

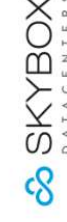


Data Centers:

Powering the Internet & our Modern Economy

May 5, 2026

Data Center Owner/Operator Members



Large End User Members

ANTHROPIC  CoreWeave  OpenAI

Associate Members (Pre-Operational)

 Beale Infrastructure  CleanArc™ DATA CENTERS  FLEET DATA CENTERS  MONTERA INFRASTRUCTURE

Industry Advisory Council

 ALL4  CATERPILLAR®  CLAYCO THE ART & SCIENCE OF BUILDING  CLUNE CONSTRUCTION  Eaton *Powering Business Worldwide*  HOLDER  Johnson Controls  MCCARTHY®  PCI mission critical  RYAN  Schneider Electric *Life is On*  VERTIV™

2 Main Types of Data Centers

Self-Perform / Enterprise

Business owns/controls servers and peripherals, may own facility

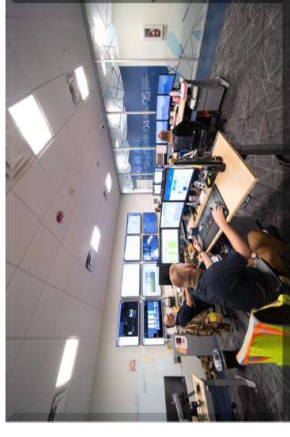
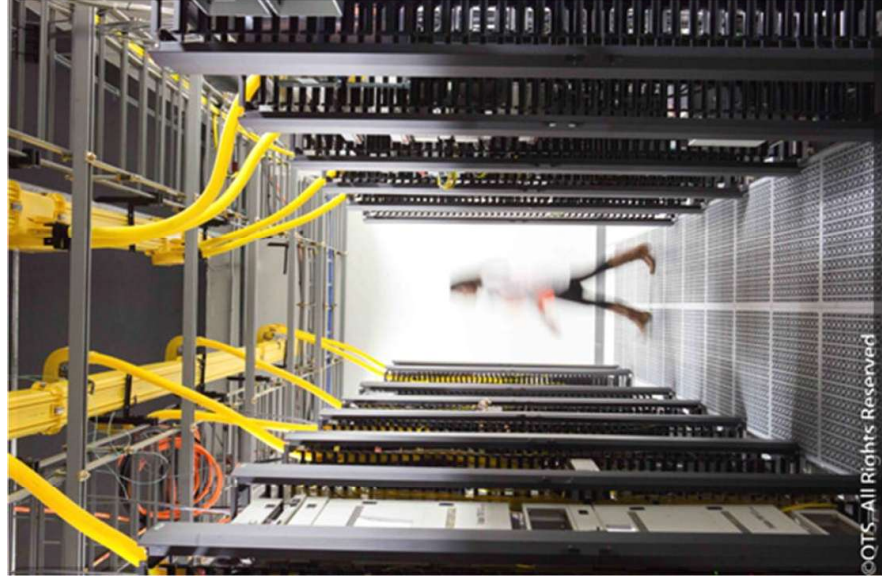
Multitenant and Build to Suit

Facility owner leases to one or more tenants

Inside a Data Center



- ▶ Building Shell
- ▶ Interior Space
- ▶ Security
 - ▶ Exterior
 - ▶ Interior
 - ▶ Cyber
- ▶ Servers



- ▶ Fiber/Networking Connectivity
- ▶ Reliable Power 24/7
 - ▶ Grid & Backup Generation
- ▶ HVAC/Cooling



Data Centers Are Highly Efficient Consumers of Energy



ENERGY

Recalibrating global data center energy-use estimates

Growth in energy use has slowed owing to efficiency gains that smart policies can help maintain in the near term

- ▶ “In 2010, the researchers estimated that **79 percent of data center computing was done in smaller traditional computer centers**, largely owned and run by non-tech companies.”
- ▶ “By 2018, **89 percent of data center computing took place in larger, utility-style cloud data centers.**”
- ▶ A 2020 study of data centers globally found that while their **computing output jumped 550% from 2010 to 2018**, their **energy consumption rose only 6%.**

Increasing Data Center Demand

- In the US 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, according to McKinsey & Company.
- The United States accounts for roughly **40 percent** of the global market.

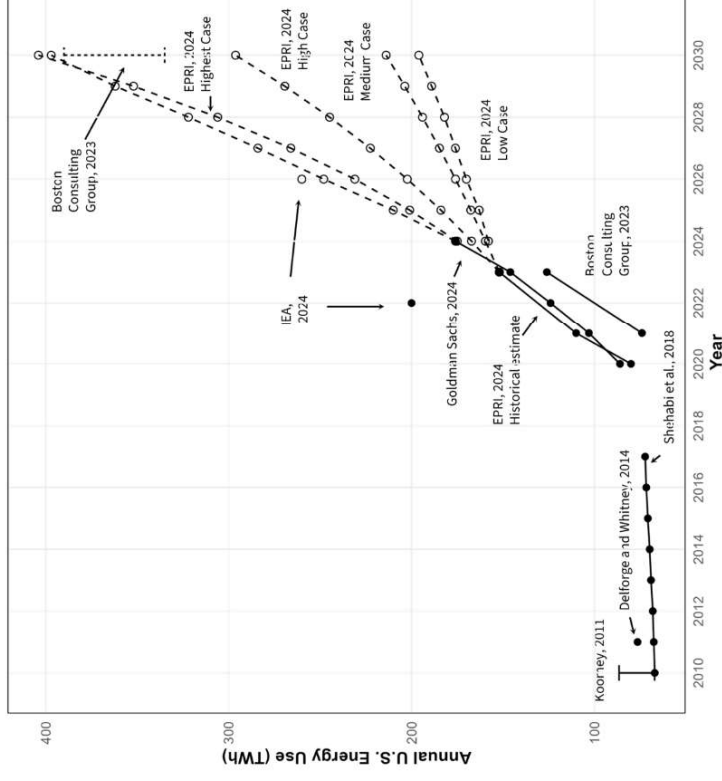


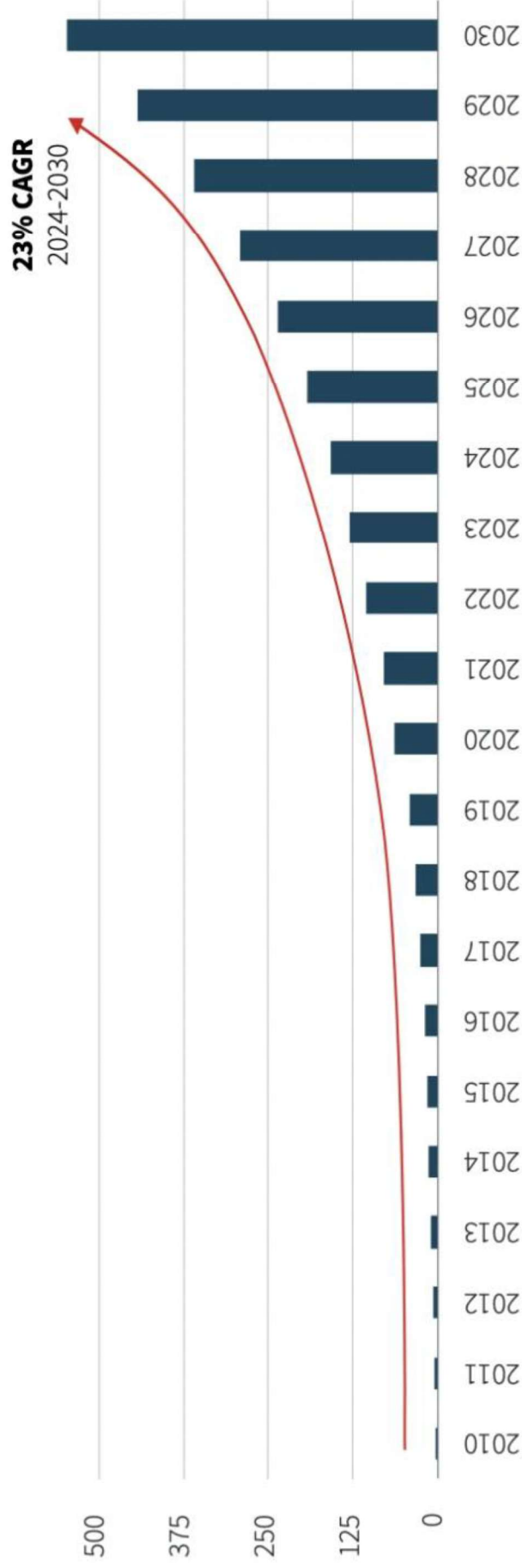
Figure 1.1. Academic and industry historical estimates of U.S. data center energy use.

