



GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Regulatory Aspects of Data Center Growth in Georgia

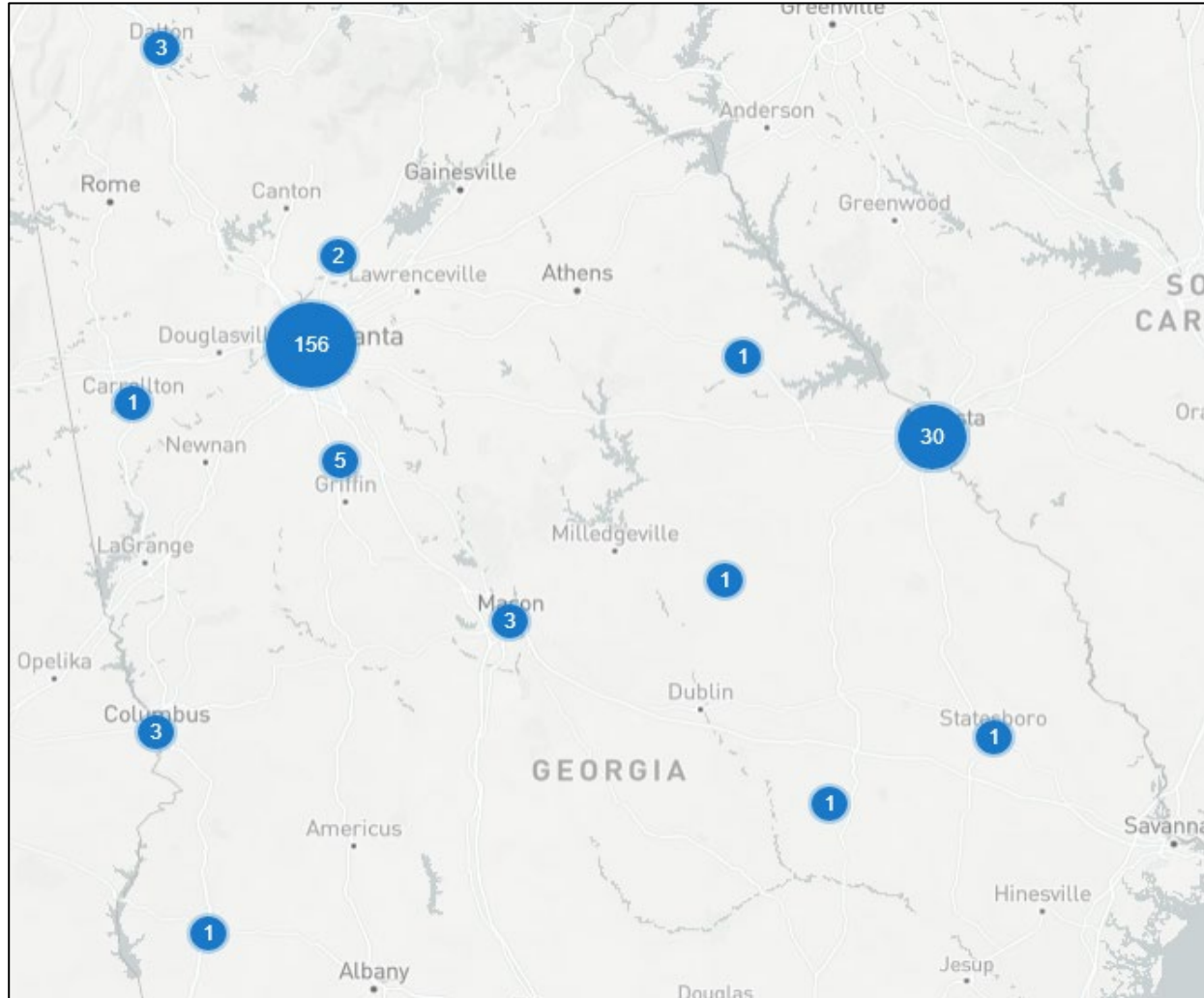
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AAPCA 2026 Spring Meeting
Atlanta, GA
April 8, 2026

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DATA CENTERS IN GEORGIA



<https://www.datacentermap.com/usa/georgia/>



PERMITTED DATA CENTERS

- As of March 6, 2026, there are estimated to be **165** data centers operating in Georgia.
 - The data center tracker website map shows a total of 208 data centers in the state, but this value represents the number of data center buildings.
 - Georgia EPD has on file **16 permitted** data centers that are operating in Georgia.
 - There are currently an estimated **149 permit exempt** data centers operating in Georgia.
- In addition, there are **13** permitted data centers that are under construction and **14** data center permit applications in-house that are under review.



