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Re: Request for comment NTIA–2024–0002

We appreciate the National Telecommunications and Information Administration (NTIA) and the U.S. Department of Energy (DoE) undertaking this Request for Comment on the impacts of data center growth across the United States.

Today, a handful of the wealthiest technology corporations are building out energy-hungry data centers at a rate that is outpacing our ability to build renewable energy. This growth threatens to reverse hard-won climate progress made by the Biden-Harris Administration, at a time when we can no longer afford delays. Much of this growth is driven by this handful of corporations racing to dominate artificial intelligence and cloud computing markets in an effort to cement their power into the future. At the same time, key players in our energy system – dominated by investor-owned monopolies and private equity-owned fossil fuel producers – have been willing accomplices, failing to protect ratepayers or prioritize the need for renewable energy infrastructure.

The administration has a critical role to play in ensuring we invest in an energy and technology future that serves the public interest. To set a new trajectory, we urge the administration to reject demands by corporate interests for unchecked data center expansion, and instead take action to address this looming threat to the public and climate progress. Those actions should be guided by the following principles:

- Prioritize affordable, renewable energy for the public above the speculative needs of technology corporations, and ensure data centers are not extending the life of coal and fracked gas, nor driving the build-out of new fossil fuel infrastructure, directly or indirectly.
- Ensure economic and energy policies related to data centers address corporate concentration, monopolization, and unfair competition in the energy, utility, and tech sectors.

- Guarantee that the public and utility ratepayers are not made to subsidize the wealthiest corporations in the world.
- Bring much-needed transparency into both the data center and utility sectors, so that the public, regulators, and lawmakers can make informed decisions that protect people and the planet.

Technological innovation has incredible potential for humans and the planet, but if tech giants and investor-owned utilities are allowed to call the shots, these special interests will follow only their short-term profit motives. If they are unchecked, we will expand dirty energy, stall our transition to renewable energy, and fail to meet our climate commitments.

As we submit this comment, coal plants that would have been retired are staying open,[1] closed nuclear plants are being reopened for exclusive data center use,[2] gas-fired power plants are expanding,[3] and regular people are expected to pay increased prices for electricity – all to the benefit of the wealthiest technology corporations in the world.[4] Data centers are also draining precious water resources, with a single data center potentially using several million gallons a day and threatening scarce local water supplies as drought conditions increase across the country.[5]

While these tech corporations have made bold climate promises, they are underreporting climate impacts,[6] walking back emissions reduction commitments,[7] misleading the public on emissions reduction claims,[8] lobbying against state-level climate legislation,[9] and attempting to weaken

[1] Antonio Olivo, *Internet data centers are fueling drive to old power source: Coal*, Wash. Post (Apr. 17, 2024, 6:05 AM), https://www.washingtonpost.com/business/interactive/2024/data-centers-internet-power-source-coal.
[2] C. Mandler, *Three Miles Island nuclear plant will reopen to power Microsoft data centers*, NPR (Sept. 20, 2024, 1:40 PM), https://www.npr.org/2024/09/20/nx-s1-5120581/three-mile-island-nuclear-power-plant-microsoft-ai.
[3] Josh Saul, Naureen S. Malik & Mark Chediak, *AI Boom Is Driving a Surprise Resurgence of US Gas-Fired Power,* Bloomberg (Sept. 16, 2024, 10:00 AM) https://www.bloomberg.com/news/articles/2024-09-16/us-natural-gas-power-plants-just-keep-coming-to-meet-ai-ev-electricity-demand.
[4] https://www.businessinsider.com/data-centers-electricity-consumers-discounts-utilities-2024-4
[5] https://www.washingtonpost.com/climate-environment/2023/04/25/data-centers-drought-water-use/
[6] https://www.theguardian.com/technology/2024/sep/15/data-center-gas-emissions-tech
[7] https://www.theverge.com/2024/5/15/24157496/microsoft-ai-carbon-footprint-greenhouse-gas-emissions-grow-climate-pledge
[8] https://www.seattletimes.com/business/amazon/5-years-into-amazons-climate-pledge-workers-challenge-its-progress/
[9] https://www.cnbc.com/2023/04/06/why-amazon-fought-oregon-bill-that-aimed-to-curb-data-center-emissions.html

global emissions reporting standards.[10] Aggravating the problem, utility companies are prioritizing investor profits by investing in fossil fuels above renewable energy.[11]

To make matters worse, states and counties are subsidizing data center expansion through tax breaks and utility deals, in order to compete for corporate investment that promises job creation but comes up far short.[12] The last comprehensive study of data center subsidies revealed the public is giving away up to $1.95 million per permanent data center job.[13] Similarly, property tax breaks for data centers mean that schools will have fewer resources than they would if the companies paid their fair share.[14] Meanwhile, sweetheart utility deals and data center-driven energy grid expansions are predicted to increase the cost of energy for regular people.[15]

Given these issues, we are deeply concerned that a handful of wealthy technology companies that stand to directly profit from fast-tracked data center infrastructure, including Amazon, Microsoft, Meta, OpenAI, Nvidia, and Google, are actively pressuring the Biden-Harris administration to take action that will guarantee the companies' own power and influence far into the future.[16] While tech executives argue that their investments in artificial intelligence are essential to national security and competitiveness, government officials should scrutinize these arguments.[17] Tech companies have failed to offer concrete evidence that these investments will produce sufficient public benefits to justify substantial government intervention and funding, much less justify the threat to our renewable energy transition.[18] Moreover, in an economy already plagued by monopolization and concentration, public handouts to corporations chasing increased market control is not good economic policy.[19]

Big tech's AI-fueled data centers will derail climate progress, unless we set a new course.

