

The Urgent Case Against Data Centers

The AI data center frenzy presents one of the greatest environmental and social challenges of our generation. Fossil fuels are already warming our climate to unsustainable levels and threatening our food, water, and health. The data center boom, driven by rising use of artificial intelligence (AI), is dousing this fire with gasoline. Energy demand and fossil fuel production are soaring, while water resources are draining. On top of this, AI threatens significant, long-term impacts on our society — from lost jobs to social instability to corporate consolidation. We cannot allow an industry with such significant environmental and societal impacts to grow unfettered, without a clear regulatory framework. It's time to pump the brakes. It's time for a moratorium on new data centers.

Any AI development must safeguard people and the environment and benefit everyone — not just the extremely wealthy. Yet the Silicon Valley oligarchs are driving this boom, as they watch their personal wealth balloon. Their massive political donations fund today's political chaos, and they are ready to cash in on their political investments. The Trump administration signals unwavering support for an unregulated industry that is already disorienting our lives. Meanwhile, Big Tech's supporters — including state and local leaders, Democrats and Republicans alike — are going along with the program.

Beyond the halls of power, however, there is a growing backlash against unregulated AI and the onslaught of data centers. It's hardly a surprise, given what Big Tech oligarchs claim about the technology. OpenAI co-founder and CEO Sam Altman said AI would “probably, most likely, sort of lead to the end of the world. But in the meantime, there will be great companies created with serious machine learning.”¹ Tech titan Elon Musk claimed AI and robotics will ultimately “replace all jobs.”² Peter Thiel, co-founder of Palantir, has stated that he does not believe “freedom and democracy are compatible”³ and that technology is an “incredible alternative to politics.”⁴

These predictions come on top of documented harms caused by AI and data centers, which include:

- **Enormous energy footprints:** A single hyperscale data center can consume as much energy as 2 million U.S. households.
- **A lifeline for fossil fuels:** The thirst for fuel is being met by keeping old coal-fired power plants running and by building new natural gas ones.
- **Skyrocketing electricity costs:** Increased energy demand can raise residential rates, which soared 31 percent from 2020 to 2025 (compared to 4 percent from 2015 to 2020).
- **Drained water resources:** By 2028, AI data centers could use as much water as 18.5 million households, just for cooling their servers.

- **An investment bubble:** A handful of companies are investing in one another and increasingly turning to risky debt structures to hide the threat of the bubble.
- **A litany of other harms:** This includes massive amounts of electronic waste (e-waste), unrelenting noise pollution, loss of farmland, political instability from deepfake videos, lost revenue from data center tax incentives, and child endangerment from AI chatbots.

Technological advances provide mixed societal benefits and harms, and AI is no different. But that does not mean we must accept the unregulated deployment of this massively extractive and transformative industry. The detailed harms from the AI boom necessitate an immediate halt to new data centers, until we create a regulatory framework that fully and adequately addresses these major issues in a just, equitable, and sustainable way.

A future dominated by AI — and powered by data centers in our backyards — is not inevitable, despite what Big Tech oligarchs proclaim. And communities are already organizing to fight back and successfully blocking new and expanding data centers. We can turn back from the Big Tech and Big Oil path of extraction and destruction, and embrace a future of environmental sustainability, social cohesion, equity, and justice. A halt to the data center buildout is a key step toward that future.

What Are Data Centers?

Data centers are the brain of the internet: facilities that house and operate computer servers.⁵ They include conventional servers that store, process, and transmit digital data,⁶ including hosting websites and online banking.⁷ In recent years, the U.S. has seen rapid growth in specialized AI servers that train and run AI models.⁸

Data centers vary significantly by size, capacity, and use. Companies can house their information technology (IT) infrastructure onsite in their own data centers or rent physical space in colocation facilities. Companies can also remotely access services at a cloud data center. These centers can serve millions of customers and are often operated by large tech companies like Amazon, Google, and Microsoft.⁹

The largest data centers, called “hyperscalers,” may house 5,000 or more servers across millions of square feet of building space.¹⁰ AI is driving a massive buildout of hyperscalers, with over 500 in the U.S. alone and another 280 expected by 2028.¹¹ By 2030, 70 percent of U.S. data center energy demand is expected to come from hyperscale facilities.¹²

The Enormous Energy Footprint of Data Centers

Data centers, especially hyperscalers, consume a mind-boggling amount of energy. In 2020, data centers consumed an estimated 223 terawatt-hours (TWh) globally — equivalent to the electricity used by over 21 million U.S. households. Even so, the International Energy Agency predicts that global energy use will triple from these 2020 levels by 2030, thanks to developments in AI and cryptocurrency.¹³ In the U.S. alone, annual data center energy demand could hit 580 TWh in 2028 — 12 percent of national demand and equivalent to the energy used by over 55 million U.S. households.¹⁴

AI technology in particular consumes an incredible amount of energy in every step — from microchip production to running AI programs.¹⁵ Simple text searches on ChatGPT use nearly 10 times as much electricity as a non-AI Google search.¹⁶ And creating images is thousands of times more energy intensive than text searches, sometimes using as much electricity per image created as it takes to charge your cell phone.¹⁷

AI servers are increasingly housed in hyperscale data centers that can cover hundreds of acres of land and consume five times more energy than pre-AI data centers.¹⁸ Just one hyperscale data center built for AI can consume as much energy as 100,000 households — and the largest as many as 2 million households.¹⁹ In Virginia, a major data center hub, energy demand from data centers increased 30 percent from 2024 to 2025 alone.²⁰

Data centers throw a lifeline to the fossil fuel industry

These enormous energy needs foster a partnership between Big Tech and Big Oil. While Big Tech brushes off AI's eye-popping energy requirements by pointing to renewable energy projects purportedly in the works, AI expansion is largely fueled by dirty energy sources.²¹ In the U.S., over 40 percent of energy for data centers comes from natural gas, 24 percent from solar and wind combined, 20 percent from nuclear, and 15 percent from coal.²²

AI expansion is extending the lives of dirty fossil fuel plants.²³ According to *Reuters*, 60 percent of scheduled retirements for oil, gas, and coal power plants within PJM (the largest power grid operator in the U.S., serving areas stretching from Washington, D.C. to Chicago) were postponed or cancelled in 2025.²⁴

Here are some more examples of AI's big giveaway to dirty energy:

- **Coal:** In Salt Lake City, Utah, lawmakers and utility executives cut back investments in renewable energy in favor of extending the lives of soon-to-be decommissioned coal plants to power new data centers.²⁵ Similar situations are occurring in Georgia, Virginia, and Wisconsin.²⁶
- **Natural gas:** Over 220 natural gas facilities are under development in the U.S., driven in part by demand from data centers.²⁷ In Louisiana, a utility company plans to open its first new natural gas plants in 50 years to power Meta's planned 4-million-square-foot data center.²⁸ Utility companies in Georgia, North Carolina, South Carolina, and Virginia plan to open 20 gigawatts (GW) worth of new natural gas generation plants by 2040, primarily to meet data center demand.²⁹
- **Nuclear:** Nuclear is a dangerous, expensive energy source producing radioactive waste that plagues generations to come.³⁰ Yet Big Tech is reviving nuclear infrastructure, including a section of the Three Mile Island nuclear plant in Pennsylvania that will power Microsoft data centers.³¹ Near Cedar Rapids, Iowa, NextEra Energy plans to reopen a closed nuclear plant as early as 2028 to supply power for AI data centers.³²

Clearly, Big Tech needs Big Oil to power data center expansion — just as much as Big Oil needs Big Tech to justify the continued burning of fossil fuels.

Data centers raise household energy costs

Utility companies often base electricity prices on the average cost of providing electricity to *all* consumers within the grid. So, when an industrial user like a data center comes online and taps into the shared grid, utilities may pass along some of the costs from the massive infrastructure buildout to all users — including residents, who already pay higher electricity rates than industrial users.³³ Utilities themselves compete to attract data centers, but can raise rates on captive residential customers.³⁴ This often results in data centers receiving electricity under special, preferential contracts that subsidize data center rates by raising residential electricity rates.³⁵

According to a report by PowerLines, U.S. electric and gas utilities requested \$31 billion in rate increases in 2025 — double what they requested in 2024.³⁶ Grid expansion costs can raise these prices for all residents.³⁷ In fact, average residential electricity prices in the U.S. soared 31 percent from 2020 to 2025, compared to just 4 percent from 2015 to 2020.³⁸

Moreover, power plants can't come online fast enough to fuel this growth.³⁹ Data centers in New York State are seeking more than 9,000 megawatts (MW) of new demand — about 1.5 times the power consumption of every household in the state in 2024.⁴⁰ Georgia Power predicts that energy sales will almost double by the early 2030s, largely driven by data centers.⁴¹ This steep demand increase can raise residential electricity costs — regardless of whether the new data centers pull from the grid or not.⁴²

The “bring your own power” delusion

Federal regulators and utility coalitions seek to fast-track the permitting of data centers that directly source electricity, such as those powered by new power plants or built next to existing ones.⁴³ More data centers are opting for off-grid electricity to benefit from this regulatory fast-track.⁴⁴ And data center proponents often conflate self-powering with self-paying, suggesting that it protects households from rate increases.⁴⁵

However, electricity markets are not so simple. Reducing consumption is often one of the easiest ways to reduce electricity bills; meanwhile, raising consumption increases the price level of electricity production.⁴⁶ Even data centers that are reportedly powered by new renewable energy sources are in fact sucking up renewables that, if connected to the grid, would allow for the closure of expensive fossil fuel generating units.⁴⁷

Moreover, when a power plant pulls out of the grid, in most cases it no longer pays for the infrastructure that once connected it to the market.⁴⁸ Instead, the remaining utility customers are left paying for old transmission wires that were built to support those power plants, on top of potentially new transmission infrastructure to fill in the gaps.⁴⁹ The utility company Exelon claims that exempting a 480 MW co-located customer from their grid usage would pass \$121 million per year in costs to residential customers (\$25.57 per household served).⁵⁰