Source: McKinsey & Company, "How data centers and the energy sector can satiate AI's hunger for power", September 17, 2024, <https://www.mckinsey.com/industries/private-capital/our-insights/how-data-centers-and-the-energy-sector-can-sate-ais-hunger-for-power>

Image Source: Lawrence Berkeley National Laboratory, 2024 United States Data Center Energy Usage Report, December 2024, <https://escholarship.org/uc/item/32d6m0d1>

What Drives Data Center Demand?

Global data created annually in zettabytes



Source: JLL Research, IDC



Source: Urban Land. Nuclear Power Makes a Comeback as Data Centers Adapt to Rising Power Demands, October 14, 2024. <https://urbanland.uli.org/resilience-and-sustainability/nuclear-power-makes-a-comeback-as-data-centers-adapt-to-rising-power-demands>

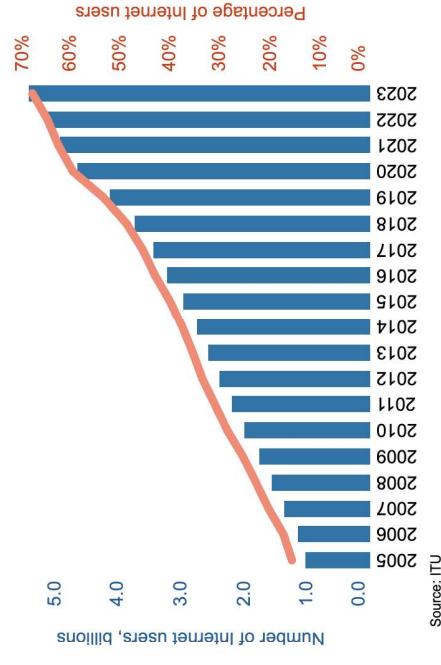
Number of People/Devices Drives Data Center Demand

"The data center industry has experienced explosive growth over the past decade, driven by ever-increasing demand for cloud services and the expanding use of web-enabled devices globally. [...] **In the next five years, consumers and businesses will generate twice as much data as all the data created over the past 10 years.**"

- JLL, *Data Centers 2024 Global Outlook*

More People Are Getting Online

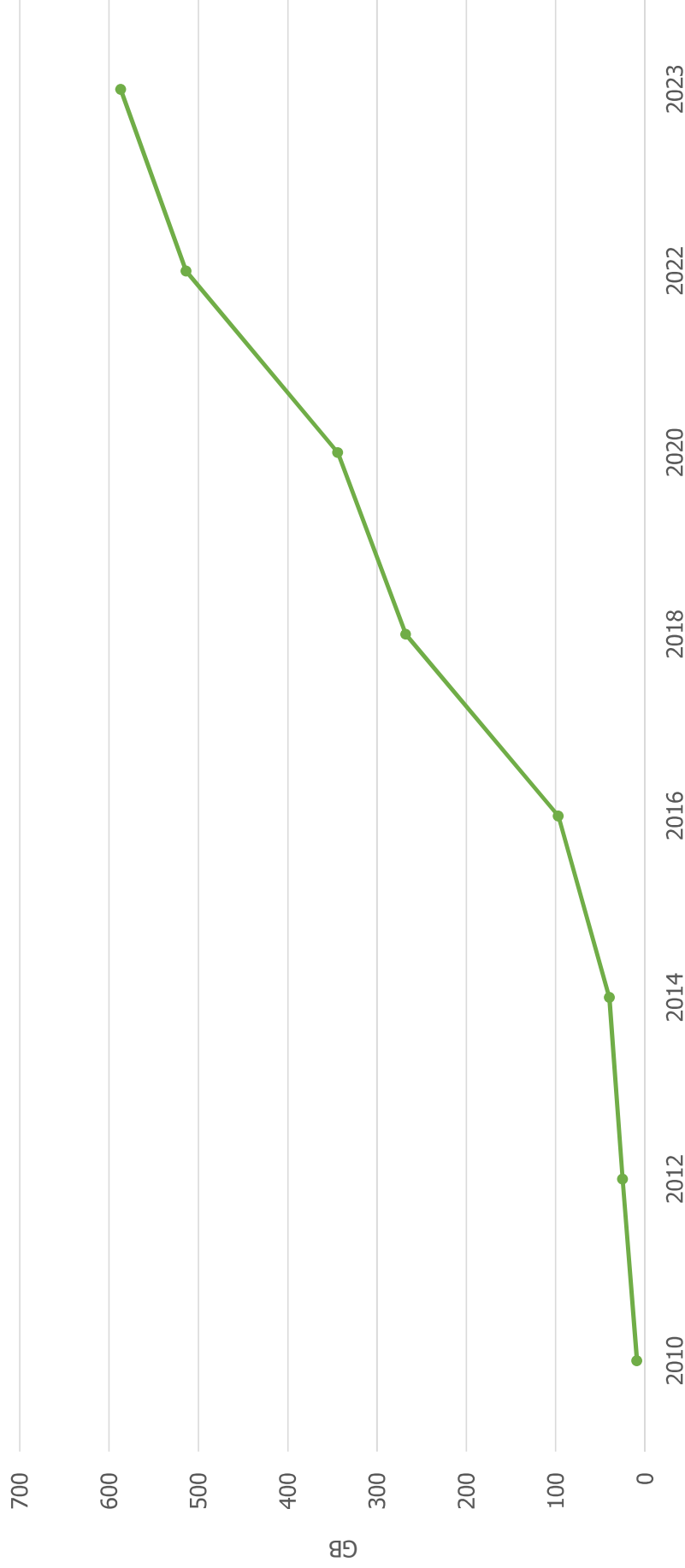
- ▶ Approximately 5.4 billion people - or 67% of the global population - are online today. This represents an **increase of 45% since 2018**. 2.6 billion people are not yet connected to the internet.
- ▶ On average, U.S. households have a total of **21 connected devices**.



Sources: JLL, *Data Centers 2024 Global Outlook*, <https://www.us.jll.com/content/dam/jll-com/documents/pdf/research/global/jll-data-center-outlook-global-2024.pdf>
International Telecommunication Union, <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>
Deloitte "Shiny new devices may be bringing joy, but who's protecting consumer data?", January 23, 2023 <https://www2.deloitte.com/us/en/insights/industry/technology/consumer-data-privacy.html>

Home Internet Use Drives Data Center Demand

Average Monthly Household Broadband Consumption



— New Products / Experiences / Applications Drive Demand —

- ▶ Cloud Services
- ▶ Generative AI
- ▶ Business Apps
- ▶ Healthcare
- ▶ Internet of Things/Connected Devices
- ▶ Streaming Video

