

THE IMPACT OF DATA CENTERS ON THE GEORGIA ECONOMY



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Executive Summary

Georgia has had a growing data center sector that was expected to continue to grow, partially driven by incentives that the state offers to encourage data center job growth and investment. Georgia has approximately 100 data centers in the state, with the majority located in the broader Atlanta metropolitan area of Fulton,¹ Cobb² and Gwinnett³ counties. There is also significant data center investment in Bulloch, Carroll, Douglas, and Newton counties, with Douglas⁴ and Newton⁵ counties having large hyperscale data centers that account for over one billion dollars in investment each. It should be noted that almost all of the planned new projects that have been announced will be located in these less densely populated counties outside of the Atlanta metro area.

This report explores the economic impact of the construction and operation of data centers in Georgia and illustrates the economic impact that a single new hyperscale data center would create. It also puts into context Georgia's standing relative to other states with data center incentive programs. We estimate that there are about 100 data center facilities in Georgia, and we estimate that it would cost \$35 billion (in 2021 dollars) to construct and commission to full operating status all of that data center space that is currently operating in the state.

Direct Economic Impact: We estimate that in the last year,⁶ the construction and operation of data centers in Georgia directly provided approximately:

- **\$1.4 billion in economic output from construction and operations combined, including:**
- 1,020 construction jobs,
- \$70 million in associated construction pay and benefits,
- 3,480 full-time-equivalent onsite operations jobs inside data centers, and
- \$276 million in associated data center operations pay and benefits.

Total Economic Impact: Taking into account the economic ripple effects that the direct investment generated, we estimate that the total impact on Georgia from data centers in the last year was approximately:

- **\$5.3 billion in economic output, including:**
- 22,940 jobs throughout the Georgia economy,
- \$1.5 billion in associated employee pay and benefits, and
- five additional jobs supported by the data center in other non-construction businesses for each operational job inside the data center.

¹ Among many other companies, Equinix, Digital Realty, and QTS have data centers in Fulton County.

² Digital Realty and DataSite have data centers in Cobb County.

³ QTS has a data center in Gwinnett County.

⁴ Google's data center is located in Douglas County. [Google is proud to call Georgia home to one of our data centers.](#)

⁵ Facebook's data center is located in Newton County. Andy Peters, "[Facebook to expand Newton County data center, add 100 jobs,](#)" *The Atlanta Journal-Constitution*, September 17, 2020.

⁶ The data used for the impact calculations in this report roughly span the period of July 2020 through June 2021.



State and Local Tax Revenue: We estimate that in the last year, the economic activity associated with the construction and ongoing operations of data centers in Georgia led to:

- \$92.4 million in tax revenue collected by the State of Georgia in corporate and personal income tax, sales tax, gas and vehicle tax, and fees; and
- \$101.5 million collected by local governments in real and personal property tax, sales tax, and fees, not counting sales taxes and franchise fees that data centers pay on electricity purchases.

Economic Impact If Georgia Can Attract One New Hyperscale Data Center: Construction and operation of a single new hyperscale data center would have a potential total economic impact of approximately:

- **\$346 million in total economic output during the two-year construction period, including:**
- 1,200 construction jobs plus 850 non-construction jobs supported in the community during the construction phase, and
- \$132 million in total pay and benefits.
- **\$431 million annually in total economic output once the facility is fully operational, including:**
- 1,830 additional jobs supported once data center operations begin, and
- \$112 million in pay and benefits.

Workforce Benefits of Data Centers: Georgia's data centers contribute to the development of a strong tech workforce across various industries with growing employment and wages. In fact, the combination of rapidly rising employment and rapidly rising wages make data centers one of Georgia's most high-performing lines of business and a valuable (and growing) contributor to a strong and robust state economy.

- From 2010 to 2020, the concentration of tech workers in Georgia grew from almost 20 percent below the national average to almost 40 percent above the national average.
- From 2010 to 2020, the gross income for an average private-sector data processing and hosting employee grew almost twice as fast as the average private-sector employee in Georgia.

Between 2010 and 2020 the average annual pay in the data center industry in Georgia increased twice as fast as the average private-sector employee in Georgia.

- **Data center industry wages in Georgia:** 64 percent increase (\$78,500 to \$128,700) vs. 35 percent average increase in private wages across all industries (\$44,300 to \$59,800).

Data Center Sales and Use Tax Incentive Programs: Data center tax incentives are an effective way to encourage data center investment and growth in a state, and they can accomplish that without negatively impacting state revenues. In fact, over half of U.S. states have sales and use tax exemptions for data centers. Virginia's Joint Legislative Audit and Review Commission found in a 2019 report that:

- Up to 90 percent of the data center investment in Virginia made by the companies that received the sales and use tax exemption would have occurred in other states except for the exemption.
- In 2017, the most recent year data was available, the data center tax incentive generated \$1.09 of Virginia tax revenue for every dollar that it exempted (this is not including local tax revenue or other economic benefits).



Georgia's Incentive Programs: Georgia is one of many states that offer sales and use tax incentive programs to encourage data centers to locate or expand in the state. However, because of the short duration of the benefits, they are some of the least attractive programs in the country. Both of Georgia's programs sunset in seven years or less. Of the states with a sales and use tax exemption for data centers, a majority have a benefit period that is a minimum of 10 years, with the exemptions in eleven states having no sunset date.

- **Georgia High-Tech Business Incentive O.C.G.A. § 48-8-3(68) (program sunsets and benefit ends June 30, 2023).** This was a permanent incentive program until a sunset was enacted in March 2021. This incentive provides a full sales-and-use tax exemption on certain computer equipment purchased by high-tech companies that invest a minimum of \$15 million in qualifying equipment.
- **Georgia Data Center Incentive O.C.G.A. § 48-8-3(68.1) (program sunsets and benefit ends December 31, 2028).** This incentive provides a sales and use tax exemption for data centers that make a minimum investment of \$100 million to \$250 million (investment threshold is dependent on the population of the county) and creates 20 new jobs within seven years of qualifying for the incentive.

