Data Centers in Texas:
A Review and Call for Innovation and Regulation

April 2026

GEAA
Greater Edwards Aquifer Alliance

Foreword

April 22, 2026

It was in November of 2025 when we decided that GEAA needed to dive into the exploding phenomenon of data centers and their impact on our water supplies. Over the past months, each time we thought we could publish, an avalanche of new information had us diving deeper into the topic.

Some aspects of data generation, such as crypto mining, are easy to dismiss as a useless waste of resources that should be prohibited. However, weighing the pros and cons of the infrastructure needed to support Artificial Intelligence (AI) demands a more nuanced approach, as this new technology is both scary and wonderful.

While many Americans persistently ignore the threats to our planet from climate change, the outcry about threats from super-intelligent AI may be taken with a grain of salt. In many ways, development of new technologies, both by AI and to serve data centers, may presage progress towards sustainability goals that we all endorse. For example, water utilities are using AI to better detect leaks within their systems and to manage conservation strategies, thus resulting in significant net gains of available water. The industry is creating a demand for longer-use storage batteries to support solar options for data centers, and many data centers are considering the use of direct vs alternating current to save energy, which could further spur conversion of our energy system to renewables and lead to greater energy conservation. And, instances of marvels to come abound. For example, AI was used to create a new flexible, high-strength, rust-resistant 3D-printable form of steel.

Conversely, GEAA's 21 county service area, and most of Texas, has been in persistent drought for several years now. We are well aware of the concerns of our constituents about locating this thirsty infrastructure in our region. Our local temperatures are increasing and rainfall is diminishing. It could be that Central Texas cannot sustain the energy and water requirements for data centers and still support the growth we are experiencing.

Many communities and rural landowners lament the prospect of big, noisy, polluting boxes dotting their landscapes. And they are taking action: 25 data center projects across the country were canceled in 2025, about four times as many as in 2024. Meanwhile, out of 770 planned data center projects, about 99 are being contested by local activists or residents, with $64 billion in projects being canceled. If the addition of the infrastructure needed to support AI is to proceed smoothly, economic equity, stakeholder engagement, policy priorities, and regulation must all be considered. Meanwhile, it is incumbent on tech firms to acknowledge that their facilities can indeed have outsized impacts on local communities, and take concrete steps to address issues of concern.

Although Texas passed some laws regulating AI in the 89th session, they did not take up any related to data centers. Given public outcry, we can expect the 90th legislature is likely to consider some regulation, as other states have done. However, how new state laws might be considered, approved, and enforced given that the Trump administration has issued an order that prohibits states from adopting their own regulations is anyone's guess.

Perhaps I am overly optimistic in believing that Texas can accommodate the digital economy without compromising the reliability and affordability of resources for its residents by requiring transparency, incentivizing efficiency, and prioritizing alternative water supplies. Changes to state law that empower unincorporated areas to address the siting of data centers will also be required.

Realistically, AI, and the need for attendant data centers, will not magically vanish. So, we felt it was incumbent on us to come up with recommendations as to how data centers might be designed, built, and regulated. We had fun brainstorming and researching this fascinating topic. I hope that you, the reader, will find some merit in these pages. My gratitude and admiration go out to the author of this report, Rachel Hanes, for her persistence, patience, beautiful writing, and good judgement.

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Executive Summary

Data centers are increasingly integral to the modern economy, but without prompt action, this industry threatens to strain an over-burdened electrical grid, deplete limited water supplies, raise costs for Texans; harm public health; and overwhelm local governments and utilities. Texas is second only to Virginia in U.S. data center development and is on track to surpass Virginia by the end of the decade. Within Texas, the San Antonio-Austin South-Central Texas region saw a four-fold increase in data center development between 2023 and 2025 and now ranks among the top global markets for expansion. Hyperscale facilities built for AI purposes and cryptocurrency mining facilities are driving this regional growth, and they consume energy and water supplies at a scale that Texas' regulatory and planning systems were not prepared to absorb.

Data centers already use enough power to supply over half of Texas' homes and could drive a 70% increase in statewide electricity demand by 2031. Texas data centers could use roughly 494,091 acre-feet of water by 2030, with impacts expected to be concentrated on the individual communities where the facilities are located. Because the State Water Plan relies on historical data and surveys, this sudden increase in demand will not be reflected in official planning until at least 2032, worsening an already projected minimum 5 million acre-feet shortfall in water supplies by 2070. Wastewater from data centers may also overwhelm local utilities and could impact downstream water quality.

Data centers' planned reliance on fossil-fuel energy, along with their cooling procedures and general facility operation, could exacerbate other types of pollution and public health impacts in the state. Texas' data center tax exemptions also cost the state more than $1 billion in 2025 and are projected to cost at least $9 billion in total between 2025 and 2030, not accounting for city and county-level exemptions, even as individual facilities create few permanent, local jobs. No Texas or federal law to date requires facilities to disclose water or energy use, and non-disclosure agreements routinely shield project details from local officials and the public. Local governments and entities lack the appropriate tools to respond to the pressures data centers are putting on local water supplies and utility rates.

This paper highlights international and national policies and recommends Texas, its local governments, regional entities, and utilities adopt policies that could serve as guardrails against the adverse impacts of data center development. These include policies to improve data gathering and state and local planning; allocate costs fairly; improve and expand local regulatory tools; limit incompatible land uses; improve transparency; limit detrimental energy and water use; and limit increases in pollution and public health impacts. The paper also recommends data center operators themselves adopt measures to limit potable water use; reduce demand on local water supplies; limit fossil-fuel energy generation and its public health impacts; and demonstrate their investment in being responsible neighbors in their community.

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Introduction

Our lives are intrinsically wrapped up in activities that require data – smartphone use, internet use, cloud storage, banking, healthcare IT systems, social media, supply chains and logistics, and retail sale systems. Realistically, any entity that generates or uses data in any form will need to interact with data centers. Data centers have become a linchpin of our modern economic and social systems, and we are likely to become even more dependent on the functions and activities they facilitate, especially as artificial intelligence (AI) technologies become more embedded in our lives and economy. Yet not all data centers are created equal.

Certain facilities can have highly adverse impacts on local water supplies, energy supplies, prices, and quality of life. As such, ensuring that data center siting, construction, and operation occurs in the most responsible and sustainable manner is critical to ensuring that our digital lives, activities, and advancements do not create lasting harm to our natural resources and communities. Texas is at the forefront of the rapid growth and changing landscape of data centers, AI, and cryptocurrency mining – our state has the opportunity to be a national and global example for how to balance the economic growth and technological advancements facilitated by data centers with responsible energy, water, good governance, and land use policy.

Texas faces many distinct but interconnected challenges that make it even more of an imperative for the state to ensure that data centers are constructed, operated, and regulated in a responsible manner. Population growth, ever-present and intensifying drought conditions, increasing temperatures, more sporadic and intense rainfall, and aging infrastructure combine to push the state's electrical grid and water utilities to the breaking point. Without appropriate regulation and increased guardrails, data centers could push energy and water systems in Texas over the edge, raising prices for Texans and leading to water shortages and heavy strains on the electrical grid.

There are many technical, policy, and economic analyses of data centers already, and more are being released each week. We hope this paper can complement these resources. This paper is intended to serve as an overview and guidepost, providing context and policy and technical recommendations for innovative and responsible management of data centers. We hope we can help local and state elected officials, as well as the general public, understand what data centers are; how they work; the different types of facilities; what challenges they present in Texas; and how governments, utilities, and industry can address these challenges.

The proposals outlined in this paper are strategies we believe should be implemented even if data centers were no longer a challenge; they stand to make Texas stronger and more resilient. Wherever the next major threat to energy and water supplies arises [1], putting in place the recommendations outlined in this paper today will help Texas be better prepared for generations to come.

We recognize the data center and AI landscape is rapidly shifting and accelerating, with new information and projections released daily. We have tried to ensure this paper is as current as possible, but also recognize that by the time it is published this landscape may have already shifted again.

Background

What are data centers?

A data center is a physical space that houses computing and networking resources and the IT infrastructure designed to store, process, and manage large volumes of digital data. Data centers can be as small as an onsite server room and as large as or much larger than a warehouse the size of multiple football fields. Regardless of their size, data centers contain servers, networking equipment, data storage systems, energy infrastructure, and cooling infrastructure.

Data centers “essentially [act] as the central nervous system of the digital world” [2]. Multiple computer servers are networked together and connected to communications networks where the servers or the information on the servers can be accessed remotely. Computer servers contain computing chips, memory chips, data storage drives, and network routers and switches [3].

Figure 1. A view of the inside [4] and outside [5] of a data center, supplied by Wikimedia Commons.

Much of the power consumed by a server is consumed by the computing chips [6]. There are currently three main types of chips used, each of which is best suited for a specific purpose and which has varying degrees of energy efficiency [7]:

- Central processing units (CPUs) contain a small number of strong cores and are the traditional computer chips, used for browsing the web, consuming media, or saving documents to the cloud.
- Graphics processing units (GPUs) are made of thousands of smaller cores and are best suited for training AI models, processing datasets, and mining cryptocurrency. GPUs require significantly higher levels of energy use and cooling (i.e., water use) compared to CPUs.
- Tensor processing units (TPUs) combine the memory and processing units together onto one chip, resulting in significantly faster performances. TPUs are used both for training AI models and for supporting the models once in use.

Most modern data centers are “likely to have thousands of very powerful and very small servers running 24/7” [3]. Data centers ingest data sent through the network from their designated sources, process the data in a server, store the data, and send it back out to the user or the requesting application [2]. Data “is the raw form of information” [8]; it can be binary, text strings, videos, pictures, sound, numbers, or characters.

Nearly every business or governmental entity relies on data centers to function and no two data centers are exactly alike [9]. Some organizations have small server rooms on-site; some have a larger site dedicated to their business (called enterprise centers); some rent servers at larger cloud-based co-location facilities; and some – like Google, Microsoft, or Amazon – have hyperscale cloud-based centers. Some of the hyperscale data centers are used nearly exclusively to train or run AI models or programs [10].

In this paper, the term data centers will generally refer to hyperscale cloud facilities, AI centers, or cryptocurrency mining facilities, except for instances in which crypto mines are referred to specifically.

Data centers in Texas

The United States is the global leader in data center operations, with nearly 40 percent of the worldwide capacity [11]. Other U.S. states have traditionally held the majority of data centers, but as those states begin to reach capacity and face opposition and constraints, Texas has increasingly accounted for new construction. Texas is now second only to Virginia for data centers being proposed and constructed [12] (see Figure 2). Companies choose Texas because it offers relatively cheap energy; access to key infrastructure such as highways, fiber optic cables, and power grids; ample renewable energy; lower business and operating costs; and a looser regulatory environment than many other states [13].

Data centers are traditionally located close to end users to reduce latency and guarantee reliability, which is why many of the facilities are located in or near large population centers or fast-growing parts of the state [11]. Some of the large AI training data centers, however, are being proposed or built in more remote locations.

As of late 2025, there were over 400 data centers across 25 markets in Texas. More projects are being constructed or planned at the time of publication, and some experts predict Texas “could overtake Northern Virginia as the world’s largest data center market by 2030” [14]. The largest share of facilities lies in the Dallas-Fort Worth-Arlington metroplex, but Central Texas, between San Antonio and Austin, saw a four-fold increase in construction between 2023 and 2025. The San Antonio-Austin market is ranked first in a list of global emerging markets for data centers [15].

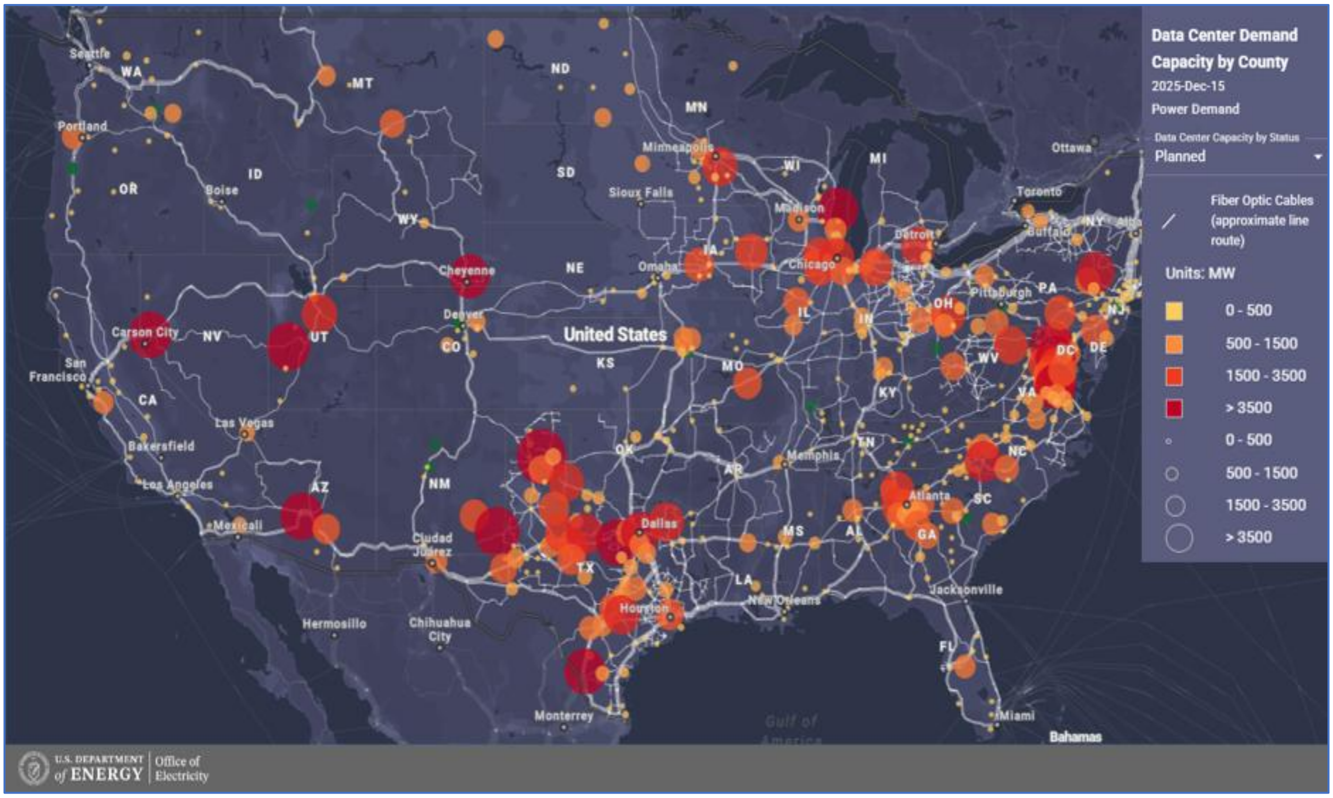


Figure 2. A map of data center demand by megawatt capacity in the United States by county, as of December 15, 2025, issued by the U.S. Department of Energy [16].

Many of the projects being proposed in Texas are hyperscale centers. These hyperscale facilities are meant "to power AI, social media, cloud storage, cryptocurrency mining, and more" [17]. While each center will serve a unique purpose, experts currently predict the majority will be built strictly for AI-related functions [18]. The current largest proposed data center in Texas is a hyperscale facility with a planned capacity of 7,650 megawatts (MW) and will be used for cloud computing and AI [19] [20] [21]. For comparison, the current largest data center in Texas as of publication has a capacity of 391 MW [19].

