Data Center Impact Analysis and Report Act – SB 116 and HB 270

Why Maryland Needs a Data Center Study Bill

Susan Gordon
1520 Laurel Wood Way
Frederick, MD 21701
segmessages@gmail.com
301-401-2446
January 21, 2025

AI and the data centers, to power them, have been created and developed by massive corporations, Open AI, Google, Meta, Microsoft, to name a few.

The Supreme Court of the United States made two significant rulings in relationship to corporations that have greatly increased their power and influence in this country. This level of influence brings about a power differential that holds sway across whole populations.

When **Citizens United,** the Supreme Court's 5-4 First Amendment decision in 2010 that extended to corporations for the first time full rights to spend money as they wish in candidate elections — federal, state, and local. The decision reversed a century of legal understanding, unleashed a flood of campaign cash, and created a crescendo of controversy that continues to build today. (When Did Corporations Become People? Nina Totenberg, NPR, Morning Edition 7/28/2014)

Legal historian, Eben Moglen says, "And we are now winding up using constitutional rules to concentrate corporate power in a way that's dangerous to democracy," he says. (When Did Corporations Become People? Nina Totenberg, NPR, Morning Edition 7/28/2014)

In June of 2024, The Supreme Court undid the Chevron decision which limits "the broad regulatory authority of federal agencies could lead to the elimination or weakening of thousands of rules on the environment, health care, worker protection, food and drug safety, telecommunications, the financial sector and more." Here's What the Court's Chevron Ruling Could Mean in Everyday Terms, NYT, June 28, 2024 By Coral Davenport, Christina Jewett, Alan Rappeport, Margot Sanger-Katz, Noam Scheiber and Noah Weiland, June 28, 2024)

 "The court's opinion could make it easier for opponents of federal regulations to challenge them in court, prompting a rush of new litigation, while also injecting uncertainty into businesses and industries." (NYT, June 28, 2024)

The Citizens United decision increased corporate power and the undoing of the 1984 Chevron Decision has made it much more difficult for the citizens in this country to protect their health and welfare and that of the environment when those needs conflict with the corporate desire for profits.

There are risks and opportunities to both AI and Data Centers.

I. AI

In the journal, Applied Roots, there was an article on the 16 Risks and Dangers of Artificial Intelligence (AI) October 28, 2024.

The author, Mayank Gupta, is a proponent of AI, understands its potential to do good, and her article lays out her concerns and offers a series of actions which would help AI reach that potential. She writes, "AI has become an integral part of modern society, powering innovations across industries. While AI offers numerous benefits, it also brings significant risks and challenges. Understanding these dangers is essential for ensuring responsible development, as unaddressed risks can negatively impact individuals, societies, and global stability." Applied Roots, Gupta)

They include: ethical, social, security and existential risks. Some that the author delves into are:

1. **A lack of transparency, privacy concerns, surveillance, security risks, social manipulation, and misinformation.**
2. Another concern of hers reflects this paper's concern with environmental injustice. She recognized that AI could bring: **socioeconomic inequality and a power imbalance.** Gupta writes, "AI's development is driven primarily by tech giants, concentrating resources and knowledge within a few corporations. The dominance of AI infrastructure by a select few could reinforce global wealth disparities and social inequalities. (Gupta)

   She offers this solution: "Policymakers must work towards democratizing AI technologies, ensuring equitable access to data, tools, and research. Promoting open-source AI solutions and encouraging collaboration can help balance the scales and prevent AI from further entrenching existing power structures." (Gupta)

Additional concerns included:

3. Environmental Harms Due to AI: Data centers that support AI development are energy-intensive, contributing to carbon emissions and environmental degradation. As AI adoption grows, the environmental footprint of these technologies will also increase, raising concerns about sustainability."

4. Ethical Dilemmas in AI Applications: "AI brings about complex ethical challenges that need to be addressed in fields like healthcare and criminal justice. The application of AI in social services may introduce bias and reinforce discrimination. Ethical dilemmas also arise when AI decisions clash with moral values or public expectations."

5. Autonomous Weapons and AI in Warfare : "AI's use in developing autonomous weapons presents significant security and ethical risks. These systems can make independent decisions without human oversight….. .Governments must work together to ensure human control over weapons systems and avoid scenarios where AI replaces human judgment in matters of life and death."

Gupta insists: "Ensuring safe AI development requires strict ethical guidelines and regulatory oversight. Researchers advocate for a focus on aligned AI—systems whose objectives are compatible with human values—to mitigate these long-term risks."

Here are Gupta's:

Key Strategies to Manage AI Risks:

1. **Developing Legal Frameworks:**
   Governments must establish laws and regulations to govern the use of AI, ensuring accountability and oversight. Similar initiatives are needed for emerging AI risks like autonomous weapons and AI ethics.