The exit of large power plants from the grid can contribute to a network “death spiral.”⁵¹ The fixed costs of now-obsolete infrastructure are shared among a decreasing number of customers, as those

capable of leaving do so (either by going off-grid or moving manufacturing to another region).⁵² Death spirals can also occur when data centers stop buying power, leaving behind excess transmission capacity that will be paid for by remaining ratepayers.⁵³

Data centers threaten grid reliability

The CEO of the North American Electric Reliability Corporation — the utility-founded, non-governmental organization overseeing grid reliability — warned in October 2025 that the rising electricity demand from AI data centers is a “five-alarm fire” for reliability.⁵⁴ The power demands of data centers can fluctuate by hundreds of megawatts in a matter of seconds,⁵⁵ making it difficult to forecast demand and balance the grid.⁵⁶ When power lines are used above their capacity, the system overheats and causes fires; and when demand exceeds supply, cascading blackouts occur.⁵⁷ According to a Bloomberg investigation, households located near data centers experience more volatile power frequency, which can strain the grid and damage appliances, adding up to billions in property damage.⁵⁸

There are already concerns about the risk of rolling blackouts in PJM’s service area.⁵⁹ In 2025, it experienced the highest energy demand in 14 years and issued a growing number of “Level 1” energy emergency alerts.⁶⁰ Grid managers in Texas and Virginia have reported multiple large fluctuations linked to data centers that risk cascading blackouts.⁶¹ Nevertheless, data center operators are fighting back against requirements that would require them to shut down during periods of energy scarcity.⁶²

The Water Impacts of Data Centers

Water is another resource under threat from the data center boom. The amount of water consumed by data centers more than tripled from 2014 to 2023.⁶³ By 2028, U.S. data centers could use as many as 720 billion gallons of water each year just to cool AI servers. This is equal to over 1 million Olympic-size swimming pools — or enough water to meet the indoor needs of 18.5 million American households.⁶⁴

Computer equipment generates heat as electricity flows through components, with central processing units (CPUs) and graphics processing units (GPUs) operating at very high temperatures.⁶⁵ For example, NVIDIA’s H100 chip (200,000 of which trained Elon Musk’s Grok3 AI model) runs an average temperature of 188 degrees Fahrenheit.⁶⁶ Continuously operating at high temperatures can accelerate the wear and damage of components and ultimately shorten their lifespans.⁶⁷

Data center infrastructure uses fresh water for cooling, often relying on evaporation to transfer heat. One study estimated that training OpenAI’s product, GPT-3, may have evaporated over 700,000 liters of fresh water — the equivalent of over 11,000 showers in the U.S.⁶⁸ Another study estimates that GPT-4 uses as much as three 16.9-ounce bottles of water just to generate a 100-word email.⁶⁹

Data centers need clean, treated water to avoid mineral blockages and bacterial growth in pipes,⁷⁰ and they can only reuse water a handful of times for these reasons.⁷¹ Most of this freshwater is not discharged back into the environment. As of 2024, just 21 percent of water used in Google’s data

centers was discharged.⁷² Everything else data centers use is either lost to evaporation (meaning it doesn't reenter the local water system) or dumped into the sewer for treatment at local facilities.⁷³

Some industry leaders tout their use of closed-loop cooling systems that “consume zero water”⁷⁴ (“consume” in this context means that none of the water withdrawn is discharged back into the environment). However, this is just clever advertising. Closed-loop systems use either air cooling (requiring giant fans) or evaporation to some degree, and it is not uncommon for them to lose 25 percent of their water volume per month.⁷⁵

Closed-loop systems also suffer from bacterial growth that can cause equipment to corrode, adding to maintenance costs.⁷⁶ Moreover, the cocktail of chemicals added to reduce corrosion and other issues will eventually be released when the water systems are flushed, consuming more water and posing water quality concerns.⁷⁷ Finally, closed-loop systems that rely on air cooling end up consuming more energy as a tradeoff, especially in hot climates.⁷⁸

But all of this is just a drop in the bucket compared to the water that's consumed when generating the electricity used to power data centers — accounting for around 71 percent of a data center's water footprint.⁷⁹ Cooling processes used in natural gas and nuclear power generation consume enormous amounts of water — 600 and 2,000 times as much water per megawatt of energy produced, respectively, compared to wind power.⁸⁰ A federal report estimated that in 2023, through power generation alone, U.S. data centers indirectly consumed over 200 billion gallons of water — enough to fill over 300,000 Olympic swimming pools.⁸¹

Water quality concerns

Water withdrawn to cool data centers can lower water levels from the source, impacting fish and other aquatic life.⁸² Although data centers can use non-freshwater sources, such as salty or reclaimed water, these inputs must be purified first — an energy- and water-intensive process itself.⁸³

Shockingly, around two-thirds of the U.S. data centers built since 2022 are in water-stressed regions.⁸⁴ In the Phoenix, Arizona area, drought conditions — exacerbated by data center demand — have led some homebuilders to pause construction. In Richmond County, North Carolina, residents are pushing back against Amazon's 800-acre data center project, citing existing issues with dry wells and poor water quality that force many to rely on bottled water.⁸⁵ In Newton County, Georgia, residents reported dry taps following Meta's nearby data center development, while a recent report warns that the county is on track for a water deficit by 2030.⁸⁶

Data centers raise residential water rates

Data centers don't just raise household energy bills — they also drive up water costs. And here too, residents often pay higher rates than industrial users. In water-stressed Mesa, Arizona, a 2019 deal between the city and Google had the tech giant paying just \$6.08 per 1,000 gallons of water for data center use, while residents paid \$10.80 per 1,000 gallons.⁸⁷ In Newton County, Georgia, water costs are expected to rise 33 percent from 2025 to 2027 (compared to the usual 2 percent annual increase).⁸⁸

Data Centers' Benefits Flow to the Wealthy and Powerful — at Everyone Else's Peril

The rapid AI rollout may be ushering in a speculative stock market bubble, similar to the 2000s dot-com bust and the 2008 global financial crisis.⁸⁹ Investment in data centers and related software accounted for nearly all of the growth in the U.S. gross domestic product (GDP) in the first half of 2025.⁹⁰ Meanwhile, AI companies secured hundreds of billions of dollars in debt in 2025 alone while requiring an additional \$6.7 trillion in capital investments to meet projected demand for computing power by 2030.⁹¹

The AI-led stock market gains are inflated by yet-to-materialize profits. Disturbingly, it seems that U.S. regulators have not learned from the past, as they aim to deregulate the tech industry (just as they deregulated banks leading up to the 2008 crisis).⁹² For example, the Trump administration's 2025 executive order on data centers aims for a "minimally burdensome national policy framework for AI."⁹³

In fact, Big Tech is turning to the same financial instruments used in the lead-up to the dot-com bust and the 2008 financial crash. This includes circular financing. Microsoft invested over \$13 billion in OpenAI from 2019 through 2023, and OpenAI sent much of this back to Microsoft to buy cloud computing power for its AI models.⁹⁴ Other examples abound.⁹⁵ More eyebrow-raising deals include one where OpenAI — with an annual recurring revenue of around \$13 billion in 2025 — committed \$60 billion per year to Oracle in exchange for use of its cloud computing facilities. Oracle — with a debt-to-equity ratio of 500 percent — still needs more funding to build them. Once built, Oracle's cloud facilities will require an additional 4.5 GW of grid capacity — more power than is generated by two Hoover dams or four nuclear power plants.⁹⁶

Another alarming resurgence is commercial-mortgage-backed securities (CMBSs) — loans on commercial properties that are turned into tradable assets.⁹⁷ As of mid-2025, the investment company Blackstone had plans to use \$3.4 billion in CMBSs to refinance debt held by QTS, the largest AI infrastructure company in the U.S. The deal is made up of bonds backed by ten data U.S. data centers and is larger than all other data center-backed CMBSs deals combined in 2024.⁹⁸

Tech companies are even financing the boom through special purpose vehicles (SPVs), which played a major role in Enron's balance sheets prior to that company's infamous collapse in 2001.⁹⁹ Companies set up SPVs as new legal entities that borrow money on their behalf, enabling companies to keep the debt off their balance sheets. Meta set up an SPV to finance a \$27 billion data center in Louisiana.¹⁰⁰ Google, CoreWeave, and xAI also have or plan to use SPVs to borrow large sums of money.¹⁰¹ Companies like CoreWeave are even using their microchips as collateral for multi-billion dollar loans¹⁰² — a risky move for lenders given that chip values drop precipitously when new technologies emerge.¹⁰³

Who will pay for an AI bust?

Relying on exotic, under-regulated financial instruments is risky for the firms involved. But it also raises alarm bells that the public may be on the hook to bail out the tech industry, if and when the bubble bursts.