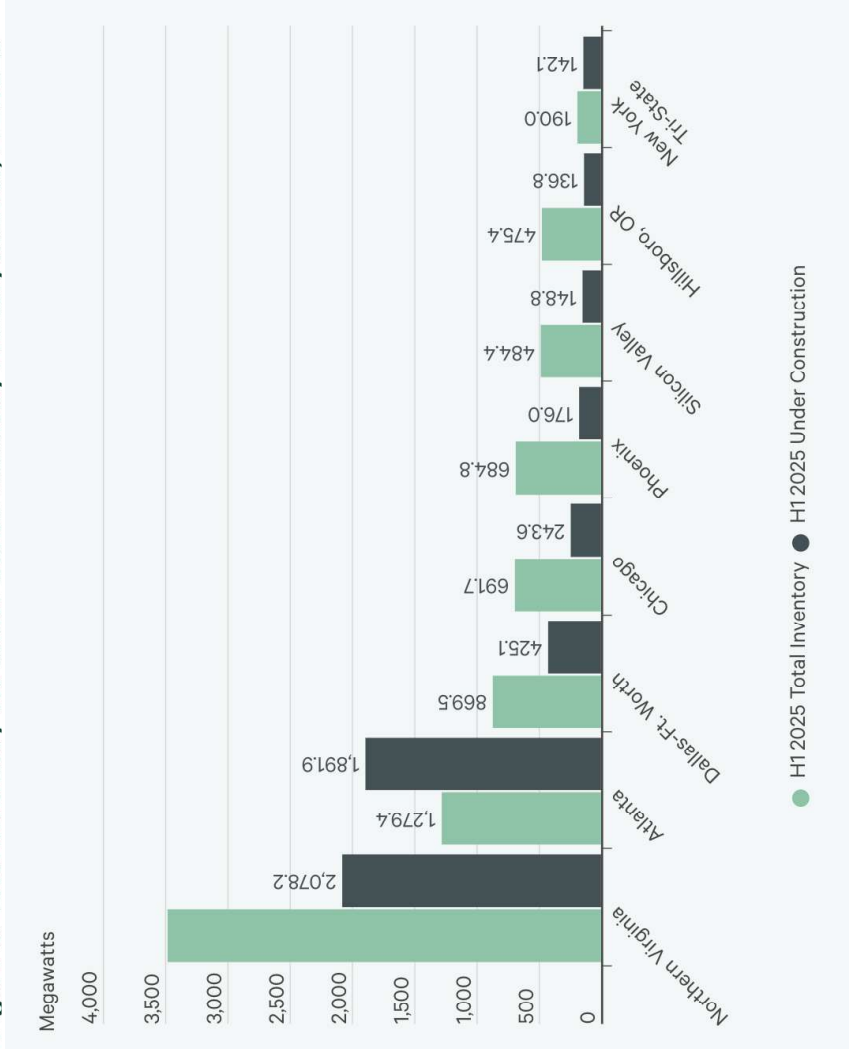
- ▶ Virtual/Augmented Reality
- ▶ eCommerce
- ▶ Machine Learning
- ▶ Payment Processing
- ▶ Online Learning
- ▶ Autonomous Vehicles
- ▶ Innovation!

Key Siting Considerations Include

- Time to Market
- Access to Fiber/Connectivity
- Access to Water for Industrial Purposes
- Access to Clean, Reliable, Affordable Energy
- Climate and Risk of Natural Disaster
- Land Availability and Cost
- Tax and Regulatory Climate
- Ownership/Occupancy Costs
- Access to Skilled Construction and Technology Workforce

Data Center Trends

Figure 6: Total Inventory vs. Under Construction by Primary Market, H1 2025

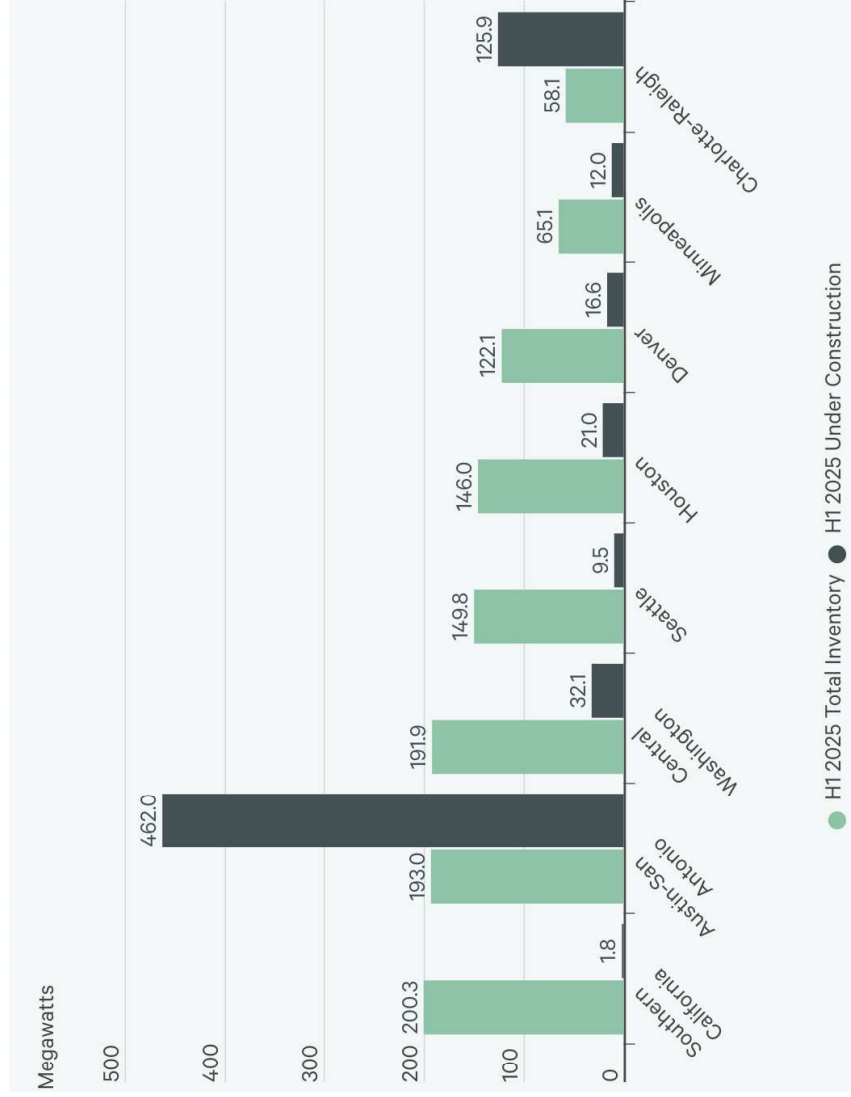


Source: CBRE Research, CBRE Data Center Solutions, H1 2025.

Source: CBRE, North America Data Center Trends H1 2025, September 8, 2025, <https://www.cbre.com/insights/reports/north-america-data-center-trends-h1-2025>

