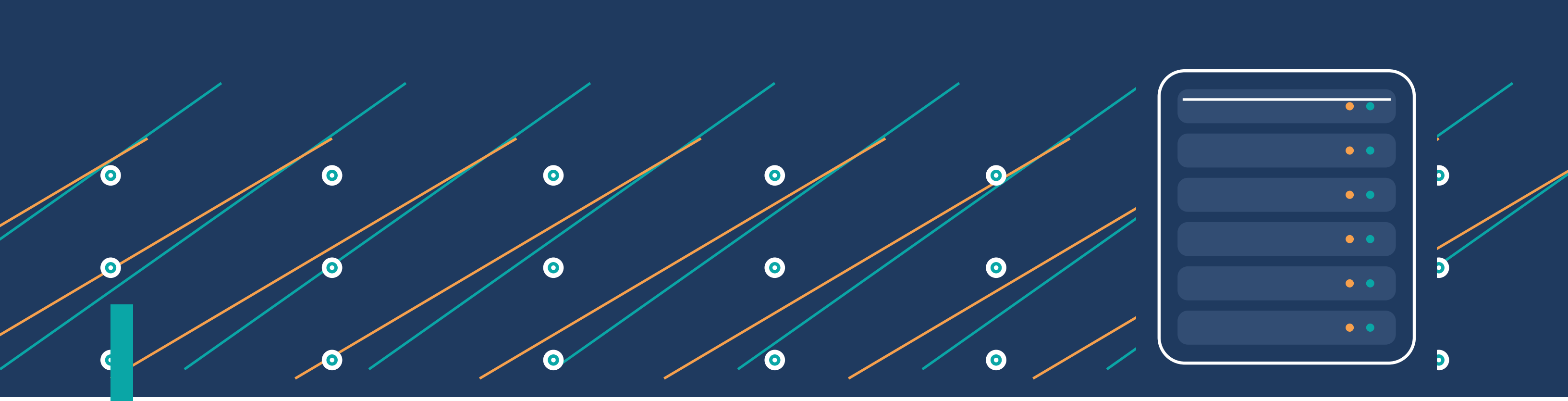

The Future of Data Center Development in Georgia

Overview and Policy Exploration

Date: February 16, 2026

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1 Introduction

Georgia is experiencing one of the fastest accelerations in data-center development in the United States, driven by the state's favorable tax, regulatory, and siting policies as well as proximity to an emerging tech hub in Atlanta. This surge has serious implications for Georgian's: Georgia Power is planning expansions and gigawatts of new generation capacity of an estimated cost of $16 billion to add 10 gigawatts with 80-90% of the new capacity planned for data center use [13, 37]. As utilities and regulators move to accommodate this rapidly expanding load, communities across Georgia have begun raising concerns about rising electricity prices, land-use changes, noise and water impacts, and the broader environmental footprint of data-center clusters. These concerns have catalyzed new forms of local activism, as residents question the pace, scale, and distribution of benefits associated with the state's data-center boom [15].

Without careful, informed, and community-responsive policy making, continued data-center expansion may lock Georgia into high cost infrastructure, hurt ratepayers, damage water quality and availability, and even reduce property values– similar to prior rollouts in places like Northern Virginia. On the other hand, strong and coordinated policy making could secure a future for Georgia as a technology and AI hub, while also preserving community agency, increasing economic output, and protecting Georgia lands and wealth. This report therefore begins from a central premise echoed in national analyses: that proactive, evidence-based policy is essential to ensure that data-center development aligns with statewide sustainability goals, protects ratepayers, and meaningfully incorporates community voices in planning and oversight.

In this report, our objective is to provide an overview of the different technical and economic challenges, benefits, and risks associated with the recent and rapid growth in the development of data centers. We examine these aspects in three dimensions: the power grid, the environment, and the local economy. For each of the three dimensions, we will discuss several case studies demonstrating the possible benefits and risks associated with data center development. Finally, we will present some recommendations.

2 Data Center FAQ

A data center is not merely a warehouse for data but an industrial-scale hub for computation, where large fleets of servers continuously move, transform, and compute over data to support workloads such as AI model training and inference, large-scale analytics, content (video) delivery, and cloud services. These massive facilities operate as tightly coupled systems—integrating high-performance computing, storage hierarchies, and high-bandwidth networks—where energy and water demands are driven by sustained computation, not passive storage, a distinction that is often misunderstood in public and policy discussions. The modern data center is a marvel of human engineering—the apex of contemporary technology—embodying trillions of dollars of sustained research and development across computing, networking, power systems, and thermal engineering to make large-scale digital society possible.