Many of the current and proposed data centers in Texas are densely clustered together in distinct regions of the state (see Figure 3). This clustering creates challenges for local land and water resource management and energy demand [11]. In fact, so many grid connection requests for these large data centers have flooded into Texas over the past few years that energy experts say the demand could be impossible to meet [22]. Local communities across the state have also begun to raise the alarm on the amount of water and power these proposed centers are expected to use and the impact these centers will have on their neighborhoods [23].

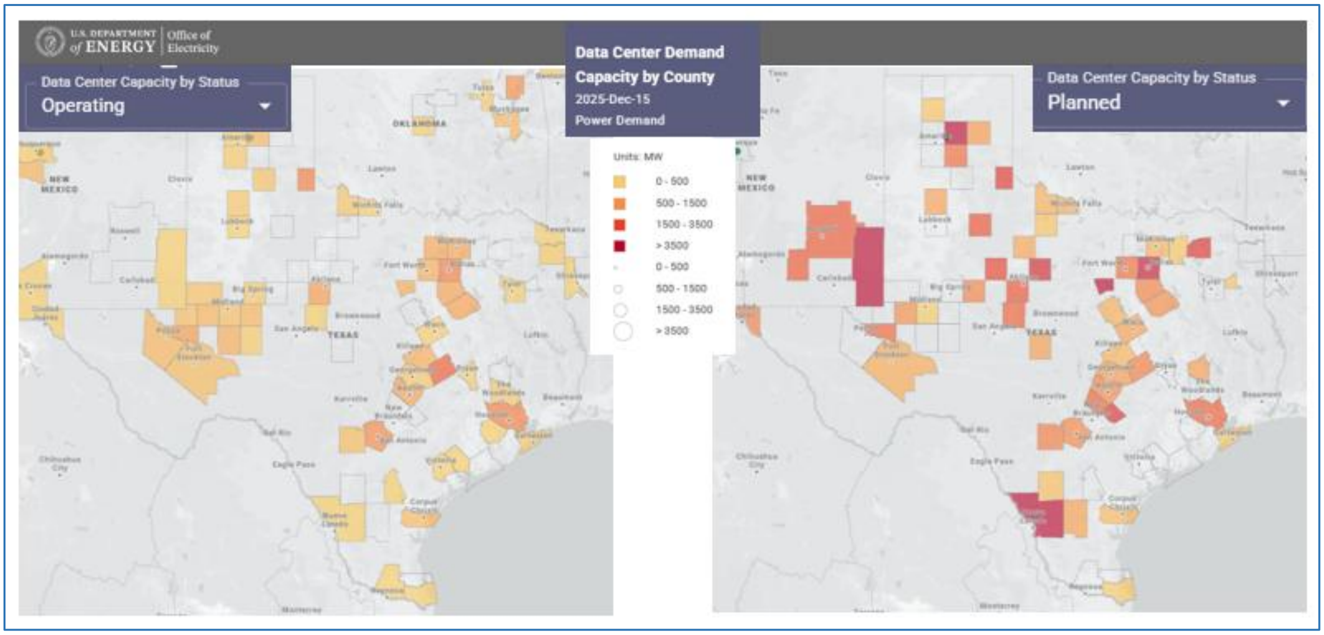


Figure 3. Maps showing data center demand capacity in megawatts by county in Texas, issued by the U.S. Department of Energy. The left side shows operating (i.e., existing) data center capacity by county, and the right side shows planned data center capacity by county [16].

A Changing Landscape

The impact of Artificial Intelligence

Artificial intelligence services and products, and especially the training of AI models, require significant increases in computing power over traditional server needs. The increased adoption, use, and innovation in AI products and services is a key driver in the rapid growth of data centers and the subsequent rapid increase in their energy use and water consumption [24]. Data centers used for AI purposes are becoming more energy intensive and physically much larger [25].

Artificial intelligence is a technology that is designed to allow “computers and machines to simulate human learning, comprehension, problem solving, decision making, creativity, and autonomy” [26]. AI uses algorithms, statistical models, and data processed through machine learning, neural networks, and deep learning to replicate how humans would think through and make decisions [27]. Much of the time and effort put into AI today revolves around advances in generative AI, which can create original images, videos, text, conversations, and other media.

Generative AI uses large language models (LLMs) for text-based AI applications and uses other types of foundation models for video, sound, and image content. These models use immense volumes of “raw” data – existing videos, images, articles, etc. pulled from the internet – to create parameters which can be used to generate content in response to prompts. Training generative AI therefore requires vast amounts of computing power, energy, and water [26].

Because AI data centers require more advanced storage, networking, energy, and cooling capabilities than non-AI centers, they often require larger physical, energy, and water footprints. Generative AI, for example, uses GPUs in place of traditional CPUs. GPUs require more water for cooling, due to the "superior heat removal capability" [28] of liquids. In fact, the "water usage effectiveness [ratio]…of AI specialized, midsize, and collocated facilities is about double that of their small and [non-AI] hyperscale counterparts" [29]. The higher the ratio of a facility, the lower its water sustainability.

AI activities and training are the fastest-growing portion of data centers' workloads. Unlike traditional industrial users, AI centers often run ceaselessly, placing constant pressure on the grid and increasing the baseload demand of the grid. Globally, due to the increase in generative AI training and use, power demand from data centers is predicted to increase 50% by 2027 and 165% by 2030 [30].

Global water demand is also projected to increase as a result. Over the next year, "total on-site and off-site water withdrawals tied to global AI demand are projected to reach 1.1-1.75 trillion gallons …annually" [30] (~3.4 million to 5.4 million acre-feet). In the U.S., AI activities are expected to contribute to the expected doubling, or even quadrupling, of data center water consumption between 2023 and 2028 [6]. The demands are no different in Texas, where "AI data centers tend to use even more resources than their traditional counterparts, and could rapidly deplete water resources in a state with a surging population and increasingly arid climate" [18].

The strains placed on critical resources by AI data centers are not hyperbolic – even the biggest boosters of AI recognize the impact these centers are having on our resources. Industry leaders in AI "are growing increasingly worried that data centers will eventually require more energy and land than are available on Earth" [31].

The impact of cryptocurrency mining

Cryptocurrency mining facilities (or crypto mines) are a type of data center. These facilities are engendering much of the same unease in Texas as AI data centers [32]. Crypto mine operations "consume extraordinary amounts of energy, strain local power grids, and provide few lasting economic benefits" [33].

Unlike traditional data centers, which often support multiple commercial uses and many customers, mining servers are dedicated to one purpose and solely support the owners of the mining operation [34]. And while cryptocurrency mines can usually provide increased revenue for electrical utilities, they often provide for few long-term jobs and lead to less economic growth in a region than other industries [35] [34].

Cryptocurrencies are digital, decentralized currencies, issued by their developer and with no tangible form. Cryptocurrencies exist on the blockchain, which is an encrypted public ledger where the "coins" can be recorded, stored, and transferred. Computers must verify and facilitate each entry or transaction on the chain [36]. Crypto mining involves continuously running hundreds of computers to verify cryptocurrency transactions in order to earn the currency for the mine's owners; it "resembles a numeric guessing game in which the first miner who guesses a certain winning number gets to create the next block for the blockchain" [37].

While operating, the mines must run consistently to make a profit, placing constant pressure on the grid and increasing its baseload demand [38]. One Bitcoin – a type of cryptocurrency – transaction uses roughly 1,449 kWh or the power usage of the average household over 50 days [39]. Crypto mining also generates significant amounts of electronic waste, or e-waste, as the equipment used to "mine" the currencies becomes obsolete roughly every 1.5 years [38].

Cryptocurrency mining operations often use far more water and energy than traditional data centers. As such, they are causing public health and quality of life concerns for nearby residents and are challenging the availability and quality of local water supplies [33]. One Bitcoin mine in Corpus Christi consumed 11,563,000 gallons (~35.5 acre-feet) of water over three months in the summer of 2025 – enough to supply 1,285 households every day [32]. Corpus Christi currently faces the likelihood of a serious water shortage in 2026 [40].

There are 22 registered crypto mines in Texas that use at least 75 MW of energy, and there are likely at least 60 mines in the state overall [41]. Over the past two years, crypto mines in Texas have consumed on average the same amount of energy as would have powered 925,000 homes [32]. And in 2024, crypto mines used as much energy as customers in San Antonio and El Paso combined [41].

The Electric Reliability Council of Texas (ERCOT), the state's grid operator, has reported that crypto mining is a risk to Texas' electricity supply, due to both the industry's power consumption and the sudden power drop-offs from the mines that can cause grid failures [32]. Crypto mining's demand on the state's grid is also impacting Texas residents' finances. Ten cryptocurrency mining operations connected to the state's grid alone caused a 5% spike in residential energy bills, which has cost the state's residents an extra $1.8 billion per year on their electricity bills [33] [34].

The cryptocurrency market is exceedingly volatile and often unregulated, leading to rapid boom and bust cycles and a pattern of following the cheapest energy. During the busts, mining operations may be operating below capacity and may end up decommissioning even after significant incentives from the local community, leaving those communities to deal with the associated debt [42]. Mines may also leave suddenly for cheaper energy in other states or regions, once again leaving local communities on the hook for transmission and infrastructure upgrades made in anticipation of tax revenue from the mine [42].

Energy and Water Concerns

Though data centers are integral to the functionality of modern society, they do not exist without serious implications for Texas' energy and water supplies. Storing data "takes electricity to power the data centers and cooling systems to keep their equipment from malfunctioning. And both of those require water" [43]. In Texas, due to the state's plentiful and cheap energy sources, "water…is the most limiting factor" [43] for data center growth.

There are currently few, if any, mandatory energy or water standards applicable to private data center operations across the United States. The federal government has "no legally binding energy standards that apply explicitly to operation of data centers in the private sector" [44]. And in Texas, the Public Utility Commission (PUC) “does not enforce specific regulations or provide incentives targeting energy performance in data centers” [45]. The state also does not place limits on the amounts of water a data center facility may use [46].

Around half of the energy used at a data center is used for the operation of the IT equipment. The rest, around 40%, is primarily used for cooling. Each electronic component of a data center generates heat while functioning; cooling systems dissipate this heat and help maintain system performance and stability. Most facilities use either air-cooled or water-cooled systems – 22% of data center facilities use water-cooled systems [6].

Even if a data center does not use water cooling, it will still have an impact on water supplies. To understand this impact, it is important to distinguish between the types of water use: water withdrawal and water consumption. Water withdrawal is the act of taking water from a surface or groundwater source and eventually returning it to the environment. Water consumption refers to the use of water that then becomes unavailable for reuse, e.g., evaporation [37].

Water withdrawal and consumption for data center operations can be either indirect or direct. Direct water use refers to the water used for cooling. Indirect refers to the water used to generate the facility’s power supply. A facility’s total direct water use often depends on how energy-efficient a system is. Data centers can currently optimize their on-site operations for either energy efficiency or water efficiency, but not both. Water-cooled systems are energy-efficient and water intensive, while air-cooled systems are energy intensive but water-efficient [47].

For a more detailed overview of the types of water use and cooling technologies in Texas, see the Hill Country Alliance’s insightful *Data Center and Water Use Community Guide* and the University of Texas COMPASS’ *Water Use Requirements for Data Centers in Texas: A White Paper on the Evolving Demands of Water Use in Data Center Infrastructure in Texas*.

Energy issues

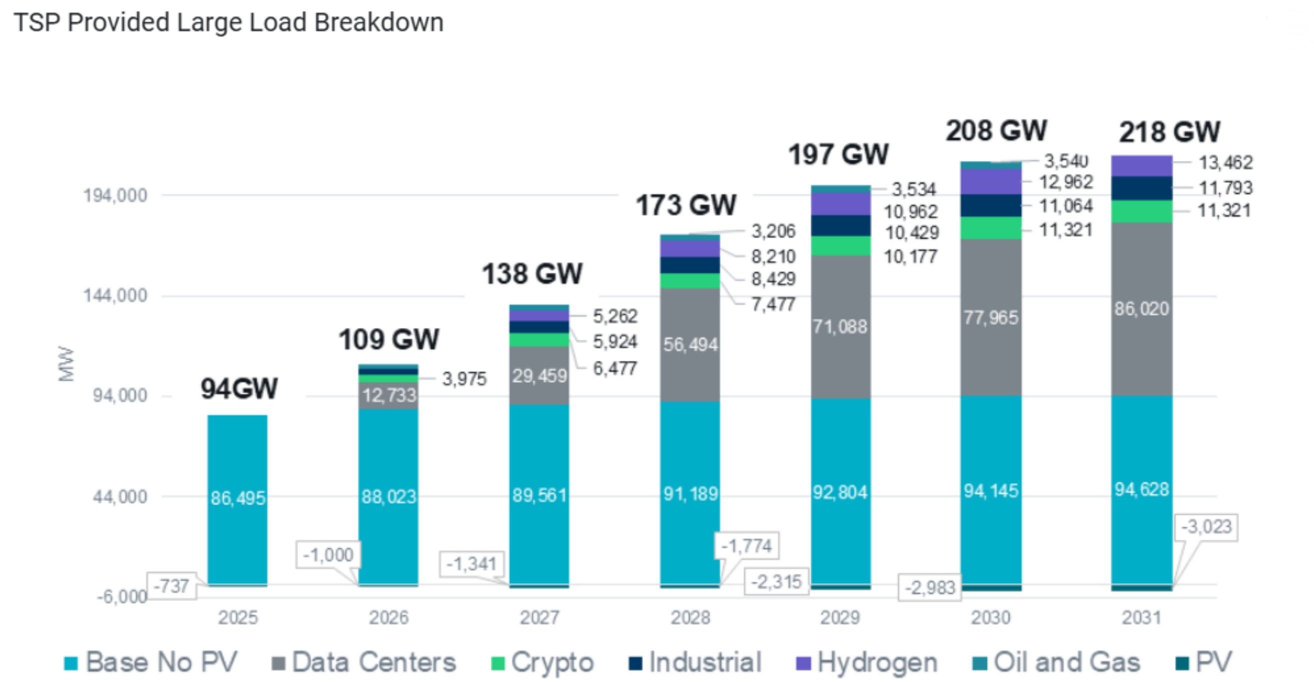
Increased demand

U.S. data center energy use accounted for approximately 4.4% of annual U.S. electricity consumption in 2023. While this percentage may seem a small portion of total energy use, it is projected to double or triple by 2028 to nearly 12% of national electricity use [6]. Part of what makes data centers’ energy load so much higher than that of other customers is that these facilities “need to constantly process data, instead of using electricity for more defined portions of the day” [48], i.e., during traditional peak hours.

Traditional data centers are already energy intensive – an average data center can consume up to two megawatt hours of electricity, roughly the same energy as a small town [47]. Those that support language learning models and AI programs will use even more. Compared to the typical American household, data centers use “ten times the amount of energy per square meter” [49].

Once AI energy costs are factored in, data centers could account for roughly 1/5 of global energy demand by 2030 [50] [51]. In fact, “the power and heat density of a [generative] AI center is at least four times that of a comparable cloud-computing facility” [52]. And nine out of 10 of the largest electric utilities in the U.S. pointed to data centers as the largest source of demand growth, due in large part to generative AI [53].

Data centers in Texas already use enough power to supply over half of the state's homes [18] and could potentially be responsible for half of the projected additional growth on the state's energy grid by 2030. Even if not every proposed data center is realized, electricity demand in Texas could still increase at least 70% by 2031 [54]. Texas energy utilities consistently highlight data centers, especially those used for AI, as key drivers of projected increased electricity demand. If all of the existing facilities in Texas to date ran 24/7, they would consume the amount of power equal to 13% of what was produced in the state in 2023 [29].