Data centers, like most capital-intensive businesses, make long-term investment decisions where the financial conditions are most secure due to the long-term nature of their investment. Companies who build and operate data centers want to choose a location where they can confidently predict their tax liability years into the future, especially if they want to expand their presence over the long term.

It is important to note that under Georgia's incentive programs, the incentive benefit period coincides with the sunset, effectively ending the program when the sunset date is reached. Most other states with a data center sales and use tax exemption do not have the benefit period ending for companies at the same time as the program sunsets for new applicants. This means that a company locating a data center in Georgia today could only utilize the benefit for five years (assuming an 18-month construction window). In Georgia's neighboring state of Alabama, a company locating a new data center could utilize that state's benefit for up to 30 years.

Georgia's incentive programs provide less long-term certainty for data center operators than is offered across the country, including in states that recently adopted or extended their data center incentive. Twenty-six states have incentives that last for 10 years or more, with 11 states having incentives that are valid indefinitely. (select examples of data center sales and use tax exemptions across the country)

Southeast (Neighboring states):

- Alabama offers up to a 30-year sales and use tax exemption. (AL 40-9B-3)
- Mississippi's ten-year sales and use tax exemption has no program sunset. (MS 57-113-25)
- North Carolina's sales and use tax exemption has no program sunset. (NC 105-164.13)



- South Carolina’s sales and use tax exemption sunsets for new applicants in 2031 with benefits ending in 2041. (SC 12-36-2120)
- Tennessee’s sales and use tax exemption and reduced tax on electricity has no program sunset. (TN 67-6-206)
- Virginia’s sales and use tax exemption sunsets at the end of 2035. (VA 58.1-609.3)

East:

- Connecticut offers up to a 30-year sales and use tax exemption with no program sunset. (CT Public Act 21-1, HB 6514)
- Maryland offers up to a 20-year sales and use tax incentive with no program sunset. (MD 11-239)
- Pennsylvania offers at least a 15-year sales and use tax exemption with no program sunset. (72 PS 9931-D)

Midwest:

- Illinois offers up to a 20-year sales and use tax exemption with a sunset for new agreements in 2029. (IL 605-1025a)
- Indiana offers up to a 50-year sales and use tax exemption with no program sunset. (IN 6-2.5-15)
- Iowa’s sales and use tax incentive program has no program sunset. (IA 423.3)
- North Dakota’s sales and use tax incentive has no program sunset. (NDCC 57-39.2-04.17)

West:

- Arizona offers a sales and use tax exemption with a 10 to 20-year benefit with a sunset for new applicants in 2033. The 20-year benefit is reserved for data centers that are considered a sustainable redevelopment project. (AZ 41-1519)
- Idaho’s sales and use tax exemption has no program sunset. (63-3622V)
- Texas offers up to a 20-year sales and use tax exemption with no program sunset. (TX 151.3595)
- Utah’s sales and use tax exemption has no program sunset. (UT 59-12-104)

Potential 10-year Horizon: We estimate that if the availability and competitiveness of Georgia's incentives are extended by at least 10 years, Georgia is likely to gain the following as new datacenter investment comes to Georgia instead of going to other states:

- **\$3.1 billion in economic output, including:**
- 13,950 jobs, and
- \$887 million in pay and benefits.

That is roughly the equivalent of attracting seven to eight new hyperscale data centers to the state over 10 years.



Georgia Has Had a Growing Data Center Market

Georgia has maintained a growing data center sector for the last several years, partially driven by the state's data center incentive programs. Within the state, there are:

- **Enterprise data centers, including large hyperscale data centers**, that are owned and operated by businesses for their own internal use, including companies who rely on tech and data processing for their business (e.g., finance, logistics, transportation, and tech companies). Some of these companies are headquartered in Georgia and have significant operations in the state.
- **Colocation data centers** that provide data center services to other companies as tenants or end users.

Georgia has approximately 100 data centers in the state. The number and magnitude of data centers in Georgia is an indicator that the state's data center incentives have helped to develop a pipeline of investment. A majority of data centers are located in the broader Atlanta metropolitan area, especially in Fulton,⁷ Cobb,⁸ and Gwinnett⁹ counties, where the population density ranges between 2,000 to 2,200 people per square mile. There is also major data center investment in Douglas¹⁰ and Newton¹¹ counties that have attracted large hyperscaledata centers that account for over one billion dollars in investment each. There is also data center investment in Bulloch and Carroll counties. The population density in those counties ranges from about 700 people persquare mile down to 100 people per square mile. Almost all of the planned projects that have been announced will be located in these less densely populated counties outside of Atlanta.

While information on enterprise data centers is generally kept confidential for security and other reasons, information on the amount of computing capacity in colocation data centers illustrates the growth in the overall data center sector in the state. According to CBRE, the commercial real estate services company, the colocation data center market in the Atlanta area has grown steadily by 47 percent since 2013, with almost all of that growth (85 percent of it) occurring since 2018 when the Georgia legislature enacted the Georgia Data Center incentive (O.C.G.A. § 48-8-3(68.1)).

Figure 1 shows the increase in colocation data center capacity (measured in megawatts of IT capacity) in the Atlanta area since 2013.

⁷ Among many other companies, Equinix, Digital Realty, and QTS have data centers in Fulton County.

⁸ Digital Realty and DataSite have data centers in Cobb County.