Data centers are essential for the operation of Internet services, artificial intelligence training and inference, cloud computing, and enterprise IT operations. Data centers vary widely in their capacity, design, and purpose. They can range from small server rooms to large-scale facilities that occupy an entire building. Large-scale operators develop campuses reaching thousands of acres of space, that include multiple data centers in close proximity to each other. Data centers may be built for exclusive use by a hyperscaler (e.g., Meta, Amazon, Google, etc), or may have many shared tenants that tend to rely on or operate with some level of coordination (e.g., Equinix co-location facilities).

How do we measure the size of data center?

There are multiple measures for the size of a data center, including the number of servers it contains and its compute capacity. For example, the capacity of supercomputers is measured in Floating Point Operations Per Second, or FLOPS. Supercomputers have a footprint comparable to that of data centers in terms of hardware, space, power, and cooling requirements. However, in this report, we use the common measure of data center power consumption, typically expressed in megawatts (MW), focusing on those that consume more than a few MWs. Data centers in this range are estimated to house more than 70% of all servers by 2028 [35].

Who owns, operates, and uses large data centers?

Large data centers vary according to the number of organizations that utilize their hardware (i.e., their users). Some data centers operate as private facilities for a single organization, while others are multi-tenant facilities that host equipment for multiple organizations. For example, Meta operates some of the largest data centers in the world (including a planned 3,600-acre, $10 billion site in Louisiana [16]), serving a single user: Meta. Other hyper-scale operators can own and manage all equipment in the data center but lease its capacity to multiple users as part of a cloud computing service, such as Amazon, Google, and Microsoft. Another class of large-scale data centers operators, like Equinix, host equipment for hundreds of different organizations within a single facility, called co-location facilities, for a sense of scale, Equinix claims that over 90% of all internet routes pass through its data centers.

Why have data centers been growing in numbers and power usage in recent years?

The recent spike in data center buildout has been largely motivated by the rapidly growing interest, extraordinary amounts of investment (Corporate AI investment reached $252.3 billion in 2024 [20]) and "hope" in the transformative impact of generative AI applications. Generative AI refers to a class of artificial intelligence models that can generate new content, such as text, images, or music, based on the data on which they have been trained. Examples of generative AI models include OpenAI's GPT and Google's Gemini, which can create human-like text and images. Generative AI computations are particularly power hungry because they often involve large-scale neural networks that require substantial computational resources for both training and serving. Training these models can take weeks or even months on powerful hardware. For example, training GPT-3 is estimated to have consumed 1,287 megawatt-hours (MWh), equivalent to the annual energy consumption of dozens of average U.S. households [32]. Serving, or the process of generating content using the trained model, can also be resource-intensive, especially when serving a large number of users simultaneously. Image and video generation in particular, is thousands of times more energy-intensive than other uses of GenAI, with a single inference being the equivalent of running an electric kettle used for about 5 to 6 minutes, or completely expending a small laptops battery [26]. Running that much power into a chip generates a lot of heat, which requires cooling systems to maintain optimal operating temperatures in data centers. Cooling is a water and energy hungry process, whose overhead varies widely based on the technology employed by the data center operator.

The two sides of the data center development argument.

Data centers can be easily viewed as a large consumer of power, water and land to serve remote users while creating a small number of permanent jobs, relative to their footprint. This view generates a lot of resistance from communities to their development, especially in communities that are already facing water and energy shortages. In a recent letter to Congress, 200 environmental organizations, including three organizations based in Georgia, called for a moratorium on the approval and construction of new data centers [12].

On the flip side, the federal government views data center development as a key economic driver and an essential factor to winning the AI race. In an article by the Congressional Research Service (CRS), data centers are viewed as "a strategic national asset" [44]. A recent executive order describes plans for data center development as "essential to national security, economic prosperity, and scientific leadership" [41]. Local governments argue that such developments bring construction and maintenance jobs to the local community in service of large data centers, tax revenue that can help further develop the community, and contribute to improving local infrastructure by expanding the capacity to generate and deliver power, network connectivity, and even roads. To attract data center developers, local governments typically offer incentives to data center developers in the form of tax breaks and fast-tracked approvals.

