

Hello, my name is Natalie Stone. I graduated from NC State University with a major in Computer Engineering this past May.

My goal today is to talk about the types of data centers, the amount of electricity used and the burden of that, followed by wastewater management and job creation

People are standing up across the state to enact moratoriums or permanent bans on data center development. Since December 2025, over 20 counties and cities in just North Carolina have realized they need more time to consider if a data center is in the best interest of their citizens. By the time I finish, I hope it is clear why so many are hesitating.

If you have heard from pro-data center advocates that “data centers have always been around and are the reason you can get on Facebook and stream Netflix”, they’re correct. But it’s important not to let this mislead you. Most that were built before the quote “AI era” are not the hyperscale data centers people across the country are protesting, which take upwards of 100 megawatts to power.

The other data centers fall into categories which are colocation, enterprise, and edge datacenters. These other categories are typically smaller and serve specific purposes. For example, enterprise data centers provide the backbone for banks, government agencies, and hospitals. Responsible hyperscale data center development is possible, but the reality is that because it’s so expensive to run a data center- the companies building them want to take shortcuts everywhere they are legally allowed to.

If it went through, Natelli would have built a 250 MW data center campus in Apex. Based on data provided by the federal government, a 250 megawatt data center would be the equivalent load from 200,000 households. For context, Vance County has less than one tenth of that- at approximately 16,000 households. But if you look at the land in Vance County that has been rezoned, it’s much larger than what was planned for Apex.

Allegedly, the land that was recently rezoned could host a 4 million square foot data center. That number is honestly so large, it’s difficult to conceptualize. Since we’re American, we like to use football fields. That’s almost 70 football fields. By looking at Louisiana’s newest data center planned for Meta, we know that 4 million square feet maps to 2 Giga watts. So now how many households is that equivalent to?

To get from mega watts to giga watts, we multiply by one thousand. To put it plainly, 1 giga watt is 1,000 mega watts. Based on the math from before, if a 250 megawatt capacity can power 200,000 households then with 2 giga watts, 1.6 million households could be powered. This is 100 times the number of households in Vance County- literally orders of magnitude larger than our residential capacity. If we wanted the John H. Kerr Dam to power it, it couldn’t. It can only produce 227 mega watts. We’d need 8 John H. Kerr Dams.

The reason I’m serious about how much electricity will be used is because this is how not only the citizens of Vance County will be paying for the data center, but residents across North Carolina. Early in my research concerning data center development I learned Duke Energy is a unique utility which owns all three parts of the electric grid- Generation, Transmission, and Distribution. Just about every company has to pay to get hooked up to the grid, which is the last step of distribution. But the generation step is something that everybody pays into.

The idea behind this is that everybody in an area pays into a pot that goes towards upgrading the electrical grid. With a data center though, you're seeing power demand jump by tens of thousands of household equivalents, if not millions. But you're not seeing that same paying into the pot as data centers typically get discounts that residential customers don't. Recently, Duke Energy has proposed that residents pay 18% more for electricity, but they project data centers will account for 80% of new electricity demand.

A large portion of the power used by data centers goes towards cooling the chips.

With evaporative cooling, which uses huge amounts of water but less electricity, data centers must flush out their lines to remove buildup on a regular basis through a process called blowdown. If we consider closed loop cooling, which uses less water but more electricity and is becoming more popular- the water is treated with chemicals that nobody will want ending up in their tap water. Glycol antifreeze, nitrite inhibitors which convert to carcinogenic nitrosamines, and heavy metals that can shed from the pipes all have to be handled appropriately. The question is if our wastewater management infrastructure is equipped to handle this.

The last thing I'll touch on is job creation. The majority of jobs created by data centers are temporary construction jobs. We would likely see these jobs appear for as short as 6 months up to 2 years.

Most of these jobs will not be locally hired unless it is required. Reality is that there are workers who've gained experience from all over the United States who will come into town and leave once they've made their money. Construction workers are moving from one datacenter construction project to another to cash in on the sudden demand for trades jobs. In Wyoming, residents are protesting building a temporary housing complex designed to hold up to 5600 workers.

We've got to ask ourselves if providing mostly temporary jobs is worth it for permanent impacts on quality of life for everybody in Vance County and surrounding areas.

I encourage Vance County to place an indefinite moratorium on hyperscale datacenters until the full and holistic impact is mapped out.

I invite any and all officials to disclose any details regarding data center development. If any Vance County public official or any individual speaking on behalf or in the interest of Vance County has signed a Non-Disclosure Agreement, Confidential Disclosure Agreement, and/or Proprietary Information Agreement, you are invited to state this information. It is possible that the NDA you signed prevents you from disclosing that this contract exists. I would like the Board of Commissioners to understand that if anybody who represents Vance County has signed an NDA, that you will be voting to approve construction for something that you have intentionally been deceived about by your colleagues. If we look to our Northern neighbors, "of the 31 Virginia communities with existing, approved, or proposed data center negotiations, 25 were covered by NDAs" so it's more likely these are in place than not.

I did not use AI to generate any portion of my comments or to assist researching.

If you would like a list of my sources from my discussion, talk to me afterwards and I'll send those over to you.

Thank you for your time.