DATA CENTER PERMIT CLASSIFICATION

Permit Exempt ^(a)	Minor Source ^(b)	Synthetic Minor Source	Transitional Permit ^(c)	Title V	PSD
149	3	23	3	0	0

(a) Unless otherwise required by the Director, SIP permits shall not be required for the following source activities. These exemptions may not be used to avoid any emission limitations or standards of the Rules for Air Quality Control Chapter 391-3-1.02, lower the potential to emit below "major source" thresholds or to avoid any "applicable requirement" (i.e., NSPS, NESHAP, etc.) as defined in 40 CFR Part 70.2.

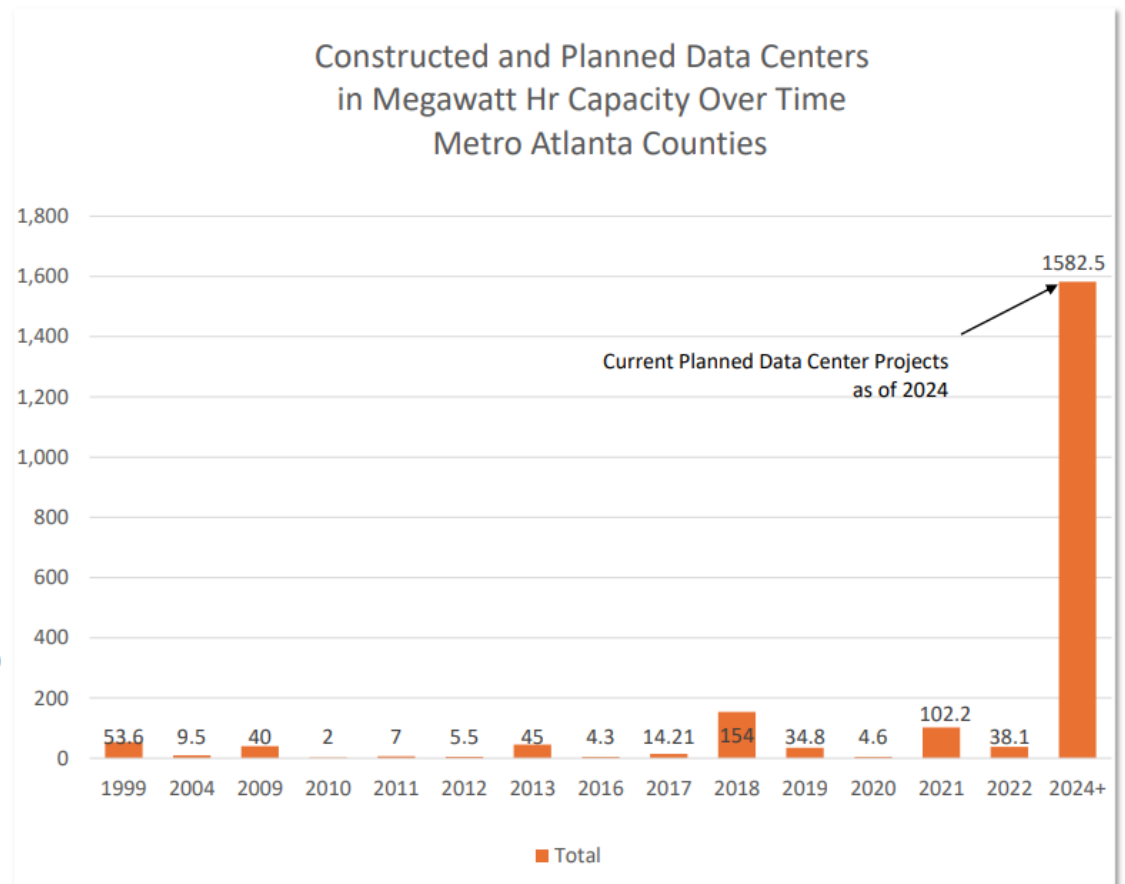
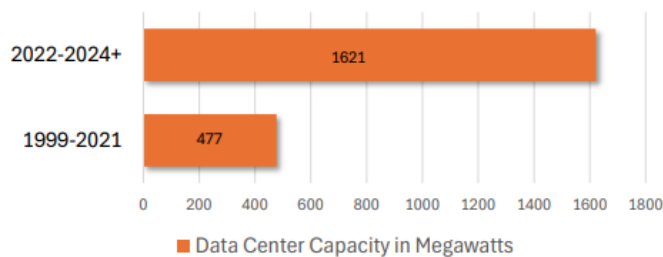
(b) Minor Source permits tend to be uncommon for data centers in Georgia since they are exempt from permitting; however, minor source permits may be issued at the request of the facility.

(c) Transitional permits are SIP major source permits that require the Permittee to apply for, and obtain a Title V permit, typically within 12 months from the facility being subject to Part 70.