3 The Power Grid

Traditional data center applications such as social networks, video streaming, web hosting, email services, and cloud storage have been the primary drivers of data center energy consumption in the past. Computation for such applications is typically performed on general-purpose central processing units (CPUs) that are optimized for a balance of performance and energy efficiency. The power consumption of a single such general-purpose chip is relatively low, often in the range of 50 to 150 watts during operation.[1] However, generative AI applications often rely on specialized hardware, such as graphics processing units (GPUs) or tensor processing units (TPUs), which are designed to handle the parallel processing requirements of neural networks. These specialized chips can consume significantly more power than traditional CPUs, often exceeding 300 to 700 watts per chip during operation [30, 31]. The shift in data center power requirements is reflected in projections of data center power consumption over the next few years. In particular, it is expected that the share of data center power consumption will increase from current roughly 3% of total US power consumption in 2024 to possibly 12% by 2028 [35]. The continuous growth in the demand for power, if not met with a corresponding increase in renewable energy capacity, could lead to a greater dependence on fossil fuels, undermining efforts to reduce greenhouse gas emissions. Moreover, it can increase cost of electricity for all consumers on the grid as more expensive peaker plants are called into service to meet the increased demand.

The increase in power demand requires the upgrade of the local power infrastructure, including transmission lines, substations, and transformers, to handle the additional load. In some cases, data centers may also invest in on-site power generation or energy storage solutions to ensure a reliable power supply and mitigate the impact on the local grid. Indeed, the global race in the development of AI technologies is coupled with a race in power generation. For example, OpenAI's letter to the Office of Science and Technology Policy (OSTP) compares power generation explanations in China and the US, with China adding 8× the capacity added in the US in 2024 [24]. To keep up with the demand for power, several hyperscale data center operators are exploring using small modular reactor (SMR) technology or relying on explanations of and newly built nuclear power plants.

The load data centers put on the power grid does not only consume its capacity but can also reduces its resilience. In particular, data centers running large AI workloads have sharp variations in their power consumption throughout the day. For example, starting a model training job can suddenly put a load measured in MWs on the grid and completely take it off when it finishes. Such sharp swings can trigger cascading failures in the grid that cannot adapt to such unplanned swings in load [22, 25]. Moreover, it complicates the already complex energy pricing models that operators rely on. Proposals to improve the resilience of the power grid typically require significant cooperation between data center operators and utility companies (e.g., DCFlex from EPRI [10] and ERCOT's demand response program in Texas).

The growth in demand goes hand in hand with improvements in data center efficiency. Power Usage Effectiveness (PUE) is a metric that measures the energy efficiency of a data center. It is calculated by dividing the total amount of energy consumed by the data center (including cooling, lighting, and other infrastructure) by the energy consumed by the IT equipment alone. A PUE value of 1.0 indicates perfect efficiency, where all energy is used solely for IT equipment. In practice, most data centers have PUE values ranging from 1.2 to 2.0. Data centers supporting generative AI applications often strive for lower PUE values to minimize their overall energy consumption and environmental impact. State-of-the-art data centers achieve a PUE of around 1.1 to 1.2, indicating high energy efficiency through advanced cooling technologies and optimized infrastructure design. However, efficiency can increase the number of data centers not reduce it, in yet another manifestation of Jevnos paradox.

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[1] Some high-end CPUs can consume up to 350 watts for Intel's latest Xeon processors and 400 watts for AMD's latest EPYC processors. However, such large processors are less commonly used. Operators typically prefer using a large number smaller, cheaper, and power efficient CPU models to perform the same work as such large CPUs [5].

In 1865, the economist William Stanley Jevons observed that improvements in coal-use efficiency in Britain did not reduce coal consumption—instead, they made coal cheaper and more useful, accelerating industrial growth and driving total consumption up. Efficiency lowered the cost per unit of output, which expanded demand. The same dynamic can apply to computing: improving the efficiency of AI computing infrastructure will enable the development of larger AI models which can increase the overall demand for computing infrastructure. This paradox highlights the importance of considering not only efficiency improvements, but also the broader implications of increased data center deployment on energy consumption and environmental impact.