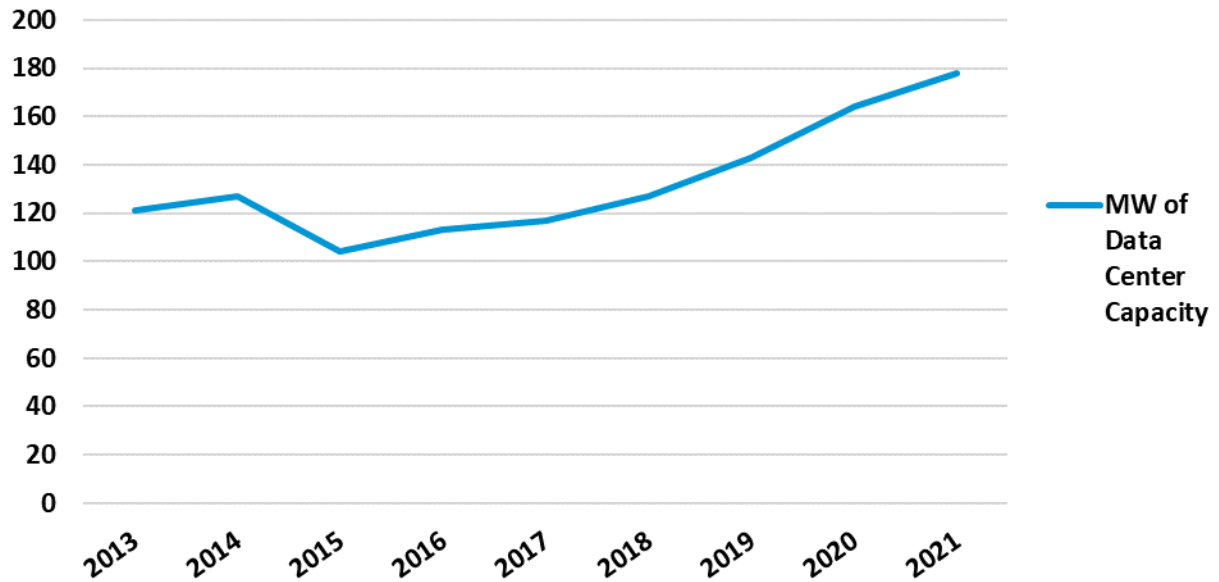
⁹ QTS has a data center in Gwinnett County.

¹⁰ Google's data center is located in Douglas County. [Google is proud to call Georgia home to one of our data centers.](#)

¹¹ Facebook's data center is located in Newton County. Andy Peters, "[Facebook to expand Newton County data center, add 100 jobs.](#)" *The Atlanta Journal-Constitution*, September 17, 2020.



Figure 1. Growth in the Size of the Colocation Data Center Market in the Atlanta Area – 2013 to 2021¹²



ADDITIONAL NEAR-TERM DATA CENTER DEVELOPMENT

According to CBRE, in addition to the 178 MW of colocation data center capacity already in Atlanta, 23.5 MW of colocation data center capacity were under construction as of the first half of 2021. Some examples of projects (both colocation and enterprise data centers) that were announced in 2020 or early 2021 include:

2020 announcements:

- Stack Infrastructure’s plan to double the size of its data center in Fulton County,¹³
- Switch’s construction of a one million-plus square foot data center campus in Douglas County,¹⁴
- Facebook’s expansion of its Newton County data center by 1.5 million square feet,¹⁵ and
- Oceanic Data Centers’ plans for a one million square foot data center in Fayette County.¹⁶

2021 announcements:

- Quality Technology Services’ (QTS) construction of a 1.1 million square foot data center as part of a mixed-use development on 36 acres of land in Fulton County (May 2021 announcement),¹⁷ and
- Microsoft’s commitment to building its East US 3 Azure data centers in Douglas and Fulton counties (February 2021 announcement).¹⁸

¹² Data Source: CBRE semiannual data center market reports 2014-2021 covering the years 2013-2021.

¹³ [Stack Infrastructure Further Expands Atlanta Presence with Land Purchase.](#)

¹⁴ [Switch Signs Anchor Tenant at The Keep Campus in Atlanta and Breaks Ground on Next Two Buildings.](#) The Keep Campus is already partially operational.

¹⁵ [Facebook Expands the Newton Data Center.](#)

¹⁶ Ben Nelms, “Developer expects to start in late 2021 on Fayetteville data center,” *The Citizen*, October 28, 2020.

¹⁷ [Project Granite application.](#)

¹⁸ [Microsoft will establish its next U.S. datacenter region in Georgia’s Fulton and Douglas Counties.](#)



Previous industry expectations for growth in the Georgia data center market were based on the expectation that Georgia's data center incentive programs would remain competitive. The enactment of a 2023 sunset earlier this year on the High Tech Program and the limited duration of the Data Center Incentive (scheduled to sunset in 2028) interject significant uncertainty into Georgia's business climate and raise questions around whether growth in the state's data center investment pipeline will continue.

THE IMPACT OF DATA CENTERS ON THE GEORGIA ECONOMY

The large pipeline of data center construction projects listed above means that Georgia construction workers have a long-term pipeline of local projects where they are better able to work locally, rather than pursue projects in other states. The construction and ongoing operation of data centers in Georgia have large impacts on the state's economy. These economic impacts are driven by:

Direct Impacts:

- The spending in Georgia on the construction of data centers
- The spending on goods and services in Georgia that data centers make during the ongoing operation of data centers

Indirect Impacts:

- The spending on goods and services in Georgia made by data center vendors
- The spending by Georgians employed in building and operating data centers

Direct Economic Impact: We estimate that in the last year¹⁹ the construction and operation of data centers in Georgia directly provided approximately:

- **\$1.4 billion in economic output from construction and operations combined, including:**
- 1,020 construction jobs,
- \$70 million in associated construction pay and benefits,
- 3,480 full-time-equivalent onsite operations jobs inside data centers, and
- \$276 million in associated data center operations pay and benefits.

Total Economic Impact: Taking into account the indirect economic ripple effects that the direct investment generated, we estimate that the total impact on Georgia from data centers in the last year was approximately:

- **\$5.3 billion in economic output, including:**
- 22,940 jobs
- \$1.5 billion in associated employee pay and benefits
- five additional jobs supported by the data center in other non-construction businesses for each operational job inside the data center.

State and Local Tax Revenue: We estimate that in the last year, the indirect economic activity associated with data centers in Georgia led to:

¹⁹ The data used for the impact calculations in this report roughly span the period of July 2020 through June 2021.