DATA CENTERS CAPACITY (MW) IN ATLANTA

Over the last 24 months, new planned data center projects exceed the total energy demand over the previous 20 years combined



ONE **great** REGION

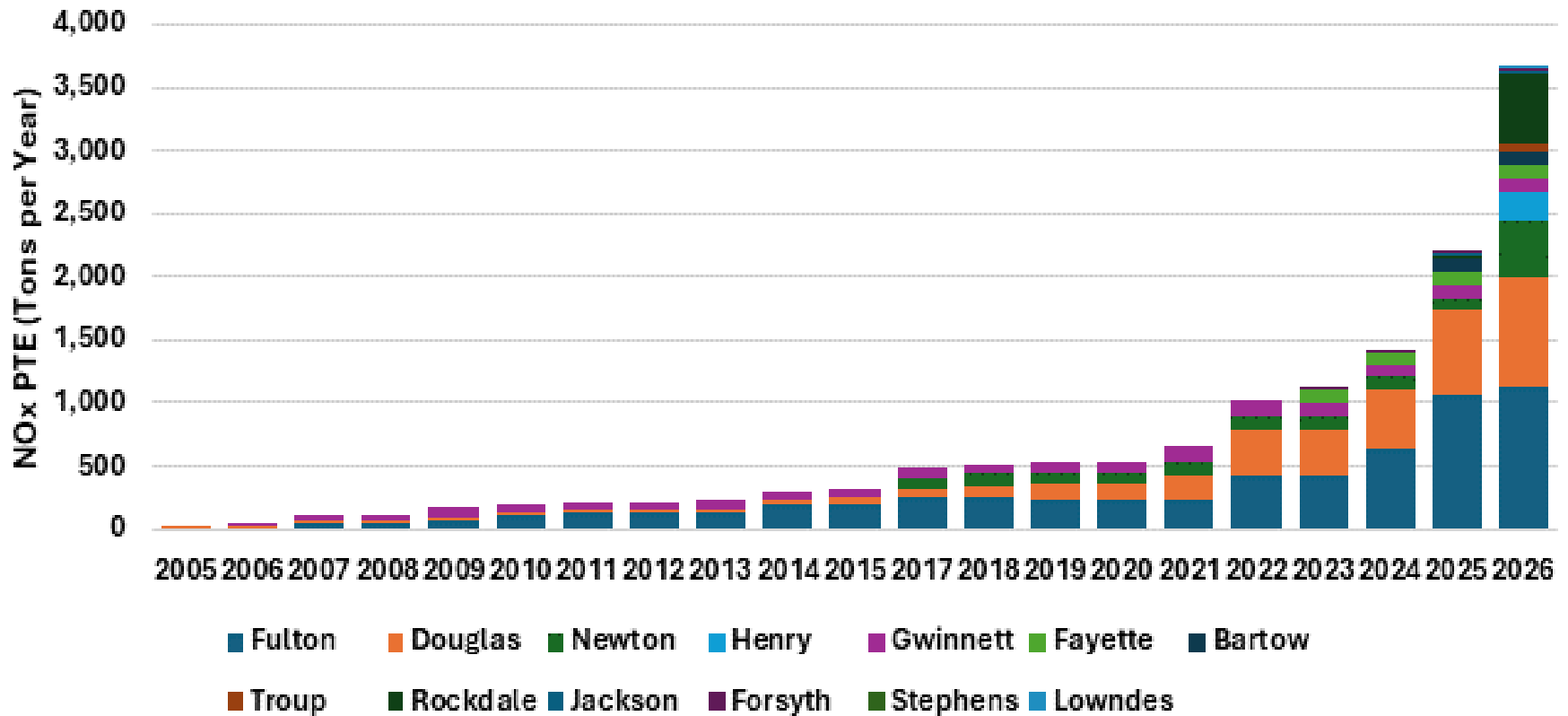
Source : ARC Analysis. Based on publicly available data. Does not include facilities where data is unavailable. Years presented are based on data collected.



Slide from Atlanta Regional Commission: Data Center Trends in Metro Atlanta (Nov. 13, 2024).

