

## Written Testimony of Josh Levi

### President, Data Center Coalition

Before the U.S. House of Representatives Oversight and Government Reform Subcommittee on Economic Growth, Energy Policy, and Regulatory Affairs

"America's AI Moonshot: The Economics of AI, Data Centers, and Power Consumption"

#### Introduction

Subcommittee Chairman Burlison, Subcommittee Ranking Member Frost, Committee Chairman Comer, Committee Ranking Member Connolly, and distinguished members of the Subcommittee, thank you for the opportunity to provide testimony this morning exploring "America's AI Moonshot: The Economics of AI, Data Centers, and Power Consumption." This topic is critical to the future of America's economy and national security.

My name is Josh Levi, and I am the President of the Data Center Coalition (DCC). DCC is the membership association for the U.S. data center industry. DCC's member companies provide the digital infrastructure that supports the applications, capabilities, and essential services that enable our modern economy, including cloud computing and artificial intelligence (AI). DCC member companies are making significant, multi-billion dollar investments in America's infrastructure. These investments support hundreds of thousands of quality jobs across the nation and contribute billions of dollars in local, state, and federal tax revenue, providing consistent funding for important community priorities like public safety, education, and transportation. Between 2017 and 2023, the data center industry's total contribution to the U.S. GDP was \$3.5 trillion. In 2023, the U.S. data center industry directly employed more than 600,000 workers and supported 4.7 million jobs in total. The sector generated \$404 billion in total labor income and contributed \$162.7 billion in federal, state, and local taxes in 2023.<sup>1</sup>

The U.S. currently leads the world in the digital infrastructure necessary for AI. The U.S. accounts for roughly 40 percent of the global market for data center capacity,<sup>2</sup> with six of the top ten markets.<sup>3</sup> However, with growing global competition, we must take action now to ensure we can maintain our leadership position. By leveraging our robust economy, dedicated workforce, and the American innovative spirit, the U.S. can remain dominant in this essential industry.

<sup>&</sup>lt;sup>1</sup> PwC, "Economic Contributions of Data Centers in the United States," February 2025.

<sup>&</sup>lt;sup>2</sup> Mckinsey & Company, "Investing in the rising data center economy," January 17, 2023.

<sup>&</sup>lt;sup>3</sup> Cushman & Wakefield Research, "2024 Global Data Center Market Comparison."

### **Background**

There is unprecedented demand for the digital services that have become central to our daily lives and modern economy—everything from the way we work and learn to how we buy groceries, bank, and even access medical care now occurs online. These digital, cloud-based services on which we all rely take place in physical locations—America's data centers. With an average of 21 connected devices per household in the U.S. and 5.5 billion people currently online globally, the role of data centers is expected to grow as consumers and businesses generate twice as much data in the next five years as they did in the past decade.<sup>4</sup> This growth is driven by the widespread adoption of cloud services, the proliferation of connected devices, and the rapid scaling of advanced technologies like generative AI, which alone could create up to \$4.4 trillion in economic value globally by 2030.<sup>5</sup>

#### **About Data Centers**

Digital infrastructure is a critical component of the United States' global economic competitiveness and keeping Americans' data safe and secure domestically. Data centers enable the essential services and cutting-edge technologies that drive the 21st century economy and enhance our quality of life, ensuring that our homes, businesses, schools, hospitals, manufacturing facilities, and governments operate effectively and efficiently.

By providing cost effective digital services on a massive scale, data centers drive innovation and growth across various sectors and are the backbone of AI. Leadership in developing and operating AI in the United States is vital for protecting national security and ensuring that AI systems are safe, secure, and trustworthy.

DCC's member companies are at the forefront of this transformation, though it is important to recognize that the U.S. data center industry is not a monolithic one. There are a variety of data center companies, business models, facilities, missions, and operations supporting the digital services critical to the modern U.S. economy and Americans' daily lives.<sup>6</sup> U.S. leadership in AI requires a vibrant and dynamic data center industry that supports each of these models.