3.1 Case Study: Virginia – Cost of Energy

Northern Virginia is the world's capital of data centers, and it is claimed that 70% of global Internet traffic goes through its data centers. The energy demand in Virginia is projected to increase by 85% in the next 15 years [33]. Thus, the impact of data centers on the power market in Virginia and surrounding states represents an important case study to consider. There are two main risks that we consider in this report: 1) passing the cost of infrastructure expansions, motivated primarily by data centers, to other consumers and 2) operating a massive, and expensive, infrastructure designed for future demand that might not materialize.

Growth in power demand requires expansion of power generation and delivery, prompting the question of who should pay for the expenses of infrastructure upgrades and operations. Answering that question is almost impossible without comprehensive data that attribute current and predicted demand to different types of consumers. For example, power grid expansions are required to accommodate the needs of data centers as well as the growing use of Electric Vehicles (EVs) [1]. Moreover, simply amortizing the cost of these upgrades on all consumers: homes and data centers alike, adds unduly costs to residential bills. Indeed, this has now been reported for the upgrades of the tranmissions line approved by PJM over the past couple of years. PJM Interconnection LLC (PJM) is a regional transmission organization (RTO) operating an electric transmission system serving all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia. When an RTO like PJM upgrades its infrastructure, the costs are divided between regional utility companies based on their share of added capacity. The regional utilities then pass on the cost of these upgrades to their consumers. In Maryland and Virginia, utilities passed 66% and over 50% of the costs of these upgrades to residential consumers [28]. A similar pattern is reported for the upgrades approved in 2024 [2]. Although data centers pay directly and fully for a subset of the upgrades, they pay only a small fraction (6 of 130 transmission lines reported in 2024 [2]).

The expansion of the infrastructure also assumes that the demand of data centers will continue to meet the added capacity, paying for its cost over time. Projections by Dominion Energy and the Piedmont Environmental Council show that such expansions can be beneficial in the long term if data center demand meets projections. In particular, current expansions can reduce residential bills by roughly 6% by 2029. However, if the infrastructure is upgraded but data center development does not meet projections, residential customers will be left to pay for the upgrades, increasing their bill by 5% in 2029 and by up to 45% in 2039 [3]. Such long-term planning is particularly important in the case of data centers, which unlike conventional massive power consumers like plants and factories that can last for decades, most of the compute capacity in a data center becomes obsolete and need upgrading every four to seven years. Thus, data center loads and projections are much more volatile than conventional power consumers, requiring novel legal framing for their long-term obligations as well as comprehensive risk management to handle worst-case scenarios. According to a recent analysis by Greenlink, an Atlanta-based nonprofit, utilities in the South are assuming exceptionally optimistic rates of data center growth, despite these projections having a very low probability of materializing [18]. This approach to planning utility expansions risks leaving ratepayers responsible for massive costs for decades to come.

3.2 Cast Study: Texas – Utility - Data Center Cooperation

While data center demand volatility poses risks for residential customers, especially as investments in power capacity expansion grow, it also poses a unique opportunity. In particular, unlike existing large power consumers, the demand of data center for power is flexible. Data center operators can adjust their computing operations, even move those jobs around their geographically distributed data centers. Thus, there is room for cooperation and collaboration between utilities and data center operators. To leverage that opportunity, Texas passed SB6 in law which requires large-load customers to include means for curtailing their demand in response to available capacity at the utility company [23]. The demand response program enacted by ERCOT in Texas already provides incentives for large energy consumers, including data centers, to reduce their electricity usage during peak demand periods. This program helps balance supply and demand on the grid, reducing the need for fossil fuel-based peaker plants and lowering overall greenhouse gas emissions. Data centers participating in demand response programs can receive financial compensation for their efforts, making it a win-win situation for both the grid and the data center operators. For example, Bitcoin miners were paid $31.7 million to shut down during the heat wave in 2023 [36]. Such coordination between utilities and data center operators improves the resilience of the grid.

SB6 includes several provisions that require data center operators to report on their energy consumption and sources of energy. This transparency helps regulatory bodies and the public understand the environmental impact of data centers and encourages operators to adopt more sustainable practices. It also requires large-load customers to contribute to the costs of necessary upgrades to the grid infrastructure, ensuring that the financial burden does not fall solely on other electricity consumers.

Despite these promising examples, the Texas grid is well known to struggle with reliability in winter months, while also (due to its pricing model) charging exorbitantly high prices to individual rate payers after a after a disastrous failure in 2021 [42]. Given the magnitude of the potential load on the grid, and the inability of ERCOT to fully harden the grid to date, and reduced ability of the state to provide oversight and accountability on the buildout, there is room for improvement in the form of strong oversight mechanisms around grid hardening requirements, capacity and pricing management, and rate payer protections.