- \$92.4 million in tax revenue collected by the State of Georgia, and
- \$101.5 million collected by local governments, not counting sales taxes and franchise fees that data centers pay on electricity purchases.

Table 1 provides a summary of the total construction and operation impact of data centers on the state of Georgia over the last year.

Table 1. Summary of One-Year Economic Impact of Data Centers in Georgia (2021 dollars)

1st Round Direct Effects	Jobs	Pay & Benefits	Economic Output
Data Center Construction	1,020	\$69,600,000	\$164,000,000
Data Center Operation	3,480	\$275,800,000	\$1,198,200,000
2nd Round Indirect Effects			
Data Center Construction Supported	720	\$42,000,000	\$129,700,000
Data Center Operation Supported	17,720	\$1,068,900,000	\$3,782,700,000
Total Impact			
Construction Subtotal	1,740	\$111,600,000	\$293,700,000
Operation Subtotal	21,200	\$1,344,700,000	\$4,980,900,000
Total Economic Impact in Georgia	22,940	\$1,456,300,000	\$5,284,600,000

THE IMPACT OF A SINGLE NEW HYPERSCALE DATA CENTER

To help make the overall statewide estimates of the impact of the entire data center sector more concrete, we can illustrate the economic and fiscal impact potential if just one new \$750 million hyperscale data center were to locate in Georgia. It is important to note that there is significant variability among hyperscale data centers in terms of size, design, capacity, and other characteristics. Our assumptions and calculations are based on an aggregation of information associated with several actual hyperscale data center projects across the country and information provided by industry sources.

Assumptions used to estimate the impact of a \$750 million hyperscale data center:

- Construction: \$240 million would be spent for construction (including the employment of 1,200 construction workers) in total over the 18 to 24 months that a data center of this scale would typically take for construction.
- Construction: \$460 million would be spent on computer equipment that is almost always sourced outside of the region of interest and does not contribute to local economic activity.
- Construction: \$50 million would be paid for the purchase of cooling and electrical equipment and other fixtures.
- Operation: eventually employ 300 direct employees and contractors that provide services such as security and maintenance.

Construction

Direct Economic Impact (24-month construction period):

- **\$193 million in economic output in the Georgia economy, including:**
- 1,200 total construction jobs, and
- \$82 million in associated pay and benefits for construction workers.

Total Economic Impact (24-month construction period):

Accounting for all of the additional effects that the project would cause as the new investment ripples through the Georgia economy, construction of such a new hyperscale data center would have a potential total economic impact over the two-year construction period of approximately:

- **\$346 million in total economic output, including:**
- 2,050 jobs supported, and
- \$132 million in total pay and benefits.

Operation

Direct Economic Impact (annually, once fully built out/operational)

- **\$103 million in economic output in the Georgia economy once the data center is fully operational, including:**
- 300 new operational jobs, and
- \$24 million in associated pay and benefits for operating workers.

Total Economic Impact (annually, once fully built out/operational):

Once such a facility is fully operational and after accounting for all of the direct and indirect effects that the project would cause in the Georgia economy, the potential total economic impact would be approximately:

- **\$431 million annually in total economic output, including:**
- 1,830 jobs supported once data center operations begin, and
- \$112 million in pay and benefits.



Data Centers Benefit the Broader Economy in Georgia

Data centers have generated business for Georgia companies that are critical pieces of the data center supply chain that in turn generate economic activity and growth for other businesses in Georgia. Table 2 shows a selection of different Georgia businesses that are part of the second ripple effect of economic activity related to spending by data centers.

Table 2. Select Georgia-Headquartered Businesses Serving Georgia Data Centers²⁰

Company	HQ City	Line of Business
AC & DC Power Technologies	College Park	Critical power maintenance services and distributor of server racks and cabinets
Alexander Electric Company	Columbus	National electrical contractor
Allison-Smith Company	Smyrna	National electrical engineering contractor
Capital City Electrical Services	Norcross	Regional electrical contractor
HEATSINC	East Dublin	International builder of power infrastructure
Holder Construction	Atlanta	Large, global builder of data centers
Inglett & Stubbs	Mableton	National electrical contractor
Jerry L. Johnson & Associates	Morrow	General contractor for data center construction and renovation
Optima Electronic Packaging Systems	Lawrenceville	Custom manufacturer of server enclosures
Southland Electrical Contractors	Madison	Regional electrical contractor



²⁰ None of the companies named here were consulted for this report nor did they request to be included. They are included based only on our own independent research. Again, this list is by no means comprehensive. It is for illustration only.

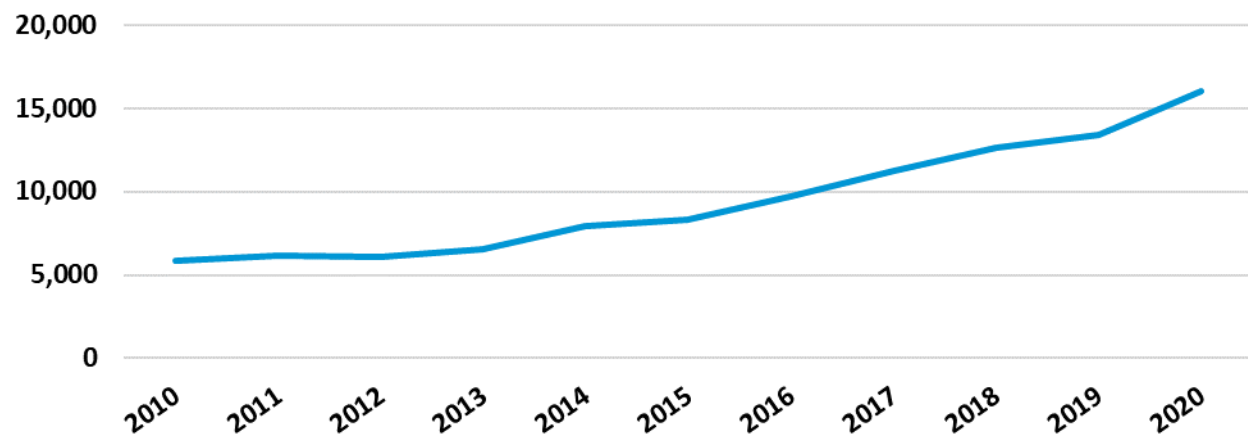


DATA CENTERS INCREASE THE TECH LABOR POOL NEEDED BY MANY INDUSTRIES

Data Center Employment

At the same time that data center investment in Georgia has been increasing, employment in high-tech sectors has increased. Private sector statewide data processing and hosting²¹ employment has escalated rapidly from 5,800 in 2010 to 16,000 jobs in 2020 (Figure 2), and from 2010 to 2020, the concentration of tech workers in Georgia grew from almost 20 percent below the national average to almost 40 percent above the national average.²²

