What Does Georgia Need to Know About Data Centers? A Conversation with Melissa Nord

Summary

What is actually inside a data center, and what happens to a community when one moves in nearby? In this conversation, meteorologist and science journalist Melissa Nord joins host Eriqah Vincent to unpack Drawdown Georgia's new video series on data centers, covering how these facilities use energy and water, why Georgia has become a magnet for new development, and what communities like DeKalb County are doing to push for stronger protections.

Key Takeaways

- Data centers need to sit near fiber infrastructure and run constantly, which means constant cooling, either through open-loop cooling that uses water once and lets it evaporate, or closed-loop cooling that recycles water but draws more electricity.
- Georgia's power surplus, about 30% compared to a typical 15% elsewhere, combined with available water and digital infrastructure, is a major reason the state has become a hotspot for new data center development.
- In DeKalb County, advocate Gina Mangham of Renew DeKalb has pushed commissioners for a zoning buffer between data centers and residential neighborhoods, pointing to a Department of Energy report on the water use, energy use, heat, and diesel-generator pollution these facilities can generate.
- Georgia has no state law requiring data center owners to publicly disclose their actual energy or water use, so what the public can see is often limited to what's proposed rather than what's actually consumed.
- Melissa's advice for Georgians: start researching now, whether or not a data center has been proposed in your area yet, since the demand driven by AI and digital infrastructure isn't going away.

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Eriqah Vincent: Hello, everyone. Welcome back once again to the Drawdown Georgia Climate Digest Interview Series. My name is Eriqah Vincent once again, and we're so happy to be joined today by meteorologist and science journalist, Melissa Nord. Good morning, Melissa. Thank you so much for being with us today.

Melissa Nord: Good morning, Eriqah. I'm really excited to be with you.

Eriqah Vincent: Awesome. I'm excited for this conversation. Let's jump right in. So please introduce yourself, Melissa, and tell the audience about the work that you're currently doing.

Melissa Nord: Sure. Well, I've been a meteorologist for over a dozen years, and in the last handful of years gotten a lot more into science journalism, climate journalism, storytelling of research, storytelling of solutions, and I really, really enjoy that. The weather impacts everybody, but as we've seen in the last decade, there's a lot more weather extremes, and some of those

weather extremes can be tied to a warmer climate, and we can see more of those types of events happening as we go through the coming decades.

So that's kind of my background. I've spent some time in local weather, national weather. I've spent some time here locally in Atlanta at a local television station, and it's been really exciting to step back from that and be able to story tell with Drawdown Georgia here on this data center's video series, because it's kind of the problem of our present and future, and Drawdown Georgia is such a solutions-oriented organization that tries to present solutions to problems that we may have that are tied to climate and the environment. So it's been a wonderful video series to be involved in.

Eriqah Vincent: Thank you so much. I think a lot of folks are thinking and talking often with not only family and friends, but colleagues about data centers. I would love to learn a little bit more about you before we jump in there, though. I'm always interested in learning about people's pathways. We talked on this show about my very non-linear pathway to the work that I've done. And so what inspired you to pursue a career on weather and climate?

Melissa Nord: Yeah. Well, when I was very young, I was scared of storms. I would hide in the basement, even if it wasn't a severe thunderstorm, and my mom has letters that I saved. I'm like, "Why does it have to storm? It's scary." But my fear really grew into fascination, and I think that's how a lot of meteorologists get their start. They wanna know why something happened, how something happens, so that they can protect themselves and their loved ones.

And for me, that fascination was sparked back in 1998. I was watching The Weather Channel all summer with several land falling tropical systems, Bonnie and Charlie, I think, were the storms back then in 1998. The Carolinas were impacted, and I was just so mesmerized by these scientists who were standing out in the elements taking a beating on the beach, but also talking about the science of where this storm is going to go. And it's not just the wind, but there's other impacts from storm surge and the rainfall and the inland flooding and all of that. And so I think that was the beginning of my interest in learning about the science of the weather.

So then I became a little science nerd, where I would want to read articles about the weather and read books about the weather, and get to shadow people who did the weather on TV and learn that there's actually people off TV who also do the weather and are really critical, so many researchers and scientists with the government and private research agencies and everything.

And so I thought, "You know what? I like talking, I like educating, but I wanna go into meteorology and learn about the science of it in school." And kind of the rest is history.