4 The Environment

We consider the environmental impact of data center development wholistically, including air and noise pollution, water usage, land use, and electronic waste generation.

Air pollution. Energy generation for data centers, particularly when sourced from fossil fuels, contributes to greenhouse gas emissions and climate change. Natural gas and nuclear power fuel three-fourths of Georgia's total in-state electricity net generation. In 2024, the amount of electricity generated by natural gas accounted for 41% of the state's total net generation according to the US EIA.[2] Because of this reliance, and slower build out of renewable energy sources in Georgia, future data centers are expected to rely nearly exclusively on fossil fuels, leading to significant emissions. Already Georgia Power extended the life of two coal plants due to increase in demand, primarily driven by data centers [14].

Water use. Data centers often require many millions of gallons of water for evaporative cooling purposes, particularly in regions where air cooling is insufficient due to high ambient temperatures, such as many locations Georgia. The use of water for cooling puts a large strain on local water resources, especially in areas already facing water scarcity. Community complaints in Ohio, Wisconsin, and even Newton county Georgia about water impacts have often dominated headlines ("Their Water Taps Ran Dry When Meta Built Next Door" NYTimes). Such concerns can be particularly alarming to communities in Georgia as multiple areas experience severe and exceptional drought conditions in 2025, the worst since 2012. To mitigate this impact, data centers can implement water-efficient cooling technologies, such as closed-loop water cooling

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[2] https://www.eia.gov/state/analysis.php?sid=GA

systems or air-side economizers, which may reduce the reliance on water for cooling, but often come with sizable cost or energy demands.

Water Usage Effectiveness (WUE) is a metric that measures the water efficiency of a data center. It is calculated by dividing the total amount of water consumed by the data center (including cooling, humidification, and other uses) by the energy consumed by the IT equipment. A lower WUE value indicates better water efficiency. Data centers supporting generative AI applications often strive for lower WUE values to minimize their overall water consumption and environmental impact. State-of-the-art data centers achieve WUE values as low as 0.1 to 0.2 liters per kilowatt-hour (L/kWh). However, the long-term benefits of water recycling, such as reduced water consumption and lower water bills, can outweigh the initial costs and energy requirements.

Land use. Land use is another important consideration, as data centers can occupy large areas of land, potentially leading to habitat disruption and loss of biodiversity. The construction of data centers may involve clearing vegetation and altering natural landscapes, which can have negative effects on local ecosystems. To minimize land use impacts, data center operators can consider building vertically or utilizing existing structures, such as repurposing old warehouses or industrial buildings. Construction practices also contribute to the environmental footprint of data centers. Construction site activities can generate dust, noise, and waste, which can affect local air and water quality. Sustainable construction practices, such as using recycled materials, minimizing waste, and implementing energy-efficient building designs, can help reduce the environmental impact of data center construction. Land use also has a impact on tax revenue streams. In Michigan, a data center company sought exemptions from property taxes that funded school districts. This move directly reduced the revenue streams for local area schools and the district, which resulted in a prolonged and expensive legal dispute.

Promises versus Reality

In Georgia, the rapid buildout of data centers is unfolding far faster than the state's ability to provide renewable and reliable energy, or the ability to access already constrained water to support them. Faced with rising public concern about the environmental impacts of these facilities—especially their outsized demands for power and water—developers frequently emphasize long-term technological fixes (i.e. novel cooling strategies, small modular nuclear reactors (SMRs)) rather than confronting near-term risks. Companies commonly pledge that future facilities will run on cleaner energy, often pointing to next-generation cooling technologies or even small modular nuclear reactors (SMRs) as eventual solutions. But these promises rest on speculative infrastructure: SMRs have no commercially deployed models today, and many "advanced" cooling technologies remain unproven at the scale required by AI-driven data-center loads, and are not anticipated to be usable for the next five years at least. Furthermore, very real local concerns around noise pollution, light pollution, and air/water quality are often met with denials by operators. In practice, operators rely heavily on fossil fuel generation to meet immediate power demands and frame this dependence as a temporary bridge until cleaner options materialize. In Georgia, as elsewhere, these bridges have a tendency to stretch indefinitely—leaving communities to bear the environmental and financial costs while developers point to a future that has yet to arrive.