2. **Creating Ethical Guidelines:**
   Businesses and organizations should adopt ethical AI frameworks that prioritize fairness, transparency, and non-discrimination. Guidelines ensure that AI technologies align with human values and promote responsible use across sectors like healthcare and finance.

3. **Investing in Technical Improvements:**
   AI developers must focus on creating explainable AI (XAI) systems to enhance transparency and accountability. Technical solutions such as regularization help prevent model bias, while robust security protocols mitigate cyber risks.

4. **Continuous Monitoring and Auditing:**
   Implementing regular audits and performance monitoring ensures AI systems function reliably over time. This also allows organizations to address new risks that arise as technologies evolve.

5. **Public-Private Collaboration:**
   Governments, businesses, and researchers should work together to develop global standards for AI safety. Collaborative initiatives foster innovation while maintaining a focus on risk mitigation.

Adopting these strategies will help organizations and societies manage AI risks effectively, ensuring the technology is **safe, ethical,** and **beneficial**.

Despite understanding these risks, in 2023, Open AI turned their back on the need for safety and regulation in this new and not understood, "black box" field of AI and turned their focus on profit. Katie Scott, in Tech. Co. wrote last year, "Last August, news hit of a mass exodus from the company's safety team. One former employee said that safety has been sidelined since Altman returned to the top seat." (Katie Scott, Tech Co)

"Ex-employees (of ChatGPT) went public with a scathing letter. 'We joined OpenAI because we wanted to ensure the safety of the incredibly powerful AI systems the company is developing. But we resigned from OpenAI because we lost trust that it would safely, honestly, and responsibly develop its AI systems.'" (Katie Scott, Tech Co.)

In placing profits over safety, Open AI has placed our entire world at risk. Publicly traded and profit driven corporations have joined in this race. As Gupta wrote, "AI's development is driven primarily by tech giants, concentrating resources and knowledge within a few corporations. The dominance of AI infrastructure by a select few could reinforce global wealth disparities and social inequalities." (Gupta)

I.   **Data Centers: the many reasons they require study.**

E&E News by Politico, Jason Plautz, Peter Behr | 01/10/2025 underscored their power and wealth when they reported incoming President Trump does not need the 20 billion dollars from a Dubai real estate developer because "Hyperscaler data center companies like Microsoft [and] Google, as well as other nontechnology companies that are backed by private equity, infrastructure funds and pension/sovereign wealth funds … have a lot of 'dry powder' — deployable capital and willingness to deploy into digital infrastructure like data centers," said Kush Patel, a senior partner with the Energy & Environmental Economics analysts firm. (E&E, Politico)

An article in the Wall Street Journal, AI Data Centers Spurs Race to Find Power, underscored this issue, "The Ohio Consumers' Counsel, meanwhile, has argued that residential customers 'should not be forced to subsidize utility investment to accommodate data centers operated by multibillion and trillion-dollar companies.'" (WSJ)

The Citizen United and Chevron Supreme Court decisions make it much harder to require the level of regulation that a powerful, unscaled, world transforming, developing technology such as AI needs.

Governor Moore invited data centers into Maryland, just as many other governors did in blue and red states across the country, because it was thought they would be a source of revenue and jobs. But now, article after article has documented that data centers, for whom these transmission lines are being proposed, are taking up a city's and, sometimes, a states' entire electrical grid that should be serving the needs of its people. Water is a finite resource in Maryland, and more so as climate driven droughts are occurring more frequently. One data center (they need water to cool them) can use all the potable water needed by an entire community. (Elizabeth Law, scientist)

"The power needs of artificial intelligence and cloud computing are growing so large that individual data center campuses could soon use more electricity than some cities, and even entire U.S. states, according to companies developing the facilities. The campuses could grow so large that finding enough power and suitable land to accommodate them becomes increasingly difficult." And, the report included these cautions: "Renewable energy alone won't be sufficient anytime soon to meet their power needs. Natural gas will have to play a role, which will slow progress toward meeting carbon dioxide emissions targets." (cnbc, 11/23/24)

"….finding enough power to drive them and enough suitable land to house them will become increasingly difficult, the developers say. The facilities could increasingly demand a gigawatt or more of power — one billion watts — or about twice the residential electricity consumption of the Pittsburgh area last year." (https://www.cnbc.com/2024/11/23/data-centers-powering-ai-could-use-more-electricity-than-entire-cities.html)

Jenn White on 1a, WAMU, October 22, 2024 had an hour-long program entitled:
The Connection Between Data Center Energy Demands and Our Digital Future.