	2025	2026	2027	2028	2029	2030	2031
Data Centers	3,717	12,733	29,459	56,494	71,088	77,965	86,020
Crypto	1,868	3,975	6,477	7,477	10,177	11,321	11,321
Industrial	973	2,757	5,924	8,429	10,429	11,064	11,793
Hydrogen	5	357	5,262	8,210	10,962	12,962	13,462
Oil and Gas	1,334	2,186	2,851	3,206	3,534	3,540	3,606
PV	-737	-1,000	-1,341	-1,774	-2,315	-2,983	-3,023

Figure 4. Estimated large load energy requests provided by transmission service providers (TSP) to ERCOT for the years 2025 through 2031. PV stands for photovoltaic power, or solar [55].

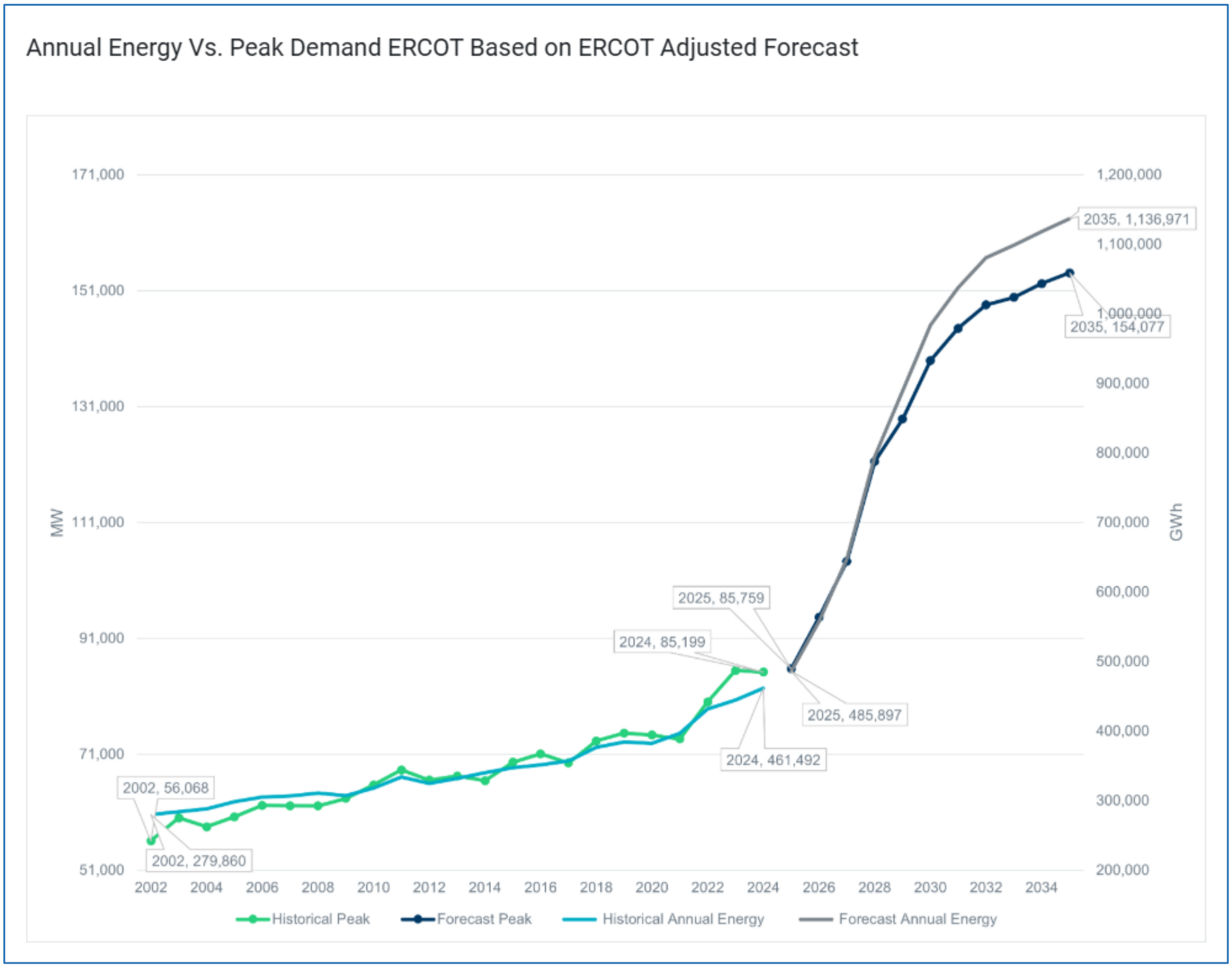


Figure 5. ERCOT's forecasted peak and annual energy demand for 2025 through 2035 compared to historical peak and annual energy demand from 2022 through 2024 [55].

Planning uncertainty

Data center proposals are already complicating the state's energy planning process. The ERCOT interconnection request system was designed to handle 40 to 50 projects. In 2025, ERCOT received 225 new large load interconnection requests. These requests represented a 270% increase in MW demand since January 2025. Over the prior two years, 2022 to 2024, ERCOT only received 152 requests combined. As of the time of writing, ERCOT was overhauling the transmission planning process [56].

The 225 requests in 2025 represented nearly 40 percent of the entire estimated electricity consumption in the U.S. for 2025 [57]. This unprecedentedly high number of requests could be a result of developers having pitched "duplicative interconnection requests to multiple sites…as they wait to see where a green light first appears for developments that may never materialize" [57]. Even if this duplicative system means the demand on the grid will likely be less, it makes planning much harder. Texas Senate Bill 6 (2025), to be discussed later in this paper, attempts to eliminate duplicative proposals.

Many of these new interconnection requests exceed 1 GW per site. Seventy-three percent of the requested connections in 2025 were for data centers, and 10% were for crypto mining [58]. Even with the ability to "shut off" large load operators (facilities using greater than 75 MW) like data centers during grid emergencies, Texas could still need $33 billion in new transmission lines to ensure that parts of the grid do not become overloaded as new data centers come online [59].

For all the predictions of the effect large load data center customers will have on the electrical grid, much is still uncertain. Cryptocurrencies like Bitcoin frequently experience extreme boom and bust cycles, with lower utilization of the mines during price downturns. Crypto mines also often follow the cheapest energy prices, leading to large buildouts of infrastructure followed by sudden abandonment for a different state [60].

Artificial intelligence, while seemingly less volatile than the cryptocurrency market, has many experts predicting a market bubble, which could slow down expansion and operation of data centers or strand already built assets [61] [10]. In fact, due to these market concerns, infrastructure and capacity constraints, and public opposition, "almost half of US data centers planned for [2026] are expected to be delayed or canceled" [62]. This uncertainty makes it difficult for utilities and regulators to appropriately plan for the impacts to local and regional supplies.

Reliance on fossil fuels

Because data centers run nearly without ceasing, the industry is currently unwilling to rely solely on renewable energy sources such as solar and wind due to their generation downtimes [47]. Until renewable sources are deployed at scale or companies are incentivized or required to use them, the "power demand driven by the rise of artificial intelligence and cloud computing is being met in the near-term by fossil fuels like natural gas, and even coal" [63] (see Figure 6). In Texas, while solar plus battery storage remains the largest share of interconnection queue requests, the natural gas queue is now outpacing the wind queue. The majority of these requests are from data centers.[1]

Energy utilities have delayed retiring coal and natural gas power plants and have even added new natural gas plants in order to keep up with data center-driven demand [63]. Even with these delays and investments by utilities, "tech companies are now building their own fleet of private power plants, mostly fueled by natural gas" [65]. This reliance on fossil fuels is expected to lead to higher electricity costs, higher emissions of air pollutants and greenhouse gases, greater impacts to public health, and lower attainment of climate goals [66].

Texas has the highest number of planned on-site private power plants for data centers in the United States. Meanwhile, Texas lawmakers have filed – and passed some – bills intended to support natural gas expansion and limit the growth of renewable energy [67]. This emphasis on fossil fuel-powered data centers will in turn lead to higher levels of water consumption – coal

[1] Testimony from Pablo Vegas, President & CEO, Electric Reliability Council of Texas, at the April 9, 2026 committee meeting of the Texas House Committee on State Affairs.

and natural gas plants have significantly greater water costs than do renewable sources of energy [68].

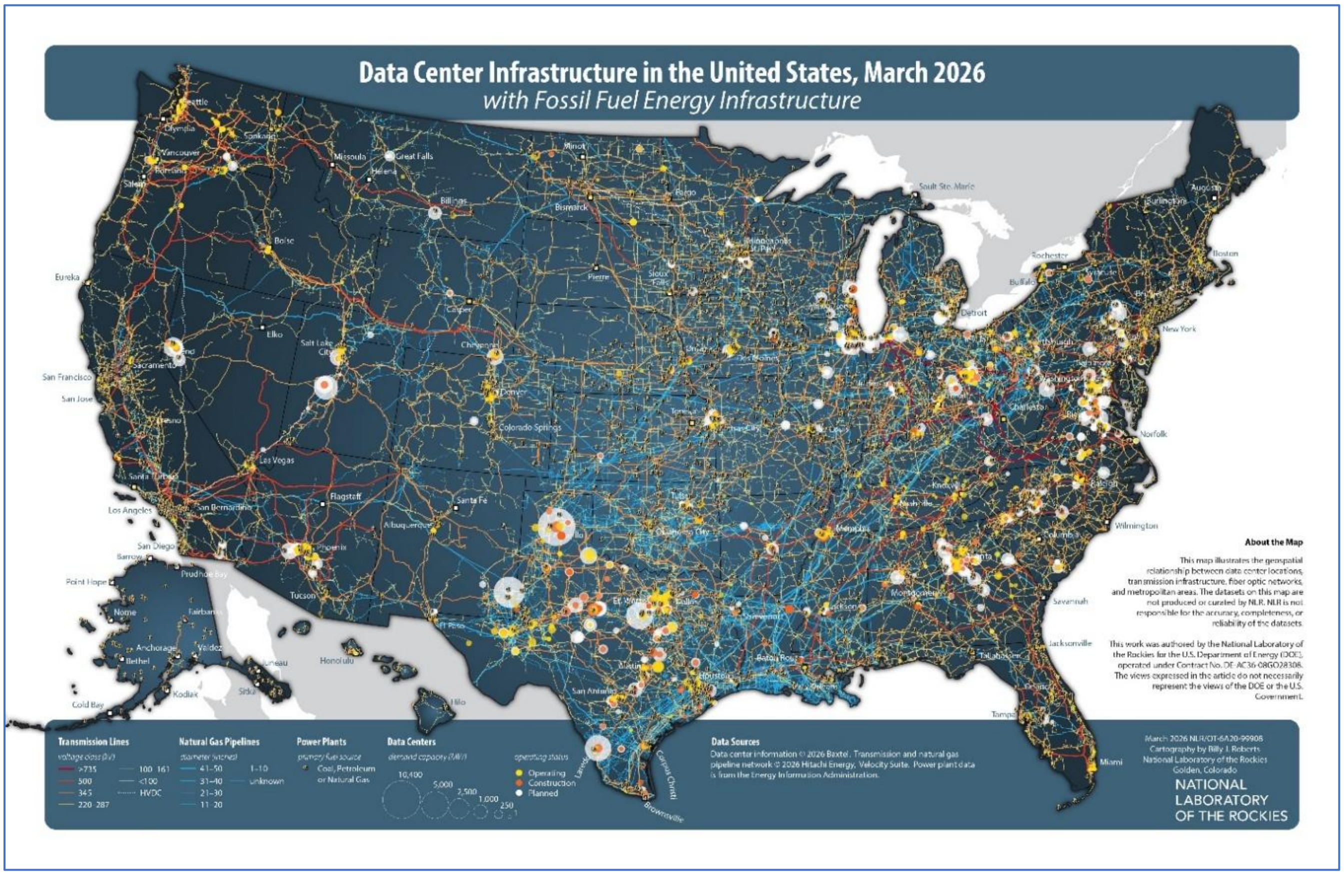


Figure 6. A map of electricity transmission lines; natural gas pipelines; and coal, petroleum, and natural gas power plants overlain by operating, in construction, and planned data centers by MW capacity. Map was created by the National Laboratory of the Rockies for the U.S. Department of Energy [64].

Increased electricity rates

Data centers have also been one of the major reasons – though not the sole reason – nationwide electricity prices increased at more than twice the rate of inflation over the course of 2025 [69]. This trend is unlikely to abate in the coming years. Increased demand for energy by data centers is expected to increase costs for all customers, as "utility rate structures are not designed to account for sudden, large cost increases from the construction of new infrastructure to serve a relatively small number of very large customers" [70].

Wholesale energy prices across the United States are forecasted to be 23% higher in 2026 than they were in 2024. This rise is "led by the West South Central region, which includes Texas, as electricity demand from data centers and cryptocurrency mining facilities in that region increases" [71]. AI data centers are currently the single biggest driver of demands on energy supplies, although in Texas, a BloombergNEF study found that new cryptocurrency mining farms could contribute to the biggest spike in energy prices [60].

Texas' price increase in 2025 was lower than the national average. However, between January 2021 and December 2024, the state still saw electricity prices increase 60%. Experts worry the data center expansion could further increase consumer rates [54]. In fact, a 2023 study in Texas "found that wholesale electricity rates rise 2 percent for every 1 GW of crypto mining load added to the state grid, meaning consumers' rates could rise as much as 22 percent by 2030 just to cover the expansion" of crypto mines [32].

Water supply issues

Increased demand

Meeting data center water demand may be even more challenging than meeting electricity demand. Water "is considerably more difficult to transfer across regions…and is constrained by local water infrastructure, hydraulic conditions, water rights, and permitting requirements" [28]. And data centers consume "vast amounts of water – some individual data centers use hundreds of millions of gallons annually, dwarfing the usage of entire communities the data centers are within" [47].

In 2014, U.S. data centers used 5.9 billion gallons (~18,106 acre-feet) in direct water use. By 2023, this water use had more than tripled, to 17.4 billion gallons (~53,399 acre-feet) – almost certainly an underestimate [30]. By 2028, water use for cooling is expected to triple again from 2025 levels [29]. By 2030, water availability is expected to become "an even more crucial factor than the well-recognized power access [factor] for data center siting" [28].

As great as the demand for direct water use is, the indirect demand for water for producing and supplying the necessary electricity far surpasses it. Seventy-five to 83% of water demand is water used during energy generation [30]. For example, data centers are estimated to consume around 8 billion gallons per year (~24,551 acre-feet) for cooling, while power plants are estimated to withdraw around 1,067 billion gallons (~3.3 million acre-feet) and consume 17 billion of those gallons (~52,171 acre-feet) to support data center power needs [29]. Furthermore, manufacturing the computer chips needed to power the data centers' functions also requires vast amounts of water, amounts that are predicted to double across the industry by 2035 [72].

An average, midsized data center could use 300,000 gallons of water per day (gpd) (~0.92 acre-feet per day) – equivalent to the use of 1,000 homes. A large data center could use up to 4.5 million gpd (~13.8 acre-feet per day) – equivalent to the use of 15,000 homes [73]. The facilities being built or planned in Texas most recently are large-scale facilities.

Data centers in the U.S. are one of the top 10 industrial or commercial industries for water consumption, and around 20% of the facilities pull water from western watersheds that are moderately or highly stressed [73]. Globally, 30% of projects currently under construction are located in regions where water stress is predicted to worsen [74].

As AI data centers become more prevalent, water stress will likely increase unless reforms and regulations are implemented. AI servers require more power than traditional servers. Their increased power demand requires stronger and more effective cooling infrastructure, and "air cooling, the dominant industry approach, is no longer viable in such power-dense environments" [52]. Water-based cooling is filling this gap.