Electronic waste. Electronic waste generation is a significant environmental concern associated with data centers, as they frequently upgrade their hardware to keep up with technological advancements and performance demands. The disposal of outdated or obsolete equipment can contribute to the growing problem of electronic waste, which often contains hazardous materials that can harm the environment if not properly managed. To address this issue, data center operators can implement responsible e-waste management practices, such as recycling programs and partnerships with certified e-waste recyclers.

4.1 Case Study: The Approach of Hyperscale Operators to Environmental Goals

Several hyperscale data center operators have made public commitments to environmental sustainability, setting ambitious goals to reduce their carbon footprint, water usage, and overall environmental impact. For example, companies like Google, Microsoft, and Amazon have pledged to achieve carbon neutrality or even carbon negativity in the coming decades. These commitments often involve a combination of strategies, including investing in renewable energy sources, improving energy efficiency, implementing water-saving technologies, and adopting sustainable construction practices. Moreover, operators periodically report on their progress towards these goals, providing transparency and accountability to stakeholders. Reports detail metrics such as carbon emissions, water usage, and waste generation, allowing for an assessment of their environmental performance over time. Further, they include concrete case studies of collaboration with local communities and governments to address environmental challenges, such as water scarcity or habitat conservation. We will discuss some examples here that we will later use to guide our recommendations.

For example, when it comes to water consumption, Google reports that it takes into account the local community's risk of water scarcity when making its plans to cool its data center. Their most recent report presents several examples where they went with air cooling deployments in communities facing high risk of water shortage (e.g., Messa, Arizona and Waltham Cross, UK) [17]. This community-specific approach to data center design creates opportunities for coordination and collaboration between operators and local governments. *However, it is important to note that the pledges made by such operators are more global in nature. In particular, achieving zero-carbon footprint might include the usage of diesel backup generators in one region while carbon capture and reforestation is carried out in another region.* Finally, it is also important to note that hyperscalars like Google, Microsoft, and Meta, can be very careful about what they report and which metrics they pursue (i.e. per token carbon cost versus total impact), and can ignore or not gather data on the whole lifecycle of impacts. In particular, it was recently reported that Amazon strategically keeps its full projections for water usage secret [39].

4.2 Case Study: Water Use in Arizona

Water scarcity in Arizona has significant local [4] and global [43] ramifications. A recent proposal for data center development, called Project Blue, has received significant attention. The project is expected to generate \$3.6 billion of economic activity for the Pima county. The project has been controversial due to its water requirements. The data center developer argues the project will be water positive [7]. In particular, the project is designed to be water positive by allowing the local water utility to charge the data center operator at a rate that covers both the nominal cost of water consumption and the expansion of the water supply to the local community. In addition, the project will support the introduction of additional sources of water and the expansion of the water reclamation infrastructure. However, there has been a pushback against the potentially misleading definition of a water positive project [6, 27]. The pushback centers around the notion that the promised net-positive outcome might materialize for the region but not the local community, replacing "wet" water with "paper" water from the perspective of the local community.

4.3 Case Study: Land Use in Virginia

Large data centers stretch over large areas of land, sometimes exceeding thousands of acres for a single facility. The construction of these data centers often involves clearing large tracts of land, which can lead to habitat disruption and loss of biodiversity. In Virginia, for example, the rapid growth of data center campuses has raised concerns about the impact on local ecosystems and wildlife habitats. The construction process can involve significant earthmoving activities, which can lead to soil erosion, sedimentation in nearby water bodies, and disruption of local flora and fauna. The impact is not only ecological but also cultural. In some cases, data center construction has led to the disturbance of historically significant sites, including cemeteries and indigenous lands. Such incidents were reported in Prince William County and Mecklenburg County where large data center development led to the disturbance of historic African American cemeteries. This case highlights the importance of thorough site assessments and community engagement prior to construction to ensure that cultural heritage sites are respected and preserved.