Jen first spoke with Amanda Peterson Corio, the global head of data center energy at Google who discussed nuclear power: "It's a small modular reactor. … These small reactors can be as small as 50 megawatts or up to 300 megawatts in size. … That modular design really helps to reduce

construction timelines. It helps you be able to deploy in more places, and then you can learn on building the same standard reactor over and over again."

But Jenn White pointed out, "The country's electric grid is being pushed to its limit. Very briefly, how is your company planning for the future in the face of the accelerating growth of AI technology and the need to decarbonize our electricity sources?"

Here in Maryland, the data centers are "partnering" with PJM and PSEG to provide those energy needs with a single proposed and utterly inadequate 550k transmission line across three counties because the nuclear reactors that Corio described have not been developed to power VA data centers.

Jen White also spoke with Catherine Huff, the former US assistant secretary for nuclear energy, who said, "So, we're still at this place where AI's demands and the demands of what these data centers are going to need in the next few years is just far beyond what it looks like the electric grid is going to be able to handle …. . I'm also skeptical of the timeline that these tech companies are setting for these small modular reactors. This is technology that basically has been in development for decades, and it's been really hard to get it right."

As the 1a conversation continued, the situation in Maryland with Governor Moore, was described as it has unfolded in other jurisdictions. "In some places, they worked really hard to… incentivize the data centers to give them kind of tax breaks if they come in, to roll out the red carpet and do anything they could. …There's starting to be community pushback in places where this happened … . And so, you're starting to see lawmakers, elected officials in some of these places starting to tap the brakes and say, wait a second. You know, we thought this was a good deal, but now we're realizing this is really stressing the power grid. And what's happening with the incentives is in in some cases, like, a county will give a tax incentive and they'll make lots of money from the data center coming in in tax revenue, but it doesn't factor in, you know, the county doesn't handle electricity planning. And so, then the power company will come along and say, well, now we need to build this new infrastructure, and we'll have to charge ratepayers, or we'll have to keep this, you know, coal or gas plant open longer or open a new one. And it starts a rethinking. Even though this brought in this tax revenue to the community that brought this data center here, this is not such a great thing for the state overall or the broader, you know, power district the utility serves. (1a, WAMU, October 22, 2024.)

In Memphis, TN, the connection between the "super-computer" Elon Musk wants to build and environmental injustice is stark.

This article in the Southern Poverty Environmental Justice Law Center wrote: A facility run by Elon Musk's xAI is spewing dangerous air pollution in South Memphis, worsening air quality and endangering families living in the predominantly Black neighborhoods nearby. Now, community members are calling for accountability and urging local leaders to take action.

Like all data centers, xAI requires huge amounts of energy. Initially, the company planned to use up to 150 megawatts of electricity, enough to power more than 100,000 homes. Recently, Musk

[has said he plans to double the facility's computing power](#), and its energy use, by the end of 2024.

To meet the incredible energy demands, xAI is running methane gas turbines. The company has at least 18 of the turbines….. These turbines pump out hazardous chemicals like formaldehyde and worsen ground level ozone, better known as smog. Even though the Tennessee Valley Authority [recently approved xAI's request for power](#), the company has not committed to turning off its gas turbines.

Even worse, [xAI is operating these harmful gas turbines without any permits](#). A coalition of community groups have warned the Shelby County Health Department that the company's refusal to apply for a permit violates federal law.

Amanda Garcia, Senior Attorney, wrote, 'This isn't the first time a Musk-founded company has skirted environmental rules. [Musk's SpaceX and Boring Company have been fined thousands of dollars for violating environmental regulations in Texas.](#)'

'Local leaders shouldn't be rubberstamping requests from somebody with a history of treating nearby communities like dumping grounds. They need to be analyzing this facility with a critical eye and ensuring it's following the rules—so far that hasn't happened,' Garcia said.

As xAI continues churning out dangerous pollution, Memphians have been left in the dark. Plans for the facility moved at breakneck speed and without any public input. Even Memphis City councilmembers were surprised when the facility was officially announced in June. It began operations just weeks later.

"Reports showed that Memphis officials signed non-disclosure agreements with xAI, and local health and utility officials were seemingly caught off guard by xAI's plans to double in size." (Garcia)

'Community members are left wondering who is calling the shots here, and if local leaders, who are supposed to be looking out for the best interest of the public, even know what is going on at the xAI facility,' Garcia said.

"Meanwhile, representatives from xAI have ignored calls from community members and city leaders to attend public meetings to answer basic questions about the company's operations and harmful impacts. xAI representatives have met with business leaders and economic groups instead." Southern Poverty Environmental Justice, November 15, 2024)

A New York Times article also provided some additional information about the situation in Memphis.