Data Center Trends

Figure 7: Total Inventory vs. Under Construction by Secondary Market, H1 2025

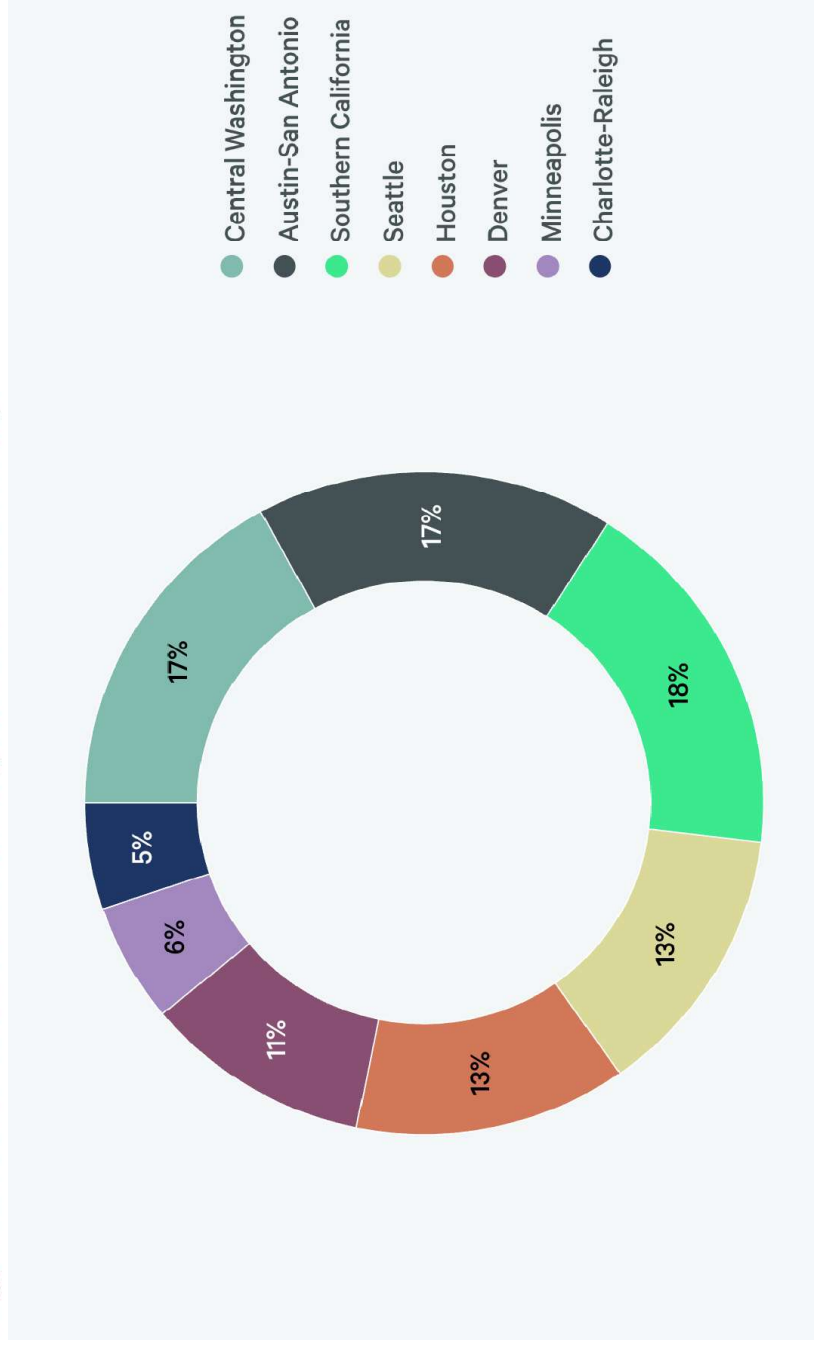


Source: CBRE Research, CBRE Data Center Solutions, H1 2025.



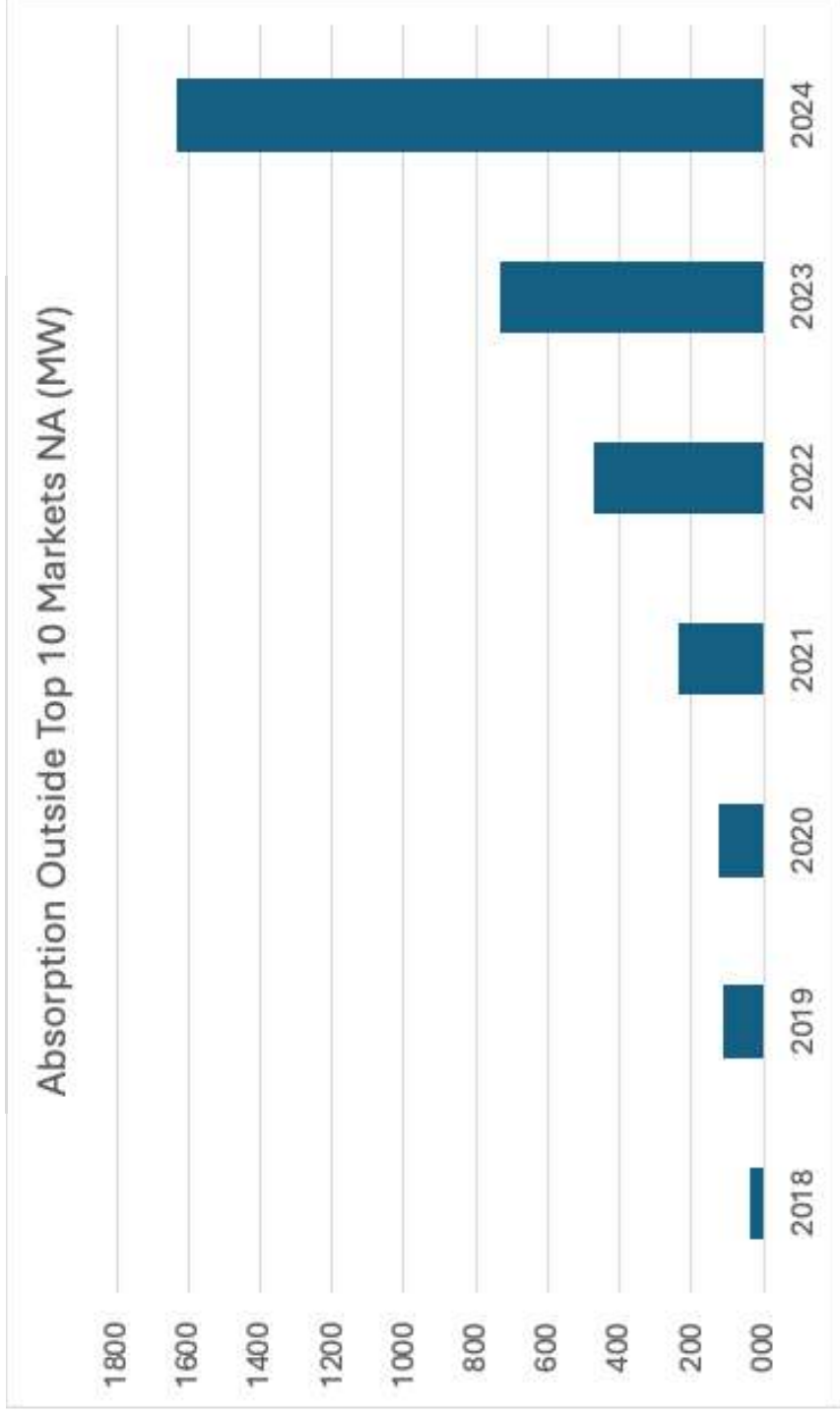
Data Center Trends

Figure 3: % of Total Secondary Market Inventory



Source: CBRE Research, CBRE Data Center Solutions, H1 2025.