<sup>&</sup>lt;sup>4</sup> Deloitte, "<u>Connected Consumer Study 2023</u>," September 2023; International Telecommunication Union, "<u>Internet use continues to grow, but universality remains elusive, especially in low-income regions</u>," November 27, 2024; JLL, "<u>Data Centers 2024 Global Outlook</u>," January 31, 2024.

<sup>&</sup>lt;sup>5</sup> McKinsey, "The economic potential of generative AI: The next productivity frontier," June 2023.

<sup>&</sup>lt;sup>6</sup> See Appendix A for information on the types of data centers.

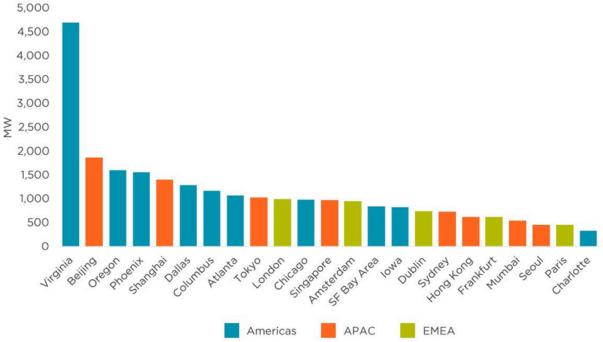
#### Data Center Markets

Globally, the U.S. is expected to be the fastest-growing market for data centers with capacity more than tripling between 2024 and 2030.<sup>7</sup> This is coupled with a historically low data center vacancy rate in North America of 2.6%, with lower vacancy rates in some key U.S. markets.<sup>8</sup>

The siting of data centers is a complex process driven by multiple factors essential for their performance and reliability, including access to energy, fiber, and workforce; proximity to customers; speed of permitting and other regulatory requirements; and the choice to invest directly in corporate power purchase agreements that add new power plant capacity to local grids.

Data center development is expanding to an increasing number of U.S. states as tax and regulatory policy changes, land availability, access to available power, and changes in latency and other operational requirements open new markets. Data center development is now occurring in at least 23 states nationwide.<sup>9</sup>





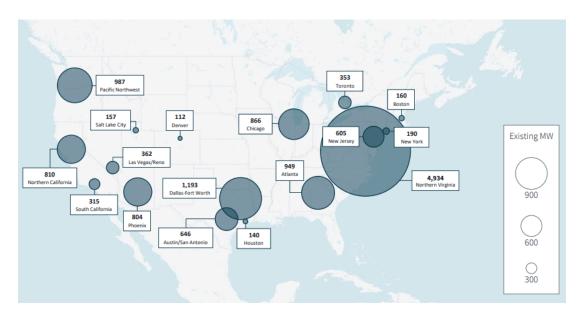
Source: Cushman & Wakefield Research, datacenterHawk, DC Byte, Structure Research

<sup>&</sup>lt;sup>7</sup> McKinsey, "The economic potential of generative AI: The next productivity frontier," June 2023.

<sup>&</sup>lt;sup>8</sup> JLL, "North America Data Center Report: Year-end 2024," March 2025.

<sup>&</sup>lt;sup>9</sup> Newmark, "2025 United States Data Center Market Outlook," February 13, 2025.

Currently, Northern Virginia is the largest data center market in the U.S.—and in the world. Other established U.S. markets include Georgia, Illinois, Arizona, Texas, and California. There is significant growth in emerging markets like Oregon, Washington, and Ohio and in new areas, including Indiana, Louisiana, Minnesota, Mississippi, and Missouri. 11



### Data Centers and U.S. Economic Growth

Economic Contributions of Data Centers and Investing in America

Data centers are the foundation of the modern economy, powering a vast array of digital services in homes, businesses, and government at a massive scale and low cost per unit of productivity. In addition to being a core enabler for business transformation and efficiency across America, data centers are vital economic engines for local communities across the country. Data centers create employment opportunities and are catalysts for broader economic growth, supporting ecosystems of suppliers, service providers, and construction.