Eriqah Vincent: Wonderful. I love hearing about stuff like that. You spent your career communicating about climate and weather, as you mentioned. What do you think is the key to communicating on those issues and those differences?

Melissa Nord: I think clarity and being concise with communication, and making something digestible and tangible, is the most important thing. Now, when we're talking about weather extremes, urgency is very important.

Eriqah Vincent: Sure.

Melissa Nord: When we're talking about bigger scale climate connections, I think there's a lot of research that, to the average everyday person, might seem abstract, so trying to break it down to

something tangible: what does it mean for my daily life? What does it mean for the food that I eat in one or two decades? What does it mean for the economy in my state or community? I think that helps break down barriers that might seem political otherwise. So breaking it down into every average day, what's the impact on me, and the bottom line, I think really helps when it comes to communicating about the climate.

Eriqah Vincent: Wonderful. My daughter is also afraid of storms, so we talk about storms a lot. So maybe she'll be more interested and fascinated by them later. So thank you for that.

Melissa Nord: It's a hard nugget when they're little, because you don't know if you wanna get into the full science of it, but it's fun going in. I've done so many school talks, and I think one of the things I enjoy the most about school talks is I made this giant three-foot wide hamburger out of felt for the Atlanta Science Festival like five years ago. And I bring it in, I put it on top of my head and bring it into the schools. And they're like, "Why do you have a giant hamburger?" People look at the layers. I'm like, "Can you describe this hamburger?" And then some of them get it, they're like, "Layers." I'm like, "Yes. You know what else has layers? The atmosphere has layers." And everybody's hamburger, they like it different. The atmosphere, its layers look different every day. So when you take a bite out of the atmosphere, it looks different every single day. And a bacon cheeseburger might mean thunderstorms, but a plain patty in a bun or a veggie burger might mean it's a sunny day.

Eriqah Vincent: A good way to describe it.

Melissa Nord: Went down a tangent.

Eriqah Vincent: No, that's a very good way to describe it, though. And that's what you were talking about when you said communicating with clarity. I mean, that's what you were talking about, whether that be age appropriate, whether that be trying to reach across the aisle to different people. I think that's really important, especially when you're reporting on things like climate and the weather that affect so many people in so many different ways depending on what we're dealing with. So you mentioned data centers. Let's get to that work that you're doing, the recent projects you're working on. You produced a video series, thank you so much, for Drawdown Georgia's newest toolkit around data centers. Obviously a very hot topic right now. And that video provides for Georgia communities ways to get engaged on the issue of data centers and AI. So tell us a little bit more about the work that you've done on that.

Melissa Nord: Well, I think it's a really complementary video series to the Drawdown Georgia toolkit, which is online. That toolkit is wonderful if you are in a community organization, or if you're a local lawmaker, or somebody who really wants to understand the ins and outs of data centers. There are also some legal aspects to what some of these data center owners are trying to do, they're trying to bypass some ways and find some loopholes and things.

But the video series is really meant for the everyday Georgian, because I think that data centers are in the news, right? We hear about moratoriums. We hear about votes at commissioner meetings. But does your mom or your brother or your younger sibling, do they really understand what a data center is? What's inside of it? I hear about how they use energy and water, but how does it use the energy? How does it use the water? Is it really using more energy than my whole town?

And I think those are the questions that we wanted to clear up and lay out, but also look at two other aspects. Number one, how are data centers changing for the future? Could there be more

solutions to how much energy they use, how much water they use? Could the data centers themselves run more efficiently and then need fewer resources? And then the other thing is, you hear about data centers, and they may seem very abstract, but when they're in your community, it's a lot different. Let's say that there's one proposed only a mile or two from your house. That could directly impact you, from maybe when the construction's happening, impacting the roads, but then once they're built, are you going to hear the noise? Is it going to affect your power bill? Is this gonna change anything with your water supply at your house, or the amount that you're paying for water or sewer?

So I think we made it a mission to also speak to some community advocates from different organizations who had been through this before and had data centers proposed, to really get their perspective of, okay, if you have a data center proposed, what do you need to do? And if they're building one and you feel like, "Hey, I'm not sure if this is supposed to be happening," what are the legal opportunities that you have to seek advice to make sure that they're operating within the restrictions of the law?