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[10] https://www.ft.com/content/2d6fc319-2165-42fb-8de1-0edf1d765be3

[11] https://www.theguardian.com/business/2020/aug/31/only-one-in-10-utility-firms-prioritise-renewable-electricity-global-study

[12] https://www.propublica.org/article/washington-data-centers-tech-jobs-tax-break

[13] https://goodjobsfirst.org/wp-content/uploads/docs/pdf/datacenters.pdf

[14] https://www.limaohio.com/news/2024/07/28/ohio-its-cities-throw-hundreds-of-millions-at-tech-giants-for-data-centers/

[15] https://www.businessinsider.com/data-centers-electricity-consumers-discounts-utilities-2024-4

[16] https://www.whitehouse.gov/briefing-room/statements-releases/2024/09/12/readout-of-white-house-roundtable-on-u-s-leadership-in-ai-infrastructure/

[17] https://www.wired.com/story/big-tech-breaking-will-only-help-china/

[18] https://ainowinstitute.org/wp-content/uploads/2024/03/AI-Nationalisms-Global-Industrial-Policy-Approaches-to-AI-March-2024.pdf

[19] https://download.ssrn.com/23/08/17/ssrn_id4543807_code3510333.pdf

At the current rate, data center expansion is predicted to drive more than a third of U.S. energy demand growth from 2022 until 2030.[20] While data centers used approximately 17 gigawatts (GW) of energy nationwide in 2022, that number is expected to jump to 35GW in the next six years – the amount of energy required to power more than 26 million homes.[21] Driving this uptick in demand are a handful of corporations racing to get as many hyperscale data centers online as quickly as possible, in order to secure their place in the artificial intelligence sector. While currently a single hyperscale data center uses approximately the same amount of electricity as 80,000 homes,[22] the industry is now developing plans for much larger 1GW data centers,[23] which would each require roughly the amount of power used by 900,000 homes.[24] There are also plans for data centers with even higher demand; for example, according to Bloomberg, OpenAI's CEO recently pitched a plan to the White House to open several massive 5GW data centers, which would each require the amount of energy used by "almost 3 million homes," or an entire city.[25]

A recent industry report predicts that power-hungry data centers will consume a whopping 8% of all U.S. electricity by 2030, and meeting this demand will require a significant expansion of energy infrastructure, from power plants to substations to transmission lines.[26]

As a result, from Nebraska to West Virginia and beyond,[27] utility corporations are announcing plans to keep coal-fired power plants online, and states are seeing expansive proposals for new transmission line infrastructure that will primarily serve to connect data center campuses with fossil-fueled power sources.[28] Making matters worse, data centers often rely on polluting diesel generators for backup emergency power,[29] and some are proposing the integration of gas

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[20] https://www.goldmansachs.com/insights/articles/AI-poised-to-drive-160-increase-in-power-demand
[21] https://www.governing.com/infrastructure/data-centers-are-electricity-hogs-making-states-reconsider
[22] https://www.nmrk.com/insights/market-report/2023-u-s-data-center-market-overview-market-clusters
[23] https://www.datacenterfrontier.com/hyperscale/article/55021675/the-gigawatt-data-center-campus-is-coming
[24] https://www.costar.com/article/1471314418/amazon-pays-650-million-for-nuclear-powered-data-center-in-pennsylvania
[25] https://www.bloomberg.com/news/articles/2024-09-24/openai-pitched-white-house-on-unprecedented-data-center-buildout
[26] https://www.goldmansachs.com/pdfs/insights/pages/generational-growth-ai-data-centers-and-the-coming-us-power-surge/report.pdf
[27] https://www.washingtonpost.com/business/2024/10/08/google-meta-omaha-data-centers/; https://www.washingtonpost.com/business/interactive/2024/data-centers-internet-power-source-coal/
[28] https://www.pecva.org/resources/publications/piedmont-view/power-surge-data-center-boom-leads-to-expansive-transmission-proposals/
[29] https://www.pecva.org/uncategorized/data-centers-diesel-generators-and-air-quality-pec-web-map/

generators as primary power sources onsite to meet power needs, if energy grids fail to meet their outsized demands.[30]

Data centers also withdraw and consume immense amounts of limited freshwater for both on-site cooling and off-site energy generation.[31] A data center can consume more than 3-5 million gallons of water each day, or the same amount needed by a city of 30,000-50,000 people.[32] And while some tech companies have made promises to become "water positive" in the next decade, the Financial Times found that Google, Microsoft, and Meta all increased their water usage in 2022,[33] and expect this trend to continue with the AI boom. As climate change increases the length and severity of droughts worldwide, the impact of data centers' high water consumption is undeniably concerning.

Astonishingly, big tech presumes to tell the public to accept stalling our renewable energy transition and draining our water supply to meet the needs of this single industry during the critical next five to seven years – when our climate, air quality, and water can least afford it.[34] Data center energy demands are already diverting investment and resources away from addressing our power grid's waning resilience in the face of increasingly extreme weather and the urgent need to transition from fossil fuels to renewable energy.[35] These are policy choices, not inevitabilities.

The public and utility customers should not subsidize big tech's expansion and dirty energy growth.