The Trump administration — known for its deregulation and backdoor deals with cryptocurrency companies and assets¹⁰⁴ — is taking steps to fund the AI and data center rollout with public dollars. In August 2025, the administration pledged an \$8.9 billion government investment in Intel’s common stock to expand domestic semiconductor manufacturing.¹⁰⁵ And OpenAI — facing \$1.4 trillion in computing costs over the next eight years while receiving just \$13 billion in revenue each year — may court the Trump administration to help fund its computing costs by cutting the cost of financing.¹⁰⁶

There is also fear that the public may be on the hook for bailing out AI companies following a crash. David Sacks — Trump’s “AI and crypto czar” — was a prominent voice in support of a federal government rescue after the 2023 crash of Silicon Valley Bank. The government ultimately backstopped \$175 billion in the bank’s deposits.¹⁰⁷ Finally, many warn of the possible impacts of an AI bubble crash on retirement accounts and the economy as a whole.¹⁰⁸

Aiding the tech oligarchy

In the end, the public bears these risks so that major tech companies can seek even more riches and further consolidate the market. The largest tech companies are experiencing record earnings. Meta raked in record-high revenue and profit in the last quarter of 2025 — \$59.9 billion and \$22.8 billion, respectively.¹⁰⁹ Microsoft saw final quarter profits increase by 60 percent between 2024 and 2025.¹¹⁰ In 2025, Nvidia, Microsoft, Apple, Alphabet (Google), and Amazon were the top five companies in the S&P 500 Index, making up nearly 30 percent of the entire index.¹¹¹

This translates into even more riches for the tech oligarchy. Seven of the 10 richest people in the world are U.S.-based tech leaders, and many have seen their personal wealth increase even more in the AI boom. Meta CEO Mark Zuckerberg’s wealth grew more than three times over from 2023 to 2025, reaching \$216 billion. The wealth levels of both Elon Musk (xAI) and Jeff Bezos (Amazon) nearly doubled over the same two years, reaching \$342 billion and \$215 billion, respectively. The remaining tech oligarchs among the 10 richest people — Oracle’s Larry Ellison, Google’s Larry Page and Sergey Bin, and Microsoft’s Steve Balmer — all saw their personal fortunes increase by at least 46 percent from 2023 to 2025.¹¹²

But with so much investment flying around, even smaller AI developers are amassing personal fortunes. As of March 2025, the combined stakes of 15 founders of four AI startups had accumulated to \$38 billion.¹¹³

Data Centers Disrupt Communities and Provide Few Long-Term Jobs

Local effects from Big Tech’s ambitions go beyond electricity and water costs. The construction and operation of data centers cause significant disruption to communities, impacting the quality of life for residents. Data center construction involves extensive tree clearing and foundation work, followed by building construction and equipment installation.¹¹⁴ Construction drives up vehicle traffic (and accidents). One resident of Abilene, Texas saw her 10-minute commute stretch to nearly two hours due to traffic congestion from a nearby data center project.¹¹⁵ In rural Louisiana, Meta’s construction of “the world’s largest data center” coincided with a 600 percent increase in traffic crashes in just one year.¹¹⁶ The crashes and heavy truck traffic also forced a local playground to close.¹¹⁷

Data centers continue to interfere with daily life after construction. Roughly one-third of Virginia data centers are located within 200 feet of homes.¹¹⁸ Their noisy cooling systems create headaches for nearby communities and disrupt their sleep.¹¹⁹ Residents in Loudon County, Virginia, a data center epicenter, liken the constant buzzing of data centers to a big fan or lawn mower running 24 hours a day, even with their windows closed.¹²⁰

Data center campuses are also an unavoidable blight on the landscape: massive, often “ugly” industrial complexes that people don’t want in their backyards.¹²¹ Their footprints are incomprehensibly huge. A proposed data center in South Whitehall Township, Pennsylvania would include six buildings spread across 410 acres (the size of 100 Walmart supercenters).¹²² An expansion of a Meta data center in Louisiana would reportedly increase the facility’s footprint to nearly the size of Manhattan.¹²³ Across the U.S., prime agricultural land is being rezoned to accommodate this data center growth.¹²⁴ And to feed their insatiable hunger, grid operators are approving massive electric transmission projects that run hundreds of miles through communities and historic areas,¹²⁵ with towers reaching 185 feet or more¹²⁶ (taller than portions of Niagara Falls).¹²⁷

Air pollution

Data centers rely on backup generators more than any other type of development, with some housing hundreds of generators.¹²⁸ Diesel generators emit harmful pollutants like nitrogen oxides (NO_x) at levels 200 to 600 times higher per unit of electricity produced compared to newer gas plants.¹²⁹ NO_x, along with additional hazardous air pollutants like carbon monoxide and particulate matter, contribute to smog¹³⁰ and exacerbate childhood asthma cases and elderly cognitive decline.¹³¹ Nevertheless, the U.S. Environmental Protection Agency in 2025 clarified that data centers may run such backup generators for up to 50 hours per year, to reduce peak demand on the energy grid.¹³² In June 2025, generators from data centers in Virginia’s Loudon County released so much air pollution that it was visible as “black smoke.”¹³³ Such air pollution can travel across state lines, exacerbating asthma and costing millions in public health costs.¹³⁴

Data centers’ local impacts often fall hardest on already disadvantaged communities. In Shelby County, Tennessee, Elon Musk’s xAI Colossus data center can reportedly emit between 1,200 and 2,000 tons of NO_x annually from 35 unpermitted, on-site “temporary” gas turbines,¹³⁵ pollution that has an estimated annual public health cost of \$160 million.¹³⁶ Peak nitrogen dioxide levels near the site rose by nearly 80 percent, raising significant public health concerns in a neighborhood with cancer rates four times the national average.¹³⁷ The surrounding communities are economically disadvantaged and already lead the state in asthma-related emergency department visits.¹³⁸ The situation prompted the NAACP to issue an “intent-to-sue” to the data center’s owner, xAI.¹³⁹

Empty revenue and job promises

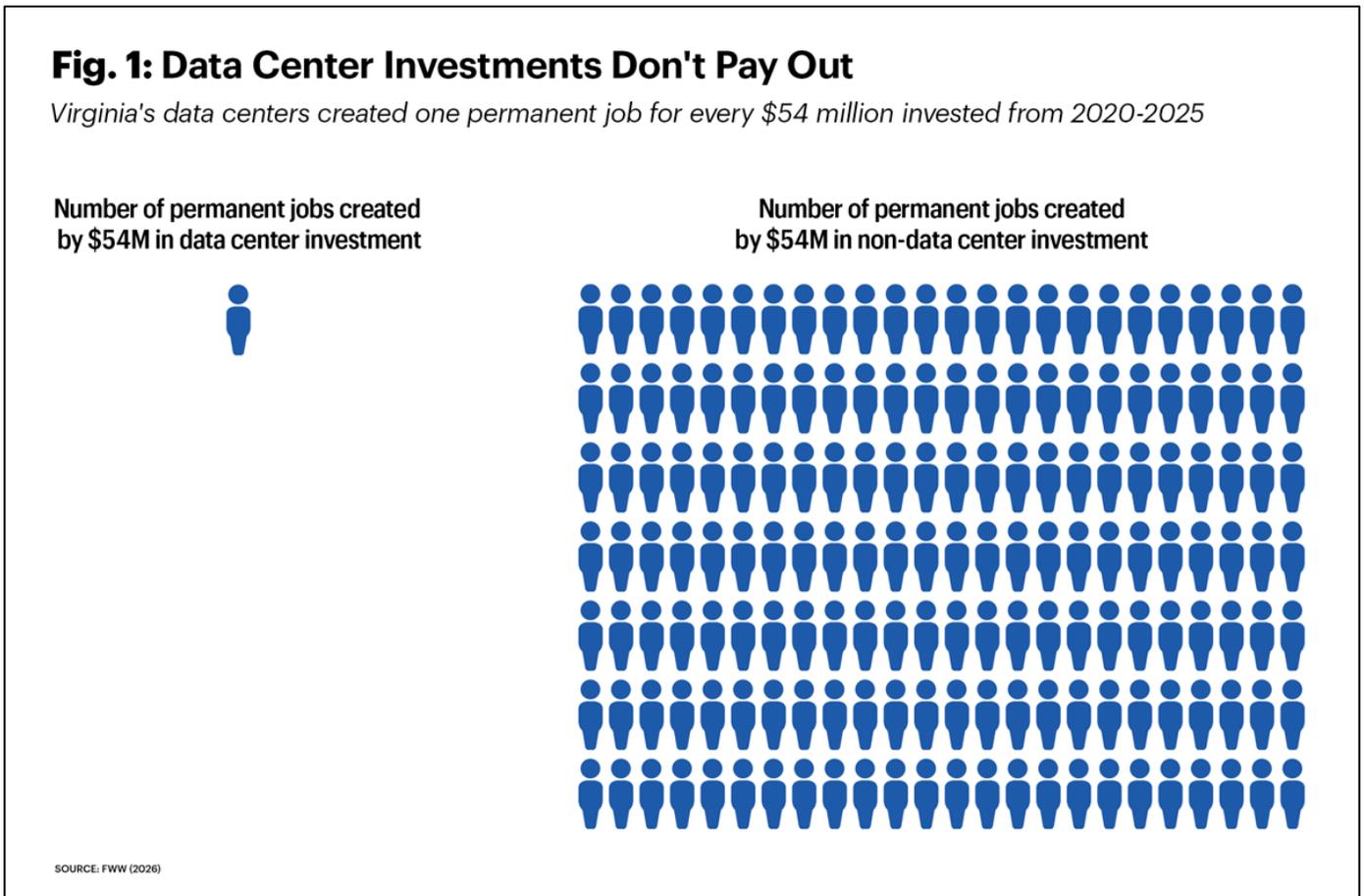
State and local officials may court Big Tech’s data centers for their promised tax revenue — but the race to offer data centers the most generous and inventive subsidies cuts into this. A proposed 500 MW data center in Genesee County, New York plans to build on land that the state paid millions of dollars in public money to prepare, and the company will likely receive property tax exemptions on top of that.¹⁴⁰ In Wisconsin, data centers can create tax increment districts that shift the cost of

building roads, water pipes, and other infrastructure to localities while denying them local property tax revenue.¹⁴¹

Most states with data centers offer these facilities exemptions on sales and use tax. In fiscal year 2025, Virginia lost \$1.6 billion in tax revenue from data centers under this exemption,¹⁴² and in 2024, Georgia lost \$450 million.¹⁴³ The sales and use tax exemption alone could amount to billions in lost revenue nationally each year.¹⁴⁴