Figure 2. Georgia’s Data Processing and Hosting Employment – 2010 to 2020²³



Georgia has developed a stronger than average tech labor market that is important for attracting businesses in industries ranging from advanced manufacturing to finance. The existence of a vibrant data center market helps to attract talent that supports all of these vital industries. Research has shown that data centers share the pool for high-tech labor with industries such as architecture, engineering, computer system design, software, telecommunications, scientific research & development, and technical consulting.²⁴

Data Center Wages

The combination of rapidly rising employment and rapidly rising wages make data centers one of Georgia’s most high-performing lines of business and a valuable (and growing) contributor to a robust state economy. Data centers are extremely capital-intensive and require a large amount of expensive equipment to operate. The wages for data center jobs are significantly higher than the average across all industries, and these wages have grown significantly over time (Figure 3).

²¹ Data processing and hosting is the U.S. Bureau of Labor Statistics industry category that most closely matches the data center sector.

²² Data Source: U.S. Bureau of Labor Statistics.

²³ Data Source: U.S. Bureau of Labor Statistics.

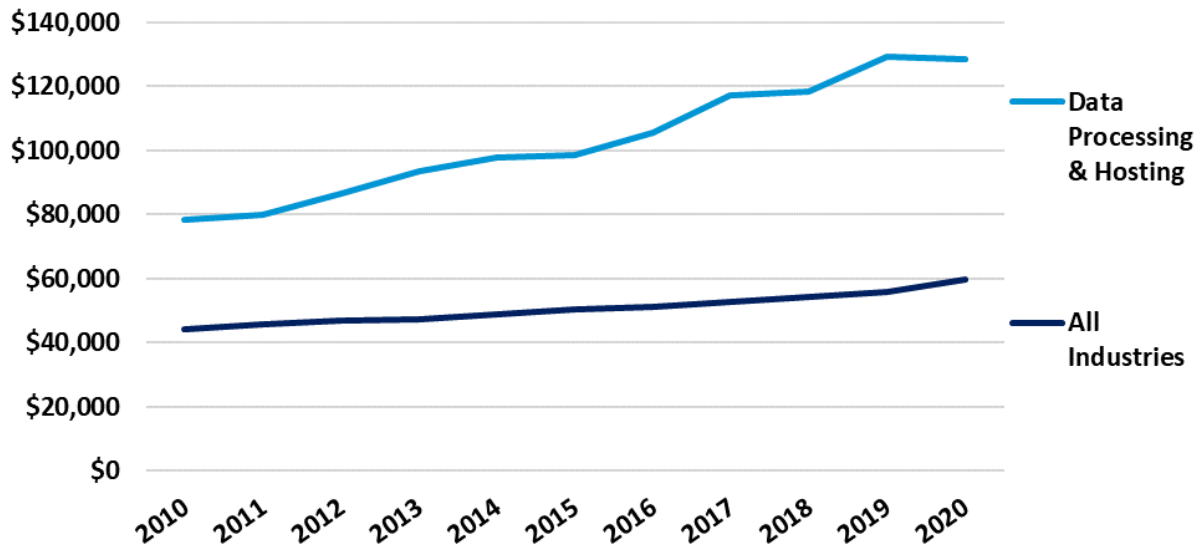
²⁴ Mangum Economics, *NVTC Greater Washington Technology Sector Profile*, December 2016.



Between 2010 and 2020 the average annual pay in the data center industry in Georgia increased twice as fast as the average private-sector employee in Georgia.

- **Data center industry wages in Georgia:** 64 percent increase (\$78,500 to \$128,700)
- **Average private sector wages in Georgia across all industries:** 35 percent average increase in private wages across all industries (\$44,300 to \$59,800).

Figure 3. Trends in Average Annual Private Sector Pay in Georgia – 2010 to 2020²⁵



²⁵ Data Sources: U.S. Bureau of Labor Statistics.



Georgia's Data Center Incentive Programs Are No Longer Competitive

DURATION OF INCENTIVE PROGRAMS ACROSS THE COUNTRY

Data centers, like most capital-intensive businesses, make long-term investment decisions where the financial conditions are most secure due to the long-term nature of their investment. Companies who build and operate data centers want to choose a location where they can confidently predict their tax liability years into the future, especially if they want to expand their presence over the long-term. A recent report by Cushman and Wakefield states, “A majority of states throughout the U.S. now offer state-level incentives, often sales- or property-tax abatements for long-term investment.”²⁶ The competition among states for data centers is significant, and data centers carefully evaluate the business climate in various states when making location decisions.

Georgia

Georgia is one of many states that offer incentives to encourage data centers to locate or expand in their states. There are two incentives under which data centers may qualify for sales and use tax exemptions on qualifying purchases depending on their business models and other factors.

Georgia High-Tech Business Incentive O.C.G.A. § 48-8-3(68) (program sunsets and benefit ends June 30, 2023). Until this year, this program provided data centers with certainty and predictability around their investments as they contemplated location and expansion in Georgia. However, the 2023 sunset added in March 2021 likely impacts the business certainty. This incentive, which applies to any company included in the listed NAICS codes (e.g., single-user data centers, software publishers, computer systems design businesses, telecommunications firms, financial transaction processing facilities, and R&D centers) that makes a minimum \$15 million investment in qualifying computer equipment, provides a full sales and use tax exemption.