Despite these corporations having unprecedented wealth, the public is subsidizing many of these data center deals through state and county tax breaks, utility deals, and rising utility bills.[36] Tech giants like Amazon, Google, and Microsoft receive sales tax exemptions on both building materials and equipment, utility tax exemptions or discounts, property tax abatements, job creation tax credits, and/or corporate income tax credits. More than half of states offer tax incentives that are specifically targeted at attracting data centers or are advantageous to data

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[30] https://www.datacenterdynamics.com/en/news/us-gas-companies-in-talks-with-data-centers-to-build-pipelines-for-onsite-power-plants/

[31] https://arxiv.org/pdf/2304.03271

[32] https://sensorex.com/data-center-water-usage-challenges/

[33] https://www.ft.com/content/6544119e-a511-4cfa-9243-13b8cf855c13

[34] https://www.washingtonpost.com/technology/2024/09/13/data-centers-power-grid-ohio/

[35] https://www.climatecentral.org/climate-matters/surging-weather-related-power-outages; https://www.nytimes.com/interactive/2023/06/12/climate/us-electric-grid-energy-transition.html

[36] https://goodjobsfirst.org/amazon-tracker/

center investment and expansion.[37] In states including Washington,[38] Illinois,[39] and Virginia,[40] the costs of these incentives have risen by three-to-four-digit percentages in recent years.

Many state and local governments fail to project or disclose how much companies will benefit from multi-year tax breaks, and tech companies often require non-disclosure agreements (NDAs) that obscure specifics about business deals.[41] For example, Virginia enacted its data center tax abatement program in 2010 but did not disclose even aggregate annual program costs until 2017. That year, tax revenue losses amounted to $65 million; by 2023, Virginia's losses had increased to $750 million.[42] Many states have enacted "as of right," or effectively automatic, tax abatements for nearly all new data centers.[43] In 2018, Georgia's governor signed a law that granted such automatic sales tax exemptions to data centers in order to attract them to the state. As the costs of the subsidies ballooned and Georgia's data center energy demands soared, the state legislature passed a bill earlier this year to pause those subsidies, but the current governor vetoed it, showing how difficult it is to rein in costly incentive programs once they have been enacted.[44]

States and localities offer these tax breaks and other special deals because they feel forced to compete for investment that could boost other tax revenues. In the process, wealthy technology corporations, like Amazon, are able to get tax breaks that they do not need, and that local communities cannot afford. Big tech is committed to data center expansion, with or without the tax breaks, so the overall impact is more money into the pockets of shareholders and fewer dollars for public services. Concretely, this means essential public services, like schools, get less money than they would without these tax breaks.[45] States and localities should not be forced to accept bad deals: cash-rich tech corporations can afford to pay their full share of taxes, and school districts cannot afford such losses.

On top of direct governmental subsidies, tech companies are also adept at working with state and local governments to craft sweetheart energy deals that other customers, including solar energy

[37] https://www.streamdatacenters.com/resource-library/glossary/tax-incentives-for-data-centers/
[38] https://www.propublica.org/article/washington-data-centers-tech-jobs-tax-break
[39] https://www.chicagobusiness.com/opinion/corporate-tax-breaks-hurt-illinois-good-jobs-first-op-ed
[40] https://goodjobsfirst.org/virginia-data-center-subsidy-costs-balloon-by-1051/
[41] https://goodjobsfirst.org/wp-content/uploads/docs/pdf/datacenters.pdf
[42] https://goodjobsfirst.org/virginia-data-center-subsidy-costs-balloon-by-1051/
[43] https://goodjobsfirst.org/virginia-data-center-subsidy-costs-balloon-by-1051/
[44] https://apnews.com/article/georgia-kemp-veto-tax-breaks-data-centers-ee11e95f3a5ac9f6e9019401c35c2e88
[45] https://www.limaohio.com/news/2024/07/28/ohio-its-cities-throw-hundreds-of-millions-at-tech-giants-for-data-centers/

producers and small businesses, do not get. These deals are predicted to raise regular people's utility bills.

For example, Amazon Web Services (AWS) and AEP Ohio (AEP) put together a secret deal in 2017 that provided Amazon with an undisclosed discount on electricity for several years.[46] According to *The Columbus Dispatch*, AWS also benefited from other incentives while building data centers in the state; the Ohio Tax Credit Authority awarded the company tax breaks worth $81 million, and a state law afforded it a sales tax exemption on data center equipment. Advocates raised concerns that Amazon's secret deal with a public utility would result in other customers paying more for programs and services than if AWS was paying the full cost. The deal ended in 2023, but Amazon requested in a filing with regulators that the details of it – including how much the company spent on building data centers, how much it saved because of the discount, and how many workers were hired remain secret.[47] AWS and AEP applied for a new discount in 2023 – but as of April 2024, the deal is still pending, the financial details are being kept secret at Amazon's request, and consumer advocates are still worried about the costs of a discount being shifted to regular ratepayers.[48]

In Mississippi, Entergy, the utility that will provide power to two new AWS data centers in the state, worked with the governor and state legislature to convince Amazon to build there.[49] It's possible that residential electricity bills in Mississippi, which have risen substantially over the last three years, could rise even further to offset any losses or penalties from the contract.[50]

Even beyond these contracts and special deals, regular electric utility customers' bills are likely to rise from the costs of the data center industry's significant energy needs. Utility customers are likely facing the burden of paying for the expensive transmission, generation, and distribution infrastructure that must be built to meet data center energy demand, rather than the industry fairly bearing the costs of its own infrastructure needs. For example, Amazon, Google, Microsoft, and Meta are currently pushing back against efforts in Ohio to ensure that the costs of building new infrastructure to meet data centers' demands are not passed along to other ratepayers, including households.[51]