DCC member companies are investing billions of dollars in the United States to meet the demand for digital infrastructure.<sup>12</sup> A data center trade publication recently indicated at least \$450 billion in planned, near-term investments in data centers and technology in the United States in 2024 alone.<sup>13</sup>

Between 2017 and 2023, the data center industry's total contribution to U.S. GDP was \$3.5 trillion. In 2023, the U.S. data center industry directly employed more than 600,000 workers and

<sup>&</sup>lt;sup>10</sup> Cushman & Wakefield Research, "2024 Global Data Center Market Comparison."

<sup>&</sup>lt;sup>11</sup> CBRE, "North America Data Center Trends H2 2024," February 26, 2025.

<sup>&</sup>lt;sup>12</sup> See Appendix B for examples of some recent U.S. digital infrastructure investments by DCC member companies.

<sup>&</sup>lt;sup>13</sup> Data Center Frontier, "From Billions to Trillions: Data Centers' New Scale of Investment," March 13, 2025.

supported 4.7 million jobs in total. Notably, the industry's growth has surpassed that of the overall U.S. economy in recent years. From 2017 to 2023, direct employment in the U.S. data center industry increased by over 50 percent, compared to 10 percent growth in employment for the United States overall during the same timeframe.<sup>14</sup>

The sector contributed \$162.7 billion in federal, state, and local taxes in 2023. The 146% increase in the industry's total fiscal support to federal, state, and local governments from 2017 to 2023 highlights the expanding role of data centers as an economic driver.<sup>15</sup>

# DATA CENTER CONTRIBUTIONS TO THE U.S. ECONOMY

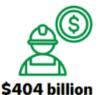


direct jobs in 2023-51% increase from 2017



4.7 million

total contribution to national employment in 2023



total contribution to national labor income in 2023–93% increase from 2017

Each job in the data center industry supports more than SIX jobs elsewhere in the economy.

\$231 BILLION

direct contribution to U.S. GDP in 2023—a 160% increase from 2017

\$727 BILLION

total annual contribution to U.S. GDP in 2023, including direct, indirect, and induced effects

\$162.7 BILLION

total fiscal support to federal, state, and local governments in 2023—a 146% increase from 2017

Source: PwC, "Economic Contributions of Data Centers in the United States, 2017-2023," February 2025

The data center industry offers high-wage, high-skill jobs that often don't require a four-year degree. Labor income earned directly from the data center industry grew by 144 percent between 2017 and 2023. This growth is four times as much as the growth in labor income across all U.S. industries over the same period. The increase in labor income contribution has outpaced the increase in employment contribution, suggesting that the U.S. data center industry supports higher earning jobs at the national level.<sup>16</sup>

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<sup>&</sup>lt;sup>14</sup> PwC, "Economic Contributions of Data Centers in the United States," February 2025.

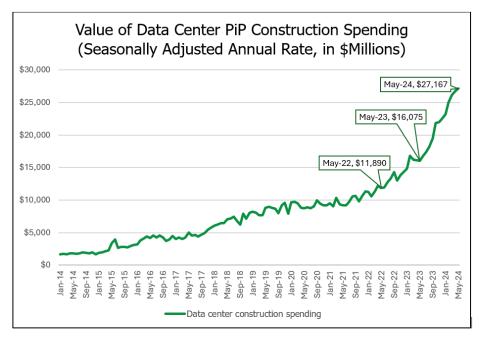
<sup>&</sup>lt;sup>15</sup> PwC, "Economic Contributions of Data Centers in the United States."

<sup>16</sup> Ibid.