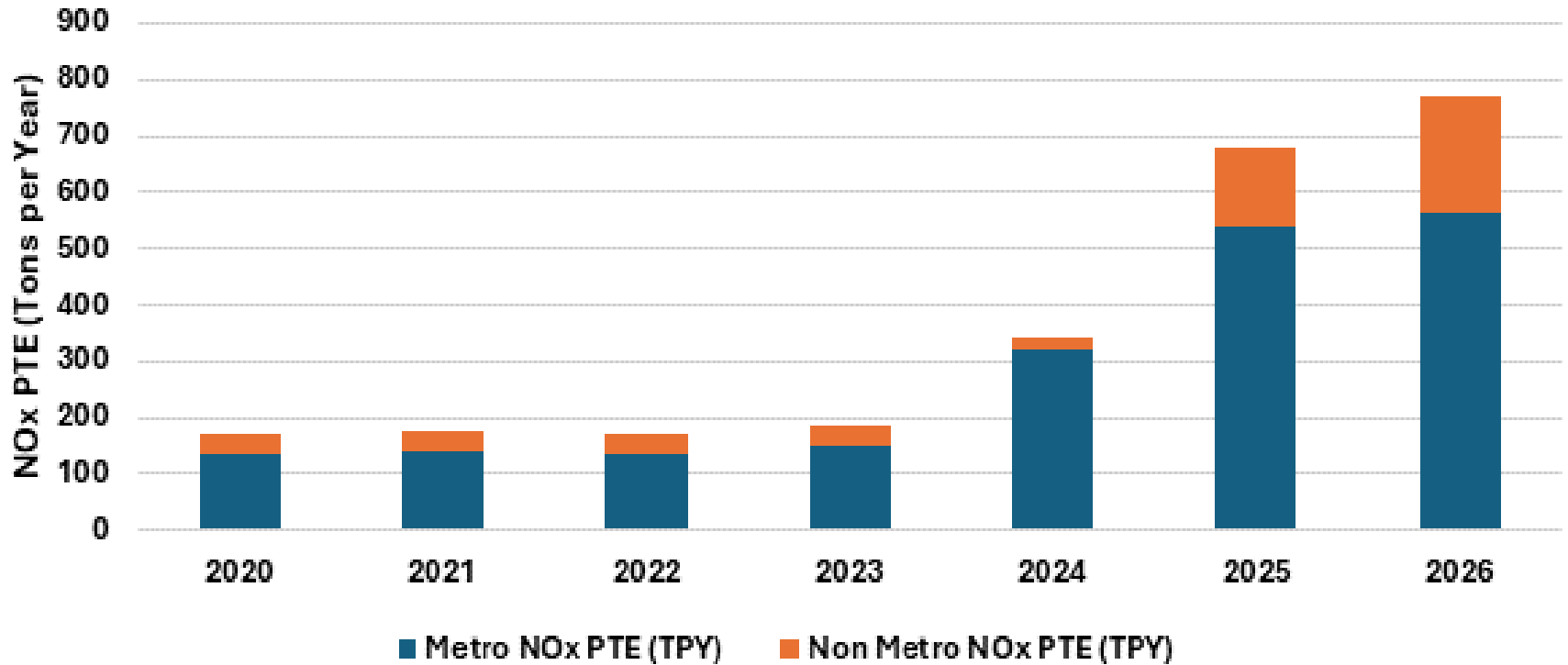


NO_x FROM PERMITTED DATA CENTERS



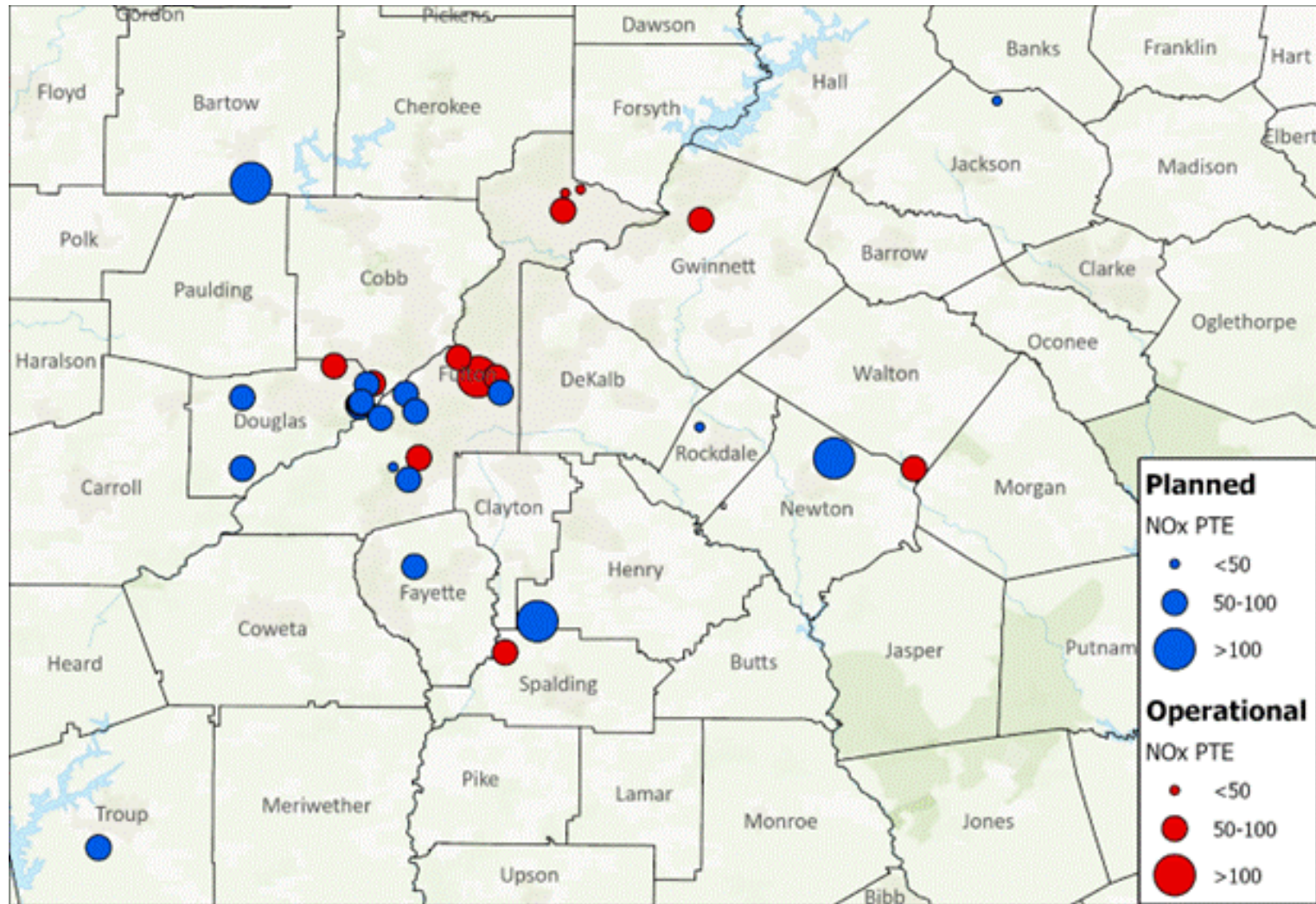


NO_x FROM PERMIT EXEMPT DATA CENTERS





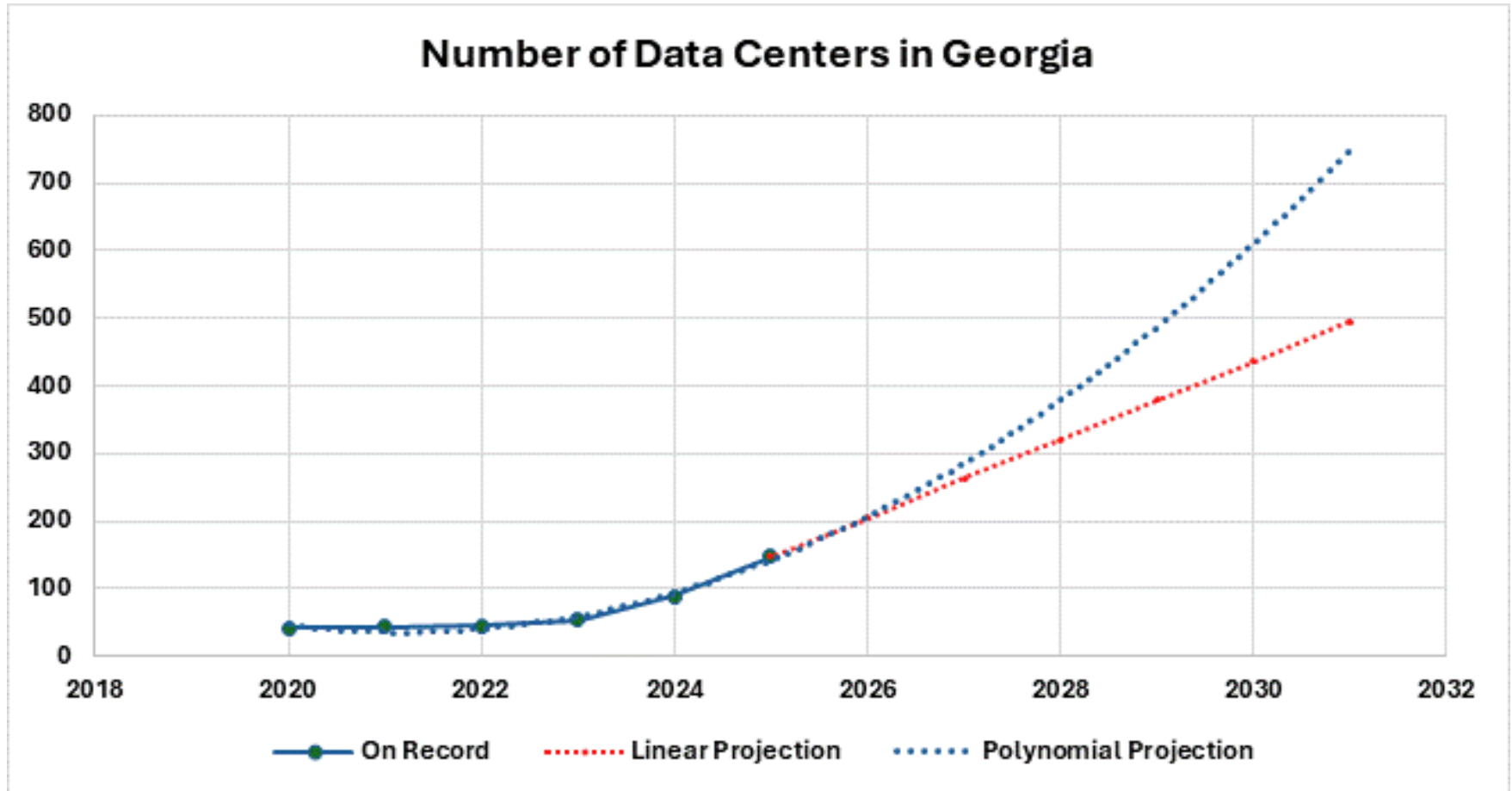
NO_x PTE FROM LARGE DATA CENTERS



- **Planned (27) → Permitted facilities that are under construction and permit applications in-house that are under review.**
- **Operational (16) → Permitted facilities that are operating.**



GROWTH PROJECTIONS FOR DATA CENTERS





DATA CENTER GROWTH

- Total potential NOx emissions from all Georgia data centers in 2025 are estimated to be approximately 2,845 tons.
- With a growth expectation of roughly 3-5 times the number of data centers by 2031, potential NOx emissions are estimated to be 8,535 – 14,225 tpy.