Eriqah Vincent: Right. Absolutely. I live in DeKalb County, and we have had a moratorium on a few data centers. For folks that may or may not be familiar, it's one of the biggest counties in the metro by land mass, and certainly up there as far as population goes. I have friends that are policy advocates. They're talking a lot about the moratoriums that we've had in DeKalb County around data centers, and community benefit agreements, and things like that. So this is of a lot of interest to me, as a DeKalb County resident. So I'm glad to hear us talking about it and creating this toolkit, and for you to be kind of helping folks delineate the information in a digestible way that feels like we can tackle this, and ask the right questions, whether you're for or against, whether you wanna know more, or you're staunchly opposed to it. Being able to really understand the language around what data centers are, what they're doing, and what it means for us to have it in our communities.

Melissa Nord: I mean, there's so much language about data centers that just seems like a foreign language when you're hearing about it. In DeKalb County specifically, Eriqah, we talked to Gina Mangham, who works with Renew DeKalb, and then there's kind of a secondary organization that's developed out of that around data centers. She's been at every single DeKalb commissioners meeting, and they really wanted a new text amendment. And the problem was that, with the zoning in DeKalb County, there's no law that's really giving a good buffer zone between residential communities and where data centers can happen. And they were advocating and fighting for this text amendment, because I think it was only 500 yards or 500 feet, something very short distance, I don't remember the number off the top of my head, between a data center and a residential zone. And she's like, "Hold on a second. We've looked at the Department of Energy report on data centers and all these impacts." They take the water, they can impact, she was looking at the water impact, the energy impact, and then of course there's heat that comes off of data centers, and if they're running diesel generators, there's pollution that will come off of them if there's a power outage.

So she's like, "We need a buffer. We need more of a buffer." And if you wanna bring the data centers in, and that's good for our economy in the county, then we need to make sure that it works for the citizens with that buffer zone. So it's that community advocate story which has not come out yet. We only got the tip of the iceberg, Eriqah, in terms of everything Gina had to say about the loops and hills they've climbed with the county, trying to really push for solutions. Not just complaining about data centers, but pushing for solutions. Like, "Let's make this work. We

need to make sure that we're being equitable for all citizens in DeKalb County." And she was advocating to make sure that this is safe for the citizens.

Eriqah Vincent: The zoning thing is a huge issue, and I'm so glad that that is being featured in the conversation around the buffer zone between residential areas. I live in a subdivision, and that's where the data centers will be put. And I also wanna mention, you mentioned equity. DeKalb County, I think, if I'm not mistaken, has the highest number of Black citizens, has the highest number of Black citizens with higher education in the metro. And so it's a very interesting place to put a data center. It's something to think about when we're thinking about equity, and we talk a lot about equity on this show. I talk a lot about equity in my work. So it's something to mention when we're thinking about where data centers are being placed, where they're being proposed, why, and what those citizens have, what say they have in where they're being placed and what the implications are around that, and them being able to have an informed voice, which is what this toolkit will help with in that conversation.

Melissa Nord: Informed voice, that is so critical, and that's one of the things that Gina was stressing, that we just want everybody to be educated, and we wanna work together to find a solution. They tried so hard to reach across the aisle and work with the commissioners, and they wouldn't even meet with them. There's a lot to get into here with data centers.

Eriqah Vincent: Yeah, I'm really excited about it. I'm excited that this exists. So as you dug into the topic, we talked about a few things that were surprising. What did you learn? Was there anything that completely surprised you as you dug into this issue?

Melissa Nord: You know, I don't even think I really understood the inner workings of data centers. I knew that there were rows and rows of computers, but I just didn't put two and two together that they have to be near fiber. Not just the fiber that runs our internet, but the fiber, it's like the digital highway of how cities are connected and how we're able to stream on our TVs a different show every night. But they've gotta be cool because they're letting off so much heat.

Eriqah Vincent: Yes.

Melissa Nord: And the easier way to cool them from a financial perspective is open loop cooling, which is evaporative cooling. They use the water once, it evaporates, it's letting off heat, and it's done. And then that water's gone. And it's more expensive to put in the closed loop system, which works in a similar way to the radiator in your car. They're cycling that water through, but it uses more energy. So you try to improve one aspect of the resources used, and then another one is taking a hit. I don't think I understood how they utilize the water. I knew that they used energy, but listen to this fact, Eriqah. So we have the biggest data center proposed in Georgia, Project Camellia in Effingham County.

Eriqah Vincent: Okay.

Melissa Nord: That would use the same amount of energy per year as 2.4 million homes if it's operating at full capacity.