In facilities using standard cooling systems, the water used evaporates and is not returned to the watershed or to the local water cycle, potentially deteriorating local conditions. Even for the facilities that are increasing their efficiency, total demand for water is growing faster than it can be supplied due to AI. In fact, "absolute water consumption continues to grow even as cooling technology improves…[and] efficiency alone cannot offset this growth indefinitely" [75].

Closed loop systems, while often promoted as a solution to the high water use of data centers, still require significant amounts of water. The water within the closed loop can indeed be reused, but water must still be withdrawn to initially supply the system and to refill the water lost to evaporation when the water itself is cooled down or when the water becomes too degraded to be reused [29]. Additionally, even facilities with water-efficient closed-loop systems request significant water capacity in their permits to accommodate cooling needs during peak heat and summer conditions, when water evaporation is preferred [28].

Studies show that adding solar, wind, and energy storage to the power grid could "result in a net 26% decrease in water use with ripple effects of decreased indirect water use across all other users of the Texas grid" [29]. Yet utilities, local governments, and the state continue to lean more heavily on fossil fuel energy sources to supply data centers with electricity.

Planning uncertainty

Texas' water supply is incredibly vulnerable to the explosion in growth of data centers not just because of how much water this industry is using, but also because the state uses historical water use data to inform its planning process [43]. There is also no statewide mechanism "to evaluate cumulative water impacts or coordinate planning across regions" [76] or to forecast large water use trends [29]. This means the state's planning documents likely won't reflect data center water use until at least 2032, limiting the ability of the state to ensure the availability and sustainability of its water supplies.

The 2022 Texas State Water Plan already predicts a more than 5 million acre-feet water shortage by 2070 (see Figure 7), and this gap was calculated before the increased demand by data centers was taken into account. Already, the state predicts that roughly 78% of Texans could face water shortages of at least 10% in 2070 with the onset of a drought of record, with around 26% facing shortages of more than 50% [77]. The growth in the data center sector "could increase total statewide water demand by as much as 10 percent compared to current planning assumptions" [78], making a currently dire forecast even worse.

Local governments and utilities are also affected by the lack of appropriate data related to data center water use. By having to rely on historical data that does not factor in cumulative impacts, local governments and utilities are unable to properly "anticipate infrastructure needs, request funding, and develop new supplies" [78]. The communities are then left to deal with companies on an individual basis without the data necessary to implement decisions most appropriate for the community [76]. Complicating local planning efforts further, "similar to power capacity redundancy, data centers often request more water than their actual demand to hedge against extreme heat events and/or rapid future load increases" [28].

Furthermore, while a data center's average water use might be relatively low, that average may hide significant peaks and valleys in water demand that are difficult for utilities to account for in their water supply and infrastructure planning. Data center water use is not always even or consistent. It is often "highly concentrated in a limited number of hot days, leading to a relatively high peaking factor even when total annual water consumption is substantially lower" [28]. Utilities must be able to plan for this peak demand to ensure that there are sufficient supplies for all customers on these peak days.

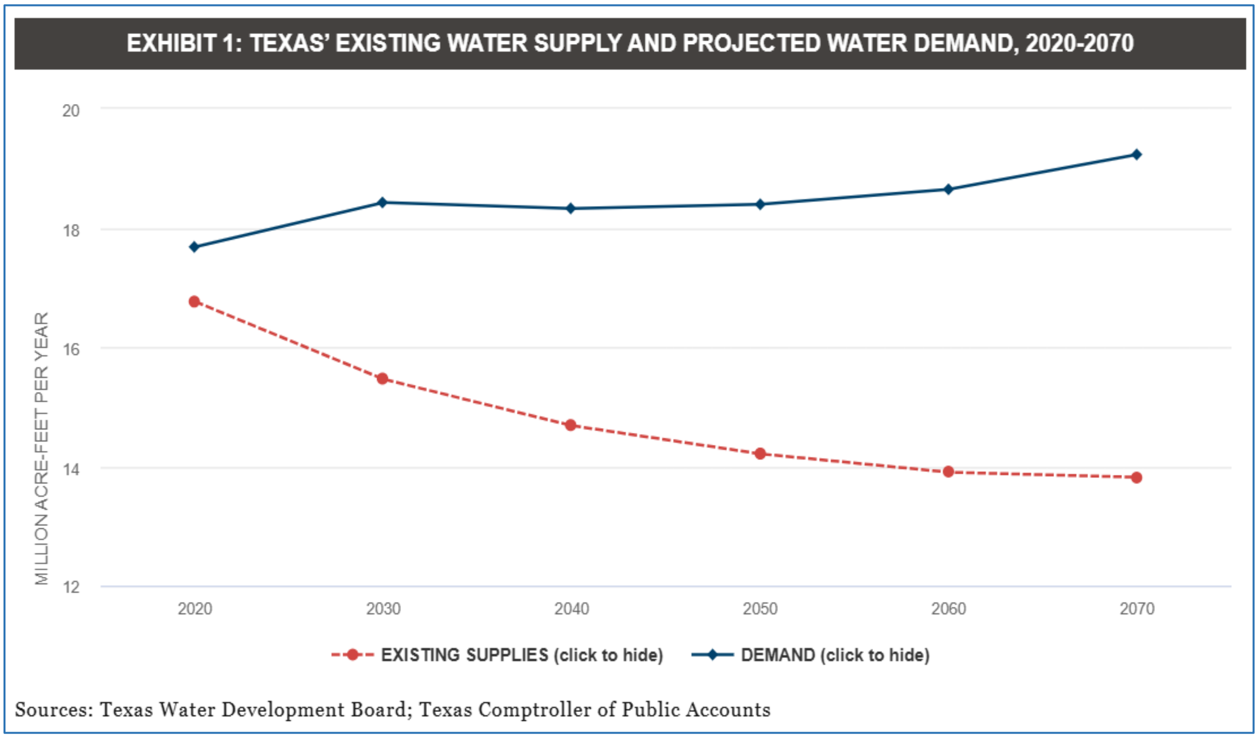


Figure 7. This chart shows the gap between existing water supplies and projected water demand between 2020 and 2070 and was shared by the Texas Comptroller of Public Accounts [79].

Local impacts

In 2025, Texas data centers are estimated to have used 25 billion gallons (~76,722 acre-feet) of water. By 2030, this amount could rise to 161 billion gallons (~494,091 acre-feet), nearly 3% of Texas' total water use [29]. The effect each data center will have on local water supplies will depend heavily on where the data center is located and which cooling technology is deployed. In 2023 and 2024, two data centers in San Antonio alone used 463 million gallons (~1,421 acre-feet) of water, even as city residents were under drought restrictions [80].

The adverse impacts arising from data center water use "are highly concentrated on [the] individual communities hosting data centers" [28]. Smaller, more rural or more water-stressed communities may not be able to handle the large increases in water demand the way a larger, more urban, or better supplied community might [80]. Companies often prioritize the price of land and electricity in making their siting decisions for data centers, while undervaluing the availability of water. This may lead to a proliferation of data centers in "economically challenged rural areas, which tend to welcome data centers for their economic opportunities" [81] but which also tend to rely on groundwater. Data centers located in counties with strong groundwater district rules and permit regulations or within city corporate boundaries are likely to have a lower impact on local water supplies than those slated to be built where there are weaker or non-existent regulatory regimes.

Unfortunately, many of the proposed data centers appear to be requesting to build in areas where the watershed is already stressed and where the community is unlikely to be able to handle the increased demand [43] [82]. And unlike the state's response to the strain data centers are putting on the electrical grid, to be discussed later in the report, there is no state law that responds to these entities' water use.

Data center water demand can also add pressure to watersheds and water utilities when they are already at their most constrained. Water demand can rise sharply in the summer months or during heatwaves. In some instances, monthly summer use has been shown to be nearly three times the average annual demand, with peak daily use nearly 10 times as much. This surge in demand in the summer "coincides with the time of year when competing demands, such as outdoor water use, are at their highest, and river flows are lowest" [83]. Water providers must be prepared then not only for the average annual demand of new data centers, but to be able to meet data center peak demand along with existing customers' peak demands – during the time of year in which it is most difficult to do so.

Data center water use places pressure on more than just local water supplies. The water use also places financial pressure on residential and existing industrial customers. Meeting the rising demand of data centers requires significant investment in water infrastructure and supplies. These investments and costs, if not paid for by the data center companies themselves, will "get passed across entire service areas through increased water rates" [54]. If a community needs to diversify its supply portfolio or find new supply sources to accommodate the increased growth in water demand, the associated costs will also be passed along through increased rates.

Even before the water demands of data centers are taken into account, experts predicted in 2024 that addressing Texas' water infrastructure challenges by 2070 would cost at least $153.8 billion [84]. These costs – along with the additional expenditures required to accommodate data centers – will fall on state agencies, local utilities, and Texas' tax- and ratepayers.

Wastewater issues

Water quality concerns

Data centers affect more than just the availability of water supplies. As water use for data centers, especially AI data centers, increases, often so too will the amount of wastewater discharged from the facilities. Water-based cooling systems can pick up contaminants during the cooling process from the machines and infrastructure the water interacts with, and these constituents can accumulate in the wastewater [85].

Data center wastewater can contain heavy metals, corrosion inhibitors, salts and minerals, biocides, and potential forever chemicals such as polyfluoroalkyls (PFAS). This wastewater may be discharged back into a public sewer system, but it may also be discharged directly into nearby water bodies or on land overlying aquifers [85]. Even once treated, these contaminants can degrade water bodies and harm aquatic life [86]. During evaporative cooling, much of the water is evaporated during the cooling process but leaves salts and other solids behind in what is called blowdown.

If the water provided had existing contaminants – say PFAS chemicals – this blowdown will have higher concentrations than the original water source and will likely go "straight back into the sewer system or to another discharge point that ultimately connects to the same watershed" [87]. Blowdown released into waterways may also be warmer than the ambient temperature of the receiving body of water, which could upset the existing aquatic ecosystem.

Community impacts

Furthermore, in regions where there are not robust municipal wastewater treatment systems, data centers can overwhelm the capacity of local systems [88]. If communities are unprepared for the new demands placed on the wastewater system, they may have to increase their capital investment, potentially leading to rate hikes for the rest of the system's users [89].

Even in localities with robust systems, the utility may still be underprepared to treat a large influx of data center wastewater. Wastewater treatment centers are traditionally designed to treat mainly municipal wastewater – wastewater that contains nutrients and organic materials. The wastewater from data centers, however, contains few nutrients and organic materials and much higher concentrations of minerals, salts, and heavy metals [90]. Wastewater operators may have to change treatment procedures and equipment, again leading to larger capital expenditures and potential rate hikes.

To cap off the difficulties that wastewater systems and advocates for water quality protections may face, data centers and their water use are also "surrounded by non-disclosure agreements, proprietary secrecies, and limited regulatory oversight" [91], making it difficult for current regulatory frameworks to account for the appropriate treatment of data center wastewater discharge.

Additional Concerns

Community concerns related to data centers are not limited to the impacts these facilities have on the energy grid and water supplies. Many communities are wary of the noise and air pollution of these facilities; their strain on public resources; the lack of long-term jobs in the community; and the lack of transparency by companies.

Pollution and public health

A recent Cornell University study found that if current AI data center power demand trends continue, "data centers in the United States could account for nearly half of all emissions from the power sector that current national climate targets would allow" [92]. By 2030, data centers in the U.S. are predicted to consume more electricity than the cement, steel, aluminum, and chemicals industries combined [93]. These data centers are often relying on fossil fuel energies like coal and natural gas to operate. Across the United States, electric providers are delaying the retirement of older fossil fuel plants and adding new natural gas plants to accommodate data center demands for energy [63].

Texas is leading this troubling trend. Texas is second in the world – behind only China, which is far larger and far more populous – in the number of gas power projects in development, nearly half of which are being developed in order to supply data centers [94]. The Texas Commission on Environmental Quality (TCEQ) issued the nation's largest air pollution permit for a complex to supply power to data centers in the Permian Basin in early 2026 [94]. Other states have enacted tighter restrictions on new natural gas power plants, contributing to a proliferation of data centers in Texas.

Fossil fuel generation creates air pollution with the release of fine particulate matter. On-site backup gas generators also release particulate matter and nitrogen oxides that are linked to a multitude of health impacts [95]. Residents within one mile of a data center "face particulate matter, nitrogen dioxide, and diesel particulate matter levels above the national median" [96]. The power generation associated with large scale data centers is predicted to cost the United States more than $20 billion in public health costs annually by 2028 [97]. By the end of this decade, air pollution from U.S. data centers "could contribute to 600,000 [additional] asthma cases and 1,300 premature deaths annually" [97].

While air pollution is the leading public health concern related to data centers, the associated noise pollution has also been linked to health concerns in nearby communities. Data center chillers, cooling towers, HVAC systems, and server fans all emit constant low-frequency noise. When data centers are not constructed to appropriately mitigate noise pollution, the noise pollution can cause health impacts even if the noise does not cause hearing loss [98].

Chronic exposure to noise levels exceeding the maximum level considered safe by the U.S. Environmental Protection Agency (EPA) – 70 decibels – can "cause sleep disturbance, headache, hearing loss, elevated stress hormone levels, hypertension, anxiety, and even cardiovascular risk" [93]. Although the maximum EPA standard for safe noise exposure is 70 decibels, the agency recommends 55 decibels or fewer [93]. The World Health Organization recommends no more than 30 decibels for prolonged exposure [99]. Data centers often produce extended noise levels above 80 decibels [93].

The same instruments and infrastructure creating the humming noises harmful to public health are also creating their own heat island effect. A new working paper has found that areas surrounding data centers see an average increase in land temperature of nearly 3.6 degrees Fahrenheit after the center begins operation, with an occasional increase of nearly 16.4 degrees [100]. On average, the study found that heat islands produced by the data center facilities could be felt nearly 3 miles from the facilities, with an occasional radius of up to 6 miles [100].

Heat islands can have a significant adverse effect on public health. Heat islands in Texas have been shown to be "associated with an increase in the relative risk of all-cause mortality" [101]. Higher temperatures can increase the risk of heat-related illnesses; intensify air pollution by accelerating nitrogen oxide and volatile organic compound interactions; increase exposure to air pollution by trapping pollutants closer to the ground; and increase greenhouse gas emissions through greater air conditioning use [102].

Public resources and the economy

Many communities and boosters tout the economic and job creation benefits of a data center coming to town. Data centers can generate enormous tax revenues for local communities, but they also have "a dismal reputation of creating the lowest number of jobs per square foot in their facilities" [103], and often create far fewer permanent jobs than promoted. The construction of a data center facility can create more than 1,000 construction jobs and high levels of short-term revenue, but the center itself often only provides for tens or low hundreds of local permanent jobs, with lower annual revenues to the local government [104]. Even in the construction phase, however, specialized construction workers may move from project to project, creating less net new employment than expected [103].

Texas provides multiple examples of the limited long-term local job creation of data centers. For example, "in Rockdale, Texas, a crypto mining company promised to build a facility that would create 350 jobs, but in fact only generated 14 jobs" [60]. In Abilene, Texas, the OpenAI Stargate campus employed 1,500 construction workers but is expected to employ only 100 full-time employees once complete, "a fraction of the number of people who might work on the same one million square feet if it were an office park, factory, or warehouse" [103].