Data Center Trends

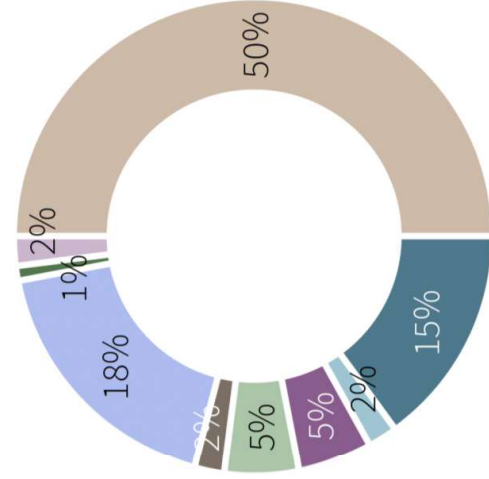


Source: *datacenterhawk*, <https://datacenterhawk.com/>

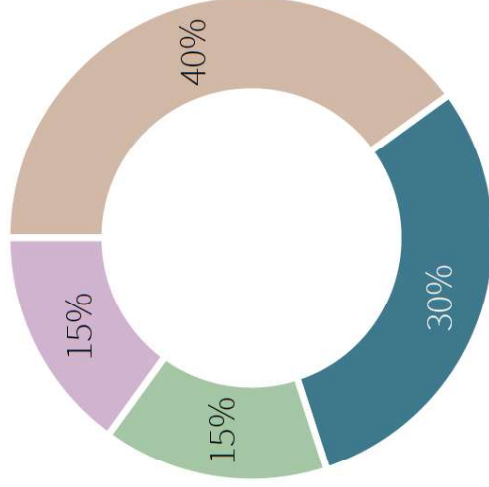
Data Center Trends

User Demand by Industry Varies Across Markets

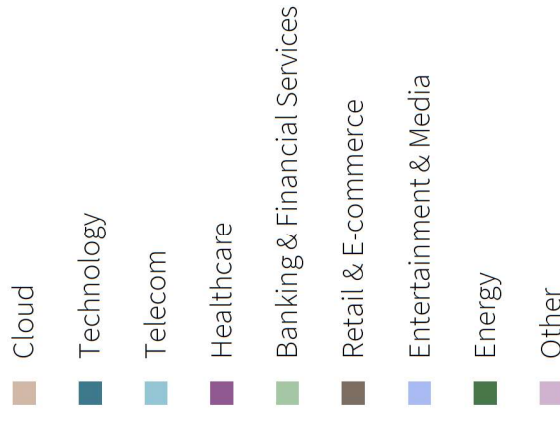
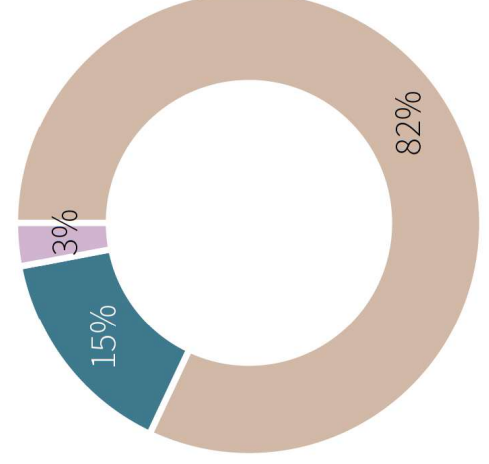
Phoenix



Dallas-Fort Worth



Northern Virginia



Why Data Centers?

- Tremendous Capital Investment
- Big Driver of Tax Revenue
- High Wage Jobs, Low Demand on Services
- Substantial Construction Jobs and Activity
- Building and Strengthening Tech Ecosystem
- Catalyst for Clean Energy Development

U.S. Data Center Industry

Jobs

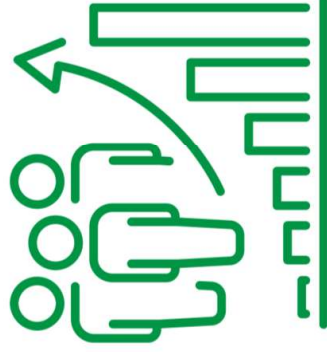
- **603,900 direct jobs** in 2023—51% increase from 2017
- **4.7 million in total employment** in 2023—60% increase from 2017
- **\$404 billion in total labor income** in 2023—93% increase from 2017

GDP

- **\$3.5 trillion in GDP impact** between 2017-2023

Taxes – Federal, State, and Local

- **\$162.7 billion in total impact** in 2023 - 146% increase from 2017



Texas Data Center Industry

Jobs

- 2023 **direct** employment: **61,060**
- 2023 **total** (direct, indirect, and induced) employment: **363,820**

Labor Income

- 2023 **total** (direct, indirect, and induced) labor income: **\$30.2 billion**

GDP and Taxes Impact

- **\$52.6 billion** (direct, indirect, and induced) to Texas GDP in 2023
 - **9% increase** since 2022
- **\$3.5 billion** (direct, indirect, and induced) in state and local tax revenues in 2023



Texas Data Center Industry

Table 2. Fiscal Impacts of Data Centers in 2024 (millions)¹⁷

	Greater Austin	Dallas-Fort Worth Metroplex	Greater Houston	Greater San Antonio	Other Areas	Statewide
School Property Taxes Recaptured by the State	\$10.1	\$345.3	\$63.7	\$0.0	\$0.0	\$419.1
State's Share of Sales and Use Tax on Tangible Personal Property	\$38.5	\$537.3	\$181.4	\$32.7	\$0.3	\$790.2
State's Share of Sales and Use Tax on Electricity	\$2.2	\$20.5	\$5.0	\$2.4	\$0.2	\$30.3
State Tax Revenue from Operational Purchases by Data Centers	\$10.1	\$126.9	\$50.0	\$18.2	\$34.8	\$240.0
State Franchise Tax Revenue from Data Centers	\$6.4	\$81.7	\$25.9	\$11.6	\$6.1	\$131.7
TOTAL STATE REVENUE	\$67.3	\$1,111.7	\$326.0	\$64.9	\$41.4	\$1,611.3

	Greater Austin	Dallas-Fort Worth Metroplex	Greater Houston	Greater San Antonio	Other Areas	Statewide
Local Non-School Property Tax Revenue	\$29.0	\$476.2	\$168.6	\$64.0	\$47.1	\$784.9
Local School Property Taxes Kept Locally	\$16.9	\$78.0	\$78.6	\$52.8	\$14.4	\$240.7
Local Governments' Share of Sales and Use Tax on Tangible Personal Property	\$16.4	\$229.3	\$77.4	\$14.0	\$0.0	\$337.1
Local Governments' Share of Sales and Use Tax on Electricity	\$0.9	\$8.7	\$2.2	\$1.0	\$0.2	\$12.9
Local Tax Revenue from Operational Purchases by Data Centers	\$9.9	\$116.1	\$50.9	\$15.8	\$29.2	\$221.9
TOTAL LOCAL REVENUE	\$73.1	\$908.3	\$377.6	\$147.6	\$90.9	\$1,597.5



Source: Mangum Economics, "Texas State and Local Tax Revenues from Data Centers," February 2025

Texas Data Center Industry

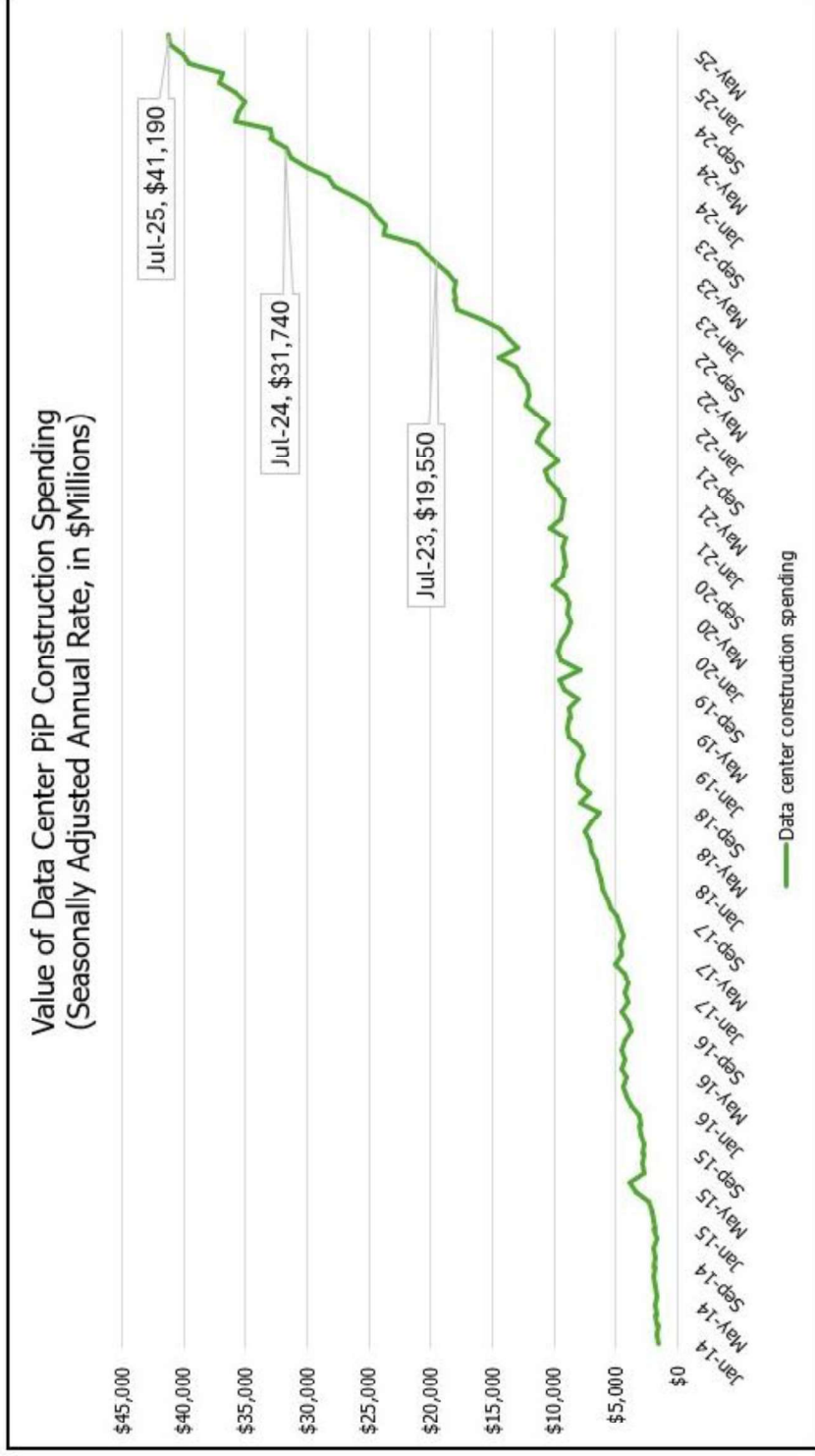
Table 4. Local Fiscal Impacts of Additional Data Center Development (in millions)⁴²