This incentive can be used by traditional data center operators as well as by businesses that depend on large quantities of data to such a degree that they choose to have full control over their data centers, but whose total investment is less than the \$100 to \$250 million required by the 68.1 exemption (noted below). An example of an essential, Georgia company that has made use of the High-Tech incentive is UPS. Although UPS is not considered a “high-tech company,” a significant number of its employees work at a large data center that it owns near its Georgia headquarters. The Georgia data center is one of the data centers that UPS uses for its global tracking and operating services network.

Georgia Data Center Incentive O.C.G.A. § 48-8-3(68.1) (program sunsets and benefit ends December 31, 2028). This incentive applies to data centers that make a minimum investment of \$100 million to \$250 million (the investment threshold is dependent on the population of the county) and create 20 new jobs within seven years of qualifying for the incentive. It provides an exemption from sales and use

²⁶ Cushman & Wakefield Data Center Advisory Group, *Data Center Global Market Comparison*, 2021.



taxes on computers, computer equipment, backup generators, air-handling units, cooling towers, energy-storage equipment, energy-efficiency technology, and other items.

Other States

Georgia’s data center sales and use tax incentive programs now have a short span relative to most other states with a data center incentive program, which will impact the state’s competitiveness for new data center investment and expansion of existing data centers. In a 2020 report, JLL indicated that, “Revised economic incentives have helped lure colocation operators” to the Atlanta data center market.²⁷

Twenty-six states have incentives that last for 10 years or more, with 11 states having incentives that are valid indefinitely. Examples in the Southeast include:

- Alabama offers up to a 30-year sales and use tax exemption. (AL 40-9B-3)²⁸
- Mississippi’s 10-year sales and use tax exemption has no program sunset. (MS 57-113-25)²⁹
- North Carolina’s sales and use tax exemption has no program sunset. (NC 105-164.13)³⁰
- South Carolina’s sales and use tax exemption sunsets for new applicants in 2031 with benefits ending in 2041. (SC 12-36-2120)³¹
- Tennessee’s sales and use tax exemption and reduced tax on electricity has no program sunset. (TN 67-6-206)³²
- Virginia’s sales and use tax exemption sunsets at the end of 2035. (VA 58.1-609.3)³³

As noted at the beginning of this report, there appears to be strong evidence that Georgia’s data center incentives have contributed to the strong growth of data centers in the state. Given the longer-term benefit that data centers are eligible for in neighboring states, Georgia has a competitive disadvantage in attracting new data center growth because its benefits are much shorter in duration. This also can impact decisions around planned projects that have not yet broken ground.

States with existing sales and use tax incentives revise and extend them from time to time to make them more attractive. Several states have recently added, enhanced, or renewed their sales and use tax incentives in 2020 and 2021 to enhance their competitiveness.

Southeast

- Virginia revised its sales and use tax exemption to require fewer new employees and less capital investment for data centers that locate where the unemployment and poverty rates are higher than statewide averages.³⁴

²⁷ JLL, Data Center Outlook, H1 2020.

²⁸ <http://alisondb.legislature.state.al.us/alison/CodeOfAlabama/1975/135558.htm> and [Alabama Department of Revenue, General Summary of State Taxes.](#)

²⁹ [Mississippi Tax Incentives, Exemptions and Credits.](#)

³⁰ [North Carolina Data Center Sales and Use Tax Exemptions.](#)

³¹ [South Carolina Department of Revenue Ruling #13-5.](#)

³² [Changes in Requirements for a Qualified Data Center, Tennessee Department of Revenue.](#)

³³ Rich Miller, “[Virginia Extends Data Center Economic Incentives](#),” *Data Center Frontier*, March 14, 2016.

³⁴ Dan Swinhoe, “[Virginia lowers threshold for data center tax exemption](#),” *Data Center Dynamics*, March 31, 2021.



East

- Pennsylvania's original incentive was ineffective at attracting data center investment to the state while billions of dollars of investments were being made in nearby states. The legislature enacted a new sales and use tax exemption that is open indefinitely with benefits available for at least 15 years. (72 PS 9931-D)³⁵
- Connecticut became the latest state to add a completely new data center incentive. Depending on the size and location of the facility, data centers could be exempted from state sales and use taxes for 20 to 30 years. (CT Public Act 21-1, HB 6514)³⁶
- Maryland enacted a new sales and use tax incentive with a benefit period of 10 to 20 years, depending on the level of investment. The incentive has no sunset date. (MD 11-239)³⁷ Following the enactment of Maryland's data center incentive, a data center developer announced plans for a new 2,100-acre data center campus in the state.³⁸

Midwest

- North Dakota enacted a data center incentive to replace an incentive that expired in 2020. The new incentive has no sunset date or limitation on the benefit period. (NDCC 57-39.2-04.17)³⁹

West

- Arizona revised and extended its data center sales and use tax exemption by 10 years to run through 2033. The benefit period ranges from 10 to 20 years, with the 20-year benefit reserved for data centers that are considered a sustainable redevelopment project. (AZ 41-1519)⁴⁰
- Idaho enacted a new sales and use tax exemption for data center equipment used in new data centers. The new incentive has no program sunset or limitation on the benefit period. (63-3622V)⁴¹
- Utah expanded its sales and use tax exemption for data centers with no minimum investment or employment criteria and no program sunset. (UT 59-12-104)⁴²

³⁵ [Pennsylvania Brings in Data Center Tax Breaks.](#)

³⁶ Matt Pilon, "[In a crowded pond, CT goes fishing for data centers with new incentives,](#)" *Hartford Business Journal*, April 19, 2021.

³⁷ [Maryland Department of Commerce, Data Center Tax Incentive Program.](#)

³⁸ Rich Miller, "[Quantum Loophole Plans 2,100 Acre Data Center Campus in Maryland,](#)" *Data Center Frontier*, June 28, 2021.

