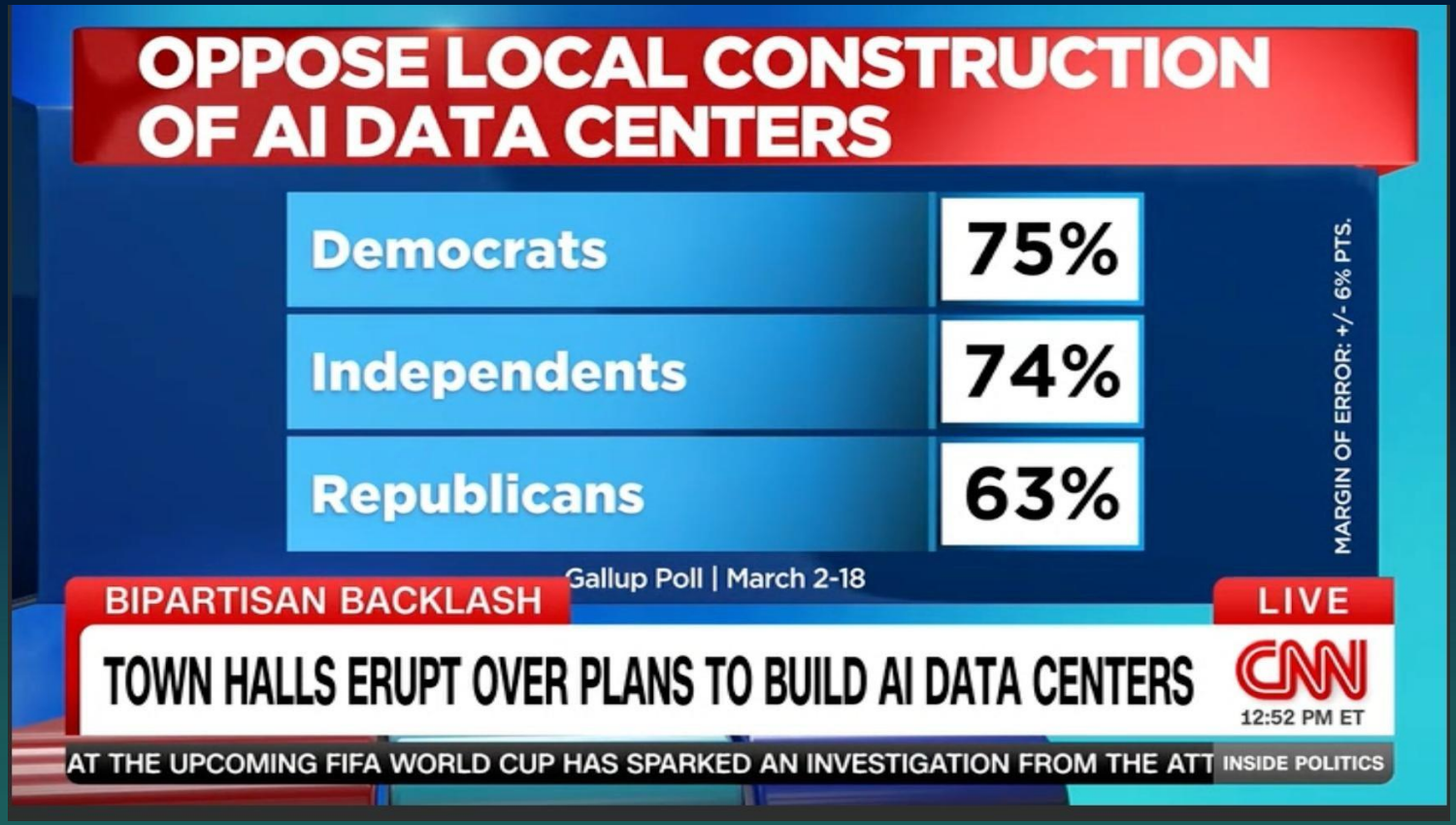
City of Rocky Mount is considering rezoning land for data center; not recently on city agenda


Roanoke Rapids
Elizabeth City
Rocky Mount
ALEIGH
GREENVILLE
GOLDSBORO

What to do next?

Successful tactics used by Edgecombe Neighbors

1. Partnership with NC Data Center Network (NCEJN) and Sound Rivers
2. Petition (online and physical signatures)
3. Community town hall (invite media)
4. Establishing resistance group; email list and Facebook page
5. Yard signs
6. Establishing regular space for monthly meetings
7. Public comments in county commissioner meetings
8. Running local anti-data center candidates for county/town elections
9. Establishing subcommittees in group (fact finding, phone outreach)
10. Engaging in county manager initiatives (survey, advisory group)
11. Passing resolution with county Democratic Party
12. Speaking at town council meetings
13. Passing town-level resolutions



Source - CNN, May 28, 2026

Recommended action items

1. Minimize your own personal use of AI tools today
2. Review your county and town's planning ordinances, zoning maps
3. File public records requests
4. Attend your local county meetings and use public comment period to voice concerns about data centers, ask for a moratorium (easy copy-paste other counties - it's what they all seem to do!)
    a. Hertford County Planning Board meeting TOMORROW Mon July 13 at 6:30 - County Government Center, Winton
    b. Bertie County Commissioners meeting TOMORROW Mon July 13 at 6pm, 106 Dundee St. Windsor
5. July 18 National Day Against Data Centers - https://www.humansfirst.com/july-18-datacenters
6. Contact representatives, ask them to support state/federal moratorium
7. Ask candidates on their position on data centers - https://tinyurl.com/NC-Data-Center-Network

Resources

- NCEJN newsletter: https://mailchi.mp/4fa4e8877b5a/sign-up
- Edgecombe Neighbors Google Drive: https://drive.google.com/drive/folders/1EMV1CwxVpUKS9ZQDdPuPxNbkkjA6c4tv?usp=drive_link
-