	Greater Austin	Dallas-Fort Worth Metroplex	Greater Houston	Greater San Antonio	Abilene MSA	Killeen-Temple MSA	Wichita Falls MSA	Other Areas	Statewide
Non-School Property Tax Revenue	\$324.6	\$832.7	\$48.1	\$347.5	\$266.7	\$66.6	\$15.1	\$104.1	\$2,005.4
School Property Taxes Kept Locally	\$74.6	\$287.2	\$77.9*	\$262.1*	\$216.4*	\$84.6*	\$14.5*	\$286.2	\$1,303.5**
Sales and Use Tax on Tangible Personal Property	\$123.4	\$367.4	\$43.8	\$119.7	\$101.0	\$0.8	\$2.9	\$0.5	\$759.5
Sales and Use Tax on Electricity	\$15.4	\$42.1	\$5.1	\$13.9	\$12.8	\$0.1	\$1.7	\$7.0	\$98.1
Tax Revenue from Operational Purchases by Data Centers	\$99.9	\$317.3	\$87.1	\$98.1	\$7.6	\$8.7	\$1.9	\$121.2	\$741.8
ANNUAL TOTAL REVENUE ON ADDITIONAL DATA CENTERS	\$637.9	\$1,846.7	\$262.0	\$841.3	\$604.5	\$160.8	\$36.1	\$519.0	\$4,908.3

* The development planned for these areas is in ISDs that have not had recapture in fiscal year 2023-2024, so we do not estimate recaptured revenue for the planned development. However, it is very possible that some of the new school revenue provided by data centers in these areas will be recaptured.

** If the State of Texas recaptures some of the revenue provided by the new data center development, then this is an overestimate of the likely local revenue from the new data center development.

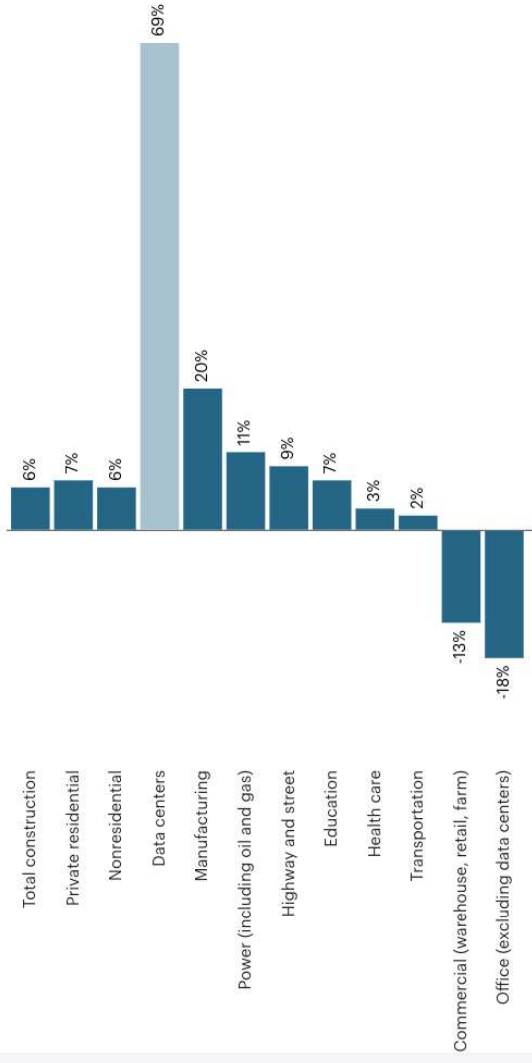
Data Center Trends



Data Center Trends

CHANGE IN U.S. CONSTRUCTION SPENDING, MAY 2023–MAY 2024

The year-over-year percentage change in U.S. construction spending in current dollars, seasonally adjusted.



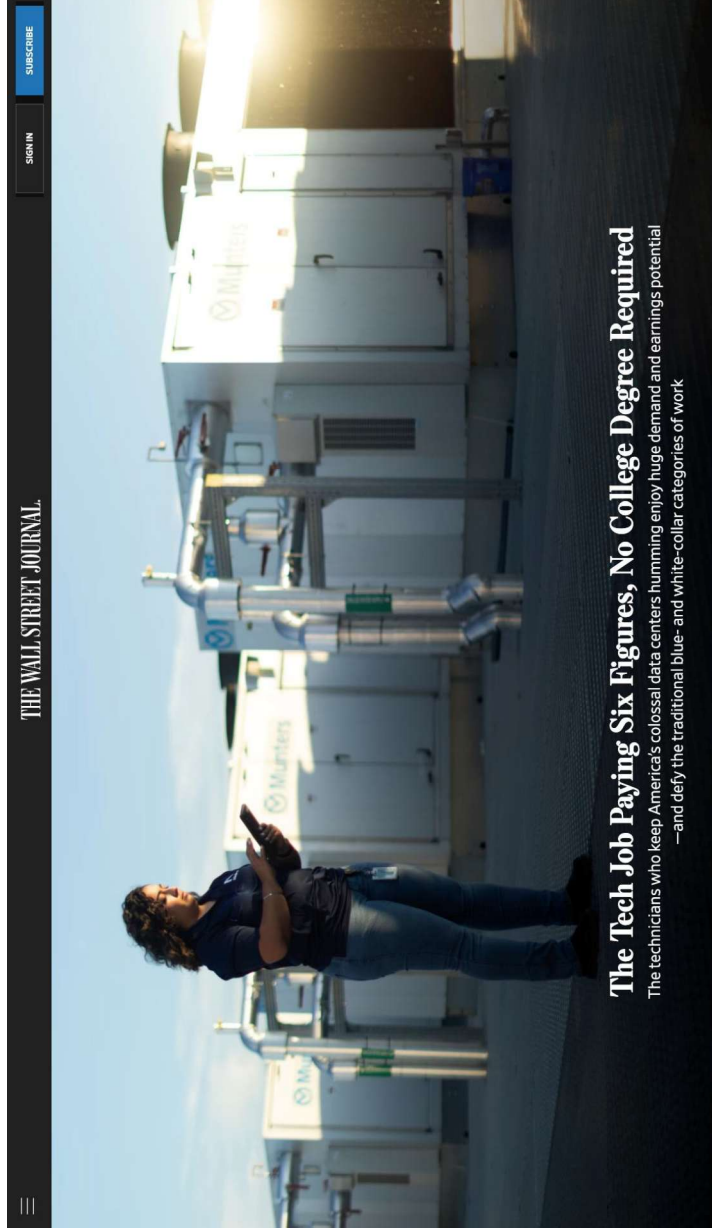
Source: Associated General Contractors of America, July 2024 report

THE BUSINESS JOURNALS



Source: Atlanta Business Chronicle, \$1B data centers adds to growing list of massive projects; offsets construction slowdown, Oct. 4, 2024, <https://www.bizjournals.com/atlanta/news/2024/10/04/1b-data-center-pitched-for-coweta-county.html>

Data Center Industry Drives Job Creation & Workforce Development



THE WALL STREET JOURNAL

SIGN IN

SUBSCRIBE

The Tech Job Paying Six Figures, No College Degree Required

The technicians who keep America's colossal data centers humming enjoy huge demand and earnings potential —and defy the traditional blue- and white-collar categories of work

Deborah Martinez Castellanos checks out the rooftop chillers at the data center where she works to ensure they are functioning properly.