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[46] https://www.dispatch.com/story/business/2017/09/10/amazon-rate-cut-raises-questions/18839490007/

[47] https://www.dispatch.com/story/business/economy/2023/08/15/amazon-ends-secret-electricity-discount-with-aep-ohio/70561198007/

[48] https://www.wosu.org/2024-04-29/article-reports-amazon-and-aep-want-secret-discount-for-data-center-electricity

[49] https://www.reuters.com/technology/amazon-plans-two-aws-data-centers-10-bln-mississippi-2024-01-25/

[50] https://magnoliatribune.com/2024/03/21/under-the-bus-williams/

[51] https://www.washingtonpost.com/technology/2024/09/13/data-centers-power-grid-ohio/

All these public handouts are going to an industry that employs few people in good, permanent jobs.[52] While these projects require initial construction jobs, as any large building would, an average data center may only ultimately employ 30 to 50 workers.[53]

There is currently far too little transparency about the data center industry's climate impacts and energy needs.

While communities, researchers, and journalists have worked diligently to uncover more information about the costs associated with specific new data center projects, major technology companies continue to withhold information that is critical to the public's ability to make informed decisions about ongoing development. The industry's sustainability reporting is largely voluntary, varies significantly both within and between companies, and contains limited and inconsistent data that is often only inclusive of what will bolster companies' public image.[54] Having made bold climate commitments, tech companies are also now hiding behind carbon offset schemes and are lobbying for less stringent emissions reporting standards.[55]

For example, a report released by Amazon Employees for Climate Justice (AECJ) in July found that the company was obscuring environmental reporting numbers.[56] Contrary to Amazon's own reporting, which stated that the company had reached 100% renewable energy for all company operations, the report found that less than a quarter of Amazon's data center energy came from renewable sources.[57] The rest was supplied by coal, oil, and fracked gas.

The company claimed it had reached its goal because it purchases Renewable Energy Credits (RECs), which supposedly offset the carbon emissions tied to the electricity it purchases locally. But nearly 70% of these RECS are "low quality" and don't actually contribute to building new, renewable energy sources, or supply clean energy locally to the data centers in question. Amazon also obfuscates environmental numbers in various other ways, including by undercounting its own carbon footprint: When tallying up emissions, it included only those created by its private brands, not third-party vendors or products it buys from manufacturers.[58] According to AECJ, the

[52] https://www.forbes.com/sites/andrewleahey/2024/08/13/tax-breaks-for-data-centers-bring-few-jobs/
[53] https://goodjobsfirst.org/wp-content/uploads/docs/pdf/datacenters.pdf
[54] https://www.theguardian.com/technology/2024/sep/15/data-center-gas-emissions-tech
[55] https://www.ft.com/content/2d6fc319-2165-42fb-8de1-0edf1d765be3
[56] https://static1.squarespace.com/static/65681f099d7c3d48feb86a5f/t/668ebf702516716ca72bbf98/1720631157044/unsustainability-report.pdf
[57] https://www.aboutamazon.com/news/sustainability/amazon-renewable-energy-goal
[58] https://revealnews.org/article/private-report-shows-how-amazon-drastically-undercounts-its-carbon-footprint/

company's annual carbon emissions have increased by at least 40% since it announced its Climate Pledge in 2019.[59]

Amazon's disdain for environmental standards for its data centers extends beyond its own questionable calculations: In a highly publicized case in Oregon, the company's lobbyists helped to kill a bill that would have held data centers to the state's clean energy standards.[60] It's just one example of how large tech companies cannot be trusted to self-report environmental numbers when they have a clear interest in obscuring their own responsibility.[61]

Companies obscure the impacts of their data centers in other ways as well. Non-disclosure agreements between tech companies and local officials have repeatedly blocked communities' access to information about the projected energy and water consumption both for existing and proposed data center facilities.[62] When *The Oregonian* requested records about the water use of Google data centers in The Dalles, Oregon, in 2021, the city filed suit to prevent those records from being made public, arguing that water consumption measurements constituted a "trade secret."[63] Earlier this year, journalist Karen Hao's records request to the city of Goodyear, Arizona, regarding the water consumption of a local Microsoft data center was similarly met with pages of redactions and a claim that the information was "considered proprietary by Microsoft."[64]

In 2023, Piedmont Environmental Council had to file a lawsuit against Orange County, Virginia, after county officials improperly denied public access to documents pertaining to a rezoning request by Amazon.[65] The county eventually turned over non-disclosure agreements signed by 10 local officials, including elected members of the Board of Supervisors, "for the benefit of Amazon.com, Inc. and its affiliates," as well as previously redacted documents and a privilege log listing all withheld documents.

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[59] https://press.aboutamazon.com/2019/9/amazon-co-founds-the-climate-pledge-setting-goal-to-meet-the-paris-agreement-10-years-early

[60] https://www.fastcompany.com/90879223/amazon-claims-to-champion-clean-energy-so-why-did-it-just-help-kill-an-emissions-bill-in-oregon

[61] https://revealnews.org/article/private-report-shows-how-amazon-drastically-undercounts-its-carbon-footprint/

[62] https://virginiamercury.com/2024/10/25/foia-friday-professor-students-find-ndas-with-data-center-companies-localities-say-theyre-used-often/

[63] https://www.oregonlive.com/silicon-forest/2021/11/the-dalles-sues-to-keep-googles-water-use-a-secret.html

[64] https://www.theatlantic.com/technology/archive/2024/03/ai-water-climate-microsoft/677602/

[65] https://www.pecva.org/region/orange/pec-lawsuit-confirms-abuse-of-foia-by-orange-county-for-the-benefit-of-amazon/

In states, consequential data center decisions happen with little oversight because of a disconnect between local approval, energy planning, clean energy goals, subsidies, and profit motives.