4.4 Case Study: Air Pollution in Tennessee

Data centers often rely on backup generators powered by diesel or natural gas to ensure uninterrupted operation during power outages. However, the operation of these generators can contribute to local air pollution, particularly in areas with high concentrations of data centers [19]. In Tennessee, for example, concerns have been raised about the cumulative impact of backup generator emissions from multiple data centers on local air quality. The emissions from these generators can include nitrogen oxides (NOx), particulate matter (PM), and volatile organic compounds (VOCs), which can contribute to smog formation and respiratory health issues. The Asthma and Allergy Foundation of America (AAFA) released a letter urging pausing the use of gas turbine generators at the Colossus Data Center in Memphis, the city ranked 7th asthma-related deaths in the country. The generators were deemed necessary to operate the data center pending further capacity deployment by the utility company. The EPA ruled the use of these generators illegal, patching the gap between federal and state law that made such deployment possible [21]. Despite the ruling, the data center appears to continue to use the generators [40].

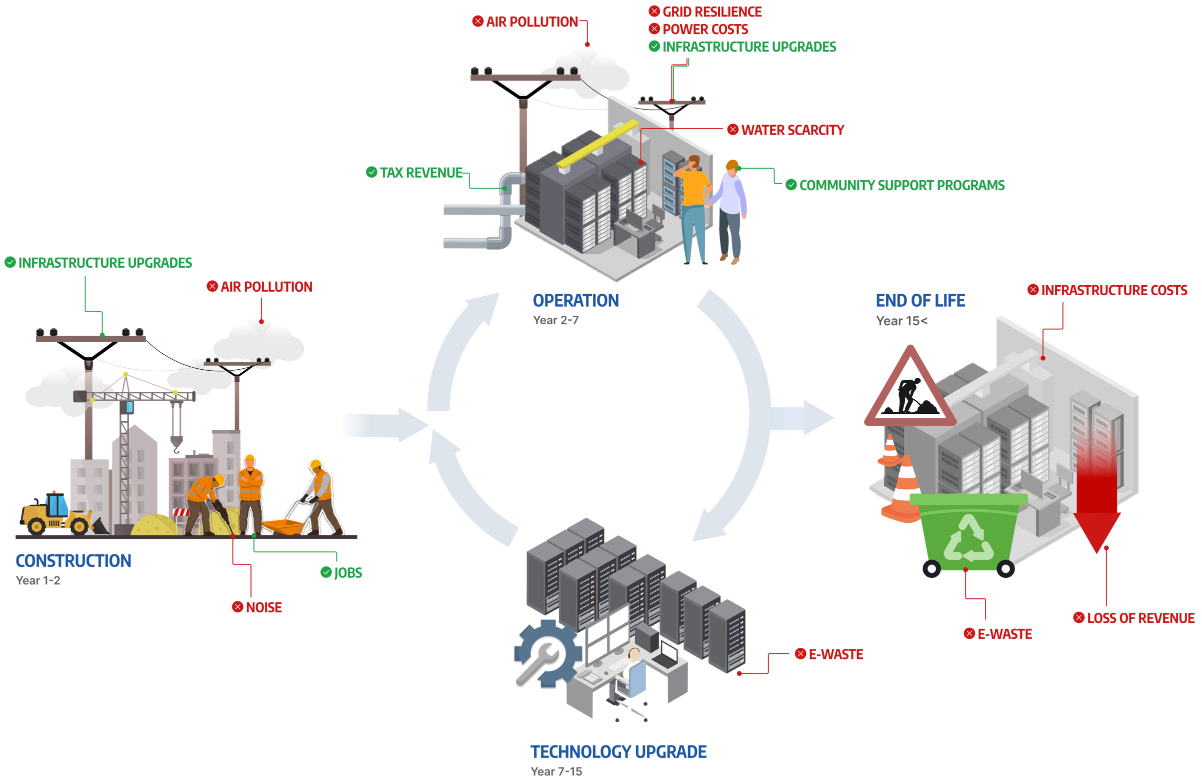
5 Local Economy

A central argument by data center proponents and local policy makers is that data centers bring economic benefits to the national economy and local communities. Such benefits have been reported comprehensively in various studies and reports from the local and global perspectives [29, 8, 38]. However, the reality is more nuanced. While data centers do contribute to local economies in certain ways, they also present challenges that can offset these benefits. Moreover, the benefits and challenges can vary significantly depending on the specific context of the community in question and the stage of the project over its potentially long lifetime.

Earlier in the data center development and operation lifecycle, the economic benefits tend to be more pronounced. During the construction phase, data centers can create a significant number of temporary jobs, from construction workers to engineers and project managers. This influx of temporary employment can stimulate local economies through increased spending on housing, food, and other services. In addition, local businesses may see a boost in demand for their products and services due to the presence of construction workers and contractors.