By [Te-Ping Chen](#) | [Photographs by Maansi Srivastava for WSJ](#)
Aug. 14, 2024 5:30 am ET

THE WALL STREET JOURNAL

BUSINESS

Data Centers Are a 'Gold Rush' for Construction Workers

Surging demand means six-figure pay and more perks

By [Te-Ping Chen](#) | [Follow](#)
Nov. 29, 2025 8:00 pm ET



Sources: [The Wall Street Journal](#), "[The Tech Job Paying Six Figures, No College Degree Required](#)", [Aug. 14, 2024](#) & [The Wall Street Journal](#), "[Data centers Are a 'Gold Rush' for Construction Workers](#)", [Nov. 29, 2025](#)

National Association of Manufacturers on Industry Support of Data Centers

Manufacturers' interest in the growth of data centers is threefold.

- Manufacturers build all of the physical inputs of data centers, from construction materials to electrical equipment to servers.
- With the digitalization of manufacturing, manufacturers are themselves increasingly dependent on a robust network of cutting-edge data centers for the smooth execution of their core business operations. AI, in particular, has become integral to modern manufacturing as it increasingly transforms and supports a multitude of aspects of manufacturing, from product design to shop floor operations to supply chain management.
- Manufacturers are reliant on the same energy sources as data centers to power their operations. As demand grows and supply remains relatively static, there is a pressing need to use all policy levers available to ensure sufficient, reliable and affordable energy for all users.

-National Association of Manufacturers filing with US Department of Commerce's National Telecommunications and Information Administration (NTIA), November 4, 2024



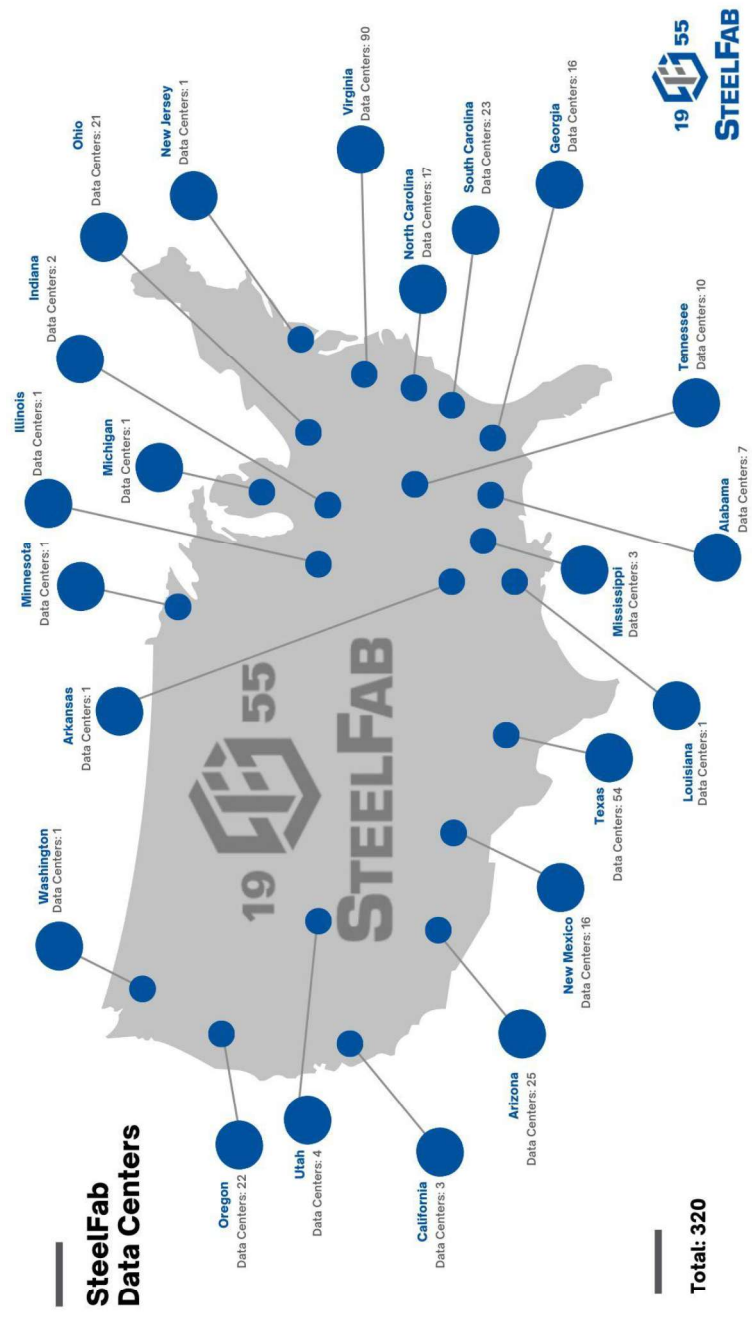
Data Center Ecosystems

Data centers establish and grow business ecosystems in every market where they operate.

19 55 STEELFAB

15 FABRICATION FACILITIES

- Roanoke, AL
- Dublin, GA
- Baltimore, MD
- Charlotte, NC
- Durant, OK
- Tangent, OR
- Flcrence, SC
- Rock Hill, SC
- York, SC
- Oakwood, TX
- Emporia, VA
- Fayetteville, NC
- Spokane, WA
- Chandler, AZ
- York, PA



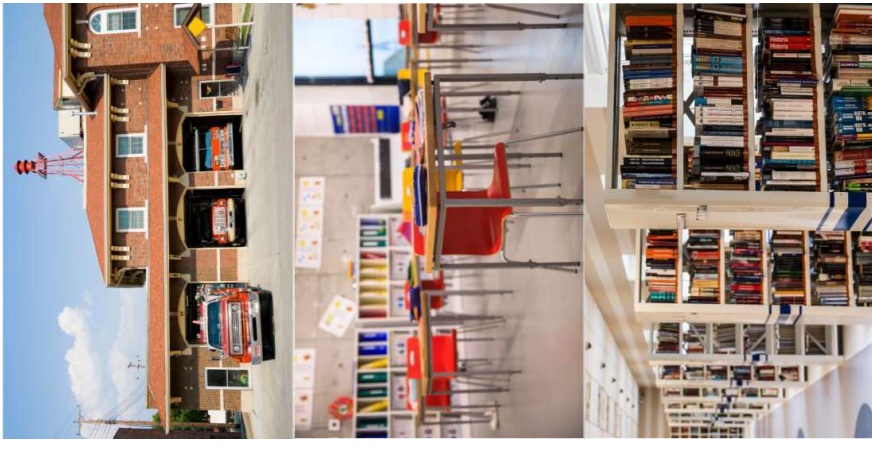
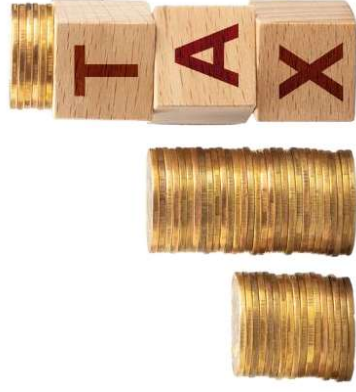
Source: SteelFab, <https://www.steel-fab-inc.com/project/data-centers/>