Across the country, data centers are being approved with little or no transparency or debate, despite significant pressure on states' energy, land, and water resources. In no place is this dynamic more apparent than in Northern Virginia, the largest data center market in the world. In this section, advocates at Piedmont Environmental Council outline the cascading and consequential nature of these decisions, and they detail how a patchwork of approval and oversight processes have enabled tech and utility corporations to create an energy crisis in the state.[66] The case of Virginia serves as a cautionary tale of what is happening or may soon happen in other states unless lawmakers and regulators take proactive steps to ensure future data center development does not follow this path.

In Virginia, as in most states, data center development projects are being reviewed at the local level under standard land use considerations, which do not consider the unprecedented energy usage, water consumption, and onsite emergency backup generators that data centers require. Localities rarely require information about impacts to regional water supplies, local air quality, carbon emissions, energy usage, the electric grid, or other ratepayers during the approval process.[67] They review data center proposals based on criteria including site aesthetics, traffic, and lighting and contrast those minor impacts against benefits such as possibly higher local tax revenue and jobs potentially created.

Once a project is approved, the electric utility claims it must furnish reliable electric service to the data center regardless of how much power is needed or the impacts it will have on the grid, electric rates, or the state's clean energy policies. The data center company then works with the utility to negotiate a timeline for that service delivery, usually in confidential contracts that are then used to justify new power plants, substations, transmission lines, and fast-tracked in-service dates.

In Virginia, the two regulated monopoly utilities, Dominion Energy Virginia (Dominion) and Appalachian Power Company (APCo) are guaranteed full recovery of their costs plus a fair rate of return for their shareholders for all infrastructure they build. This means that the more money

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[66] https://www.pecva.org/region/loudoun/dominion-energy-integrated-resource-plan-projects-historic-rate-increases-for-virginia-ratepayers-while-subsidizing-the-worlds-wealthiest-companies/

[67] https://cleantechnica.com/2024/06/14/concerned-citizens-seek-transparency-about-data-centers-in-virginia/

they spend on infrastructure projects, the more revenue they can earn. This opportunity for increased profit means that utility companies are incentivized toward capital-intensive projects like transmission lines and gas power plants – and not inclined to raise questions about public impact.[68]

Under this system, information about the potential power grid impacts of a data center proposal, including energy demand, consistency with the state's clean energy policy, the costs of required infrastructure, required right-of-way for transmission lines, interconnection conditions, and the cost to other ratepayers, is never considered or evaluated proactively in a public process before local approval.

Exacerbating this problem is the temporal and often geographic disconnect between the local approval process and the impacts felt by the community. The impacts on air quality, water consumption, energy, climate, and ratepayers are felt years after these projects are approved not only locally, but also in states outside the community.[69] Maryland and West Virginia are feeling the impacts of the power needs of the Northern Virginia data center market through massive transmission line projects,[70] delayed retirement of several coal facilities,[71] new gas facilities,[72] and higher electric rates on their residents and businesses.[73]

For example, demand in Loudoun County, Virginia, is currently necessitating a 500kV transmission line loop around eastern Loudoun, but also regionally requiring billions of dollars of new transmission lines that will connect to new 500kV transmission lines up into Maryland and West Virginia.[74] The Transmission Expansion Advisory Committee of PJM, the regional transmission organization, is currently in the process of evaluating even larger proposals for 765kV lines to serve the load demand of the region.[75] These lines are expensive for electric

[68] https://www.utilitydive.com/news/data-centers-bypass-clean-energy-gas-fossil-fuels-nuclear-load-growth/720562/
[69] https://www.deq.virginia.gov/permits/air/issued-air-permits-for-data-centers
[70] https://marylandmatters.org/2024/08/13/people-power-vs-electric-power-in-feud-over-proposed-transmission-project/
[71] https://www.washingtonpost.com/business/interactive/2024/data-centers-internet-power-source-coal/
[72] https://www.bayjournal.com/news/energy/residents-rally-against-gas-plant-in-chesterfield-va/article_e1c545de-6150-11ef-a486-1ba5bedd01aa.html
[73] https://www.wric.com/news/virginia-news/dominion-energy-unveils-plan-to-meet-unprecedented-demand-bills-could-go-up-50-by-2039/
[74] https://www.utilitydive.com/news/pjm-board-transmission-rtep-maryland-dominion-firstenergy/702263/
[75] https://www.utilitydive.com/news/aep-dominion-firstenergy-pjm-transmission-projects-rtep/729168/

ratepayers and will require significant acquisition of private land, sometimes necessitating the state use of eminent domain.[76]

The billions of dollars required for this infrastructure has raised urgent questions and concerns about who pays and how much,[77] with Maryland's consumer advocate even submitting a filing to the Federal Energy Regulatory Commission challenging the impact to Maryland ratepayers of the costs of data center transmission projects that will largely serve Virginia.[78] Information gathered from recent rate cases in front of the State Corporation Commission indicates that Virginia residential ratepayers may be subsidizing more than 40% of the cost of transmission infrastructure needed to meet the demands of the state's data centers.