Data centers secure these tax incentives on the promise of economic growth and job creation. But long-term employment growth at the centers is minimal, creating relatively few permanent positions once construction is complete. In 2021, a Microsoft data center in Illinois received more than \$38 million in state sales tax exemptions but created only 20 permanent jobs, according to a CNBC report.¹⁴⁵ A Business Insider analysis found that even the largest data centers typically employ fewer than 150 permanent workers, with some employing as few as 25.¹⁴⁶

In total, as few as 23,000 people nationally worked in data centers as of 2024 (0.01 percent of all jobs), according to a recent Food & Water Watch (FWW) analysis.¹⁴⁷ Moreover, these jobs don't come cheaply. FWW found that from 2020 to 2025, Virginia's data centers created just one permanent job per every \$54 million invested — 168 times more than what it costs to create one permanent non-data center job (\$322,000) (see Fig. 1).¹⁴⁸



E-waste

Today's data center investments will inevitably become tomorrow's obsolete assets — exacerbating the e-waste problem. Servers last only around five years,¹⁴⁹ while microchips last just one to three years.¹⁵⁰ And yet, since 2010, e-waste generation worldwide grew five times faster than recycling efforts.¹⁵¹ High-income countries often ship their e-waste to developing countries, and less than 25 percent gets recycled globally; the rest lands in toxic dumps or is funneled into illegal trading routes.¹⁵² Workers handling e-waste are routinely exposed to heavy metals like lead, mercury, and cadmium, which are linked to a host of health harms from neurodevelopmental impairments to cancer.¹⁵³

Societal Harms From Unregulated AI

While data centers have significant impacts on people and the environment and provide little benefit, the unregulated AI boom they support is also disrupting society. These disruptions range from job losses to child endangerment to the undermining of democracy. None of these impacts are addressed with a comprehensive regulatory framework.

Job losses

A mere 6 percent of workers believe that AI will create long-term job opportunities, while the majority worry about how AI will impact the workplace.¹⁵⁴ Big Tech executives do little to curb these fears. OpenAI CEO Sam Altman boasted that AI can already do the work of entry-level workers, while Tesla CEO Elon Musk claimed that work will be optional in as few as 10 years.¹⁵⁵ Speculations on U.S. job displacement vary wildly, from 1 to 2 percent over the next 20 years to one quarter by 2030.¹⁵⁶

Job displacement may already be occurring. Jobs reliant on analytical or administrative skills — such as financial clerks or data entry keyers — are more exposed to AI than those reliant on hands-on mechanical skills, such as nurses or maintenance workers.¹⁵⁷ Younger tech workers may be disproportionately impacted, facing increased unemployment rates compared to other sectors and ages.¹⁵⁸ If AI reduces entry-level roles, there is a risk that this next generation of workers will not be trained, leading to alienation.¹⁵⁹ Moreover, tech companies are already laying off workers to focus on AI growth. In October 2025, Amazon attributed 14,000 planned layoffs to a need to “organize more leanly” in order to fully invest in AI, following the moves of other companies like Salesforce, Duolingo, and Lufthansa.¹⁶⁰

Displacement is not inevitable, however. A recent study from the Massachusetts Institute of Technology (MIT) found that 95 percent of companies are getting zero return from AI investments, and adoption remains low among mid- to small-sized companies.¹⁶¹ AI has become a convenient scapegoat for companies looking to lay off workers, offloading the responsibility onto faceless technology.¹⁶² Ultimately, company executives will make the final decisions to eliminate positions, and there is still time to choose human innovation over faulty technology.

Copyright infringement and data privacy

Data privacy and online safety are additional casualties in Big Tech's race to develop AI. Large generative AI models are trained on as much information as the company can obtain, including text,

images, and other assets scraped from the internet or purchased from third parties.¹⁶³ A huge trove of copyrighted materials has been swept up into the training models, some of which were obtained from pirated websites.¹⁶⁴ Dozens of lawsuits have been filed across the country relating to copyright infringement, including high-profile cases brought by The New York Times, Getty Images, and Disney.¹⁶⁵ Ironically, even as Big Tech looks to use AI to replace workers, the technology would go nowhere without sucking up as much human-made work as possible.

More insidious, though, are the data that generative AI collects on all of us. Any public information not behind a paywall may be caught up in data scraping, including voter registration data, public social media profiles, and personal blogs.¹⁶⁶ This even includes personal identifying information of both adults and children, such as passport photos, credit card numbers, and sociodemographic information.¹⁶⁷ Companies also use proprietary data from their own sites — like Google searches, Facebook and Instagram shares, Amazon purchases, and ChatGPT message logs — to train their AI models.¹⁶⁸ Some AI models have even been trained on private medical records and leaked or hacked materials.¹⁶⁹ Without regulation protecting our data, much of this scraping is entirely out of our control.

Child endangerment

While regulators dawdle, children are already using AI models, with over 70 percent of teens reporting communicating with an AI chatbot.¹⁷⁰ In August 2025, 44 state attorneys general sent a letter to major tech companies condemning them for an alleged “inability or apathy toward basic obligations to protect children.”¹⁷¹ This followed reporting on Meta’s internal policies permitting romantic or sexual conversations between children and the company’s AI chatbots — which would be illegal if an adult were on the other end.¹⁷² The attorneys general point out these structural and systemic problems inherent in AI chatbots.¹⁷³

Parents are filing lawsuits alleging that AI companies lack safeguards to properly address mental health conversations.¹⁷⁴ Children may trust AI bots when they express human-like empathy, struggling more than adults to distinguish between robot and human.¹⁷⁵ However, no matter how much chatbots emulate humans, they are not human and fail to understand risks properly.¹⁷⁶ This results in bots that encourage self-harm or violence and fail to promptly redirect users to real mental health services.¹⁷⁷ Such dangerous technology cannot be allowed to continue operating unabated, especially as companies show callous disregard for their users’ safety.

Information disorder

In an increasingly online society, AI threatens the contours of reality itself as it amplifies misinformation and disinformation. A McKinsey survey found that 30 percent of companies fact-check just 20 percent or less of the materials being churned out by AI.¹⁷⁸ This is extremely concerning, as AI has no understanding of or obligation to the truth. In response to a question, AI models respond with the most likely string of words, regardless of accuracy. This leads to inaccurate or omitted information, false citations, and incorrect links.¹⁷⁹

It’s a problem so pervasive that it has its own technical term: AI hallucination.¹⁸⁰ NewsGuard found that this problem is only worsening. When asked in August 2025 about current events, the top ten AI

models repeated false information 35 percent of the time, up from 18 percent a year prior. The models now prioritize any response, correct or not, over accuracy.¹⁸¹

This is a dire threat to society. Democracy rests on a shared understanding of truth and reality. AI threatens to amplify disinformation and erode our sense of understanding. During the peak of the COVID-19 pandemic, AI bots spread false conspiracy theories, undermining public health authorities and drowning out facts.¹⁸² The 2020 election saw the rise of “deepfakes”: AI output that mimics a person’s likeness and voice and that’s used to claim that an individual said something they never did.¹⁸³ Deepfakes of political figures pose massive threats to elections, threatening to undermine voters’ trust in the democratic process.¹⁸⁴ Trump’s White House has leaned into this, posting defamatory and racist imagery of Democratic leaders.¹⁸⁵ But when we can no longer believe what we see or hear, we lose our grasp on a shared reality.

Communities Are Fighting Back Against Data Centers

While AI data center companies spend billions of dollars to roll out their vision of the future, people across the country are organizing and fighting back to protect their communities.

According to the nonprofit group Data Center Watch, as of March 2025, local activism has delayed or blocked around \$64 billion in data center projects across the country.¹⁸⁶ Opposition is brewing wherever data centers are taking root:

- In September 2025, commissioners in Hampden Township, Pennsylvania rejected a zoning ordinance that would have allowed data centers in office parks, following public pressure from community members and groups like FWW.¹⁸⁷ And in November 2025 — following fierce opposition from over 100 organized residents packed into the meeting room — supervisors for Pennsylvania’s Hazle Township unanimously rejected a land application for a proposed 15-building, 1,280-acre data center.¹⁸⁸
- In January 2026, hundreds of residents flooded City Hall in Monterey Park, California to protest data center development, in response to a proposed 250,000-square-foot data center in a local business park. Residents kept the meeting going past midnight, ultimately getting the city council to commit to draft a proposal for a 45-day ban on data center development.¹⁸⁹
- Residents in Charles City County, Virginia organized against a proposed data center, opposing its potential impacts on their way of life as well as on local wildlife and ecosystems. The developer pulled its plan in August 2025, before county supervisors could vote for the project, citing local opposition.¹⁹⁰
- In October 2025, White County, Indiana became the third county in the state to approve a moratorium on data centers, following months of public opposition to a local project.¹⁹¹ That same month, Stark County, Indiana announced a moratorium on large hyperscale data centers, making it the fourth county in the state. Officials in both counties are looking to

block large projects while they review guidelines, while Stark County officials are considering making theirs a permanent ban.¹⁹²

- In August 2025, St. Charles, Missouri became the first city in the U.S. to issue a one-year moratorium on data centers. The city council's unanimous decision¹⁹³ followed widespread pushback by over 5,500 residents on the secretive "Project Cumulus" data center project. The lack of transparency surrounding the project was so great that the end user was never disclosed.¹⁹⁴

AI enthusiasts fear state regulation

The Trump administration and some members of Congress seek to limit states' ability to halt AI and data center expansion. In December 2025, Trump issued an executive order that threatens to cut funding for states with "onerous" AI rules and directs the U.S. Department of Justice to challenge state AI laws.¹⁹⁵ Trump signed the order despite strong opposition from members of his own party, and experts say the order wrongly attempts to restrict state powers without Congressional action.¹⁹⁶ In Congress, some lawmakers have tried to shoehorn in state preemption through annual spending and defense bills.¹⁹⁷ The efforts faced strong pushback in the Senate and from 36 state Attorney Generals, who signed a letter condemning these efforts.¹⁹⁸