While data centers often do not have much of an impact on the local job market, they can have an indirect impact elsewhere in the economy, including jobs in the upstream supply chain for data centers and downstream in the sectors supported by data center operations. For every direct job, there are on average 7 indirect jobs supported [105]. Thus, there may be statewide or nationwide economic benefits even if "the actual economic effect on host communities may be more diffuse" [11].

Data centers can contribute sizable sums to local government coffers through tax revenues. It is not uncommon, however, for the actual revenue gain to be less than originally projected, due to significant tax incentives [106]. Many state governments provide multiple tax exemptions or tax abatements of which data center operators can take advantage.

At least 32 U.S. states have some form of tax exemption program for data centers, and only 20 of these states actually disclose the annual costs of these revenue losses. In 10 of those 20 states, the state is losing over $100 million a year [107]. Texas and Virginia lead this group in losses. According to the Texas Tribune, Texas' data center tax incentive is now "one of the state's costliest incentive programs and soon to be the most expensive of its kind in the nation" [108].

In 2023, the Texas State Comptroller estimated that a state sales and use tax exemption program for property used by certain data centers would cost the state $130 million in Fiscal Year 2025. Instead, this program cost the state an estimated $1.016 billion in Fiscal Year 2025, "making it one of the most expensive subsidy programs for any industry in any state" [107] (see Figure 8). Data center subsidies are now predicted by the Texas Comptroller to cost the state at least $9 billion combined between 2025 and 2030 and at least $1.3 to $1.75 billion annually [109]. This projection is likely to be an underestimate as well.

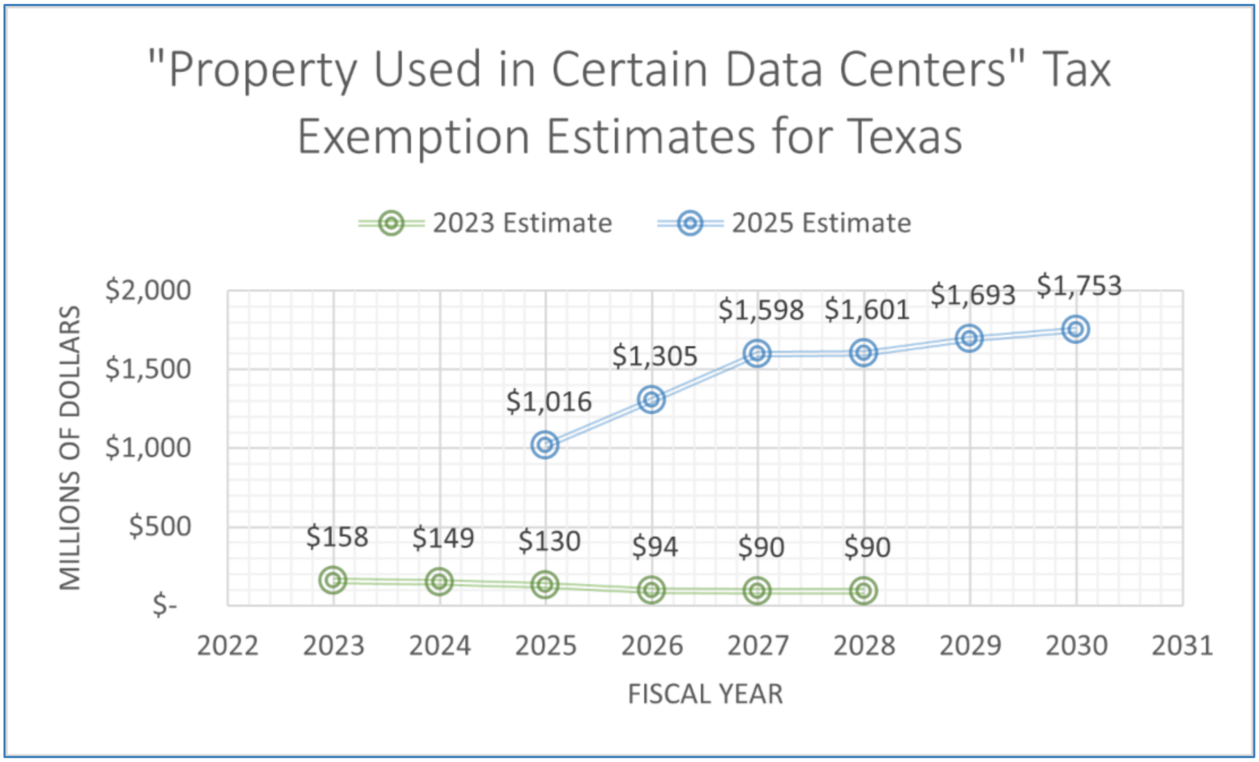


Figure 8. This chart illustrates the difference in the projected cost of the "Property Used in Certain Data Centers" tax exemption between the report issued in 2023 (green line) and in 2025 (blue line). Chart produced by the Greater Edwards Aquifer Alliance, relying on Texas Comptroller data [109].

To receive the exemption, data center companies must create at least 20 jobs paying more than 120% of the median area salary if the facility is larger than 100,000 square feet and at least 40 jobs at that level if larger than 250,000 square feet [108]. There are also certain investment targets in the facility that the companies must achieve to qualify.

The $1.016 billion loss to the state does not include the state's tax exemptions for information and data processing services, which could include some additional exemptions for data centers. This second tax abatement category cost the state an additional $236 million in 2025 and is projected to cost at least $332 million annually by 2030 [109].

Data centers may also receive additional tax abatements from the local government in whose jurisdiction they are located. The companies can enter Chapter 312 agreements with municipal or county governments to abate certain property taxes for up to 10 years. Data centers can receive reduced or eliminated property taxes on cooling systems, new or expanded buildings and facilities, IT hardware, backup power, and servers [110]. A data center project must have capital costs greater than $5 million in urban areas and $1 million in rural areas and must create at least some local jobs in order to qualify for the property tax exemption [110].

In Fiscal Years 2022 and 2023, the latest years for which there are data, counties accounted for 61% of the required reinvestment zones created to grant this abatement. Business expansion and new business were the most commonly cited purposes for granting the abatements, and most terms were for 10 years [111]. While there is no aggregated database for local tax abatements for data centers specifically, the average Chapter 312 abatement in counties for FY 2022 and 2023 combined was $81.9 million per property. For cities, the average combined abated value for those two years was $6.4 million per property [111].

Tax exemptions and abatements are not the only area where a state or locality may end up losing money when data centers are built. Hyperscale data centers and crypto mines can require expensive upgrades of or additions to transmission and distribution lines or expensive acquisitions of new water supplies. States and local communities may then be stuck with a large unnecessary bill for the infrastructure upgrades and little tax revenue to offset it if the company decommissions, leaves for a cheaper opportunity elsewhere, or enters bankruptcy [112].

Large load customers, especially crypto mining facilities, may benefit not just from tax exemptions but may also profit through energy demand response programs. During tight grid conditions, facilities enrolled in ERCOT's demand response program receive payment from ERCOT in exchange for powering down operations [113]. Some companies, again mainly crypto mining companies, have also entered contracts with power companies to buy electricity at set rates and sell it back into the market when prices rise due to grid strain. Crypto mining operations are the main benefactors of these contracts and programs because they are able to curtail or power down quickly compared to data centers that provide support to end users [42] [113].

During Winter Storm Uri, one crypto mine received $125 million by selling back to the grid [113]. During the extreme heat conditions in August of 2023, another mine received almost $32 million between selling power back to the grid and being paid through the ERCOT demand response program [114]. In both instances, the companies made more from selling back energy and curtailing operations than they did from mining cryptocurrency.

Transparency and local control

While the broad implications of the consequences data centers have on natural resources are relatively established, it is much harder to pin down specific data or understand the localized impacts. Companies are not currently obligated to release much of the critical information related to their operations, and there are few mandatory reporting requirements.

There is currently no national or state law that requires data centers to report their water use. While companies in Texas are required to report their historical water use to the Texas Water Development Board (TWDB), they are not required to report expected future consumption or future supply sources. The last time the state tried to track data center historical water use, only a third of centers responded to the survey [43].

There is also no current national or Texas law that requires data centers to report their energy use [115]. When the U.S. Energy Information Administration conducted a pilot survey of energy use of 50 data centers, only 9 responded. Under Texas Senate Bill 6, Texas does require data centers to disclose their back-up generation ability to ERCOT and the utility from which they receive power; the back-up generation must be capable of meeting at least 50% of the facility's demand [116]. Interested parties may then infer an estimate of the power demand of the site, but the full electricity demand is not required to be reported under state law.

Data center companies, especially those training or operating AI, also frequently use non-disclosure agreements (NDAs) when dealing with landowners and local public officials. NDAs are intended to ensure competitors do not gain information on a company's strategies, technology, or plans. But the agreements bar elected officials from disclosing critical information to their constituents, concerned parties, or journalists and often lead to greater community distrust in projects. These NDAs make it difficult for the impacts of the proposed projects to be fully known and thus fully taken into consideration during the decision-making process [117].

Many proposed and recently developed data centers are outside of city boundaries and located on unincorporated county land. County governments in Texas are exceedingly limited in their ability to regulate development under the authority granted to them by state law. Counties do not have zoning authority and often do not run a water or electric utility. As long as a proposed development complies with applicable standards, permits, and agreements, the county usually must approve it [23].

While municipalities do have zoning authority and increased regulatory authority, state law permits land within a municipality's extraterritorial jurisdiction to be de-annexed under Senate Bill 2038 (2023). This land then becomes subject only to state and county jurisdiction; municipal ordinances and protections no longer apply. Data center operators located within a municipality's extraterritorial jurisdiction may be motivated to dis-annex their property in order to be subject to fewer rules.

For data centers that use private on-site power generation rather than entering an agreement with a local electric utility, local officials are again cut out of the approval process. The state can grant air pollution permits "over the loud objections of residents and officials in surrounding communities" [65].

Further complicating public input, water and wastewater utilities in Texas also often operate under Certificates of Convenience and Necessity (CCNs), the geographical service area of the utility. Municipalities and water districts are not obligated to obtain a CCN, but may do so if they choose. Investor-owned utilities, water supply corporations, and certain counties are required to obtain one [118]. The holder of the CCN has the exclusive right to provide the water or sewer service to that area and is legally obligated to provide "continuous and adequate service to every customer and every qualified applicant for service" [118] within that area. There may be certain scenarios under which a water or wastewater utility could decline service or reduce the volume requested by the applicant – i.e., Drought Contingency Plan restrictions or defining reasonable use of an applicant – but these scenarios would likely be determined through litigation.

Regulatory and Legislative Landscape

As the impacts from data center development and operations have become more clear, cities, states, and countries have begun to respond with new regulations and legislation. The following examples are not necessarily all measures that GEAA would endorse, but they do represent efforts to respond to the impacts of data centers on natural resources and local communities. Most regulations related to data center sustainability are concerned with improving energy efficiency and increasing the use of renewable energy sources. Fewer regulations to date deal with improving water use at a similar level, although this gap is shrinking.

International

Energy

Even as the European Union (EU) looks to triple its data center capacity under its AI Continent Action Plan, it has still moved forward with some data center regulations [119]. The EU released the 2023 Energy Efficiency Directive's Data Centre Sustainability Reporting Obligations, which requires data centers with a power demand of at least 500 kW to report energy consumption, power utilization, temperature set points, waste heat utilization, water usage, and renewable energy use [120]. The EU will collect and publish this data publicly and will update it annually. Large companies in the EU may also be subject to the EU's Corporate Sustainability Due Diligence Directive, which requires them to consider the environmental impacts of their business decisions.

In Germany, the city of Frankfurt limits data centers to specific areas and mandates they connect to the city-wide waste heat system [120]. Laws in Greece set clear land-use regulations, construction standards, and notification requirements for data centers and encourage renewable energy sources [120]. Iceland offers a tax deduction on equipment that meets EU energy-efficiency standards or reduces energy use by more than 30% [120].

Ireland implemented a four-year moratorium on connecting data centers to the Dublin-area energy grid while it worked to establish new regulations and requirements. Data centers consume nearly 25% of Ireland's electricity. Data centers must now have on-site generation or full-capacity battery systems and will be required to send power back to the grid if requested. Under the new regulations, "at least 80% of each facility's annual electricity demand must come from renewable energy projects" [121]. Ireland has also issued a directive declaring that to be aligned with government policy, data centers must consider:

- "Economic impact;
- Grid capacity and efficiency;
- Renewables additionality;
- Co-location or proximity with a futureproof energy supply;
- [Decarbonized] data centers by design; and
- For small and medium enterprises, access and community benefits" [122].

Singapore, meanwhile, has adopted the Green Data Centre Roadmap, that places "greater emphasis on deploying green energy, energy-efficient, and tailored cooling systems and equipment" [123]. Singapore also provides energy efficiency grants and has adopted a certification system for operators that adopt energy efficient practices and sustainability and environmental performance measures [123].

Japan is working to develop and adopt energy efficiency measures for data centers, with penalties for operators that fail to meet the new requirements [124]. Japan also requires data centers to submit energy efficiency improvement plans [120].

Canada mandates that all enterprise Data Centers must achieve LEED Silver certification for energy efficiency and sustainability and transition to 100% clean electricity by 2025 (it is unclear if these mandates have been achieved) [120].

Water

The European Union Energy Efficiency Directive (EU EED) and the German Energy Efficiency Act both require data centers to report their water usage, though there is no legal requirement to reduce water use. The EU EED directs operators to report their total water consumption by source of origin and their water use efficiency indicator [125]. The EU also requires certain entities to report environmental risks under the EU's Corporate Sustainability Reporting Directive (CSRD). Companies subject to the CSRD must report, in part:

- How their operations affect water and marine resources;
- Actions taken to prevent or mitigate actual or potential negative impacts;
- Actions taken to reduce water consumption;
- Total water consumption, total water consumption in areas facing local drought, information relating to the local watershed's water quality and availability, and total water recycled and reused;
- Strategies to preserve and restore water resources; and
- Their water sustainability policies [125].

In China, Beijing has proposed data center water caps, while the city of Shanghai has proposed stricter guidelines for water efficiency [126]. Some Chinese ministries that oversee sectors related to the data center industry have also ruled out certain cooling technologies as "unsuitable for use in waterscarce areas" [126]. The Anhui province in eastern China "plans to shut down all crypto mining projects within the next three years due to a power supply shortage" [127] and will limit new projects that require high levels of energy or power consumption. At least three other provinces in China have pledged to limit or ban cryptocurrency mining projects.

Domestic

Many of the bills proposed and enacted over the past few years across the United States were intended to provide tax incentives or inducements for data center sites, including tax exemptions and expedited permitting and zoning procedures. Legislation intended to offset the environmental harms of large data centers is, however, becoming more common.

According to one study, between January and November of 2025, roughly 190 bills related to data centers were proposed, around nine times the number proposed the prior year. Around 50 of these bills dealt with tax incentives and benefits, 40 with energy grid conditions and prices, and 30 with water consumption [128]. Though these numbers represent the volume proposed, and not the volume enacted, they show the growing interest in responding to the proliferation of data centers across the country.

Energy

At the national level, the Clean Cloud Act of 2025 would amend the Clean Air Act to grant the U.S. Environmental Protection Agency and the U.S. Energy Information Administration with the "authority to collect data and information on annual electricity consumption of data centers and cryptocurrency mining facilities" [44]. This bill has been referred to the U.S. Senate Committee on Environment and Public Works but has not, as of publication, advanced.

At the state level, California requires data centers to comply with Title 24 of the state's Energy Code, which sets out standards for energy efficiency, renewable energy use, and carbon footprint management. The state mandates that data centers "meet certain standards for heating and cooling systems, implement energy-efficient technologies, and participate in Demand Response programs that help balance grid load during peak periods" [45].