Given the growing energy demand from data centers, electric generation is now a major concern in Virginia.[79] On July 16, 2024, Dominion reported that its transmission area (DOM zone) hit a new high summer peak of 23,127 megawatts (MW), which includes 5,698MW of data center load.[80] *The Wall Street Journal* recently reported that data centers' share of total power consumption in Virginia is now 26%, and this percentage is projected to significantly increase in the coming years.[81] New load forecasts for the DOM zone show a peak of nearly 34,500MW by 2030, with nearly 15,000MW, or 45% of the total load, coming from data centers.[82] By 2039, PJM's load forecast projects that data center demand will be responsible for 55% of the DOM zone's total energy demand, which means data centers will have been responsible for doubling the zone's total electricity demand in only 15 years.

This skyrocketing demand has brought proposals for new gas plants, the expansion of nuclear power, delayed retirement of several coal-fired power plants, as well as transmission line expansions that will carry power from West Virginia coal-fired power plants to data centers in

[76] https://www.princewilliamtimes.com/news/data-center-driven-power-crunch-prompts-planning-for-new-high-voltage-lines/article_7d5417bb-6a00-52ae-a365-7d973f9050df.html
[77] https://www.scc.virginia.gov/newsreleases/release/Commission-Schedules-Technical-Conference-on-Impac
[78] https://content.govdelivery.com/accounts/MDOPC/bulletins/38a1f27
[79] https://www.eia.gov/todayinenergy/detail.php?id=62409
[80] https://s2.q4cdn.com/510812146/files/doc_financials/2024/q2/2024-08-01-DE-IR-2Q-2024-earnings-call-slides-vTC.pdf
[81] https://www.wsj.com/business/energy-oil/ai-data-center-boom-spurs-race-to-find-power-87cf39dd
[82] https://www.pjm.com/-/media/planning/res-adeq/load-forecast/load-forecast-supplement.ashx

Northern Virginia.[83] Coal in Maryland is also being kept online through costly Reliability Must Run (RMR) agreements to meet the high energy demand.[84]

Despite this growth in dirty energy, tech companies and other data center operators are pressing ahead and even starting to use locally polluting on-site gas power production.[85] For instance, Vantage Data Centers built a 100-megawatt gas plant to power its data center campus in Ashburn, Virginia.[86] This new air pollution source adds to the large diesel generators (>2000kW) used for data center emergency backup power, which number well over 4,000 in Loudoun County.[87] Incredibly, neither the state nor the EPA seems to be assessing the air quality issues this might pose, and the Virginia Department of Environmental Quality (DEQ) continues to approve these diesel and gas generators as minor new source review (NSR) permits without public input or evaluation of their cumulative air quality impacts.

While these costs and impacts are disproportionately piling up in Virginia, the threat goes well beyond a local issue in a single state. In the race to dominate in artificial intelligence, big tech companies are replicating this model of development in Ohio, Indiana, Oregon, Mississippi, Georgia, Arizona, Texas, and beyond – in search of cheap land, low-cost energy, and permissive regulation.[88]

Corporate concentration is holding us back on tech and climate, and the administration should tackle this head on.

Corporate concentration and monopolization in the tech,[89] energy,[90] and utility sectors stand in the way of advancing shared prosperity and innovation,[91] and our federal policies should

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[83] https://www.wsj.com/business/energy-oil/how-big-data-centers-are-slowing-the-shift-to-clean-energy-44ef4145https://www.wsj.com/business/energy-oil/how-big-data-centers-are-slowing-the-shift-to-clean-energy-44ef4145

[84] https://www.sierraclub.org/articles/2024/02/pjm-thwarts-maryland-s-coal-free-ambitions-while-costing-marylanders-millions

[85] https://www.datacenterdynamics.com/en/news/us-gas-companies-in-talks-with-data-centers-to-build-pipelines-for-onsite-power-plants/

[86] https://www.datacenterdynamics.com/en/analysis/us-grid-power-crunch/

[87] https://www.loudounnow.com/news/concern-grows-over-data-centers-power-lines-in-loudoun/article_29255f7a-ba1e-11ee-b337-0b0f125b94a9.html

[88] https://www.nmrk.com/insights/market-report/2023-u-s-data-center-market-overview-market-clusters

[89] https://static1.squarespace.com/static/5e449c8c3ef68d752f3e70dc/t/67100da0fb1ffa695a7ad75b/1729105313006/Stopping+Big+Tech+from+Becoming+Big+AI.pdf

[90] https://www.openmarketsinstitute.org/publications/anti-monopoly-approach-green-new-deal

[91] https://ilsr.org/wp-content/uploads/2021/01/SLPG_Electricity.pdf

continue to acknowledge and address this.[92] The explosive energy demands of big tech's data centers have brought the consolidation across these sectors into focus.