Data Center Tax Revenues Help Address Local Priorities

2022 Local Tax Benefit For Every
\$1 Spent on Local Services

Loudoun County → **\$26.00**

Prince William County → **\$13**



Data Center Tax Revenues Support Affordability

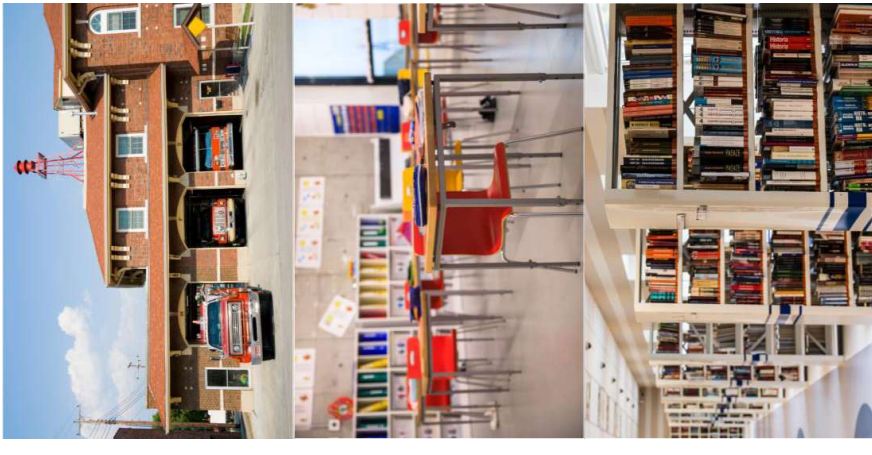
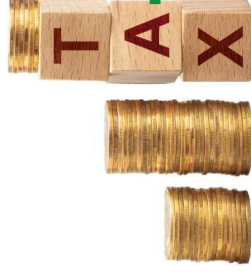
Loudoun County, Virginia:

- Condo owners will see the largest decrease in their tax bills with the average per unit bill seeing a \$141 difference. **Single-family attached homes will see an average decrease of \$112**, and single-family detached homes will see an average of \$8 in savings.
- The draft budget also includes a **67-cent reduction in the vehicle property tax rate**, bringing down the existing \$4.15 cent rate to \$3.48 cents.
- **The tax bill for a vehicle valued at \$20,000 would be \$134 less in fiscal year 2026** than it would be in fiscal year 2025 under the new rate.
- Hemstreet said the significant rate reductions are **only made possible by the “unprecedented” 50% increase in commercial property valuations attributable to the data center industry.**

Data Center Tax Revenues Help Address Local Priorities

Red Oak, Texas:

- To put it in perspective, with \$13 billion in data center investments already underway, and more in our development pipeline, **these facilities are set to quadruple our city's total taxable land value.**
- **Moreover, since most of the land on which these data centers are being built was previously tax-exempt, these investments have brought and continue to bring an increase to our city revenue.**
- **These new funds allow us to make meaningful investments, supporting education, strengthening public safety, expanding infrastructure and creating spaces for recreation and connection, all to enhance the quality of life for our residents.**



Data Centers and Water Use

Data centers are estimated to use approximately 39 billion gallons per year (BGY) of water in 2025.

That is compared to:

- **Utility water leakage: 2,500 BGY**
- 18% of municipal treated water is lost to leakage
- **Food and beverage industry: 533 BGY**
- **Semiconductor industry: 59 BGY**



According to the Joint Legislative Audit and Review Commission in Virginia, the world's largest data center market, **83% of data centers use as much, if not less, water than a large commercial office building.** The report also found data center water use in the state is sustainable.



Data Centers and Water Use

Cooling Types:

- Air cooling
- Liquid cooling
- Immersion cooling
- Evaporative cooling
- Hybrid cooling strategy

Local factors that may affect the type of cooling used:

- Humidity
- Climate/temperature
- Availability of water
 - Recycled
 - Non-potable
 - Harvested rainwater sources

Data Centers and Energy

CRAIN'S CHICAGO BUSINESS

Opinion: Data center growth fuels clean power and job creation. too

Clarion Ledger

Mississippi's proving data centers don't always mean higher power bills

The Economist

Americans' electricity bills are up.
Don't blame AI

Were it not for data centres, prices might be even higher

The Atlanta Journal-Constitution

BUSINESS

Georgia Power CEO teases plans to lower rates, touts data center expansion

The Washington Post

There's a reason electricity prices have been rising. And it's not data centers.

PBS NEWS HOUR

How data center power demand could help lower electricity prices

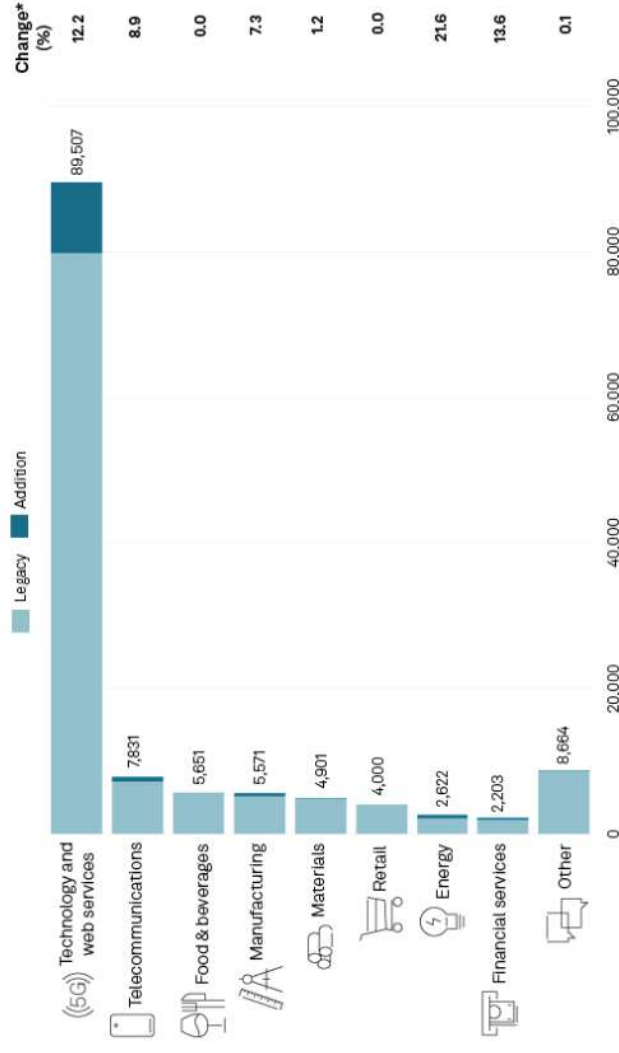
21 ALIVE

I&M to lower electric rates, citing revenue from data centers



Advancing Access to Clean Energy and Greening the Grid

Contracted US carbon-free energy capacity by sector (MW)



As of July 10, 2025.
 * From February 2025 to July 2025.
 Tracked carbon-free energy capacity contracted with US projects only. Includes totality of Microsoft-Brookfield deal pending further visibility into US and Europe breakout for contracted capacity.
 Cumulative capacity. All tracked deals.
 Analysis does not include most on-site corporate renewable capacity, such as rooftop solar systems.
 Legacy database adjusted based on availability of new information.
 Sources: S&P Global Market Intelligence; public reports.
 © 2025 S&P Global.



Source: S&P Global, Corporate-signed US clean energy surpasses 130 GW amid shifting policy support, July 30, 2025, <https://www.spglobal.com/market-intelligence/en/news-insights/research/corporate-signed-us-clean-energy-surpasses-130-gw-amid-shifting-policy-support>



Questions?