California has also introduced Senate Bill 58, which would grant a "tax credit for data centers that adopt sustainable practices, such as utilizing at least 70 percent carbon-free energy, sourcing 50 percent of their energy supply from behind-the-meter sources, avoiding diesel fuel, and employing water-efficient cooling systems" [129]. As of publication, SB 58 has passed the Senate and is held in the State Assembly.

California also offers data centers incentives for adopting energy-efficient technologies and requires data centers to report direct and indirect greenhouse gas emissions [45]. To the north, the state of Washington has clean energy mandates that require or incentivize renewable energy use for data centers [130].

Colorado has proposed Senate Bill 102, which would define large loads as facilities with a demand greater than 30 MW; direct the Colorado PUC to determine what percentage of data center electricity consumption can be met with renewable sources; and require data centers to match that percentage until 2031, at which time 100% of consumption must come from renewable sources. Data centers would be required to enter 15-year contracts with utilities, contribute to demand management programs, and report electricity usage to the Colorado Department of Public Health and Environment for public availability. Electricity utilities would be prohibited from offering economic development rates to the facilities and from connecting them to the grid without assurance the facilities would meet upfront investment and contract requirements [131]. As of publication, SB 102 has not advanced out of its senate committee.

Minnesota lawmakers recently passed SSHF16. While criticized by some for extending tax breaks for large data center projects and for not going far enough to protect the environment, the bill does add new regulations on data centers with the aim of protecting water sources and the state's energy goals [134] [128]. Developers will be required to cover all their grid costs and to annually pay around $3.5 million into an energy conservation and weatherization account for low-income residents.

Minnesota utilities also may not "pass the cost of supplying electricity to data centers onto other customers, or use the growth of data centers as an excuse to avoid meeting the state's mandate for carbon-free electricity by 2040" [134]. And each center must attain certification for one or more green building standards or sustainable designs [128].

The Ohio Public Utilities Commission recently issued a rule allowing utilities to impose "enhanced financial obligations on data centers to protect residential customers from paying for the costs of grid improvements and increased energy demands" [130]. Data centers are required to pay 85% of the power they are permitted for, regardless of whether they use that amount [130].

In January 2026, Virginia regulators approved a new rate class designed for data center customers with demands over 25 megawatts. These customers will also be required to pay for at least 85% of the electricity transmission and distribution costs over a 14-year contract and pay the generation costs [48]. Data centers are now required to pay more of the costs it takes to serve their facilities, "regardless of how much they actually use and without saddling the rest of the customer base with as much of the costs to serve the full agreement amount" [48]. And Loudon County, Virginia has updated its codes to leave construction approval to the discretion of the local authorities, removing permitting by right [120].

Georgia too has recently implemented a rule intended to protect Georgia's ratepayer from the costs to the system caused by data center power loads by implementing a new rate class for data centers and minimum billing [130]. And Floridian lawmakers at the time of writing are working on advancing a regulatory framework, Senate Bill 484, to respond to some of the impacts of data centers on water use and electricity use. For electricity, the legislation would require Florida's Public Service Commission to develop service requirements for data centers that have those customers bear the full cost of their service and not shift the cost to general ratepayers [132]. SB 484 has, as of publication, been ordered engrossed and enrolled, but has not yet been signed by the Governor.

Water

California's SB 58 would incentivize data centers to adopt water-efficient cooling systems if passed. At the same time, the State Water Resources Control Board and California Public Utilities Commission are exploring potential bans on potable use for non-potable purposes at data centers and potential requirements for data center water conservation measures [129]. Oregon, meanwhile, has adopted rules that limit water use for cooling in regions with drought [130].

In California, a bill passed to require data centers to report their water use was vetoed by the state's Governor [12]. A similar bill passed in New Jersey was also vetoed. But in Utah, House Bill 76, which would require large data centers to annually report water usage to the state or pay fines for every day out of compliance, passed in March 2026 and was signed by the governor. This bill also requires a municipality or county to notify the state's Division of Water Rights, Division of Water Quality, and the relevant water provider before it approves a land use application for a new large data center. The operator of the center must also now notify the water provider of its anticipated water consumption needs and provide details regarding its water withdrawal plans, plan to treat discharges, discharge water temperatures, and extent of water recycling. The Division of Water Rights will be required to publish water withdrawal data for each new large data center, not in the aggregate. [133].

Colorado's SB 102 would require large load data centers to follow water use standards and report water usage to the Department of Public Health and Environment [131]. And Minnesota's SSHF16 requires pre-application evaluation by the Department of Natural Resources for projects using more than 100 million gallons per year (~307 acre-feet per year) and sets permit conditions for these facilities, including aquifer tests, water conservation practices, and protections for public welfare [134].

Kansas' Senate Bill 98, passed in 2025, provides a sales tax exemption to firms that commit to a minimum investment of at least $250 million and meet certain requirements, including a commitment "to undertake practices that will conserve, reuse, and replace water" [135]. These practices may include, but are not limited to:

- Using water efficient fixtures and practices;
- Treating, infiltrating, and harvesting rainwater;
- Recirculating and recycling water before discharging;
- Partnering with state and local governmental entities and private individuals and entities to use discharged water for irrigation, water conservation, or other beneficial purposes;
- Using reclaimed water when possible; and
- Supporting water restoration efforts in local watersheds [135].

Ohio's Environmental Protection Agency is, as of the time of writing, undergoing rulemaking on a *General Permit Authorization for Discharges from Data Center Facilities under the National Pollutant Discharge Elimination System*. The current draft permit would cover point source discharges from data centers; establish sampling protocols; limit contaminants in the discharged water; prevent discharges to groundwater; and ensure that discharges comply with the Clean Water Act and Ohio Water Pollution Control Act [136].

The Pennsylvania statehouse recently passed House Bill 2246 out of committee. HB 2246 would require large data centers to inform the state's Department of Environmental Protection of their water needs before beginning construction. The bill is intended to "ensure that state agencies, in collaboration with local governments and river basin commissions, can assess potential impacts and ensure adequate considerations are in place to protect our water supplies" [137] This bill remains in committee as of April 2026.

New Jersey legislators proposed Assembly Bill 3966 that would have required the state's environmental agency to conduct a water impacts study to "evaluate the past, present, and future impacts of water use by large-scale data centers on state water systems, costs, operations, and the environment, including feasible conservation strategies" [138]. As of publication, this bill remains in the Assembly Appropriations Committee.

South Carolina has proposed Senate Bill 867, which would require assessments of certain factors in the permitting process before approval. The assessments may include an examination of large data centers' water sources, water consumption, stormwater management, cumulative impacts on water resources, air quality considerations, and noise mitigation, among other factors. Senate Bill 867 would also establish water efficiency standards and maximum noise levels applicable to all data centers in the state [139]. This bill has been referred to committee but, as of publication, has not advanced since January 2026.

Finally, Florida's proposed SB 484 would disallow water districts from issuing permits for large data centers "if the proposed use of the water is harmful to the water resources of the area or is prohibited by the applicable local government zoning regulations or comprehensive plan" [132].

Other

If passed, Colorado's SB 102 would require the state's Department of Local Affairs to develop model codes for data center development, "considering best practices for zoning, environmental impacts, water use, and community engagement" [131]. Developers may also be required under this bill to submit a cumulative community impacts analysis and a community benefit agreement.

Oklahoma legislators filed House Bill 4194 in February 2026 which would establish requirements and responsibilities for companies for the closure and site restoration of large data centers. Operators would be solely responsible for decommissioning costs and must provide financial assurance in the form of a bond, letter of credit, or escrow to the Oklahoma Corporate Commission sufficient to cover decommissioning and restoration expenses. Within 12 months, operators would be responsible for "removing all structures, equipment, and hazardous materials…, disposing of waste legally, restoring disturbed land, and addressing any environmental contamination" [140]. If they fail to do so, the state would step in and the operator would be held liable for all costs. As of publication, this bill has been introduced and referred to committee.

Illinois has proposed a law, Senate Bill 2181, that would require data centers to report annually their energy and water consumption to the Illinois Power Agency. The submission "must detail monthly energy and water consumption, including specifics about energy sources, water usage for cooling or other purposes, and any efficiency improvement measures undertaken" [141]. SB 2181 would also require the Illinois Power Agency to undertake a study – to be released publicly – on how data centers impact rate-paying customers. The study will include an examination of the facilities' impacts on electricity demand, environmental concerns, and energy rate changes. This bill has been assigned a third reading in the Senate at the time of publication.

Indiana has proposed two bills, SB 135 and SB 79, that would require disclosure of a facility's projected water and power use and require quarterly reporting of electricity use to the Indiana Utility Regulatory Commission. Neither SB 135 nor SB 79 have advanced since January 2026. Ohio has introduced legislation that would ban elected officials from "knowingly entering into NDAs that bar them from 'disclosing, discussing, describing, or commenting on' matters related to their official duties" [138], with provisions for voiding the agreements and imposing fines. This bill has not advanced since February 2026.

New York legislators have proposed SB 6394, which would require disclosure to the Public Service Commission of a facility's energy and water use, job numbers, and waste details prior to construction. The bill has been referred to committee as of publication. New York has also introduced Senate Bill 9144, which would impose a temporary, three-year moratorium on state and local approvals for data centers. During the moratorium, the New York Department of Environmental Conservation would be required to complete an environmental impact review and then promulgate regulations to address issues identified in the review. This review would examine “current and projected effects on energy use, electricity rates, water resources, air quality, greenhouse gas emissions, and electronic waste” [142]. This bill has not moved since February 2026.

Under S.9144, New York’s utility regulator would simultaneously be required to “issue regulations to prevent higher energy costs for residential ratepayers from new data centers” [143]. Measures similar to New York’s S.9144 have been called for or proposed in Michigan, Georgia, Oklahoma, Vermont, Maryland, and Virginia [143]. New York State also passed a moratorium on gas-powered cryptocurrency mining facilities in 2022.

In 2025, Virginia lawmakers passed Senate Bill 1449, which would have required an applicant for a data center to submit site assessments to the local zoning authority prior to approval. The assessments would have had to detail the effect of the proposed facility on noise pollution, ground and surface water resources, agricultural resources, parks, registered historic sites, and forestland on or contiguous to the site [144]. The Virginia governor vetoed this bill on the grounds that it created unnecessary red tape, but it is a good example of legislation that could empower local governments to make decisions best suited for local conditions. In Maryland, the state’s governor vetoed a 2025 bill that would have required an analysis of the energy, economic, and environmental impacts of data centers [145].

South Carolina lawmakers have proposed Senate Bill 867 and Senate Bill 902, which would require large data centers to file decommissioning plans with the Public Service Commission. These plans must include removal procedures, estimated decommissioning costs, and an estimated decommissioning timeline. Operators must submit financial instruments that provide for decommissioning financial assurance – such as letters of credit, surety bonds, escrow accounts, or corporate guarantees – to the Public Service Commission. Once the facility begins decommissioning, the operator would be required to remove structures and equipment, if the site is not repurposed for similar use; restore the site to suitable condition for future development; properly dispose of or recycle materials according to relevant environmental regulations; and address any environmental contamination [139]. These bills have not advanced since January and February of 2026.

South Caroline Senate Bill 867 would also create a state Data Center Development Office within the Department of Environmental Services, responsible for conducting pre-application consultations with prospective data center operators, developing and updating best practices and guidance documents, reviewing and approving site permits, and coordinating review processes, among other directives. The office would be composed of ten members, including representatives from the data center industry, the utilities industry, rate-payer advocacy organizations, environmental organizations, water utilities, and local governments [139].

Florida’s original SB 484 language would mandate public hearings; clarify that local governments have authority to “exercise power and responsibility over comprehensive planning and land development regulations related to large load customers” [146]; and prohibit agencies from entering an NDA that prevents public disclosure. The NDA provision has since been stripped from the bill [147].

Texas

Energy

Due to unprecedented energy demand in Texas with the rapid growth of large load (greater than 75 MW) customers like data centers and crypto mines, the state passed Senate Bill 1929 in 2023 and Senate Bill 6 in 2025. SB 1929 requires bitcoin miners with energy capacity greater than 75 MW to register with the state's Public Utilities Commission (PUC) (although the PUC has declined to make these filings publicly available) [41].

Senate Bill 6 went further. SB 6 is intended to shift transmission costs to the new large load facilities and prevent residential and smaller commercial customers from paying for the upgrades and connection infrastructure costs through increased rates [57]. SB 6 requires companies to:

- Shoulder grid connection costs;
- Submit evidence of site control and proof of financial commitments;
- Pay a $100,000 fee for the initial PUC transmission screening;
- Disclose similar applications both within and out of state;
- Disclose backup power generation to ERCOT and utility partners;
- Disclose behind-the-meter agreements;
- Ensure backup power generation can meet 50% of the facility's demand; and
- Build in a remote-disconnect capability for emergency load-shedding requirements [116].

The above provisions are currently undergoing rulemaking with the Public Utilities Commission. The PUC is also undertaking rulemaking to address the ability of data centers to push their transmission costs off onto residential and smaller commercial customers through the 4CP process.[2] Some experts have voiced concerns that the intent of SB 6 to ensure data centers are fairly shouldering their costs may be watered down by the time the final regulations are published.[3]

SB 6 also sets out two demand response programs – one voluntary and one mandatory. The bill requires ERCOT to direct electric providers such as co-ops and municipal utilities to establish protocols for large load customers "to curtail operations, switch to on-site backup generators, or completely cut power remotely if the grid is under extreme stress" [116], [148]. The mandatory curtailment protocols will only apply to data centers and crypto mines that interconnect beginning January 1, 2026 and only during grid emergency conditions [149].

ERCOT is also directed to create a demand response program that pays large load customers who voluntarily reduce demand during emergencies. ERCOT must give at least 24 hours' notice and customers may only participate as long as they are not participating in any other such program [149].

[2] Testimony presented at the April 9, 2026 committee meeting of the Texas House Committee on State Affairs.
[3] Personal communications with Texas Senate staff.

Water

Texas' Fiscal Year 2026 State Budget directs the PUC and the Texas Water Development Board to collaborate on a survey for data centers and crypto mines to share water use information. The survey will ask these sites to report "direct water use, the types of cooling technology used, and insight about indirect water use, like what sources provide power to the facility" [150]. The information compiled is expected to be reported by the end of the calendar year, although there are some concerns that the PUC will also decline to make these filings publicly available, similar to the crypto mine registrations. This survey is not mandatory and only applies to operating facilities, not to those planned or under construction [151].

Recommendations

Much of the harm to natural resources and local communities caused by – or predicted to be caused by – data centers arises from limited regulations, a lack of oversight, and a lack of appropriate incentives. The following recommendations are put forth to alleviate the impacts of data centers in Texas on energy and water systems, public health, public coffers, and citizen trust. While much of the movement and discussion in the state to date has focused on responding to data centers' electricity demands, we encourage a stronger focus on the industry's water demands. As one Texan put it: "Electricity is economic, water is existential."[4]

These recommendations are intended to balance the economic benefits and day-to-day integration of data center-supported functions with the protection of Texans. The weight, however, should fall on protecting Texas' residents and communities. The recommendations are not necessarily in order of importance or feasibility.

Regulatory and legislative

Mandate Water and Energy Use Reporting and Public Access

Without appropriate data, it is impossible to prepare for the impacts of an industry and to safeguard Texans. The Texas State Water Plan does not currently account for the water use of data centers and likely will not until at least 2032. Even once it does, the State Water Plan relies on historical use reporting to make projections, and this reliance on historical data cannot appropriately account for the fast growth of data centers and their water use. The state also does not require data centers to explicitly report their energy use.