³⁹ [North Dakota Century Code § 57-39.2-04.17.](#)

⁴⁰ Dan Swinhoe, "[Arizona extends data center tax breaks for another 10 years,](#)" *Data Center Dynamics*, April 27, 2021.

⁴¹ [HB 521.](#)

⁴² [Utah Sales and Use Tax General Information](#), Revised 6/21 and [SB 114.](#)



COMPETITION BETWEEN STATES

New York – New Jersey – Connecticut

New Jersey is debating adding an incentive. There is a growing realization that the New York-New Jersey region lost its lead in the data center market to Northern Virginia, at least in part because New Jersey is not competitive with other markets on taxes.⁴³

An even more dramatic illustration of the sensitivity of data centers to tax changes is the way in which data centers showed their mobility in response to a potential increase in taxes in New Jersey. In the summer of 2020, some elected state officials proposed imposing a 25/100th of one percent or a 1/100th of one percent tax on financial transactions processed in data centers located in New Jersey.⁴⁴ In the fall of 2020, the New York Stock Exchange ran its financial transactions out of its data center in Chicago for five days to practice for any possible relocation of the market to data centers outside of New Jersey. The Governor of Texas was involved in attempting to attract Nasdaq to migrate its data center operations to Dallas, the second-largest data center market in the United States. In the spring of 2021, the state of Connecticut enacted a data center incentive to make that state a viable alternative, in the event that New Jersey proceeded with the financial transaction tax.⁴⁵

Illinois – Indiana

In June of 2019, Illinois added a new data center incentive.⁴⁶ Although the Chicago area is one of the largest data center markets in the United States, it was not keeping pace with the growth of data centers in the markets of Northern Virginia, Dallas, and Phoenix – all located in states that provide sales and use tax exemptions to attract data center investment. Since the enactment of the Illinois incentive, several new large data center projects have been announced in the state, and over \$5 billion in additional data center investment has been committed making it one of the fastest-growing states in terms of data center activity.⁴⁷ The neighboring state of Indiana also enacted a 50-year sales and use tax exemption for data centers to attract data centers to the Indiana suburbs of Chicago.⁴⁸

⁴³ See Rich Miller, "[Will Tax Incentives Jump-Start NJ's Data Center Industry?](#)," *Data Center Frontier*, January 28, 2020. "Twenty years ago, New Jersey probably led the country and data center space, but we haven't moved the needle at all in 20 years." – Gil Santaliz, NJFX "New Jersey was once a hotbed of data center activity, with thriving markets for colocation and financial data centers. The state maintains a substantial and strategically important data center community, but the hottest leasing action has shifted elsewhere, primarily to Northern Virginia." "There is a bill being looked at, and it looks very similar to the broad strokes of what you see in Virginia." – Santaliz

⁴⁴ Alex Alley, "[NYSE and Nasdaq threaten to leave New Jersey if transaction tax goes ahead](#)," *Data Center Dynamics*, October 20, 2020.

⁴⁵ Matt Pilon, "[In a crowded pond, CT goes fishing for data centers with new incentives](#)," *Hartford Business Journal*, April 19, 2021.

⁴⁶ Ally Marotti, "[Data center boosters hope new tax incentives 'stop the bleeding,' keep tech sites in Illinois](#)," *Chicago Tribune*, June 2019.

⁴⁷ Companies announcing large data center projects in Illinois since the enactment of the incentive include Aligned Energy, Facebook, Prime Data Centers, NTT, and Stream.

⁴⁸ [Indiana General Assembly 2019, Indiana House Bill 1405](#).



Data Center Incentives Do Not Diminish State Tax Revenues

With so many states offering data center sales and use tax incentives, state tax incentives intended to attract data centers do not diminish state tax revenues because data centers generally avoid locating and expanding in states without a sales and use tax exemption. States that do not attract new data center investment do not receive the additional tax revenue and economic impact from data centers. Consequently, when data centers locate in states with sales and use tax exemptions, there is no lost state revenue. States with sales and use tax exemptions for data centers are recognizing that forgoing direct sales and use tax revenue is necessary to gain the economic impact that data centers bring, along with the tax revenue associated with that economic impact.

In June of 2019, Virginia’s Joint Legislative Audit and Review Commission (JLARC) published an evaluation of the state’s data center incentive using confidential tax information that is not publicly available.⁴⁹

JLARC found that up to 90 percent of the data center investment made by the companies that received the sales and use tax exemption would not have occurred in the state of Virginia without the incentive. So, the “cost” of the State data center incentive is only 10 percent of the amount of State sales tax revenue exempted. Using the confidential tax information, JLARC estimated the economic and government budgetary impact of Virginia’s data center sales and use tax exemption.⁵⁰

JLARC determined that in 2017 (the latest year for which data was available for the evaluation) data centers generated \$4.7 million more state tax revenue from construction and suppliers than the amount of sales and use tax exempted by Virginia’s data center incentive.⁵¹ In 2017, the State took in \$1.09 in state tax revenue from data center-related activity for every one dollar of potential state tax revenue that was exempted from qualifying data centers.

⁴⁹ Joint Legislative Audit and Review Commission, *Data Center and Manufacturing Incentives, Economic Development Incentives Evaluation Series*. June 17, 2019.