Once the data center is operational, the number of permanent jobs created is often relatively small compared to the size of the facility. Data centers are highly automated and require a limited number of staff for maintenance, security, and operations. This can lead to a situation where the initial economic boost from construction does not translate into sustained long-term employment opportunities for the local community. Another potential benefit is the ability to attract technical jobs that thrive in the vicinity of data centers due to their need for the compute capacity, direct access to the data center, and the benefit of the improved infrastructure. However, these secondary impacts are difficult to measure and depend significantly on the specific type of data center, the task loads typically routed through it, and the constraints and capital of companies most likely to utilize those services.

During their lifetime, data centers are subject to property taxes, which can provide a significant source of income for local governments. This revenue can be used to fund public services, infrastructure improvements, and community programs. However, as has been reported in CNBC, Washington Post, and other outlets, states have historically competed for data center business, in some cases deferring property taxes, or exempting sales tax until years after a data center is built. Some states use tax money to upgrade infrastructure purely for datacenters (which is potentially what has happened in Georgia via a recent PSC decision). In Virginia, over $1 billion in tax incentives were given out, over 80% of all incentives [34].



In some cases, data center operators may also invest in local infrastructure, such as roads and utilities, which can benefit the broader community. However, the environmental impact on the community, discussed above, can also have a significant economic impact, potentially lowering property values and increasing the cost of water and power for residential ratepayers. The economic benefits of a data center rely on the sustained operation of the data center over a long period of time. However, data center operations require continuous hardware upgrades and a continued exponential demand for compute resources. If the AI ”bubble” were to burst, demand for computing were to slow, or hardware costs were to rise too high, these data centers would be taken offline, or left at lower capacity, or not finished. Then the community will be left to bear the infrastructure costs and environmental impact of these data centers with minimal benefits.

Another significant outcome is that a community with a success story hosting a large data center will attract more development. The economic benefits make it appealing to approve more development projects. Thus, such successes can snowball, amplifying the risks, as well, which we have reported on when discussing the case of northern Virginia. A community needs to take into account a holistic view of the impact of such developments, including future developments that aim to leverage existing success stories.

5.1 Case Study: Walton County, GA and Meta

Meta is a major contributor to local government revenue through property taxes, which can help fund public services, infrastructure, and schools. This accounts for approximately $11 million annually. Moreover, Meta has invested in upgrading our local infrastructure, helping to offset some of the costs that tax dollars would otherwise cover. They also added renewable energy sources to the local grid. Meta’s Data Center Community Action Grants and other programs provide funding and support to local schools and nonprofits, often focusing on STEAM (Science, Technology, Engineering, Arts, and Mathematics) education, workforce development, and community projects. The Social Circle, the location of the Meta datacenter, has attracted a Rivian electric vehicle manufacturing plant.

The operation of the Meta datacenter and development of the Rivian plant have caused significant concern in the local community. The operation of the Meta datacenter has been reported to have increased sediment buildup in local water sources [11]. The Rivian plant development has further exacerbated these concerns [9]. While these concerns have been refuted in court, community pushback remains.

6 Conclusion

Data centers are a critical component of modern digital infrastructure, supporting a wide range of services and applications essential to our daily lives. However, their rapid and extraordinary growth in just the past year, fueled by the AI boom, has raised significant concerns regarding their energy consumption, environmental impact, and economic implications for local communities. Georgia is rapidly emerging as a national hub for data center development, shaped by a policy landscape and infrastructure constraints unlike those of most other states. While this growth brings economic opportunity, it also introduces challenges that demand proactive, Georgia-specific responses. This report distills key issues, highlights early successes, and draws cautionary lessons from other states—what worked, what failed, and what Georgia can learn as policymakers, communities, and operators navigate the path ahead.

We appreciate that different communities, cities, and counties have their own unique challenges, ordinances, and priorities. Therefore, we recommend that local governments and stakeholders carefully evaluate the potential benefits and drawbacks of data center projects in their specific contexts. Moreover, data center development requires a collaborative approach involving policymakers, industry stakeholders, and local communities to ensure that the growth of data centers aligns with broader societal goals. By adopting a balanced approach that considers energy efficiency, environmental sustainability, and economic development, communities can harness the advantages of data centers while mitigating their negative impacts.

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