Yet, a 2023 Data Center Staffing Survey from the Uptime Institute found staffing shortages as high as 48% at mid- and junior-level operations positions, and 41% and 33% in electrical and mechanical jobs, respectively.<sup>17</sup> As data centers expand from traditional mature markets such as Northern Virginia to emerging markets across the country, the rapid pace of development and the need to meet specialized skill requirements have contributed to labor shortages for both operations and construction positions. With rapid expansion of AI and the associated data center infrastructure buildout, the need for trades and highly skilled labor will continue to increase.

# Broader Economic Benefits of the Data Center Industry

Investment in U.S. data center infrastructure supports growth in domestic jobs, both highly skilled operational jobs in data centers and jobs in the broader economy including construction, electricians, telecommunications, manufacturing, and pipefitters. At the national level, each direct job in the data center industry supports more than six jobs elsewhere in the U.S. economy.<sup>18</sup> Between May 2023 and May 2024, construction spending by the U.S. data center industry increased 69%, from \$16.075 billion to \$27.167 billion.<sup>19</sup>



Source: U.S. Census Bureau Construction Spending Data: Historical Value of Private Construction Put in Place (PiP), May 2024

In addition, the data center industry has a symbiotic relationship with industries in its supply chain, encompassing manufacturers, labor, construction, and more. For example, the National

<sup>&</sup>lt;sup>17</sup> The Uptime Institute, "The Uptime Institute Data Center Staffing Survey 2023," December 2023.

<sup>&</sup>lt;sup>18</sup> PwC, "Economic Contributions of Data Centers in the United States."

<sup>&</sup>lt;sup>19</sup> U.S. Census Bureau, "<u>Construction Spending Data: Historical Value of Private Construction Put in Place (PiP)</u>," May 2024.

Association of Manufacturers recently outlined how manufacturers provide the physical components of data centers in addition to being increasingly reliant on them due to digitization.<sup>20</sup>

The exponential growth of the data center industry has contributed to the expansion of companies throughout its supply chain. From construction and fabricators of steel used in data center projects, to HVAC manufacturing and portable sanitation companies, the data center industry is fueling economic growth in countless companies across a variety of industries.<sup>21</sup> The data center industry has also leaned in, working with manufacturers on shoring up supply chains and helping shorten construction timelines.

# **Data Centers and Energy**

The U.S. requires rapid deployment of more data centers to provide the computing power needed to support critical and emerging technologies, including AI, that deliver broad public and economic benefits. As demand for data center services continues to rise, timely access to affordable and reliable power is the pacing challenge for the industry. After nearly two decades of relatively flat electricity consumption, the U.S. is experiencing a significant increase in power demand driven by several economic growth trends, including the onshoring of new manufacturing, widespread electrification, hydrogen fuel production, and growth in demand for data center services. In the U.S. market alone, demand—measured by power consumption to reflect the number of servers a data center can house—is expected to reach 80 gigawatts (GW) by 2030, up from 25 GW in 2024.<sup>22</sup>

To meet this need, the U.S. will require a diverse set of energy resources and technologies to maintain its edge amidst intensifying global AI competition with far reaching implications for national security and sustained economic prosperity. And the data center industry is playing its part by accelerating commercialization of new technologies like advanced nuclear, enhanced geothermal, and carbon capture and investing in the expansion of existing generation resources. Supporting this growing electricity demand through timely and prudent investments in new generation, transmission, and distribution infrastructure is essential to the nation's economic growth, competitiveness, and national security.

Data centers also contribute to improving energy management and sustainability efforts across the economy. Advanced technologies including smart thermostats, optimized EV charging, and dynamic line ratings all rely on data center infrastructure to support the efficiencies brought to the grid.

<sup>&</sup>lt;sup>20</sup> National Association of Manufacturers, "Response Comments in Docket ID: 240823-0225 before the National Telecommunications and Information Administration," November 4, 2024.

<sup>&</sup>lt;sup>21</sup> See Appendix C for detailed examples of the data center industry fueling economic growth across other sectors.

<sup>&</sup>lt;sup>22</sup> McKinsey, "How data centers and the energy sector can sate AI's hunger for power," September 17, 2024.