⁵⁰ [Appendix N: Results of economic and revenue impact analyses.](#)

⁵¹ Mangum Economics, *The Impact of Data Centers on the State and Local Economies of Virginia, 2020*. Also, see [Appendix N: Results of Economic and Revenue Impact Analyses.](#)

The Potential for Future Jobs and Investment Growth in Georgia

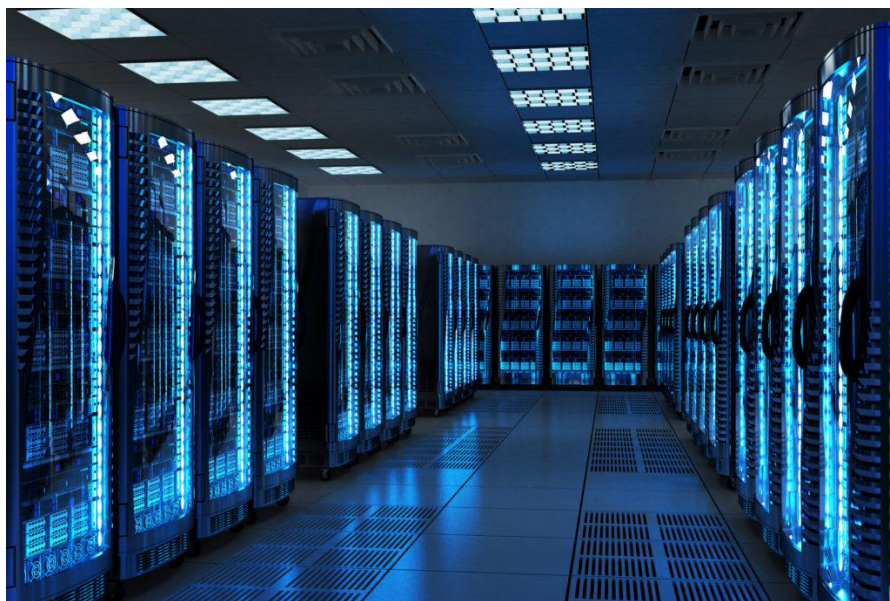
It is possible to estimate the potential impact on jobs and economic growth in Georgia if the state's data center incentives are made competitive with other states that offer an incentive. We do this by estimating the volume of new data center projects that could locate in Georgia instead of another state, and then calculating the jobs, pay and benefits, and economic output associated with those facilities.

Research by Virginia's Joint Legislative Audit and Review Commission estimated that 90 percent of the data center projects that received tax incentives in Virginia would have been located in another state if Virginia's data center incentives were not in place. If we infer that the same would be true in Georgia (where data center market growth has been six percent per year over the last eight years), we can estimate that over 10 years **Georgia's data center market will grow by 60 percent instead of six percent, if Georgia's data center incentives are extended for at least 10 years.**

If Georgia remains competitive for data center growth over the next 10 years, new data center investment and jobs sited in Georgia could gain:⁵²

- **\$3.1 billion in economic output activity, including:**
- **13,950 jobs, and**
- **\$887 million in pay and benefits.**

For context, that impact is roughly the equivalent of gaining seven to eight new hyperscale data centers (described earlier in this report) over the ten-year period. That result is likely if the newly enacted sunsets on Georgia's data center incentive programs are removed.



⁵² This is based on estimates of the impact of data center construction and operation jobs over the last year and extrapolating to a 10-year period with both potential growth rates.

Table 3 shows the estimated impacts of data centers 10 years out with and without the incentives and (in the final column) the difference in year ten.

Table 3. Summary of One-Year Total Economic Impact of Data Centers in Georgia (2021 dollars)*

10 th Year 1 st Round Direct Effects	With Incentives Renewed	Without Incentives Renewed	Gained Impacts with Incentives Renewed
Data Center Construction Jobs	1,630	160	1,470
Data Center Construction Pay & Benefits	\$111,400,000	\$11,100,000	\$100,300,000
Data Center Construction Output	\$262,400,000	\$26,200,000	\$236,200,000
Data Center Operation Jobs	5,570	3,690	1,880
Data Center Operation Pay & Benefits	\$441,300,000	\$292,300,000	\$149,000,000
Data Center Operation Output	\$1,917,100,000	\$1,270,100,000	\$647,000,000
10 th Year 2 nd Round Indirect Effects			
Data Center Construction Supported Jobs	1,150	120	1,030
Data Center Construction Supported Pay & Benefits	\$67,200,000	\$6,700,000	\$60,500,000
Data Center Construction Supported Output	\$207,500,000	\$20,800,000	\$186,700,000
Data Center Operation Supported Jobs	28,350	18,780	9,570
Data Center Operation Supported Pay & Benefits	\$1,710,200,000	\$1,133,000,000	\$577,200,000
Data Center Operation Supported Output	\$6,052,300,000	\$4,009,700,000	\$2,042,600,000
Total Impact			
Total Jobs Impact in Georgia	36,700	22,750	13,950
Total Pay & Benefit Impact in Georgia	\$2,330,100,000	\$1,443,100,000	\$887,000,000
Total Output Impact in Georgia	\$8,439,300,000	\$5,326,800,000	\$3,112,500,000

* Amounts may not sum due to rounding.





About Mangum Economics, LLC

Mangum Economics, LLC is a Richmond, Virginia based firm that specializes in producing objective quantitative and qualitative analysis in support of strategic decision making. Much of our recent work relates to IT & Telecom Infrastructure (data centers, terrestrial and subsea fiber), Renewable Energy, Economic Development, and Tax and Regulatory Policy. Examples of our work include:

- *The Impact of Data Centers on the Arizona Economy, 2021;*
- *Potential Impact of the Development of the Offshore Wind Energy Industry on Hampton Roads and Virginia, 2020;*
- *The Potential Impact of a Data Center Incentive in Maryland, 2020;*
- *The Impact of Data Centers on the State and Local Economies of Virginia, 2016, 2018, and 2020;*
- *Opportunities for Southside Virginia to Participate in the Cloud Economy, 2019;*
- *The Economic and Fiscal Contribution that Data Centers Make to Virginia: Spotlight on Prince William County, 2018; and*
- *The Potential Impact of a Data Center Incentive in Illinois, 2018.*

POLICY ANALYSIS

Identify the intended and, more importantly, unintended consequences of proposed legislation and other policy initiatives.

ECONOMIC IMPACT ASSESSMENTS AND RETURN ON INVESTMENT ANALYSES

Measure the economic contribution that business, education, or other enterprises make to their localities.

CLUSTER ANALYSIS

Use occupation and industry clusters to illuminate regional workforce and industry strengths and identify connections between the two.

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