- Also, Georgia Power has projected to add around 9,900 MW of capacity by 2031 and forecasts that data centers will consume about 80% of the new power generated.



NEW POWER GENERATION

Company	Plant	County	# Units	Unit Types	Total MW
Georgia Power	Plant Yates (issued 06/07/24)	Coweta	3	Simple-cycle gas turbines	1,300 MW
Georgia Power	Plant Bowen (issued 01/29/26)	Bartow	4	Combined cycle gas turbines	1,482 MW
Georgia Power	Plant Wansley (issued 03/03/26)	Heard	2	Combined cycle gas turbines	1,453 MW
Georgia Power	Plant McIntosh*	Effingham	2	Combined cycle gas turbines	757 MW
Oglethorpe Power Company	Talbot Energy Facility (issued 03/04/26)	Talbot	1	Simple-cycle gas turbine	256 MW
Oglethorpe Power Company	Smarr Combined Cycle Energy Facility (issued 11/06/25)	Monroe	2	Combined cycle gas turbines	1,200 MW
Tenaska Enon Generating Facility	Tenaska Enon Generating Facility*	Heard	4	Simple-cycle gas turbines	1,800 MW

***PSD permit application currently under review by the SSPP NOx Permitting Unit.**



PERMITTING FORECASTS AND CHALLENGES

- **Bring Your Own Generation (BYOG)**
 - Bridge power to an off-site data center
 - On-Site temporary power generation
- **Hyperscale Data Centers, Speculative Permitting, and Negotiating Permitting Pathways**
- **Site Determination**
 - Common Control
 - Colocation



PERMITTING FORECASTS & CHALLENGES

- **Increased Public Interest**
- **Air Toxics Modeling**
 - Modeling scenarios and their impact on permit limits.
 - Parameters used in modeling such as hours of operation and/or fuel consumption can result in additional permit limits.
 - Source Characterization (e.g., horizontal discharge)



