



# Data Centers in Michigan

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The number of data centers has exponentially increased across the nation, driven by the prevalence of cloud computing, artificial intelligence (AI), and reliance on data. The demand for AI products and service integration is rising, and tech companies race to develop the necessary infrastructure to meet the moment.

## What are Data Centers?

Data centers are physical buildings housing networked computer servers used for remote storage and the processing or distribution of data. Data centers have existed since the conception of the internet and traditionally transmit data from one place to another. Data centers have become increasingly important as more and more digital services move off of our devices (e.g., smartphones, laptops) onto cloud-based services. This has resulted in data centers as essential infrastructure for our daily lives—everything, from emails to social media comments to YouTube videos, requires a data center for them to work.

Data centers have continued to evolve alongside expanded use of the Internet and its subsequent need for faster broadband connections. Today, with the growth of AI-based applications, data centers that support AI are the next iteration of this evolution.<sup>1</sup> In contrast to traditional data centers, data centers used for AI (often called hyper-scale data centers) are physically larger and specifically designed to process huge amounts of data for high-performance computing tasks, particularly large-scale AI model training. These tasks require “continuous parallel processing” with machinery called GPUs (Graphics Processing Units), TPUs (Tensor Processing Units), and other AI accelerators that allow for the processing of unstructured data, like PDFs, images,

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<sup>1</sup> <https://growsmartmaine.org/resources-for-your-community/>



social media posts, and videos.<sup>2 3</sup> As AI adoption across the global market grows, the demand for its supporting infrastructure does too.

## Why Michigan?

The Great Lakes region is the home of nearly 20% of all US data center facilities.<sup>4</sup> Developers of data centers target states and cities that have strong utility and grid infrastructure and access to water. Since April of 2025, Michigan has been identified as a key site for data center development by tech firms and companies, mainly due to the Enterprise Data Sales & Use Tax Exemptions signed into law by Governor Gretchen Whitmer. The exemptions remove Michigan's 6% sales and use tax on data center construction and equipment purchases, in turn requiring significant capital investment (e.g., \$250M) and job creation (e.g., at least 30 jobs at 150% medium wage).<sup>5</sup> The exemption is accompanied by other factors that make Michigan a good fit for data center infrastructure, including abundant freshwater resources and a cooler climate. Fresh water is key to cooling data centers in some cases, and cooler air during the winter can greatly lower the required electrical costs for cooling during those months. Currently, Michigan has more than 64 data centers.<sup>6</sup>

## What's the Impact?

Hyperscale data centers today typically require 10-40 times more computing power than traditional centers built before 2015.<sup>7</sup> A simple inquiry into a chatbot uses substantially more power than a simple Google search would have used before the integration of AI-powered search. The specialized equipment and around-the-clock operations result in substantial energy and water demands, with broader environmental and economic implications for communities. Currently, 95% of data centers are located in clusters around large or medium metro counties, adding access capacity to already strained

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<sup>2</sup> <https://www.coopercenter.org/research/GLDC>

<sup>3</sup> <https://www.rcrwireless.com/20250327/fundamentals/ai-data-center-difference>

<sup>4</sup> <https://www.joycefdn.org/news/cooper-center-releases-comprehensive-findings-on-data-centers-in-the-great-lakes-region>

<sup>5</sup> <https://www.michiganbusiness.org/services/data-center/>

<sup>6</sup> <https://www.datacentermap.com/usa/michigan/>

<sup>7</sup> <https://www.coopercenter.org/research/GLDC>



electrical grid systems and water resources.<sup>8</sup> Companies target their data centers around larger municipalities for a number of reasons, including access to a reliable internet connection, grid infrastructure, water, and a skilled workforce.

## Electricity & Water Consumption

Two of the biggest concerns around data centers are their resource usage, especially as it pertains to electricity and water. Electricity is used in two primary ways in a data center: powering all of the computational equipment (where most of the electricity is usually used) and cooling. Data centers require constant, high-voltage power to operate servers around the clock. Data centers cannot tolerate outages or fluctuations, making them among the most demanding customers on the electric grid.

A mid-sized data center typically requires 10-50 megawatts of electricity, enough to power 8,000 to 40,000 homes. Large hyperscale facilities can demand 100 to 1,000+ megawatts, rivaling the electricity use of an entire city.<sup>9</sup> As of 2024, data centers are estimated to utilize 4.4% of US electricity, a share that, depending on their rate of growth, could increase threefold by 2028.<sup>10</sup>

Some data centers use electricity for cooling, primarily through massive air conditioning units that circulate cold air across server racks. In places like Michigan, where the temperatures are low enough for long portions of the year, data centers often use outside air for cooling to lower their electricity consumption.