Eriqah Vincent: Hmm.

Melissa Nord: That brings into full view why the Public Service Commission had to give the green light to adding all of that load on Georgia Power. Georgia Power's gonna expand their power generation in the coming years, they gotta add more to Plant Vogtle, and so that makes

sense. But the reason why a lot of these data centers are coming into Georgia is because right now we have an excess of power generated versus used, more than a lot of states. We have about a 30% surplus. Most states run closer to 15%. So they see that opportunity, they see the business incentives coming in, and in some counties there's water, and that's part of the reason why we've got the digital highway with Atlanta here. That's why a lot of these data centers are coming into Georgia. But there's just so many things about data centers I don't think I understood before speaking to all of these experts about how they work, how much power they really use, and then let's say there's a hurricane and there's a power outage.

Eriqah Vincent: Right.

Melissa Nord: They need backup power, right?

Eriqah Vincent: Right.

Melissa Nord: And we don't have enough batteries built to store power to run them 24/7. There was battery storage built which could be powered by, say, solar farms charging up the batteries, but there's still not enough battery storage to run these data centers for very long at all. So that's why diesel generators are right now the main way that these data centers are using backup power, and they have to test them every single month. So when they test them, there's pollution going into the air, and that is right around some communities.

Eriqah Vincent: Thank you for that, that's super helpful. I think folks also talk about noise pollution as well when it comes to data centers. There have been videos on the internet of people having data centers near their neighborhood and recording how loud they can be. But you just surprised me with something around the surplus of energy. I don't think I knew that Georgia had, like, a 30% surplus of energy, one of the more surplus states in the country. That's so interesting that you said that, because I think we've also talked about, we've done so many interviews at this point, about Georgia Power and the demand for power. There's always conversations in the energy justice space in Georgia about whether Georgia Power is meeting the demand. What does that mean for additional generating facilities like Plant Vogtle, expanding Plant Vogtle, like you just mentioned? Is the demand meeting something that is needed, or is there a surplus? I think there's been conversations around that, so that's very interesting. And I also wanna highlight what you said about the 2.4 million homes. A friend of mine and I laugh because we talk all the time about whether folks know how to count, because I think people don't understand often what that number really is. We hear numbers like a million, and we don't fully understand how many homes that is, how many people that is, how many neighborhoods that is. Really taking in that amount of people or that amount of homes, I feel like folks don't always grasp numbers like that when they hear something like that. That's a lot of homes.

Melissa Nord: Right.

Eriqah Vincent: Yeah.

Melissa Nord: The city of Atlanta itself, one unit at Plant Vogtle, that's a one gigawatt facility, so this one going into Project Camellia, I wanna say it's 3.2 gigawatts. I'll have to double check on that. But a one gigawatt facility, it's using one gigawatt of energy every single hour. Annually, that's 8.6 terawatts. So that's less than a third of Project Camellia. That is the same energy use as 750,000 homes, which is larger than the city of Atlanta. Not the metro, but just the city.

Eriqah Vincent: City, yeah.

Melissa Nord: So it is. But also, some of these, when I was speaking to some of our experts, some of these data centers, they'll go in, they have to make their proposals and they say, "Okay, this is our capacity. This is how much water we wanna use." In reality, sometimes they may not operate at that maximum full capacity much of the time.

Eriqah Vincent: Right.

Melissa Nord: And the problem is, Eriqah, that there's no state law that requires data center owners to publicly make available their energy use or water use.

Eriqah Vincent: Interesting.

Melissa Nord: And so some of this is a little bit gray, because we know what's proposed, but what are they actually using? Some will publish it, most will not. And there's also two main buckets of data center owners. There's the data center owners that are building for themselves, and they're gonna end up using it, like the Amazons and the Microsofts and the Googles. And then there's another bucket of data center owners that are coming in that are gonna sell space, or rent out space within their data center for other companies to use. And sometimes those are the ones that end up wanting to bypass the laws a little bit more, rather than the data center owners that are building it to use it themselves, where they understand they want to work with the community because they know they're gonna be there for a long time.

So there's just so much that goes into this problem of our present and future, since Georgia is, I think it was announced, the number one place for future data centers planned. There was a study that came out on that. There was a Pew Research Center study that had us at number three or four. There was another one that was published in the last month or so that I think had it at number one for data centers proposed.