These federal power grabs come on the heels of several state bills addressing AI's risks to society and data center impacts. A Colorado bill that went into effect in February 2026 regulates the use of "high risk" AI in sensitive sectors — like hiring, housing, lending, and healthcare — to prevent algorithmic discrimination. Notably, it gives customers the right to appeal or correct data, with potential penalties up to \$20,000 per violation under unfair trade practices.¹⁹⁹ In January 2026, bills went into effect in states like Texas and California that likewise address responsible and transparent use of AI.²⁰⁰ According to one analysis, more than 40 states considered 267 data center-related bills in 2025. Nearly half addressed energy use, while others addressed tax policy and water governance.²⁰¹

Conclusion: We Need a Moratorium on New and Expanding Data Centers

The well-documented harms of AI data centers cannot be resolved with piecemeal regulations or vague promises from AI enthusiasts of a utopian future. Nothing short of a halt to the data center rollout will suffice until a comprehensive regulatory framework is developed to ensure that people and the environment are fully protected — and that technological advancements benefit everyone, not just a handful of extremely powerful people. Food & Water Watch is calling for:

- An immediate moratorium on data centers at the federal, state, and local levels;
- The development of a regulatory framework for data centers that fully protects people and the environment;

- The development of a regulatory framework for AI that addresses the distribution of economic benefits, copyright, jobs, data privacy, protections for children, protections against deep fakes, impacts on democracy, and other issues;
- A stop to any and all efforts to preempt local control of AI data centers at the federal or state level; and
- An end to all federal, state, and local subsidies for AI data centers.

Endnotes

- 1 Gilson, Dave. Stanford Institute for Economic Policy Research. “At what point do we decide AI’s risks outweigh its promise?” May 31, 2024.
- 2 Mancini, Jeannine. “Elon Musk says robots will replace ‘all jobs’ and work will be optional, like ‘growing vegetables’ instead of shopping at the store.” *Yahoo Finance*. October 28, 2025.
- 3 Thiel, Peter. “The education of a libertarian.” *From Scratch: Libertarian Institutions and Communities*. April 2009.
- 4 von Knebel, Moritz. “When we are no longer needed: Emerging elites, tech trillionaires and the decline of democracy.” *Tech Policy Press*. May 8, 2025.
- 5 Offutt, Martin C. et al. Congressional Research Service (CRS). “Data Centers and Their Energy Consumption: Frequently Asked Questions.” R48646. January 23, 2026 at 1; Susnjara, Stephanie and Ian Smalley. IBM. “What is a data center?” Accessed January 27, 2026. Available at <https://www.ibm.com/think/topics/data-centers>.
- 6 H.R.6. 110th Cong. § 110-140. (2007) at 25 and 26.
- 7 International Energy Agency (IEA). “Energy and AI.” World Energy Outlook Special Report. April 2025 at 32.
- 8 Shehabi, A. et al. Lawrence Berkeley National Laboratory. “2024 United States Data Center Energy Usage Report.” LBNL-2001637. December 2024 at 16.
- 9 Offutt et al. (2026) at 1 and 2; Susnjara and Smalley (2026).
- 10 Susnjara and Smalley (2026)
- 11 Hiller, Jennifer. “AI data centers, desperate for electricity, are building their own power plants.” *Wall Street Journal*. October 15, 2025.
- 12 Barth, Adam et al. McKinsey & Company. “The data center balance: How US states can navigate the opportunities and challenges.” August 8, 2025.
- 13 Romanov, Dmitry et al. “Comparative analysis of scenarios of data center waste heat utilization for district heating networks of different generations.” *Energy Conservation and Management*. Vol. 334. 2025 at 1 to 2; U.S. Energy Information Administration (EIA). “Electricity consumption in U.S. homes varies by region and type of home.” December 18, 2023.
- 14 Shehabi et al. (2024) at 52 and 53; EIA (2023).
- 15 Ruberti, Marcello. “The chip manufacturing industry: Environmental impacts and eco-efficiency analysis.” *Science of the Total Environment*. Vol. 858. February 2023 at highlights.
- 16 Halper, Evan and Caroline O’Donovan. “AI is exhausting the power grid. Tech firms are seeking a miracle solution.” *Washington Post*. June 21, 2024.
- 17 Crownhart, Casey. “AI is an energy hog. This is what it means for climate change.” *MIT Technology Review*. May 23, 2024.
- 18 Shehabi et al. (2024) at 37; Barth et al. (2025); Barringer, Felicity. Stanford University. Bill Lane Center for the American West. “Thirsty for power and water, AI-crunching data centers sprout across the West.” April 8, 2025.
- 19 IEA (April 2025) at 13.

- 20 Hering, Garrett and Susan Dlin. “Data center grid-power demand to rise 22% in 2025, nearly triple by 2030.” *S&P Global*. October 14, 2025; Virginia Economic Development Partnership. “Data Centers.” Available at <https://www.vedp.org/industry/data-centers>. Accessed February 2026 and on file with Food & Water Watch (FWW).
- 21 Gelles, David. “A.I.’s insatiable appetite for energy.” *New York Times*. July 11, 2024; Hiller, Jennifer and Amrith Ramkumar. “Big Tech is rushing to find clean power to fuel AI’s insatiable appetite.” *Wall Street Journal*. September 24, 2024.
- 22 IEA (April 2025) at 87.
- 23 Gelles (2024).
- 24 Kearney, Laila. “AI data centers are forcing dirty ‘peaker’ power plants back into service.” *Reuters*. December 23, 2025; PJM. “Territory Served.” Available at <https://www.pjm.com/about-pjm/who-we-are/territory-served>. Accessed February 2026 and on file with FWW.
- 25 Halper and O’Donovan (2024).
- 26 *Ibid.*; Peterson, Melody. “Power-hungry AI data centers are raising electric bills and blackout risk.” *Los Angeles Times*. August 12, 2024.
- 27 Halper, Evan. “AI giants learn to share Trump’s zeal for fossil fuels.” *Washington Post*. February 23, 2025.
- 28 *Ibid.*; Thomas, Ellen. “Utilities want to power Big Tech’s AI ambitions with natural gas. These are the data centers they’re betting on.” *Business Insider*. February 13, 2025.
- 29 Thomas (2025).
- 30 FWW. [Press release]. “Gov. Hochul approves massive corporate bailout for old, expensive nuclear plants.” January 22, 2026.
- 31 Mandler, C. “Three Mile Island nuclear plant will reopen to power Microsoft data centers.” *NPR*. September 20, 2024.
- 32 Kimball, Spencer. “An Iowa nuclear plant is the next contender to restart, spurred by AI data center demand.” *CNBC*. September 1, 2025.
- 33 Martin, Eliza and Ari Peskoe. Harvard Law School — Environmental & Energy Law Program. “Extracting Profits From the Public: How Utility Ratepayers Are Paying for Big Tech’s Power.” March 2025 at 7.
- 34 *Ibid.* at 1.
- 35 *Ibid.* at 4.
- 36 Plautz, Jason. “Utilities sought a record \$31B in rate increases last year.” *E&E News*. January 29, 2026.
- 37 Wade, Cameron et al. Open Energy Outlook “Electricity Grid Impacts of Rising Demand From Data Centers and Cryptocurrency Mining Operations.” June 2025 at 1 and 2.
- 38 FWW analysis of EIA. Electric Power Monthly. Available at <https://www.eia.gov/electricity/monthly>. Accessed January 2026.
- 39 Hough, Tim. “How ISOs and RTOs are addressing large load growth.” *RTO Insider*. October 20, 2025.
- 40 French, Marie. “New York data center surge presents economic development conundrum.” *E&E News*. December 24, 2025; FWW analysis of EIA. Electric Power Annual. Available at <https://www.eia.gov/electricity/data.php>. Accessed February 2026.
- 41 Martin and Peskoe (2025) at 4 to 5.
- 42 *Ibid.* at 21.
- 43 Plautz, Jason. “FERC approves central US grid plan for connecting AI data centers.” *E&E News*. January 20, 2026; Camacho, Francisco A.J. and Kevin Bogardus. “FERC chair cleared for data centers case.” *E&E News*. January 21, 2026.
- 44 Newman, Chris. “Data centers going off grid with natural gas to ‘find any way to get power’.” *Natural Gas Intelligence*. June 16, 2025.
- 45 Larsen, Leia. “Utah’s massive data centers can’t get the power they need, so they’re building their own.” *Salt Lake Tribune*. February 9, 2026.
- 46 Mims Frick, Natalie et al. National Renewable Energy Laboratory. [Technical brief]. “Consumer Benefits of Clean Energy: Energy Efficiency.” December 2024 at 4 to 7; ISO New England. “How resources are selected and prices are set in the wholesale energy markets.” Available at <https://www.iso-ne.com/about/what-we-do/how-resources-are-selected-and-prices-are-set>. Accessed June 2025.
- 47 Pata, Selin Karlilar and Mehmet Balcilar. “Decarbonizing energy: Evaluating fossil fuel displacement by renewables in OECD countries.” *Environmental Science and Pollution Research*. Vol. 31. 2024 at 31307 and 31309 to 31310; Hanwha Data Centers. “AI and renewable energy: The future of data centers.” December 4, 2025. Available at <https://www.hanwhadatacenters.com/blog/ai-and-renewable-energy-the-future-of-data-centers>. Accessed February 2026.
- 48 Martin and Peskoe (2025) at 20; Rand, Joseph et al. Lawrence Berkeley National Laboratory. “Queued Up: 2024 Edition Characteristics of Power Plants Seeking Transmission Interconnection as of the End of 2023.” April 2024 at 1; Gorman, Will et