"After the xAI deal was announced in June, officials of the local utility, Memphis Light, Gas and Water, assured the community in an online [fact sheet](#) that the company "is paying for all upgrades" involved in supplying electricity and that "there will be no impact to the reliability of availability of power to other customers from this electric load."

"But the vast scale of potential consumption meant the plan required a sign-off from the Tennessee Valley Authority, the federal agency operating the grid that supplies power to most of Tennessee and parts of six other Southern states. Unlike the local approval of the plant itself, that decision was not quick in coming. 'We continue to review the details of their proposal and electricity demand needs,' Julia Wise, a spokeswoman for the authority, said in a statement on Oct. 22."

"So, in the meantime, xAI bypassed the electric grid by installing the mobile natural gas plants.

(https://www.nytimes.com/2024/10/31/business/energy-environment/elon-musk-ai-memphis-pollution.html?unlocked_article_code=1.Zk4.22PK.7qshe61XOsYh&smid=url-share)

A Bloomberg article, AI Needs So Much Power, It's Making Yours Worse, Technology |The Big Take by Leonardo Nicoletti, Naureen Malik, Andre Tartar on December 27, 2024, discussed "energy instability."

The authors write, "Experts have been warning for some time now about the impact data centers will have on power grids across the globe. The AI boom has only underscored the issue: The digital economy is sucking up so much power that demand is now straining available supplies of electricity in many parts of the world, leading to concerns over price increases and even widespread outages. And that's only projected to worsen as more data centers are built."

The new harmonics data shows how these problems are already starting to play out in real time across the US.

"It's an issue that goes beyond just whether or not there's enough power to flip the lights on. Distortions mean that even as electricity is flowing to homes, the quality can be eroded enough to destroy appliances and increase vulnerability to electrical fires if there's a voltage surge. Poorer power quality overall can also eventually lead to lights flickering along with brownouts and blackouts."

" 'We need to understand those risks,' said Hasala Dharmawardena, a senior member of the Institute of Electrical and Electronics Engineers who also works at the North American Electric Reliability Corp."

"The grid has never faced the kinds of strain that comes with data centers. These city-sized users can pop up very quickly, within a year or two, which is much faster than grid planning usually happens. Even during population booms, the rise in power demand paled in comparison to the expected installation in the coming years of hundreds, perhaps thousands, of these facilities to power AI. That stress is adding to problems of aging infrastructure, extreme weather, and the electrification of more parts of everyday life, such as the rise of electric vehicles."

The maps accompanying this article show this level of grid stress is already occurring 20 miles south west of Frederick County, MD. (Bloomberg, December 27, 2024)

And yet, the four data centers who want to set their behemoth concrete warehouses in Frederick County are already pushing against the regulations created by the county workgroup and themselves. (Frederick News Post.)

But in our rush to build data centers for AI, those suggestions, and many others, such as onsite nuclear generation, are being bypassed because they will diminish the corporate profits or are not available. It could take 3, 5 or even 10 years until they are. (citation, Lapp, Miller, Boathouse, and others)

Susan Miller, of Earth Justice and Julia Boathouse, who has been monitoring the data center development in Northern Virginia, are warning that we do not have currently have the means to safely provide power to data centers. (Sixth Maryland Climate Summit, January 4-5, 2025.)

Every article, interview, and the data from the 6th annual Climate Summit, that this author has found and cited has reached the conclusion that our current methods of supplying energy to data centers are utterly inadequate and create profound risks for the communities and states in which they reside.

These words, from concerned scientists and environmentalists, were written in an open letter to former President Biden, when he decided to fast-track data centers and ignore environmental regulations. "Data-center power demand, which (is) threatening regular people with increased electricity prices, drastically undermining climate goals by keeping coal-fired power plants open and expanding gas-fired plants, creating major nuisances and pollution for local communities, and are harming national parks and other protected lands. This massive spike in energy demand is being driven by some of the wealthiest corporations in the world, including several that this Administration has investigated or pursued for anti-competitive business practices. An enormous energy giveaway to these corporations at the expense of consumers, a habitable climate, and local communities would be unconscionable and inexcusable." (Open Letter to President Biden, November 2024)

In conclusion, even a cursory read of the risks data centers pose to both the environment and to the members of the community, provides reason after reason for a study of data centers before permits are provided for them to site and build. This paper is not a wholesale rejection of data centers. While it outlines the risks, it also offer solutions.

But reaching those solutions requires time and thoughtful planning. If this current Republican administration proceeds with its promise to dismantle the regulatory functions of the Federal Government, then the safety and the welfare of this nations' citizens may be dependent on the actions of those in the states.

Those solutions, that planning, may now be entirely dependent upon our government in Annapolis. You, our legislators, may be the only firewall between Maryland citizens and corporate greed.