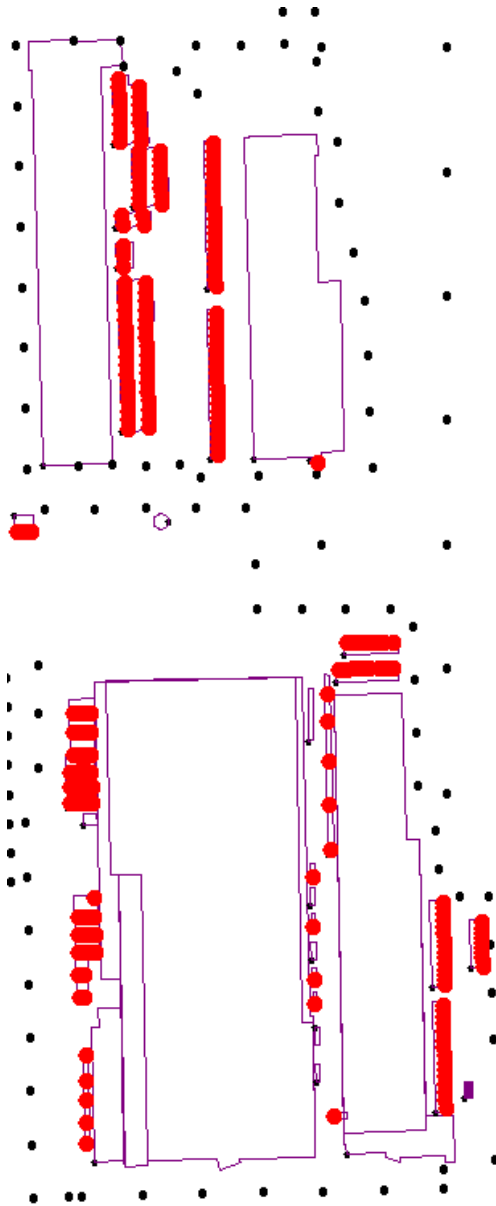
AIR TOXICS PROGRAM

- Georgia operates a robust Air Toxics program to demonstrate that emissions from 439 toxic air pollutants (TAPs) comply with Georgia Rules for Air Quality Control 391-3-1-.02(2)(a)1. and 391-3-1-.02(2)(a)3.
- Minimum Emission Rates (MERs) for each individual TAP were established for screening purposes.
 - Facility-wide emissions < MER → no further analysis
 - Facility-wide emissions > MER → modeling analysis
- Acceptable Ambient Concentrations (AACs) are derived for various averaging periods (15-minute, 8-hour, 24-hour, annual) based on IRIS, OSHA, Cal/OSHA, NIOSH, and ACGIH data.



TOXIC IMPACT ASSESSMENT

- **TAPs relevant for data center reviews:**
 - **Formaldehyde:** MER = 22.1 lb/yr
 - **Benzene:** MER = 31.6 lb/yr
 - **Acetaldehyde:** MER = 1,107.2 lb/yr
 - **Toluene:** MER = 1,216,650 lb/yr
 - **Xylenes:** MER = 24,333 lb/yr
 - **Naphthalene:** MER = 730 lb/yr
 - **Acrolein:** MER = 85.1 lb/yr
 - **1,3-Butadiene:** MER = 7.3 lb/yr
- **Maximum 1-hour emission rates for short term modeling**
- **Annualized emissions for annual modeling based on permitted hours of operation (e.g., 500 hr/yr/generator)**



CASE 1

- Four buildings
- Urban setting
- 231 diesel-fired emergency generators
 - 1.0–2.25 MW
 - 500 hr/yr each
 - Individual stacks (vertical)
- Facility-wide NO_x limit of 199.8 tpy
- Benzene exceeds the MER
 - 265 lb/yr PTE
 - 1-hour modeling @ 100% load
 - Annual modeling @ 25% load
 - Flagpole receptors