Eriqah Vincent: That is so helpful, and really something to think about. Thank you so much for this information. It's really helpful and really something for us to think about as we're thinking about data centers in Georgia. And I didn't know that we were in the top five of proposed data centers, so that's also very interesting. So when you think about this toolkit, what is the most important takeaway for the toolkit for Georgia communities and for folks that are utilizing this toolkit? And how do you imagine people using the information that they'll find in the toolkit?

Melissa Nord: Well, I think it's really about education. Data centers are being proposed in all aspects of Metro Atlanta, and in other parts of Georgia.

Eriqah Vincent: Right.

Melissa Nord: And whether you have one proposed now or maybe not yet, but you wanna learn more, now is really the best time to research, because it's not an issue that's gonna be going away.

Eriqah Vincent: Right.

Melissa Nord: We have more and more demand for data centers because AI has a lot more needs than just your standard computer. So we need, with our digital infrastructure, more and more data centers, and there's a lot of facets to how it impacts a community. So I hope that for

community leaders and advocacy organizations, they can utilize the videos, but also that toolkit online is so important. It has so much, it digs down into all the resources and the nuts and bolts of what you need to know. And then the videos can really be for anybody. They're not meant to be for just people who are really headfirst into data centers, but they're meant for the everyday Georgian who maybe wants to learn about data centers and not just hear what they're hearing on the news about what the moratoriums are in place. But this will just kind of lay out what you need to know, so that then you can go and research in your area what's actually happening and what those impacts will be if one is proposed.

Eriqah Vincent: And I'm thinking about, you said, hopefully people using it as education to think about what data centers are using. And I also wanna mention, you said AI has so much more usage than just our standard computers. I also wanna mention that people don't even realize, even before ChatGPT and OpenAI and those things that you type something into and it generates for you, there are other things that you are already using that utilize AI. There are the obvious things that we're thinking about, like your ChatGPTs and other AI generators, but then there's the non-obvious things that also are utilizing AI. And so there's so much I think people don't even fully realize in the ways that AI has been kind of marketed thus far. I think people don't even realize all the ways in which we're utilizing it, and therefore, that is the need that you're talking about for more data centers, because it's the obvious, overt things and it's the covert things that we don't even think about.

Melissa Nord: I mean, we use them for using a map on your phone, Google Maps, it tells you the best way, or Waze, all those places, they use AI. You use data centers to do streaming on your computer. Literally every facet of your life that involves technology is using a data center. And a lot more of it is using AI. It's like now your emails suggest ways to write your emails.

Eriqah Vincent: Yes.

Melissa Nord: And I'm like, "I just wanna write the email myself." And predictive text on your phone as well. I just wanna write it myself, but that's the future of technology. And it all requires more power, more resources from more data centers.

Eriqah Vincent: Thank you so much for this, Melissa. This has been really eye-opening for me, and I know it will be for our audience when they see this. So I really appreciate you breaking some of this down for us, and also pointing us in the direction of the toolkit and the videos that you produced for Drawdown Georgia. I wanna ask you my last question. It's my favorite question that we ask all of our interviewees, and it's what's giving you hope around climate in Georgia?

Melissa Nord: I think I've done a lot of storytelling around climate and science in general in Georgia, and what I find is that it doesn't matter what part of the state you're from, everybody wants the area they live in, the community they live in, to sustain. You don't want it to be impacted.

Eriqah Vincent: Yes.

Melissa Nord: You want to enjoy nature around you, wildlife around you.

Eriqah Vincent: Mm-hmm.

Melissa Nord: And when you try to cut through whatever may seem political, there are just issues of we are seeing more weather extremes. We're also seeing more solutions to cut down on our carbon footprint.

Eriqah Vincent: Mm-hmm.

Melissa Nord: And when you just talk about the solutions and the science, everybody can have a conversation that is a back and forth conversation. Because everybody wants the same thing at the end of the day, and that is to live in a great place.

Eriqah Vincent: Thank you so much. I couldn't agree with you more. Thank you, Melissa, for being with us and for the work that you are doing on reporting and giving more information, educating around data centers and AI. We really appreciate the work that you've done with this toolkit. So thank you for being with us today, and thank you for joining me in this conversation. And thank all of you for watching. As always, we appreciate having you here and having you in the conversation. And we will see you next time on our next interview with another fantastic Georgia leader that is helping work on climate in the state. Thanks, everybody. Thanks, Melissa.

Melissa Nord: Thank you.