To account for the demands placed on local and regional water supplies, the state legislature should require data centers to report their direct water use to the Texas Water Development Board and Texas Commission on Environmental Quality and require the TWDB to make this information publicly available. To account for the energy demands placed on the state's electrical grid and for the indirect water use of data centers, the state legislature should also require data centers to report their energy use and source to the Public Utilities Commission and ERCOT and require the PUC to make this information publicly available. Texas should stop relying on voluntary surveys submitted by the industry to plan its future.

[4] Personal communications with Texas Senate staff.

Utilities, cities, and counties should require facilities to report energy and water use as part of their development agreements with the data center companies. Data centers should also be required to submit realistic estimates of their water and energy use during the permitting and development approval process with local governments and utilities, including estimates of peak energy and water demand [28].

Create New Rate Class for Data Centers for Energy Use

To fully account for the unprecedented demands data centers are placing on energy supplies, and to account for how these demands will impact customer rates, multiple states and utility companies have begun to define and create new rate classes specifically for data centers. To protect other customers, data centers would be charged with distinct and higher electric rates, typically along with minimum contract length terms, even if the data center is decommissioned [152] [153].

Texas legislators should instruct the Public Utility Commission to define and create a new rate class for large load customers like data centers and crypto mines and require higher rates and long-term contracts compared to smaller load industrial users or residential and commercial users. Rates should appropriately reflect the costs of providing service and keep these costs from being passed on to residential customers.

Create New Rate Class for Data Centers for Water Use

Data centers often contract for municipal water service due to municipal water being the cheapest option for their water use. Even though water supplies in Texas are increasingly strained, the current prices of water for industrial use means “the financial incentives for data centers to conserve water don’t reflect the issue’s importance” [154]. Financial pressure is needed to ensure facilities move to adopt cooling systems and water sources that lessen demand on municipal supplies.

To protect residents and water supplies from rate increases due to sudden, sharp increases in water demand and infrastructure buildouts, Texas legislators should instruct the Public Utility Commission to define and create a new, higher rate class for data centers who contract for water with for-profit, investor-owned water utilities. Utility districts, water supply corporations, and city-owned water utilities should also define and create similar new rate classes that ensures the costs of providing water service to data centers is not passed on to residential customers. Water rates should be high enough to encourage data centers to adopt alternative water supplies or cooling methods, such as rainwater harvesting, recycled wastewater, atmospheric water harvesting, recycled produced water, immersion cooling, or brackish groundwater.

Mandate Upfront Investment in Infrastructure and No Increase on Resident Rates

To serve data center customers without interrupting reliability for existing customers, utilities are having to increase investment in necessary infrastructure, including new or upgraded transmission lines, power plants, water pipes, and treatment centers. Water utilities may also have to look for new, more expensive water supplies. Without appropriate safeguards, these costs are passed on to all customers, including residential ratepayers and small businesses who can least afford rate increases [155]. Data center companies, meanwhile, are well positioned to afford to invest in the upfront costs required [156]. Other states and public utility commissions have begun to implement legislation and rules to prevent data center costs from being passed on to customers.

SB 6 in Texas already requires large load customers to shoulder grid connection costs. Due to water availability concerns in Texas, the state should consider implementing similar rules to mitigate increased water utility rates. To limit the impact on ratepayers, the state should require data centers to pay upfront the cost of water service, including the costs of any new or upgraded water and wastewater infrastructure or new water supplies. The state should also prohibit water and electric utilities from passing along the costs of data center service to residential customers. Additionally, local governments should require data centers to submit decommissioning plans and decommissioning financial securities.

Require Data Center Water Use to be Included in TWDB State Water Plan

Texas' water planning process and documents are not expected to take data center water use into account until at least 2032. Yet many of the industry's estimates predict there will be significant growth in this sector before then. And as AI model training and integration increases, so too will the demand for water for cooling the specialized computing equipment increase. By not accounting for the current and predicted demands of data centers, Texas is limiting its ability, and the ability of its local governments, to estimate the need for future water supply sources, infrastructure, and funding [29].

The state should direct the Texas Water Development Board to immediately begin to define and account for data center water use in the state water planning process. The state should also direct the TWDB to require future water use estimates from water users in the state, to better ensure that the state water planning process appropriately accounts for future demand. Again, the state should stop relying on voluntary surveys to plan its future.

Require Metering of Water and Energy Use

Good data is perhaps the most critical element in any attempt to ensure that data centers are not having outsized adverse impacts on natural resources or a local community. A lack of accessible data and transparency makes it difficult for regulators, utilities, and elected officials to appropriately prepare for and respond to data center growth.

To ensure the full impacts of a data center's water and energy use are understood, the state should disincentivize behind-the-meter power generation, require meters on groundwater wells used by data center facilities, and ensure that all utility-provided water and energy is appropriately metered. Data from the meters should be accessible to the public in annual reports submitted to the relevant utility and state agencies to ensure transparency and that contract and benefit agreement obligations are being met.

Expand and Reform Groundwater Conservation District Authority

While many of the data centers in Texas receive, or plan to receive, water from public and private water utilities, many others will likely rely on groundwater wells to supply water necessary for cooling. In many instances, too, the water utilities themselves may also be relying on groundwater wells for their water supplies. Unless a facility or utility is located in an area in which a groundwater conservation district (GCD) does not exist, GCDs are often in charge of permitting the wells used by the data centers or the utilities from which they source their water.

Many GCDs are facing threats of legal action related to enforcement; constrained budgets and a lack of staff; limited authority in their enabling legislation; and a lack of sufficient data. Some GCDs are far more constrained in their authority than others, placing the aquifers under their jurisdiction at greater risk of depletion. These factors combine to make it exceedingly difficult for GCDs to appropriately manage groundwater resources within their boundaries.

To ensure that groundwater supplies are sustainably and appropriately managed, and to protect Texans and businesses who rely on groundwater, the state should grant all GCDs within the state full Texas Water Code Chapter 36 authority, at minimum, and should shield GCDs from liability for actions taken to meet desired future conditions and drought contingency plan limits to pumping. Where there are no GCDs present, the state should create new GCDs or expand the boundaries of existing GCDs. Texas should also increase investment in groundwater data and modeling tools and in financial and technical assistance for GCDs.

Eliminate or Limit Tax Exemptions for Data Centers

Data centers can provide communities with crucial tax revenues, but officials should work to ensure those revenues are not undercut by tax exemptions. While it is unclear exactly how much local governments are granting data centers in tax exemptions, the state government alone is predicted to lose between $1.3 and $1.7 billion annually over the next five years from data center tax abatements. These blanket tax exemptions are not necessary for development to occur. Some major data center companies have already decided not to seek tax exemptions in exchange for building and operating in a community, while some communities in Texas have declined to offer tax exemptions and have still seen developments move forward [157] [158]. Data centers facilitate "a profitable, rapidly growing industry that does not need any public financial support" [107].

To protect taxpayers, Texas legislators should eliminate, strongly pare back, or place strict limits on the state data center tax exemption. Local governments should also strongly consider not granting tax exemptions to data center facilities. If a government does move forward with an exemption, the exemption should have strict job creation and retention minimums, tax revenue minimums, strong and sustainable water and energy provisions, and term limits of three to five years.

Limit Cryptocurrency Mining and Prohibit New Crypto Facilities

Crypto mines parallel some of the most detrimental impacts of data centers on local communities in Texas, with few of the associated economic benefits. Other states and countries have recognized how few benefits crypto mines bring to a community compared to the harms and have taken steps to ban them altogether or ban them from using fossil-fuel based energy sources.

Texas should consider banning crypto mines outright or, alternatively, banning their use of on-site diesel or natural gas generators and restricting their operations during certain drought stages. The state legislature should exclude crypto mines from tax benefits afforded to other data centers, if tax benefits are not eliminated as recommended And the legislature should also grant cities and counties the authority to decline crypto mine developments, either through eliminating by-right zoning and permitting in cities or expanding county land use authority. For existing crypto mine facilities, Texas should consider implementing incentives to promote the conversion of these facilities to data centers. This conversion would lessen the impact of newly sited data centers on land, water, and energy supplies.

Expand County Authority for Land Use Regulation

Counties in Texas do not have zoning authority, and as such, can place few if any restrictions on where and how data centers can be constructed and operated within unincorporated areas. Texans in unincorporated areas of the state are often then subject to the most immediate impacts that arise from data centers. Compared to municipalities, counties are limited in their ability to provide buffers between residents and industry or prohibit incompatible land uses; limit noise pollution; manage and mitigate stormwater and flooding; or control how a site can be developed.

To protect residents currently at the most risk of the adverse impacts of data centers, the state legislature should grant counties the authority to, if they so choose, implement stricter land use regulations related to commercial and industrial developments. Such expanded authority could include authority to impose impervious cover limits, watershed protection ordinances, noise pollution limits, incompatible land use regulations, and open space requirements. The state could also grant counties the authority to assess drainage fees and impact fees for new industrial developments.

Provide County Authority for Moratoriums

Counties in Texas have no express authority to impose a development moratorium. Yet county governments are dealing with as many, if not more, data center developments than municipal governments. Land in unincorporated areas of a county is considered very attractive to developers due to limited county regulatory authority and often lower tax rates.

Counties are granted the authority “to promote the health, safety, morals or general welfare of the county and the safe, orderly, and healthful development of the unincorporated area of the county” [159]. To ensure counties can protect their residents’ access to safe and adequate water supplies the state should allow counties to impose development moratoriums during water shortages, during certain drought stages, or during a set period of time in which the state will revise or develop ordinances under which to regulate data centers.

Expand Municipal Authority for Moratoriums

Historically, cities used development moratoriums “to prevent growth from outpacing essential services such as water, sewer, storm drainage, or street capacity” [160]. A bill passed in 2025, House Bill 2559 (89R), created extensive extra steps for cities to take before declaring a moratorium; caps moratoriums at 180 days; and places strict limits on duration and frequency [161]. The law does not account for emergency scenarios such as water shortages or exceptional and emergency drought stages. Other states and localities have begun to propose data center moratoriums until regulations can be worked out or have limited high water use industries in areas experiencing drought.

To ensure municipalities can protect their residents' access to safe and adequate water supplies the state should allow cities to impose development moratoriums during water shortages, during certain drought stages, or during a set period of time in which the city will revise or develop ordinances under which to regulate data centers.

Remove Strict Limits on Municipal and County Budgets

One of the biggest draws of data centers in Texas is the estimated tax revenue they can provide for a local government [162]. The state has in recent years limited local government property taxing authority and has attempted to place caps on budget increases [163] [164]. Municipalities and counties are thus becoming more reliant on large new developments to provide influxes of tax revenue to bolster local budgets. Furthermore, in jurisdictions where local budgets are "beholden to an industrial and often unstable economy" [164], the reliance on a single industry can lead to budgetary booms and busts [162].

To ensure local governments are not overly reliant on a single industry to sustain their budgets, especially when that industry is facing concerns of an economic bubble, the state should remove or increase the caps on municipal and county property tax increases and should refrain from capping budget increases.

Uphold Rights to Deny or Reduce Service within a Water Supply CCN

A Texas Certificate of Convenience and Necessity grants a utility the exclusive right to provide water, sewer, or electric service to a specific geographic area. Regulated by the PUC, it mandates continuous service, defines service boundaries, and acts as a monopoly for that area. Investors, private utilities, and Water Supply Corporations must obtain a CCN for new service regions. In most cases, utilities with a designated CCN are legally obligated to provide service to customers who request service within that CCN area. They may, however, legally deny or delay connections under specific conditions, such as failure to comply with safety regulations, lack of infrastructure or supply, or failure to pay for service.

CCN boundaries are approved by the TCEQ at the request of the utility. Municipalities and water districts who have chosen to obtain a CCN should reconsider the boundaries of the CCN to ensure that they are not providing unnecessary service or service that would compromise their ability to provide adequate water supplies to existing customers. The utility can still choose to provide service outside of their CCN within an area not otherwise served by issuing utility service agreements on a case-by-case basis, with attendant conditions required as appropriate.

The state should direct all CCN holders to develop and enact a drought management plan. The state should also defend the right of all water CCN holders to deny or curtail service if providing service will impede the ability of the utility to meet its drought management metrics or goals or maintain its water supply capacity.

Improve Public Transparency and Participation Requirements

Many data center companies and developers have relied on non-disclosure agreements (NDAs) while working towards approval of their project with the relevant local government. NDAs prevent transparency, public access, and public input and betray good governance principles. NDAs can prevent the public from being informed of the full impacts a proposed data center might have on the community and its natural resources.

The state should strictly limit municipalities, counties, utilities, and state agencies from entering any NDAs that would prevent elected officials or staff from releasing information to the public, prevent the public from knowing the companies behind the proposed development, or prevent the public from accessing details about the development and its impact [165]. The state should ensure that agreements or contracts that violate these provisions be void and unenforceable under state law [138]. And the state should require municipalities, counties, utilities, and state agencies to post public notice and provide opportunities to comment on service, zoning, and permit applications.

Encourage Community Benefit Agreements and Community Investments

Counties and municipalities can work to ensure that data centers within their jurisdictions do not negatively impact the community and environment whenever possible and, in some cases, provide benefits beyond tax revenues. Local governments can negotiate with companies proposing to build data centers through community benefit agreements. Some communities in Texas have already utilized this option to balance data center growth opportunities with community interests [166].

Community benefit agreements are "formal documents that spell out the costs and benefits of data centers for specific communities and detail areas for cooperation" [157]. Community benefit agreements are contracts, which should be transparent, publicly accessible, and subject to legal safeguards and enforcement; they should be in the best interest of the public. Counties and municipalities in Texas should enter into and enforce community benefit agreements with data center companies for each data center site proposed. These agreements could contain provisions that, among any other desired provisions, would require the developer and local government to: [157] [167]

- Restrict water use to a set amount per day and supply source to specified supplies
- Require specific forms of cooling technology
- Require a certain percentage of renewable energy use and restrict on-site diesel generators
- Set strict noise and air pollution limits and require the installation of noise sensors and air pollution monitors
- Require water and electricity metering, along with air and noise pollution monitors
- Require publicly available annual reporting of electricity use and direct water use
- Require a pre-permitting cumulative impacts assessment for the impact of the project on energy and water supplies, public health, and affordability
- Require a living wage for all employees pre- and post-construction
- Maintain a certain threshold of local full-time post-construction jobs
- Require a certain investment in local infrastructure improvements
- Require impact fees or direct investment in community funds, such as low-income energy efficiency programs, local school resource funds, or workforce training programs

- Set out specified agreements on fines for violations of any provision in the contract
- Require exit fees for delayed, stranded, or shut-down projects and specified timeframe for fees to be charged if necessary
- Set out realistic tax revenue projections, minus tax abatements and incentives
- Require commitment of tax revenue and community investment for a specified timeframe
- Set out terms for any tax incentives, tied to strict economic and environmental parameters
- Require the developer to put up a bond or some other form of "financial assurance to cover the full cost of future site cleanup, infrastructure removal, and environmental remediation" [165] in the case of site abandonment pre- or post-construction or in the event of accidental releases or harms [138]

Require Renewable Energy Generation

The proliferation of energy-hungry data centers "creates a rare policy window: a chance to modernize the…electrical system and make long-delayed investments" [168] in renewable energy sources. By 2030, data centers across the U.S. are predicted to use more electricity than many heavy industries combined, and much of this demand will be a result of training and running generative AI functions [169]. Electrical generation is also where the bulk of data center water use occurs if the generation relies on fossil fuels. Wind and solar power require almost no water for electrical generation.