- al. “Grid connection barriers to renewable energy deployment in the United States.” *Joule*. Vol. 9, Iss. 2. February 2025 at 2 and 5.
- 49 Martin and Peskoe (2025) at 20; Rand et al. (2024) at 1 and 6; Overs, Brian. “Local power grid operator’s failure to plan is costing Marylanders millions.” *Baltimore Banner*. August 12, 2024.
- 50 Federal Energy Regulatory Commission. “Order Rejecting Tariff Revisions.” Docket No. ER24-2888-001. February 20, 2025 at 9.
- 51 Ford, Andrew. “System dynamics and the electric power industry.” *System Dynamics Review*. Vol. 13, No. 1. 1996 at 68 and 69.
- 52 *Ibid.*; Isser, Steve. (2015). *Electricity Restructuring in the United States Markets and Policy From the 1978 Energy Act to the Present*. New York: Cambridge University Press at 41 and 196.
- 53 Martin and Peskoe (2025) at 16 and 17.
- 54 Camacho, Francisco A.J. “Data center growth a ‘five-alarm fire’ for electric reliability.” *E&E News*. October 22, 2025; Isser (2015) at 393.
- 55 Chen, Xin et al. [Working paper]. “Electricity Demand and Grid Impacts of AI Data Centers: Challenges and Prospects.” Version 4.0. November 2025 at 1.
- 56 Hough (2025).
- 57 Nicoletti, Leonardo et al. “AI needs so much power, it’s making yours worse.” *Bloomberg*. December 27, 2024; Chen et al. (2025) at 9; Isser (2015) at 121, 387 to 389, and 392.
- 58 Nicoletti et al. (2024).
- 59 Blunt, Katherine and Jennifer Hiller. “America’s biggest power grid operator has an AI problem — too many data centers.” *Wall Street Journal*. January 12, 2026.
- 60 Malik, Naureen S. “The boom in AI is stressing the largest US power grid.” *Bloomberg*. July 29, 2025.
- 61 Chen et al. (2025) at 10.
- 62 Blunt and Hiller (2026).
- 63 Shehabi et al. (2024) at 55.
- 64 FWW analysis of Li, Pengfei et al. “Making AI less ‘thirsty’: Uncovering and addressing the secret water footprint of AI models.” *Communications of the ACM*. Vol. 68, Iss. 7. June 17, 2025 at 3; Shehabi et al. (2024) at 49; Mulroy, Clare. “How many gallons are in an Olympic swimming pool? A look at the volume.” *USA Today*. July 19, 2024; California Department of Water Resources. “State Agencies Recommend Indoor Residential Water Use Standard to Legislature.” November 30, 2021. Available at <https://water.ca.gov/News/News-Releases/2021/Nov-21/State-Agencies-Recommend-Indoor-Residential-Water-Use-Standard>; U.S. Census Bureau. QuickFacts. Available at <https://www.census.gov/quickfacts/fact/table/US/HCN010217>. Accessed January 2025.
- 65 Offutt et al. (2026) at 6.
- 66 NVIDIA. “NVIDIA H100 PCIe GPU.” 2022 at 6; Hindy, Joe. “Musk’s xAI launches Grok 3: Here’s what you need to know.” *CNET*. February 24, 2025.
- 67 NVIDIA (2022) at 8; Ontiveros, Jeremie Eliahou et al. “Datacenter anatomy part 2 — cooling systems.” *SemiAnalysis*. February 13, 2025; Mutschler, Ann. “Chip aging becoming key factor in data center economics.” *Semiconductor Engineering*. May 20, 2024.
- 68 OpenAI. “GPT-3 powers the next generation of apps.” March 25, 2021. Available at <https://openai.com/index/gpt-3-apps>; Li et al. (2025) at abstract, 1, 3, and 5; U.S. Environmental Protection Agency (EPA). [Fact sheet]. “Save Water and Energy by Showering Better.” EPA832-F-13-011. 2017 at 1; EPA. “EPA Expobox Unit Conversion Table.” Updated November 20, 2025. Available at <https://www.epa.gov/expobox/epa-expobox-unit-conversion-table>.
- 69 Harper, Christopher. “Using GPT-4 to generate 100 words consumes up to 3 bottles of water — AI data centers also raise power and water bills for nearby residents.” *Yahoo News*. September 19, 2024.
- 70 Pascual, Manuel G. “Artificial intelligence guzzles billions of liters of water.” *El Pais*. November 15, 2023.
- 71 Li et al. (2025) at 3; Marchall, Alexander. “How much does AI pollute and why? The environmental impact on water, energy and CO2 consumption.” *Journal*. September 25, 2024.
- 72 Google. “Environmental Report.” 2025 at 110. Available at <https://www.gstatic.com/gumdrop/sustainability/google-2025-environmental-report.pdf>.
- 73 Li et al. (2025) at 1 and 3; Marchall (2024).

- 74 Craske, Ben. “How are data centres shifting to zero-water cooling tech?” *Data Centre Magazine*. July 22, 2025; Solomon, Steve. Microsoft. “Sustainable by design: Next-generation datacenters consume zero water for cooling.” December 9, 2024. Available at <https://www.microsoft.com/en-us/microsoft-cloud/blog/2024/12/09/sustainable-by-design-next-generation-datacenters-consume-zero-water-for-cooling>; Meta. “Breaking ground on our new AI-optimized data center in El Paso.” October 15, 2025; Vincent, Pradeep and Ram Nagappan. “First principles: Data center innovations to power gigawatt scale superclusters.” *Oracle Cloud Infrastructure Blog*. October 14, 2025.
- 75 Laughing, Sophy M. and Bo Erik Gustav Hollsten Ruvalcaba. [Technical report]. “No, AI doesn’t drink a bottle of water per prompt. The engineering reality of AI infrastructure.” 2025 at 9 and 10; National Institutes of Health (NIH). Office of Research Facilities. “Closed-loop systems water treatment.” Iss. 135. August 2023 at 1.
- 76 NIH (2023) at 1.
- 77 Offutt et al. (2026) at 8; Hedge, Ganesh. “Closed-loop cooling: Water saver or chemical time bomb?” *KETOS*. June 11, 2025; Veolia. “Chapter 32 — Closed recirculating cooling systems.” *Handbook of Industrial Water Treatment*. Available at <https://www.watertechnologies.com/handbook/chapter-32-closed-recirculating-cooling-systems>. Accessed November 2025.
- 78 Laughing and Hollsten Ruvalcaba (2025) at 9.
- 79 Xiao, Tianqi et al. “Environmental impact and net-zero pathways for sustainable artificial intelligence servers in the USA.” *Nature Sustainability*. Vol. 8. November 10, 2025 at 2.
- 80 FWW. “Thirsty Fossil Fuels: Potential for Huge Water Savings by Switching to Renewables.” July 2022.
- 81 Mulroy (2024); Shehabi et al. (2024) at 57.
- 82 Rogoway, Mike. “Google’s water use is soaring in The Dalles, records show, with two more data centers to come.” *Oregon Live*. February 22, 2023.
- 83 Pascual (2023); FWW. “5 Reasons Why Desalination Isn’t Worth It.” April 27, 2023. Available at <https://www.foodandwaterwatch.org/2023/04/27/5-reasons-desalination>.
- 84 Nicoletti, Leonardo et al. “AI is draining water from areas that need it most.” *Bloomberg News*. May 8, 2025.
- 85 Tegethoff, Eric. “NC community worries data centers would drain local water supply.” *Public News Service*. August 20, 2025.
- 86 Tan, Eli. “Their water taps ran dry when Meta built next door.” *New York Times*. Updated July 16, 2025.
- 87 Olson, Eric et al. “Data centers draining resources in water-stressed communities.” *Dallas Morning News*. May 6, 2024.
- 88 Tan (2025).
- 89 Sonnenfeld, Jefferey A. and Stephen Henriques. “This is how the AI bubble bursts.” *Yale Insights*. October 8, 2025; Karma, Roge. “Something ominous is happening in the AI economy.” *Atlantic*. December 10, 2025.
- 90 Lichtenberg, Nick. “Without data centers, GDP growth was 0.1% in the first half of 2025, Harvard economist says.” *Fortune*. October 7, 2025.
- 91 McKinsey & Company. “The cost of compute: A \$7 trillion race to scale data centers.” April 28, 2025; Seligson, Paula. “The \$3 trillion AI data center build-out becomes all-consuming for debt markets.” *Bloomberg*. February 2, 2026.
- 92 Angelides, Phil et al. Financial Crisis Inquiry Commission. “The Financial Crisis Injury Report.” January 2011 at xviii.
- 93 Exec. Order No. 14318. 90 Fed. Reg. 35385. July 23, 2025; Exec. Order No. 14365. 90 Fed. Reg. 58499. December 11, 2025.
- 94 Gu, Jacqueline and Cade Metz. “How OpenAI uses complex and circular deals to fuel its multibillion-dollar rise.” *New York Times*. October 31, 2025.
- 95 *Ibid.*
- 96 Cembalest, Michael. J.P. Morgan. “The blob: Capital, China, chips, Chicago and Chilliwack.” *Eye on the Market*. September 24, 2025; Hammond, George and Cristina Criddle. “OpenAI makes 5-year business plan to meet \$1tn spending pledges.” *Financial Times*. October 14, 2025.
- 97 Frisch, Ian. “Debt has entered the A.I. boom.” *New York Times*. November 8, 2025.
- 98 Barth et al. (2025); Frisch (2025).
- 99 Frisch (2025); Schwarcz, Steven L. “Enron and the use and abuse of special purpose entities in corporate structures.” *University of Cincinnati Law Review*. Vol. 70. 2002 at 1310.
- 100 Hayes, Adam. “Special purpose vehicle (SPV): Definition and reasons companies use them.” *Investopedia*. August 27, 2025; Karma (2025).
- 101 Karma (2025).
- 102 *Ibid.*; Arun, Advait. Center for Public Enterprise. “Bubble or Nothing: Data Center Project Finance.” November 2025 at 1 and 20.