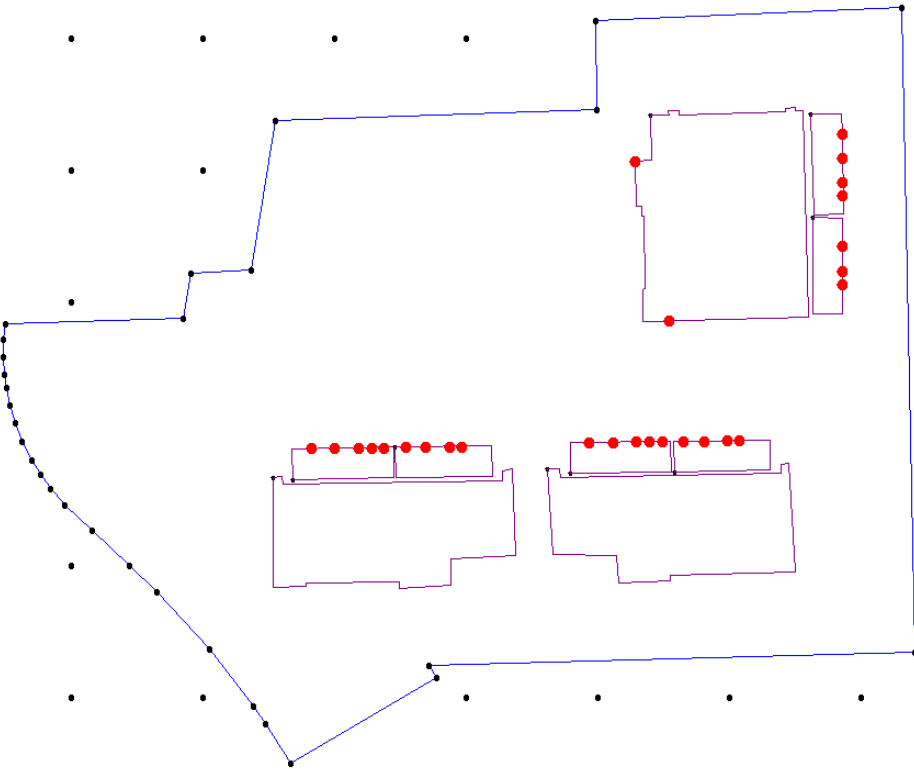
CASE 1





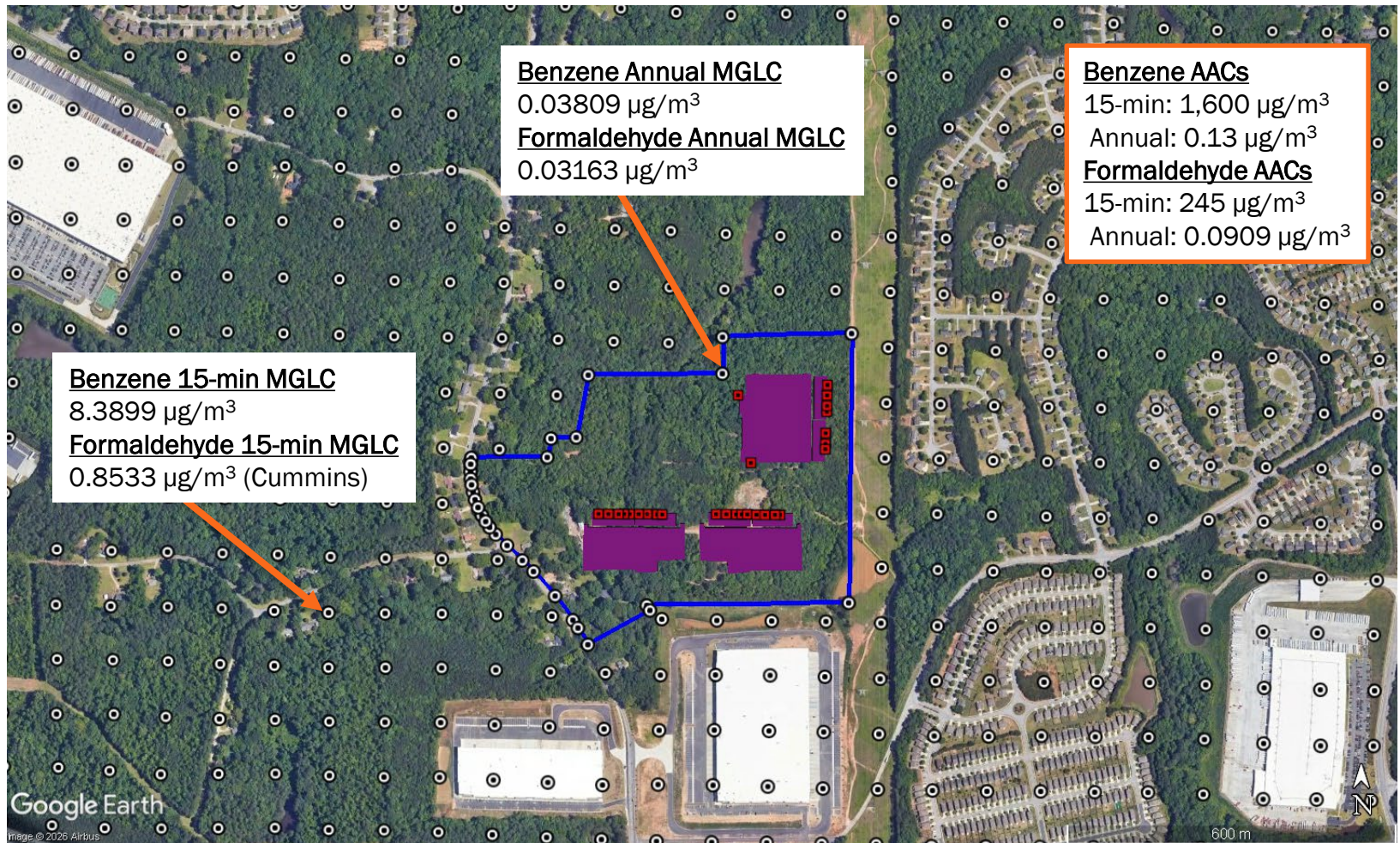
CASE 2

- Three buildings
- Suburban setting
- 126 3-MW emergency generators
 - 42 generators per building
 - Arranged in groups of six with stacks grouped in two rows and bent horizontally
 - Option to model each stack individually or adopt worst-case stack parameters for all grouped stacks
- Revision to planned permitted facility
 - Add 10 new 1.75-MW BOH generators
 - Reclassify 42 engines from Tier 4 to Tier 2
 - Limited engines to 87 or 93 hr/yr
- Redundancy considerations in modeling





CASE 2





NEXT STEPS

- **Look at ways to more accurately track permit-exempt emergency generators.**
- **Look at ways to limit the projected increase in NO_x emissions, especially in the Atlanta area since Atlanta is currently violating the 2015 ozone standard.**



CONTACT INFORMATION

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QUESTIONS