Natural gas and coal plants will likely sustain the increased demand, at least in the near future, leading to increased costs imposed on taxpayers and ratepayers, increased water use, and increased public health impacts. Texas leads the nation in planned on-site natural gas generation for data center energy needs, and state lawmakers have made strong in-roads in promoting fossil fuel-based energy sources and restricting renewable sources. Still, half to two-thirds of Texas' power generation comes from renewable sources, but limiting these sources could cost Texans a 14% increase in power prices by 2035 [170], [171]. Other states have seen data center companies enter deals with utilities to fully fund "wind turbines, solar panels, and battery storage, as well as the costs of grid infrastructure upgrades to serve [the company's] data centers" [168].

To lessen the impacts on water sources and public health, and to lower costs for Texans, the state legislature should direct the Public Utilities Commission to require that proposed large load or data center projects invest in renewable sources – i.e., wind or solar – combined with flexible dispatchable sources like batteries to supply their facilities. Cities and counties should require increased renewable energy generation along with battery storage in their development agreements with data center companies.

Limit Use of Backup Fossil Fuel Generators

To ensure data centers will be online as close to 100% of the time as possible, companies rely on back-up diesel generators. Diesel generators are highly detrimental to air quality, noise quality, and public health, and yet "there is concern that as ERCOT employs its new powers to force data centers off the grid in times of peak demand, the diesel generators will run more frequently" [172], causing even greater harm.

To protect residents' health and safety, lower public health costs, and improve long-term resiliency, the state should direct the TCEQ – the state agency in charge of permitting diesel generators as backup power – and the PUC to implement rules that phase out diesel generators in favor of renewable sources combined with battery storage [173] [172]. Cities and counties should prohibit diesel generators and require renewables plus battery storage in development agreements with the data centers.

Invest in Energy Efficiency and Water Conservation

Texans and their utilities do not need to wait for the state government or data center industry to get started on lowering costs. Improving energy efficiency and water conservation efforts can lower individual residential bills while the state and data center industry embark on larger efforts to bring down costs more broadly [174] [175]. Energy efficiency and water conservation also help utilities avoid or delay the need for new energy generation and transmission and new water supplies [176] [177]. One study found that if Texas implemented statewide energy efficiency programs coupled with demand response for residential and commercial customers from 2024 to 2030, "Texas could reduce peak summer electricity demand by 15 gigawatts and the peak winter demand by 25 gigawatts" [113]. The 2022 State Water Plan highlighted that the adoption of water efficiency standards should lead to a 9.5% reduction in municipal water demand by 2070, with even greater demand reduction possible with greater action [77].

Texas should set strong energy efficiency resource standards, increase statewide minimum building standards, require utilities to set and enforce water conservation plans, and allow counties to adopt modern building codes and standards. Utilities should provide energy efficiency and water conservation tools and assistance free of charge to customers. In addition to lower energy and water bills, stronger building codes and standards can lead to fewer property losses, lowering insurance rates across the state and improving overall affordability measures [178].

Cap Noise Pollution at EPA Limit

Noise pollution from cooling systems and generators is a major concern of residents neighboring data centers. This concern is unlikely to lessen as facilities bring online on-site power generation and diesel generators. Cities can pass ordinances regulating noise, but counties in Texas are unable to do the same [179]. The state does not regulate noise pollution as environmental pollution under the TCEQ or other agencies. Under the state penal code, noise is "presumed unreasonable" if it exceeds 85 decibels and only after the person has received notice from law enforcement that the noise is a public nuisance [180].

The state should direct the TCEQ to undergo rulemaking to consider noise pollution from a proposed facility when considering whether to approve or deny its permits. The state should also grant counties the authority to regulate noise pollution that exceeds EPA standards or to implement buffer zones between facilities and nearby communities. Cities should consider revising ordinances to limit noise pollution to no more than 60 decibels for long-term exposure and to require buffer zones that would shield nearby communities from adverse noise pollution.

Technological

There are a wide variety of technological changes data centers could adopt and implement to mitigate the adverse impacts of their operations on Texas' water and energy supplies. Most of these solutions would allow facilities to at least partially decouple from traditional water and electricity supplies. By implementing these following solutions, data center operators can also demonstrate to the local community that they are invested in being good neighbors and partners.

It is important to note that data centers should implement the following technological solutions – along with any newer, more efficient technologies that may arise in future years – regardless of the legislative and regulatory changes undertaken. However, local governments and the state should still prioritize implementing strong good governance policies and regulations as guardrails to protect Texans.

Utilize Liquid Immersion Technologies

Data centers do not necessarily need to rely solely on either water-based cooling or air cooling. Immersion cooling – or direct-to-chip cooling – has become more popular as concerns about water and energy demand have increased. Immersion cooling involves "submerging electronic components…in a non-conductive liquid that efficiently absorbs their heat and transfers it to a heat exchanger" [181]. The dielectric liquid absorbs heat from the computing equipment, is cooled by transferring the heat to an exchanger, and then is recirculated back into the system [182].

Immersion cooling does require higher upfront costs than water or air cooling, due to the cost of the liquid and the cost of the unique computing equipment that can withstand being submerged. However, immersion cooling has significant energy savings – thereby lowering indirect water use – and significant direct water use savings [182]. Energy use can be reduced by up to 50% and water consumption by up to 91% compared to traditional air cooling methods, making long-term operating costs lower [181]. Data center operators should consider immersion cooling in place of water cooling, especially in water scarce regions.

Utilize Rainwater Harvesting Systems

Data centers are often large, boxy, warehouse-style buildings with large, flat roofs. These roofs can be ideal for rainwater harvesting (RWH). On average, 30,000 gallons of water can be collected from an inch of rain falling on one 50,000 square foot roof – many data center roofs are two to 20 times that size [183]. Rainwater harvesting can supplement a significant portion of a data center's water needs, though often not the entirety. RWH offsets the pressure placed on the water supplier, reduces the amount of potable water used for non-potable purposes, mitigates drainage issues, and reduces the need for significant infrastructure upgrades [184].

While installing RWH systems may be a large up-front investment, RWH can reduce long-term utility bills and operational costs. And in a state like Texas, as "both the cost and uncertainty of water resources increase, especially as the climate changes" [183], RWH will begin to make more economical sense each year. Using alternative water supplies such as rainwater, recycled wastewater, or other non-potable sources "can lower operational costs by 25-30% over the facility's lifetime" [185] and demonstrate the operator is addressing community concerns. Data centers should maximize their rainwater harvesting capability, even if relying on internal water recycling or closed loop systems.

Utilize Atmospheric Water Harvesting Systems

Atmospheric water harvesting (AWH) – or atmospheric water generation – technology pulls water vapor out of the air to produce a usable water supply. AWH works best in warmer, more humid environments in which there is more water vapor in the air. Operating a data center generates a significant amount of low-grade heat, and AWH systems can use that heat to generate the water supply. In harvesting water "directly from the self-replenishing atmosphere, the supply is entirely decentralized and independent of municipal networks or aquifers" [186]. As an additional benefit, the water produced by AWH is considered ultra-pure, free of corrosive salts and minerals that could damage computing equipment. And if paired with solar power, the operating costs of AWH systems may be significantly lessened.

Various universities and companies are working on refining and improving the functionality and cost of AWH systems, and the AWH industry has identified data center cooling as a prime AWH application [187]. To reduce pressure on local water supplies and energy supplies, data centers should implement atmospheric water harvesting systems and consider connecting those systems to solar power. Data centers should maximize their atmospheric water harvesting capability, even if relying on internal water recycling or closed loop systems.

Utilize Recycled Produced Water

Texas has a produced water disposal problem. Produced water is the byproduct of hydraulic fracturing, and its production is outpacing its ability to be disposed of safely. By 2030, Texas is expected to produce 26 million barrels per day, even as its current disposal process of reinjection into wells has "created widespread underground pressure problems threatening freshwater resources, mineral rights, and production operations across the [Permian Basin's] most prolific zones" [188]. The federal government – through the Bureau of Land Management – has begun directing oil and gas companies "to identify new uses for oilfield wastewater…rather than relying primarily on permanent underground injection" [189]. The state of Texas has done the same through the Texas Produced Water Consortium [190].

Produced water is more expensive and difficult to treat to appropriate standards than other forms of non-potable water, but its use in cooling would lessen pressure on municipal water supplies and provide the oil and gas industry with a beneficial disposal option [191]. The Texas Produced Water Consortium predicts there could eventually be up to 168 billion gallons (~515,573 acre-feet) of produced water available per year for beneficial uses such as industrial cooling as research continues and treatment costs scale down [190]. Data centers should connect with the oil and gas industry to examine partnerships for the treatment and beneficial reuse of produced water within data centers.

Utilize Recycled Municipal Wastewater

Data centers that use water for cooling do need water that is low in salts and minerals to protect the computing and cooling equipment from corrosion and mineral build-up. They do not, however, necessarily need to use potable municipal water or groundwater. Data centers are able to use recycled wastewater for cooling with some additional levels of treatment, as municipal recycled wastewater is already treated to a high standard [192]. If data centers are located in or near an urban or fast-growing rural community, they are likely to already be located near an existing wastewater treatment plant. Amazon uses recycled municipal wastewater in at least 20 of its data center facilities, and Google uses it in at least a quarter of its facilities [193].

By using recycled wastewater to supply a facility's cooling water and additional non-potable water needs, data centers can relieve pressures on municipal drinking supplies and groundwater sources. If a community does not yet have a recycled water source, the data center company should work with the local government and utility to invest in the necessary infrastructure in exchange for a lower water rate, as long as other users are able to opt in to the recycled water source. Data centers should look to utilize recycled wastewater to meet the gaps in water supplied by RWH or AWH or to supply the center's needs if the only other option is municipal potable water.

Utilize Brackish Groundwater

Brackish groundwater is groundwater that has a total dissolved solids content between 1,000 and 10,000 parts per million [194]. Brackish groundwater must undergo desalination before it can be used in a data center to remove salts that could damage the computing equipment. The brine waste must also be disposed in a manner that does not degrade existing water supplies. The 2022 State Water Plan calls for at least 157,000 acre-feet per year of desalinated brackish groundwater supplies by 2070 to meet water demands [194]. As of 2025, the Texas Water Development Board has designated a total of 31 brackish groundwater production zones that may be able to provide some of this supply [195].

While treatment costs for brackish groundwater are greater than they would be for municipal water, "several hyperscale data centers are already exploring or implementing brackish water strategies" [196]. Similar to other alternative water supply sources, brackish groundwater use can ease demands placed on existing potable supplies. Data center operators in Texas who are considering brackish groundwater for cooling should consult with the local groundwater conservation district, if present, before pumping and must ensure their pumping does not lead to saltwater intrusion of freshwater sources.

Utilize Solar and Battery Storage Sources

Natural gas power plants require 2,800 gallons of water consumption for every MWh generated [182]. Solar energy requires none. Already nearly 40% of tech companies "now incorporate solar arrays directly at their facilities, while 36% utilize battery storage to mitigate fluctuations in supply" [197]. Solar plus battery storage eases demands on local grids and requires less indirect water consumption. Solar is the quickest power source to deploy and is often the most affordable source for operators [198] [199].

While rooftop solar plus battery storage is unlikely to meet the large energy demands of a center, it can still provide backup power, reduce the load requested, and provide the "right reputational message" [200]. Data center operators should install rooftop solar and battery storage on-site and should work with the electricity supplier to invest in renewable energy generation.

Utilize Existing Abandoned Infrastructure

Data center companies have successfully retrofitted multiple brownfields and abandoned industrial facilities across the nation into significant data centers without disturbing new land [201] [202]. Some communities in which data center companies are looking to locate in Texas may have appropriate existing brownfield sites or other abandoned commercial and industrial sites. These sites may already have water, sewer, and electrical infrastructure and building footprints appropriate for adaptive reuse. They may also already have "a zoning status and environmental review history that make the permitting process for a data [center] easier than it would otherwise be" [203].

In determining siting, data center operators should examine opportunities to retrofit brownfield locations or abandoned industrial facilities. In doing so, however, companies should ensure their facilities does not exacerbate existing pollution concerns and should work to ensure nearby communities see tangible benefits. Data center companies may also consider siting their facility in abandoned and un-reclaimed surface mines, which may have some existing electrical infrastructure, water permits, and large, flat surfaces.

Locate Certain Infrastructure Underground

Some data centers have begun to locate their facilities and infrastructure underground. Underground data centers are often located in abandoned stone caves, bunkers, or mining shafts [204]. Underground facilities are less land-intensive and require less energy and water for cooling due to consistent and lower ambient temperatures underground [204]. Underground data centers are inappropriate in karst limestone regions, such as the Edwards Aquifer region in Texas. Outside of karst limestone regions, where appropriate, operators should examine whether any part of their infrastructure can be constructed underground to preserve land and lessen energy and water use demands.

Treat Discharge Water to Drinking Water Quality

Wastewater discharged from data centers can reenter the local water utility's wastewater stream, potentially "straining municipal wastewater treatment plants and potentially exceeding local infrastructure capacity – especially in water-scarce regions" [86] The wastewater itself may contain constituents for which public treatment plants are underequipped to handle, which may create water quality risks downstream [205]. To relieve burdens placed on public utilities, keep rates low for existing customers, and reduce water quality risks, operators should consider treating their wastewater to drinking water standards before discharging it back into the system.

Conclusion

Texans are increasingly concerned about the adverse impacts record-breaking data center development and operation may have on their pocketbooks, on their community, and on the state's natural resources. Texas lawmakers are pressed to balance these concerns with ensuring economic growth and with maintaining its position as a leader in innovative technology. Local governments and utilities must work to balance the needs of demand-intensive facilities with the protection of residential ratepayers and local resources. Yet the regulatory and planning frameworks in Texas are not currently equipped to handle the scale or speed of development.

In response to these pressures, between the inception of this report and its publication, the Texas House and Senate have both pledged to study data center issues in preparation for the 90th Legislative Session in 2027. Some of the issues highlighted in their interim charges include electricity use, transmission infrastructure, water use, tax incentives, and ratepayer protections. County courts and city councils have also begun efforts to determine how they can best balance the needs of their residents with the growth opportunities provided by data centers, by holding multi-hour public meetings, calling for Attorney General's opinions, and forming stakeholder groups.

We hope this paper adds to the resources these officials, and the public, use in formulating responsible policies to respond to the rapid growth of data centers in Texas. Our state is rightfully proud of its history of leading the rest of the nation in growth and innovation; we have the opportunity to lead again. With the right guardrails – better data and planning, fair cost allocations, stronger local authority, better standards, and cleaner technology – Texas can lead the nation in responsible data center development.

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[5] Author's note: Never having used an AI model before, I thought I should try one if I was going to write about the infrastructure supporting them. As an exercise, I fed one of the leading AI models the hyperlinks and PDFs of each of my sources in this paper and asked it to return the formal citation references. After many, many hours and multiple iterations of reviewing its responses and refining my requests, it was necessary for me to go in and just create the reference section myself – the model only ended up creating 6% of the references accurately. The remaining 94% all had at least one error even after multiple attempts to have it correct itself. The model made up and misattributed authors, shortened or changed headlines, changed the plain text of the hyperlinks, and left out or made up dates. While this paper makes no value or ethical judgements of AI use and provides no recommendations for AI use, as that is out of its scope, it is clear from this exercise, along with myriad other news stories and case studies, that this technology would also benefit from some enhanced regulatory guardrails. At the very least, we should all be aware of its limitations and the need for human review and oversight.

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