The markets for artificial intelligence infrastructure, including specialty chips (i.e. graphics processing units or GPUs) and hyperscale data centers, already reflect a significant degree of concentration. Earlier this year, the Federal Trade Commission launched an ongoing inquiry into investments and partnerships involving generative AI companies and the major cloud service providers: Amazon, Microsoft, and Google.[93] These three companies control an estimated two thirds of the cloud computing market and have correspondingly dominant data center footprints – infrastructure essential to developing and deploying large-scale AI models.[94] This concentration has shaped and will continue to shape the development of artificial intelligence in a manner likely to further entrench the power of a small group of already-dominant technology companies.[95]

Meanwhile, monopoly investor-owned utility companies cannot be trusted to address the climate threat from data centers because their primary motivation is to profit from and control the electricity system. When informed in the 1960s of the relationship between power plant emissions and climate change, utilities hid this knowledge from the public and subsequently funded misinformation campaigns to "reposition global warming as theory and not fact."[96] They have been enthusiastic cheerleaders of data center expansion because it means more revenue from power plant and transmission line investments. Utility lobbyists in Georgia have already marshaled recent industry reports of high load growth from data centers to justify an enormous investment in new gas capacity.[97] And utilities have shown repeatedly that they can flex their political muscle,[98] even illegally, to retain management authority over the grid, despite racking up multi-billion dollar costs from wildfire mismanagement in California and participating in a political bribery scandal in Ohio.[99]

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[92] https://www.whitehouse.gov/briefing-room/presidential-actions/2021/07/09/executive-order-on-promoting-competition-in-the-american-economy/

[93] https://www.ftc.gov/news-events/news/press-releases/2024/01/ftc-launches-inquiry-generative-ai-investments-partnerships

[94] https://www.statista.com/chart/18819/worldwide-market-share-of-leading-cloud-infrastructure-service-providers/; https://datacentremagazine.com/top10/top-10-data-centre-companies-in-the-world-2024

[95] https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4543807

[96] https://global.oup.com/academic/product/short-circuiting-policy-9780190074265

[97] https://www.epri.com/research/products/3002028905; https://www.canarymedia.com/articles/utilities/data-centers-want-clean-electricity-can-georgia-power-deliver-it

[98] https://ilsr.org/articles/report-upcharge-electric-utility-monopoly/

[99] https://www.cpuc.ca.gov/news-and-updates/all-news/cpuc-approves-45-million-penalty-in-settlement-with-pge-for-dixie-fire-2024; https://apnews.com/article/firstenergy-ohio-bribery-9873386a884ee33396a8d6b7e9e36713

The Biden-Harris administration should invest in a vision of the future that goes beyond the extractive, profit-seeking motives of a few corporations.

The technology industry has pushed aggressively for the unfettered expansion of data centers and AI development with promises of societal transformation. Government officials should scrutinize these claims and examine how profits and investor demands have directed technology corporations toward a combination of banal, deceptive, unfair, monopolistic, and surveillance-oriented innovations, particularly in the last few decades. Artificial intelligence for the benefit of society could be worth public investment; AI used to surveil, discriminate, and mislead people for corporate profit is not. These distinctions are worth considering.

For years, civil rights, civil liberties, and human rights advocates have warned that current and future problems with artificial intelligence need to be considered and addressed before it is too late.[100] Today, AI is being used in critical decisions about people's lives, including in housing,[101] the workplace,[102] parole,[103] policing,[104] and even military operations, including targeted assassinations.[105] Despite the consequential nature of these decisions, there is insufficient transparency, redress, accountability, protection against bias, or even proof of accuracy.

Much of the current data center boom is related to large language models and other forms of generative AI. While these models are a huge breakthrough theoretically, in the hands of profit-driven companies, generative AI is eroding the usefulness of search engines,[106] polluting news and scientific ecosystems with reams of false "facts,"[107] empowering fraudsters and scammers,[108] increasing non-consensual deepfake pornography,[109] threatening to influence elections via misinformation and disinformation,[110] and posing enormous cybersecurity risks. Additionally, these systems are scraping sensitive and personal data,[111] including medical records and child sexual abuse material.[112]

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[100] https://www.brennancenter.org/sites/default/files/2023-10/AI%20Letter%20to%20U.S.%20Congress.pdf
[101] https://www.washingtonpost.com/dc-md-va/2024/10/03/dc-housing-lawsuit-rentgrow/
[102] https://laborcenter.berkeley.edu/wp-content/uploads/2021/11/Data-and-Algorithms-at-Work.pdf
[103] https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing
[104] https://copout.tech/wp-content/uploads/2023/03/CPT_Cop-Out_Essay.pdf
[105] https://www.972mag.com/lavender-ai-israeli-army-gaza/
[106] https://www.404media.co/google-news-is-boosting-garbage-ai-generated-articles/
[107] https://www.newsguardtech.com/special-reports/ai-tracking-center/
[108] https://www.aarp.org/money/scams-fraud/info-2024/ai-scams.html
[109] https://www.wired.com/story/deepfake-porn-is-out-of-control/
[110] https://abcnews.go.com/Politics/russia-iran-ai-influence-us-election-dni/story?id=113941680
[111] https://epic.org/wp-content/uploads/2023/05/EPIC-Generative-AI-White-Paper-May2023.pdf
[112] https://arstechnica.com/information-technology/2022/09/artist-finds-private-medical-record-photos-in-popular-ai-training-data-set/

Advocates have also raised concerns that the government itself is using artificial intelligence in ways that undermine our rights and liberties. For instance, in a recent letter to the Department of Homeland Security, over one hundred civil society organizations charged that the department is using artificial intelligence in ways that do not comply with federal requirements meant to protect the public.[113]

Beyond artificial intelligence, there are well-documented, long-standing concerns about these corporations' surveillance-driven business models. In order to maintain these business models and prevent oversight, tech corporations have interfered with technology regulation in the areas of privacy,[114] automated decisions,[115] artificial intelligence,[116] workplace technology,[117] and antitrust.[118]

Given these issues, we are alarmed that the administration is under pressure to underwrite and fast-track the expansion of these business models, as it considers the increasing energy demands of big tech's data centers.