- 103 Arun (2025) at 1 and 20.
- 104 Gauthier-Villars, David et al. “Inside the Trump family’s global crypto cash machine.” *Reuters*. October 28, 2025; Stone, Peter. “Critics slam deregulation of crypto as Trump family expands its footprint in industry.” *Guardian*. April 14, 2025.
- 105 Intel. [Press release]. “Intel and Trump administration reach historic agreement to accelerate American technology and manufacturing leadership.” August 22, 2025.
- 106 Milmo, Dan. “Can OpenAI keep pace with industry’s soaring costs?” *Guardian*. November 10, 2025.
- 107 Kang, Cecilia et al. “Silicon Valley’s man in the White House is benefiting himself and his friends.” *New York Times*. November 30, 2025; Rosoff, Matt. “Investors implore the government to step in after Silicon Valley Bank failure.” *CNBC*. March 11, 2023; Allyn, Bobby. “Trump tech adviser David Sacks under fire over vast AI investments.” *NPR*. December 13, 2025.
- 108 De Vynck, Gerrit. “One force is propping up the economy. Fears are growing it won’t last.” *Washington Post*. September 30, 2025.
- 109 Meta Platforms, Inc. “Meta reports fourth quarter and full year 2025 results.” January 28, 2026; Spangler, Todd. “Meta rakes in record revenue and profits for Q4, details massive AI investments for 2026.” *Variety*. January 28, 2026.
- 110 Microsoft, Inc. U.S. Securities and Exchange Commission (SEC). Form 10-Q. Commission File No. 001-37845. FY ended December 31, 2025 at 3.
- 111 Morabito, Charlotte. “The S&P 500 is more concentrated with AI than ever. Here’s how to manage your risk.” *CNBC*. October 22, 2025.
- 112 Forbes. “The richest people in the world.” Available at <https://www.forbes.com/billionaires>. Accessed February 2026.
- 113 Carson, Biz et al. “The new billionaires of the AI Boom.” *Bloomberg*. March 28, 2025.
- 114 Joint Legislative Audit & Review Commission (JLARC). Report to the Governor and General Assembly of Virginia. “Data centers in Virginia.” Report 598. December 9, 2024 at 77.
- 115 Smith, Tobin. “Abilene residents fed up with traffic near data center.” *Big Country Home*. September 22, 2025.
- 116 Hawkins, Drew. “Construction of Meta data center causing ‘dangerous and reckless’ road conditions.” *NPR*. November 26, 2025.
- 117 Hawkins, Drew. “Construction on Meta’s largest data center brings 600% crash spike, chaos to rural Louisiana.” *Louisiana Illuminator*. November 22, 2025.
- 118 JLARC (2024) at 77 and 79.
- 119 Murphy, Ryan and Emily Feng. “Why more residents are saying ‘no’ to AI data centers in their backyard.” *NPR*. July 17, 2025; JLARC (2024) at 75 to 76.
- 120 Chan, Rosalie. “Virginia’s ‘Data Center Alley’ residents say an eerie hum is keeping them up at night.” *Business Insider*. November 27, 2023; JLARC (2024) at 5.
- 121 Saunders, Harrison. “The top 10 ugliest data centers in the world.” *Fierce Network*. May 3, 2023; Goovaerts, Diana. “Data centers are ugly. Why not bury them all?” *Fierce Network*. October 12, 2023; Suzuki, Kori. “Imperial Valley city sues to force environmental review of massive data center project.” *KPBS*. December 12, 2025; Martinelli, Tess. “I live near 14 data centers. The noise and smell are terrible, but I refuse to leave my dream home.” *Business Insider*. October 24, 2025.
- 122 Unger, Amy. “Hyperscale data center proposal in S. Whitehall going under the microscope.” *WFMZ*. January 15, 2026; Walmart Inc. SEC Form 10-K. Commission File No. 001-06991. FY Ending January 31, 2025 at 7.
- 123 Zeff, Maxwell. “Mark Zuckerberg says Meta is building a 5GW AI data center.” *TechCrunch*. July 14, 2025; Garfinkle, Allie. “Meta expands its already massive Louisiana data center project.” *Fortune*. February 9, 2026.
- 124 Schreiber, Ernest. [Opinion]. “Say ‘no’ to rezoning ag land for data centers.” *Lancaster Farming*. December 16, 2025; Underwood, Alexia. “As the data center boom ramps up in the rural Midwest, what should communities expect?” *Inside Climate News*. October 28, 2025.
- 125 PJM. [Press release]. “PJM selects regional transmission projects to be jointly developed by Dominion Energy, American Electric Power, FirstEnergy.” February 27, 2025; Carey, Mac. “How data center alley is changing northern Virginia.” *Oxford American*. January 17, 2025; Wilder, Drew. “Residents fight Dominion transmission line project in Ashburn.” *News4 Northern Virginia*. Updated August 20, 2025.
- 126 Dominion Energy. [Presentation]. “Morrisville to Wishing Star — transmission line project.” 2025 at 3; First Energy. [Presentation]. “Gore-Doubs-Goose Creek improvement project.” August 2025 at 5.

- 127 Niagara Falls USA. “10 fun facts about Niagara Falls State Park.” Available at <https://www.niagarafallsusa.com/the-source/10-fun-facts-about-niagara-falls-usa>. Accessed February 2026 and on file with FWW.
- 128 JLARC (2024) at 58 and 59; Hines-Acosta, Lauren. “Potential for more air pollution from data centers causes concern in Virginia.” *Bay Journal*. December 10, 2025.
- 129 Han, Yuelin et al. “The unpaid toll: Quantifying and addressing the public health impact of data centers.” *ARXIV*. December 2024 at 4.
- 130 JLARC (2024) 2024 at 58.
- 131 Ni, Ruijing et al. “Long-term exposure to PM_{2.5} has significant adverse effects on childhood and adult asthma: A global meta-analysis and health impact assessment.” *One Earth*. Vol. 7. November 2024 at 1959; Lopez-Granero, Caridad et al. “Particulate matter in human elderly: Higher susceptibility to cognitive decline and age-related diseases.” *Biomolecules*. Vol. 14, No. 35. December 26, 2023 at 5; Gentry, Brian M. et al. “Marginal asthma prevalence from NO_x emissions (MANE): A model to predict pediatric asthma burden from emissions of nitrogen oxides.” *Environmental Science & Technology*. Vol. 59. 2025 at 10347, 10353, and 10354; Wood, Dylan et al. “Exposure to ambient air pollution and cognitive function: An analysis of the English longitudinal study of ageing cohort.” *Environmental Health*. Vol. 23, No. 35. April 2024 at 7.
- 132 Han et al. (2024) at 5; EPA. [Fact sheet]. “Use of Backup Generators to Maintain the Reliability of the Electric Grid.” May 1, 2025 at 1 and 2.
- 133 Pampaloni, Hanna. “Heat wave prompts increased data center generator use; Turner pushes for Tier 4 upgrades.” *Loudoun Now*. July 16, 2025.
- 134 Han et al. (2024) at 5 to 6 and 10.
- 135 Chow, Andrew R. “‘We are the last of the forgotten:’ Inside the Memphis community battling Elon Musk’s xAI.” *TIME*. August 13, 2025.
- 136 Ren, Shaolei and Adam Wierman. “Mitigating the public health impacts of AI data centers.” *Harvard Business Review*. November 5, 2025.
- 137 Chow (2025).
- 138 Ren and Wierman (2025).
- 139 Chow (2025).
- 140 French (2025).
- 141 Tilton, Julia. “Rural Wisconsin has become a hotspot for data centers. State’s unique tax instrument explains why.” *Daily Yonder*. January 22, 2026.
- 142 Virginia Department of Accounts (Virginia DOA). Report of the Comptroller to the Governor of Virginia. “An Annual Comprehensive Financial Report. For the Fiscal Year Ended June 30, 2025.” 2025 at 191.
- 143 Justice, Jessie S. and Tommie L. Shepherd. The University of Georgia. Prepared for the Georgia Department of Audits and Accounts. “Tax Incentive Evaluation: Georgia Data Center Sales & Use Tax Exemption.” December 2025 at 5.
- 144 JLARC (2024) at 5 and 20 to 22; Virginia DOA (2025) at 191; Justice and Shepherd (2025) at 5.
- 145 Tortorelli, Paige et al. “In race to attract data centers, states can forfeit hundreds of millions of dollars in tax revenue to tech companies.” *CNBC*. June 20, 2025; Illinois Department of Commerce & Economic Opportunity. “Data Center Investment Program 2022 Annual Report.” 2023 at 12.
- 146 Beckler, Hannah et al. “Big Tech promised jobs. Cities gave millions. Where are the workers?” *Business Insider*. June 20, 2025.
- 147 FWW. “Artificial Jobs: The Illusion of Big Tech’s Data Center Employment Claims.” January 2026 at 1.
- 148 *Ibid.* at 2.
- 149 Samaye, Ismael et al. “Life cycle assessment of edge data centers: Case study in presence of renewable energy and refurbished servers.” *ACM Journal on Computing and Sustainable Societies*. Vol. 3, Iss. 2. April 2025 at 9:7 to 9:8.
- 150 Shilov, Anton. “Datacenter GPU service life can be surprisingly short — only one to three years is expected according to unnamed Google architect.” *Tom’s Hardware*. October 24, 2024.
- 151 IEA. “Recycling of critical minerals — strategies to scale up recycling and urban mining.” December 2025 at 12.
- 152 United Nations Institute for Training and Research. [Press release]. “Global E-Waste Monitor 2024: Electronic waste rising five times faster than documented e-waste recycling.” March 20, 2024; Olomo, Daniel Beloumou. “As electronic waste surges, countries look for answers.” United Nations Environment Programme. March 11, 2025; Liu, Kang et al. “A global perspective on e-waste recycling.” *Circular Economy*. Vol. 2, No. 100028. 2023 at 2, 6, and 9 to 11.