Water can also be a critical resource for cooling data centers. Two types of cooling processes use water: evaporative cooling and closed-loop cooling systems. Evaporative cooling systems work by passing warm air or water over a wet medium, using the energy absorbed during evaporation to lower temperatures. This is highly energy-efficient because it relies on a natural physical process rather than mechanical refrigeration, but it consumes significant amounts of water. Because of this water usage, evaporative cooling is less attractive to data center companies trying to limit their environmental impact, and it has been a point of negotiation in community

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<sup>8</sup> <https://www.coopercenter.org/research/GLDC>

<sup>9</sup> <https://planetdetroit.org/2025/11/data-centers-water-energy-impact/>

<sup>10</sup> <https://www.congress.gov/crs-product/R48646>



conversations around data centers in Michigan. Closed-loop cooling systems, by contrast, circulate a refrigerant or chilled water through a sealed circuit, using compressors and heat exchangers to absorb heat from the facility and reject it outside. These systems use much less water as it can be recooled, but are more electricity-intensive because they depend on mechanical systems to cool the water after it's used.

Electricity and water usage will drastically vary on a case-by-case basis depending on the environment, type of cooling used, and size of facility. While the largest data centers (such as the Google data center proposed in Van Buren Township) can use as much electricity and water as a small city, the vast majority of data centers are not that resource-intensive. Though in Michigan, the proposed data center loads total multiple gigawatts, raising concerns about grid capacity, long-term utility costs, and increased reliance on fossil fuel generation if clean energy resources cannot scale quickly enough.

## Environmental

The environmental footprint of AI data centers extends beyond water and energy consumption. Large facilities can transform hundreds of acres of land, particularly in rural areas, altering land use and increasing noise, traffic, and infrastructure demands. Backup generators, often used for emergency power, can also contribute to local air pollution if not properly regulated.

There are tradeoffs between water-efficient and energy-efficient cooling technologies, meaning choices made by developers can shift environmental impacts rather than eliminate them. Without clear standards and transparency, communities may face cumulative environmental effects that are difficult to track or mitigate.

## Economic

Data centers are often promoted as engines of economic development, but the benefits can be limited. While construction creates good-paying jobs for two to three years, most data centers employ relatively few permanent workers, often between 10 and 100 positions. The public cost per job can be high when generous tax incentives are included. Michigan's data center incentives require relatively modest job creation in



exchange for significant sales and use tax exemptions, raising concerns about whether public benefits justify the cost. Though, as of the time of writing, other types of tax incentives, such as property tax exemptions, have not been used to attract data centers, which would offset the potential property tax benefits accrued by local communities where data centers are sited.

Another important consideration when determining the economic gains of data centers in a community is whether the company hosting the data center is based in the state. The location of the company's headquarters determines tax revenues, the flow of capital gains and profits, and the independence of the local communities where the data centers reside. Michigan currently has 64% of its data centers owned by companies within the state; in comparison to Ohio at 9% and Illinois at 15%, that is high.<sup>11</sup> In-state companies that own data centers are small retail and telecom businesses compared to out-of-state companies, which are normally larger tech companies like Amazon.

Michigan was the last state in the Great Lakes region to pass sales and use tax exemptions for data centers, putting the state at risk of the same reality as the other states have experienced. The high prevalence of out-of-state companies reinforces the likelihood of external investments flowing directly out of the community, putting undue pressure on local resources and infrastructure. An economic evaluation done by the Cooper Center concludes that the economic impacts of data centers on states are modest. The economic output of data centers in terms of employment and GDP is mainly derived from short-term construction activities rather than sustained operational activities.

A recent report from the Anderson Economic Group outlined three potential economic impact scenarios from data center development in the state, outlining potential direct impacts (e.g., job creation) and indirect impacts (e.g., economic multipliers of money being spent in the local region during construction).<sup>12</sup> With estimates ranging from \$121 million to \$5.5 billion, the actual economic impact of data centers is yet to be seen, and we would advise communities to be wary of potential estimates related to the long-term economic impacts of these facilities. Recent research by labor economist Michael

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<sup>11</sup> <https://www.coopercenter.org/research/GLDC>

<sup>12</sup> [https://www.andersoneconomicgroup.com/wp-content/uploads/2026/02/CMS\\_DataCenters02092026.pdf](https://www.andersoneconomicgroup.com/wp-content/uploads/2026/02/CMS_DataCenters02092026.pdf)



Hicks, drawing from Texas, demonstrates no real net job growth due to data center construction, and that fiscal incentives offered cannot be justified on the basis of job creation.<sup>13</sup>

While some communities may benefit from increased property tax revenue, others may worry about opportunity costs, infrastructure strain, and the risk that utility investments made for data centers could ultimately affect residential ratepayers if projects scale back or fail to materialize.

## Weighing the Costs and Benefits of Data Center Growth in Michigan

Data centers represent both an opportunity and a challenge for Michigan. The state's natural advantages, abundant freshwater, cooler climate, and strong grid infrastructure, combined with new tax incentives, have positioned Michigan as a growing hub for data center development. However, the benefits are not guaranteed. Significant demands on electricity, water, and land, coupled with modest and often short-term job creation, raise real questions about whether the public investment justifies the return. As AI drives exponential growth in data center demand, Michigan policymakers and communities must carefully weigh the economic promise against the environmental costs and infrastructure pressures, ensuring that development serves the long-term interests of residents, not just the bottom lines of largely out-of-state tech companies.

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<sup>13</sup> <https://michaeljhicks.substack.com/p/data-centers-and-local-job-creation>