While much focus is placed on the industry's overall growth and energy consumption, data centers themselves are also highly efficient facilities compared with smaller on-premise data centers maintained by individual companies and organizations, aggregating computing power that would otherwise be dispersed across numerous less efficient systems. This centralization has allowed data centers to leverage innovations in design, technology, and operations, which has resulted in significant energy efficiency gains across the economy. For example, despite a nearly sixfold increase in computing output between 2010 and 2018, energy consumption at data centers increased by just 6 percent.<sup>23</sup>

DCC is actively engaged with energy stakeholders nationwide and we support greater communication, collaboration, and transparency in planning for future load growth. DCC members are committed to paying their full cost of service for power generation, distribution, and transmission. In fact, a recent report from Virginia's Joint Legislative Audit and Review Commission (JLARC) confirms that data centers in Virginia, the world's largest market, are currently paying their full cost of service for the energy they use.<sup>24</sup>

## Barriers to Data Center Development and Actions for the Federal Government to Consider

By proactively removing barriers to deployment, the federal government can play a pivotal role in supporting this critical sector, fostering economic growth, and maintaining our competitive edge against foreign adversaries. DCC stands ready to work with the Subcommittee and members of Congress to pass impactful legislation to drive this industry forward.

Ensuring timely access to reliable energy. The data center industry's greatest challenge is timely access to reliable energy. American energy policy can unleash manufacturing and growth in data centers by promoting robust transmission planning, faster interconnection processes, innovative commercial arrangements, and faster generation deployment.

Transmission and generation constraints across the country are restricting economic growth, including data center development, and part of that constraint comes from permitting delays. The federal government must play a critical leadership role in ensuring the nation has sufficient energy capacity to power America's growing economy, including additional transmission lines, energy generation, and the deployment of new technologies. DCC supports congressional and administrative action on comprehensive permitting reform including expanding NEPA reform, preventing protracted timelines in judicial review, and streamlining interstate transmission and nuclear permitting.

**Critical equipment and supply chain constraints.** Major sectors of the U.S. economy are experiencing shortages and delays with delivery of capital equipment, especially power

<sup>&</sup>lt;sup>23</sup> Lawrence Berkeley National Lab, "<u>Recalibrating global data center energy-use estimates</u>," *Science Magazine*, March 2020

<sup>&</sup>lt;sup>24</sup> Joint Legislative Audit and Review Commission, "Report to the Governor and the General Assembly of Virginia: Data Centers in Virginia, 2024," December 9, 2024.

generation and distribution equipment, and materials. As noted by Building Design + Construction, some data center equipment has lead times of more than two years, while other equipment and basic building supplies are scarce. When digital infrastructure is needed immediately to support critical functions like banking, healthcare, national security, and AI, these delays could impact new data center development in the U.S. Efforts are underway to reshore data center equipment manufacturing in the U.S., but these will not be realized until 2026-27. DCC members report broad challenges in procuring critical data center equipment, along with lengthening lead-times for delivery. Shortages are commensurate with general industry demand, leading to demand spikes across all data center operators, including hyperscalers. DCC supports congressional and administrative actions to expand domestic capacity of critical electric and data center equipment, establishment of a strategic transformer reserve, and standardization and complexity reduction for critical equipment including transformers.

Workforce challenges. Worker shortages in the data center industry are commonplace already. As data centers expand from traditional mature markets such as Northern Virginia to emerging markets across the country, workforce shortages are amplified by a mismatch between the existing skills in those communities and the skills necessary for data center-related operations and trades positions. DCC supports the creation of national technology hubs, training veterans for jobs in the data center industry, and expanding and strengthening data center education programs, including programs at community colleges and historically black colleges and universities.