- 153 EPA. “Cleaning up electronic waste (e-waste).” May 16, 2025. Available at <https://www.epa.gov/international-cooperation/cleaning-electronic-waste-e-waste>; Liu et al. (2023) at 11.
- 154 Lin, Luona and Kim Parker. Pew Research Center. “U.S. Workers Are More Worried Than Hopeful About Future AI Use in the Workplace.” February 25, 2025 at 5 to 6.
- 155 Fore, Preston. “OpenAI CEO Sam Altman says AI is ready for entry-level jobs — but unbothered Gen Z have made it their new work friend.” *Fortune*. June 5, 2025; Rogelberg, Sasha. “Elon Musk says that in 10 to 20 years, work will be optional and money will be irrelevant thanks to AI and robotics.” *Fortune*. January 19, 2026.
- 156 Stone Center. Massachusetts Institute of Technology (MIT). [Policy memo]. “Preliminary Estimated Workforce Effects of Automation from AI.” July 2023 at 1; U.S. National Science Foundation Cloud and Autonomic Computing Center and Gerald Huff Fund for Humanity. “Impact of AI on workers in the United States.” 2025 at 4; Goldman Sachs. “How will AI affect the global workforce?” August 13, 2025; Society for Human Resource Management. [Press release]. “AI’s wake-up call: New SHRM research reveals 23.2 million American jobs already impacted.” October 2, 2025.
- 157 Schendstok, Matt and Sydney Schreiner Wertz. U.S. Department of the Treasury. Office of Economic Policy. “Occupational Exposure to Artificial Intelligence by Geography and Education.” Working Paper 2024-02. April 2024 at 17 and 30 to 32; Kochhar, Rakesh. Pew Research Center. “Which U.S. Workers Are More Exposed to AI on Their Jobs?” July 2023 at 19 to 21 and 43 to 45.
- 158 Goldman Sachs (2025).
- 159 Edmondson, Amy C. and Tomas Chamorro-Premuzic. “The perils of using AI to replace entry-level jobs.” *Harvard Business Review*. September 16, 2025.
- 160 Kaye, Danielle. “The AI job cuts are here — or are they?” *BBC*. October 28, 2025; Bhaimiya, Sawdah. “Companies are blaming AI for job cuts. Critics say it’s a ‘good excuse’.” *CNBC*. October 19, 2025.
- 161 Challapally, Aditya et al. MIT. “The GenAI Divide: State of AI in Business 2025.” July 2025 at 3; Goldman Sachs (2025).
- 162 Kaye (2025); Bhaimiya (2025).
- 163 Zirpoli, Christopher T. CRS. “Generative Artificial Intelligence and Copyright Law.” LSB10922. Updated July 18, 2025 at 4; University of North Carolina. Information Technology Services. “AI, data privacy and you.” January 25, 2024.
- 164 Zirpoli (2025) at 4.
- 165 George Washington University. Center for Law and Technology. Database of AI Litigation. Available at <https://blogs.gwu.edu/law-eti/ai-litigation-database>. Accessed February 2026.
- 166 Leffer, Lauren. “Your personal information is probably being used to train generative AI models.” *Scientific American*. October 19, 2023; University of North Carolina (2024).
- 167 Hong, Rachel et al. [Preprint]. “A common pool of privacy problems: Legal and technical lessons from a large-scale web-scraped machine learning dataset.” *arXiv*. June 20, 2025 at 11.
- 168 University of North Carolina (2024).
- 169 *Ibid.*; Leffer (2023).
- 170 Robb, Michael B. and Supreet Mann. Common Sense Media. “Talk, trust, and trade-offs: How and why teens use AI companions.” July 2025 at 2.
- 171 National Association of Attorneys General. Letter to Anthropic et al. August 25, 2025 at 2. Available at https://www.naag.org/wp-content/uploads/2025/08/AI-Chatbot_FINAL-44.pdf.
- 172 Horwitz, Jeff. “Meta’s AI rules have let bots hold ‘sensual’ chats with kids, offer false medical info.” *Reuters*. August 14, 2025; National Association of Attorneys General. Letter to Anthropic. (2025) at 2.
- 173 National Association of Attorneys General. Letter to Anthropic. (2025) at 2.
- 174 Gold, Hadas. “More families sue Character.AI developer, alleging app played a role in teens’ suicide and suicide attempt.” *CNN*. September 16, 2025.
- 175 Kurian, Nomisha. “‘No, Alexa, no!’: Designing child-safe AI and protecting children from the risks of the ‘empathy gap’ in large language models.” *Learning, Media and Technology*. July 10, 2024 at 5 to 6.
- 176 *Ibid.* at 7 to 8.
- 177 Kuznia, Rob et al. “‘You’re not rushing. You’re just ready:’ Parents say ChatGPT encouraged son to kill himself.” *CNN*. November 6, 2025; Guarino, Mark. “AI chatbot dangers: Are there enough guardrails to protect children and other vulnerable people?” *ABC News*. November 2, 2025; Gold (2025).

- 178 Singla, Alex et al. McKinsey & Company. “The State of AI: How Organizations Are Rewiring to Capture Value.” March 2025 at 5.
- 179 University of Maryland. “AI & information literacy: Assess content.” Available at <https://lib.guides.umd.edu/c.php?g=1340355&p=9880574>. Updated August 25, 2025.
- 180 *Ibid.*; Sun, Yujie et al. “AI hallucination: Towards a comprehensive classification of distorted information in artificial intelligence-generated content.” *Humanities & Social Sciences Communications*. Vol. 11. September 27, 2024 at 2.
- 181 Sadeghi, McKenzie. “AI false information rate nearly doubles in one year.” *NewsGuard*. September 4, 2025 at 2 to 4.
- 182 Nasiri, Shahla and Armin Hashemzadeh. “The evolution of disinformation from fake news propaganda to AI-driven narratives as deepfake.” *Journal of Cyberspace Studies*. Vol. 9, No. 1. January 1, 2025.
- 183 U.S. Government Accountability Office. “Deepfakes.” GAO-20-379SP. February 2020 at 1.
- 184 *Ibid.*; Nasiri and Hashemzadeh (2025).
- 185 Ingram, David. “On Truth Social, Trump has embraced AI media to attack foes and boost his image.” *NBC News*. October 4, 2025; Carney, Jordain and Nicholas Wu. “Trump posts vulgar deepfake slam of Democratic leaders after White House meeting.” *Politico*. September 29, 2025.
- 186 Data Center Watch. “\$64 billion of data center projects have been blocked or delayed amid local opposition.” March 2025 at 1 and 2.
- 187 Hurdle, Jon. “Pennsylvania community groups urge officials to restrict data center development.” *Inside Climate News*. October 15, 2025.
- 188 Learn-Andes, Jennifer. “Luzerne County real estate tax break requested for 15-building data center in Hazle Township.” *Times Leader*. February 18, 2025; Durante, Samantha. “Crowd of 100 gathers in Hazle Twp. as Supervisor Board votes down proposed data center.” *Fox 56 Wolf*. Updated November 17, 2025.
- 189 Huang, Josie. “How Monterey Park residents pushed back on a data center — and changed the course.” *LAist*. January 25, 2026.
- 190 Ress, David and Sean Jones. “Richmond, Va., area counties split on data centers.” *Richmond Times-Dispatch*. December 2, 2025.
- 191 Ink Free News. “Three Indiana counties pass data center moratoriums.” Updated November 26, 2025; White County, Indiana Board of Commissioners. Ordinance No 2025-10-20-02.
- 192 White County, Indiana Board of Commissioners. Ordinance No 2025-10-20-02; Pete, Joseph S. Times of Northwest Indiana. “Stark County puts moratorium on large data centers.” *Indiana Economic Digest*. December 17, 2025.
- 193 Bassler, Hunter. “St. Charles becomes the 1st city in the nation to ban data center construction citywide for a year.” *KSDK News*. August 22, 2025.
- 194 Bassler, Hunter and Laura Barczewski. “St. Charles data center dead for now after developers withdraw application, mayor says.” *KSDK News*. August 18, 2025; Grumke, Kate and Kavahn Mansouri. “Google linked to secretive Missouri data center.” *KCUR — St. Louis Public Radio*, September 8, 2025.
- 195 Exec. Order No. 14365.
- 196 *Ibid.*; Jingnan, Huo. “Trump is trying to preempt state AI laws via an executive order. It may not be legal.” *NPR*. December 11, 2025.
- 197 Shapero, Julia. “Senate strips AI provision from megabill.” *The Hill*. July 1, 2025; Miller, Gabby. “Trump says AI executive order limiting state rules coming this week.” *Politico*. December 8, 2025.
- 198 Shapero (2025); National Association of Attorneys General. Letter to Speaker Mike Johnson et al. U.S. House of Representatives. November 25, 2025 at 1. Available at <https://ag.ny.gov/sites/default/files/letters/letter-to-congress-ai-moratorium-letters-2025.pdf>.
- 199 CO S.B. 405. § 17 (2024); Colorado Legislative Council Staff. “SB 24-405 — Fiscal Note.” April 12, 2024 at 2.
- 200 Capriglione et al. Texas Senate Research Center — Committee Report. “Bill Analysis C.S.H.B 149.” 89R31345 BCH-F. May 20, 2025 at 2; TX H.B. 149 § 551 (2025); Alikhani, Malihe and Aidan T. Kane. “What is California’s AI safety law?” *Brookings*. December 23, 2025; CA S.B. 492. § 22757.2 (2024).
- 201 Multistate. “State Data Center Policy 101: Legislative Trends, Key Terms, and What to Expect in 2026.” December 2025 at 1.