Recommendations: The administration should pursue economic, climate, and technology policy in the public interest -- not in service of wealthy corporations pursuing profit and power.

The administration has a strong role to play in ensuring we invest in an energy and technology future that serves the public interest. Right now, corporate profit interests in the tech and energy sectors are driving toward maximum growth at the expense of energy and water resources – all in an effort to "win" the artificial intelligence race and secure these companies' own wealth and power into the future.

We are alarmed by statements from the Department of Energy and White House that suggest the administration is seeking to fast-track data center growth at the expense of a more pressing need to expand affordable, renewable energy for the public and advance our nation's stated climate

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[113] https://static1.squarespace.com/static/62c3198c117dd661bd99eb3a/t/66da0d7c29828232ef2add40/1725566332933/Sign+On+Letter+to+DHS_+Cancel+Use+of+AI+by+Dec+1+%281%29.pdf

[114] https://www.cnbc.com/2021/11/19/the-amazon-lobbyists-who-kill-us-consumer-privacy-protections.html

[115] https://therecord.media/human-resources-artificial-intelligence-state-legislation-workday

[116] https://apnews.com/article/artificial-intelligence-lobbying-congress-technology-regulation-d54fe64f3fd135fdca41bdaf528282b8

[117] https://fortune.com/2022/04/24/employee-surveillance-bill-california/

[118] https://thehill.com/policy/technology/3785894-how-big-tech-fought-antitrust-reform-and-won/

goals. Government action solely to benefit a handful of corporations would be a real threat to progress we have made toward reducing concentrated corporate power in our economy, especially in the tech sector, where the public is concerned about artificial intelligence and wants protections against surveillance-driven business models.[119] Instead of serving corporate interests, we urge the administration to prioritize the following principles and actions:

- Prioritize affordable, renewable energy for the public above the needs of technology corporations, and ensure data centers are not extending the life of coal and fracked gas, nor driving the build-out of new fossil fuel infrastructure, directly or indirectly.
    - Investments in our energy infrastructure should be directed toward building affordable, renewable energy for the public, and not to serve and fast-track the demands of a handful of the wealthiest companies.
    - The government should require that data center power consumption be fully supplied by additional renewable electricity with hourly and location matching, and that new data centers use state-of-the-art technology to reduce energy and water usage.
    - The Environmental Protection Agency (EPA) should ensure that the Clean Air Act is being appropriately implemented by requiring a cumulative assessment of air quality impacts when Tier 1-4 diesel and gas power generators are permitted at data centers for emergency backup and primary power.
    - The government should resist the influence of powerful corporate interests in policymaking, including by stopping the revolving door for personnel with strong ties to relevant industries and minimizing such actors' outsized access to decision-makers.
- Ensure economic and energy policies related to data centers address corporate concentration, monopolization, and unfair competition in the energy, utility, and tech sectors.
    - Any energy investments related to data centers and artificial intelligence should be examined through the lens of reducing monopolization and corporate concentration in these sectors.

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[119] https://www.pewresearch.org/short-reads/2023/08/28/growing-public-concern-about-the-role-of-artificial-intelligence-in-daily-life/; https://www.pewresearch.org/short-reads/2019/11/15/key-takeaways-on-americans-views-about-privacy-surveillance-and-data-sharing/

    - The administration should begin addressing vertical integration and enforcing antitrust laws in the energy, cloud computing, and artificial intelligence sectors, including examining the potential for structural separation for corporations like Amazon.

    - The administration and Congress should address investor-owned monopoly utilities that are not advancing the renewable energy interests of their ratepayers or the public, including by reducing barriers to renewable energy grid connections.

- Guarantee that the public and utility ratepayers are not made to subsidize the ambitions of the wealthiest corporations in the world.

    - The Federal Energy Regulatory Commission (FERC) should examine ways to protect other ratepayers from data center energy infrastructure costs, including generation, transmission, and distribution.

    - FERC should consider rulemaking to establish strong consumer protections for co-located load arrangements.

- Bring much-needed transparency into both the data center and utility sectors, so that the public, regulators, and lawmakers can make informed decisions that protect people and the planet.

    - The administration should create mandatory energy and water reporting requirements for individual data centers, and make that information available to the public.

    - The administration should update federal electricity reliability standards to require regional impact assessments to determine whether planned or existing data center operations compromise system reliability.

    - The administration should address how some investor-owned utilities are preventing renewable energy projects, like community and rooftop solar from connecting to the grid in a timely manner, by collecting data on interconnection timelines and costs for each electric distribution utility.

- Encourage a tech future aligned with the public interest by working with Congress to pass strong privacy, data minimization, algorithmic accountability, and antitrust laws that address current abuses of power and prioritize the autonomy and rights of people.

- Prioritize a just transition to renewable energy that creates large numbers of high-quality and union jobs, rather than giving subsidies to low-employment industries like the data center industry.

Sincerely,

Athena Coalition
350.org National
Chesapeake Climate Action Network
Citizens Action Coalition Indiana
Coalition to Protect Prince William County
Data & Society
Electronic Privacy Information Center
Fight for the Future
Free Press
Friends of the Earth
Good Jobs First
Institute for Local Self-Reliance
Kairos Action
Loudoun Wildlife Conservancy
MediaJustice
Open Markets Institute
People's Action Institute
Piedmont Environmental Council
PowerSwitch Action
Public Citizen
Sugarloaf Alliance