Risk allocation between energy customers and energy suppliers. Data center development is a growth opportunity for utilities, since serving data centers can represent a substantial increase in their assets and rate base. Increasingly, utilities are also concerned about managing uncertainty risk associated with building out generation and grid capacity required to serve large load customers, such as data centers. Some utilities are requiring substantial financial assurance requirements from new large load customers that tie up large amounts of capital and credit for extended periods of time, chilling investment in some markets and stranding capital that would otherwise support investment in additional data centers and markets. Congress and the administration should explore mechanisms or programs that can provide utilities with certainty when building out required power generation, optimizing existing grid capacity, and developing new grid capacity.

### **Conclusion**

Data centers are vital to enabling critical and emerging technologies like AI that are essential to U.S. national security, international competitiveness, and economic prosperity. Building new data centers is mission-critical to maintaining America's competitive edge and leadership in AI–but

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<sup>&</sup>lt;sup>25</sup> Building Design + Construction, "10 biggest impacts to the data center market in 2024-2025," October 1, 2024.

<sup>&</sup>lt;sup>26</sup> JLL, "North America Data Center Report: Year-end 2024."

the industry's ability to grow is currently hampered by power constraints, workforce shortages, supply chain bottlenecks, and regulatory inflexibility. Near-term solutions are needed to bridge that gap and ensure the U.S. continues to lead in the development of new digital infrastructure. With proactive and timely action, the federal government can play a pivotal role in supporting this critical sector, fostering economic growth, and maintaining our competitive edge against foreign adversaries.

DCC thanks the Subcommittee for its leadership in promoting a strong data center and AI ecosystem here in the U.S. and holding this timely hearing. We look forward to a continued collaboration and dialogue with Congress and the Trump Administration to ensure the U.S. continues its dominance in the digital economy by building out the infrastructure that enables it.

# **Appendix A: Types of Data Centers**

Data centers vary in size, purpose, and business model, and support various and distinct computer workloads, including cloud, AI, and application-specific deployments.

Single Occupant Data Centers: These facilities are typically either owner occupied or owned by a data center provider and leased to a single tenant. Owner occupied data centers are usually custom designed to the occupant's unique engineering requirements. When the owner and occupant of a single tenant data center are different entities, the data center provider can build to suit based on a tenant's requirements or utilize a provider's standard basis of design. Either the tenant or the provider may operate the building. The purposes of these data centers is generally cloud infrastructure – including application infrastructure (e.g., search, streaming, banking, social media), AI training infrastructure (creation), or AI inference (use) infrastructure.

<u>Multi-Tenant Data Centers:</u> These facilities are owned and operated by a data center company and are leased and occupied by multiple tenants representing a variety of customer types. Some of these facilities have hundreds of tenants with small capacity needs, while others have a few tenants with larger capacity needs.

Increasingly, data centers are being built in a campus style with multiple buildings. The purpose and value of a data center campus is the economy of scale for power, water, network, and other supporting infrastructure, as well as the opportunity for future expansion. Campuses are either owner occupied or owned by a data center provider and occupied by one or more tenants.

<u>Edge Data Centers</u>: Edge data centers are smaller facilities located as close to the end user as possible, typically used to support Internet of Things and other low latency demands. Use cases for edge data centers include agriculture, banking, defense, health care, smart factory applications, and mining.<sup>27</sup>

<sup>&</sup>lt;sup>27</sup> PwC, "Edge data centers: how to participate in the coming boom."

# **Appendix B: DCC Members Announced Investments in America**

DCC member companies are investing billions of dollars in the United States to meet the demand for digital infrastructure. Some recent examples of publicly announced significant capital investments across the country include:

- Amazon—\$11 billion AI and cloud data center investment in Georgia, \$10 billion digital infrastructure investment in Ohio, \$10 billion in two data centers in Mississippi, and \$11 billion in new data centers in Indiana.
- Cologix-\$7 billion data center campus in Licking County, Ohio
- Compass Datacenters—\$10 billion hyperscale data center campus in Meridian, Mississippi
- Crusoe-\$3.4 billion AI infrastructure project in Abilene, Texas
- Equinix–\$15 billion to expand hyperscale data centers in the U.S.
- Google-\$2 billion data center in Fort Wayne, Indiana
- Meta-\$10 billion AI data center development in Richland Parish, Louisiana
- Microsoft–\$80 billion planned in total AI infrastructure investment in FY2025
- QTS-\$750 million data center campus in Cedar Rapids, Iowa
- STACK Infrastructure—\$4 billion for data centers in Virginia and Oregon
- Vantage Data Centers—\$2 billion investment in hyperscale digital infrastructure in Ohio

# **Appendix C: Ecosystem Partners**

The data center industry is a catalyst for economic growth in several industries throughout its supply chain. For example, **SteelFab**, one of the nation's premier fabricators of steel for data center projects, has successfully completed more than 330 data centers in 24 states and counting.<sup>28</sup> **Munters Corporation** in Virginia recently announced an investment of \$29.95 million to build a 200,000-square-foot expansion to support its ongoing HVAC manufacturing activities for the data center industry.<sup>29</sup>

In Ohio, **Vertiv** makes cooling and distribution systems for data centers, and, as a result, has seen its business grow into one of central Ohio's most valuable companies.<sup>30</sup> Across America, Clayco, a construction company, has 57 active data center projects with the largest hyperscale and tech companies. In 2024 alone, data center projects generated \$3.6 billion in revenue—this was half of Clayco's total revenue in 2024 and more than double the revenue they generated from data center construction in 2023.<sup>31</sup>

In 2024, **Schneider Electric** built an integration facility in Red Oak, Texas campus to support increasing demand for prefabricated modular data centers. Schneider Electric's 105,000 sq foot facility supports over 200 jobs and will allow the company to expedite delivery of standardized infrastructure to customers nationwide and reduce production costs.<sup>32</sup>

Beyond companies working on data center inputs, the data center industry supports a vast ecosystem of companies that give back to and strengthen local communities. One of those companies is **AMERI-CANS**,<sup>33</sup> a veteran-owned portable sanitation company that's been a key partner to Virginia's data center industry. AMERI-CANS is creating quality jobs for Virginians and has contributed over \$500,000 to charities supporting veterans and their families.

In a recent op-ed in The Columbus Dispatch,<sup>34</sup> Bryan Stewart, president and CEO of the **Superior Group**, an electrical construction, engineering and technology services company headquartered in Columbus, Ohio, talked about the benefits of the data center industry. He points out that data centers in Central Ohio are a major source of employment, supporting over 10,000 construction jobs, 2,000 data center operations jobs, and hundreds of maintenance and retrofitting jobs this year alone. Additionally, these are high-paying, permanent jobs. For

<sup>&</sup>lt;sup>28</sup> SteelFab, "Data Center Projects."

<sup>&</sup>lt;sup>29</sup> Governor of Virginia, "Munters to Expand Manufacturing Facility in Botetourt County," March 25, 2025.

<sup>&</sup>lt;sup>30</sup> The Columbus Dispatch, "<u>How Vertiv grew from a small refrigeration shop to one of central Ohio's largest companies</u>," February 16, 2025.

<sup>&</sup>lt;sup>31</sup> Utility Dive, "New Clayco CEO expects data center boom to thrive," January 23, 2025.

<sup>&</sup>lt;sup>32</sup> Schneider Electric, "Schneider Electric Opens Data Center Integration Facility in Red Oak, TX," June 20, 2024.

<sup>&</sup>lt;sup>33</sup> Virginia Connects, Virginia's Data Centers - Supporting Local Business.

<sup>&</sup>lt;sup>34</sup> The Columbus Dispatch, "Ohio is at an inflection point. We must improve energy grid for data centers," September 5, 2024.

example, Amazon Web Services has been creating such jobs in Ohio since 2015. A journeyman electrician earns an average of \$134,000 annually in compensation and benefits.