CoreSite
An American Tower Company

Data Center Myths Versus Facts

Busted! Five Myths That Don't Stand Up to the Facts

UNDERSTANDING THE FACTS ABOUT DATA CENTERS

Data centers often spark curiosity, and sometimes even confusion. While headlines can be bold and attention-grabbing, they don't always tell the full story. In reality, data centers are thoughtfully planned, closely regulated and built to support the digital experiences we rely on every day.

Here are a few important facts to keep in mind:

- **Data centers exist because consumers, businesses, governments and communities depend on "digital everything."**
- **The construction of data centers is subject to state and local zoning, environmental and other laws. State and local governments approve and oversee data center construction.**
- **Many state and local governments offer incentives to attract data centers in anticipation of long-term economic benefits like tax revenue and job creation.**
- **Data centers play a critical role in modern society, powering everything from online learning and healthcare to critical services such as 911 emergency response, suicide/help hotlines and cancer research.**

By sharing clear information and helpful context, we can replace misconceptions with understanding.

MYTH NO. 1

My individual digital footprint is insignificant and doesn't contribute to the rise in data centers.

Fact:

Everyday digital activity, when combined across millions of people around the world, creates the demand for data centers that keep our connected world running smoothly. The computing equipment contained in data centers requires power and cooling. Virtually all digital communications and interactions conducted by consumers, businesses and governments run through data centers. Our collective use of digital services includes:

- **Everyday personal activities such as shopping, banking, emailing, texting, social media scrolling, chat sessions, audio/video streaming, ChatGPT inquiries, GPS navigation and online education classes.**
- **Critical services such as 911 emergency response, suicide/help hotlines and cancer research.**
- **Personal and professional use of cloud computing such as online meetings via Zoom, storage of documents and photos, payment processing and gaming.**

DIGITAL IMPACT

4,900

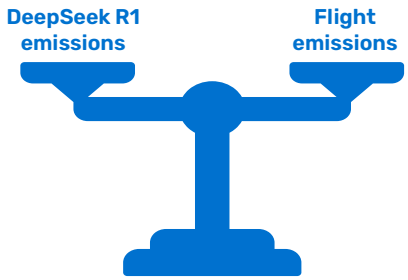
The average person has more than 4,900 daily digital data interactions.[1]

16.9 oz.

A 100-word email generated by ChatGPT using GPT-4 uses slightly more water than one 16.9-ounce bottle of water.[2]

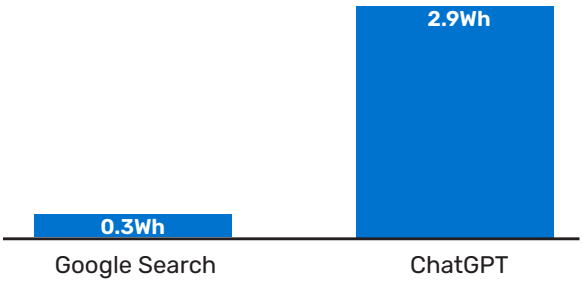
Fact:

Using the 70 billion-parameter reasoning model DeepSeek R1 to answer 500,000 questions would emit as much CO_2 as a round-trip flight from London to New York.[3]



Fact:

The average electricity demand of a typical Google search is 0.3 watt-hours of electricity and ChatGPT is 2.9 watt-hours per request — about 10 times more.[4]



Fact:

Leaving your camera off during a web call can reduce your environmental footprint in that meeting by 96%.[5]

MYTH NO. 2

Data center power usage increases community power rates.

Fact:

Energy rates are regulated. Having a data center in a community doesn't automatically increase the rates consumers pay. In some situations, data centers may help to stabilize or decrease community rates.

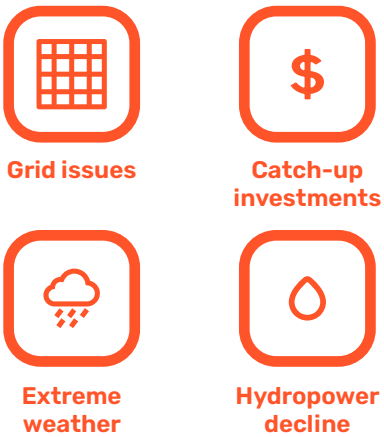
According to a former Environmental Protection Agency liaison to the data center industry, a Georgia plan to build new data centers is keeping electricity rates steady.[6] Some studies suggest that higher electricity demand can lower prices. One report points out that states with the highest load growth from 2019 to 2024 experienced reductions in real prices [average retail electricity prices], whereas states with contracting loads generally saw prices rise.[7]

COOLING AND POWER, CUSTOMIZED

CoreSite increases energy efficiency by following cooling best practices, managing airflow in real time and customizing power and cooling for its tenants.

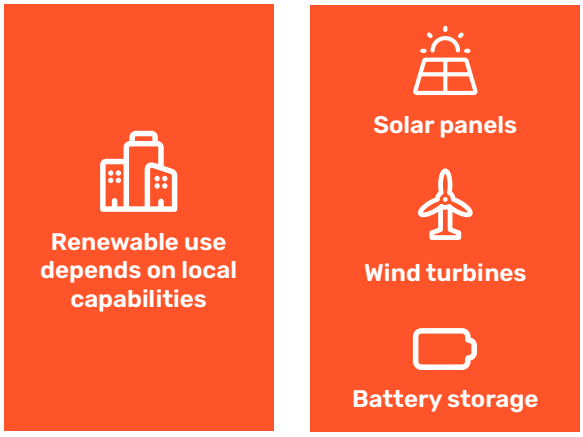
Fact:

Power rate increases can be caused by grid issues, catch-up investments in the grid and extreme weather events that affect supply. Hydropower generation declined in 2023, for example, due to weather impacts.[8]



Fact:

The use of renewable energy by data centers is dependent on the capabilities of local utility companies. Some data centers are exploring and implementing onsite power generation via solar, wind and battery storage, which bypass the local grid.



MYTH NO. 3

Data center water usage causes water shortages.

Fact:

Data centers do not get priority when it comes to water usage and obtain water from the utility the same way any other consumer obtains water. Water usage is planned and permitted. Typically, local water utility companies conduct studies before approving a volume so that the added volume won't stress the local system.

Fact:

A breakdown of U.S. water usage shows that data centers use a relatively small amount of the total water withdrawals. Water use per data center depends on the type of cooling technology, facility size, rack density, climate, location, reuse/recycling methods, regulations and permits.

For the years 2010 to 2020, the U.S. Geological Survey[9] found:

~0.02%

Daily data center water use of approximately 47.75 million gallons accounted for about 0.02% of U.S. daily water withdrawals.[10]

43%

Crop irrigation share of U.S. water withdrawals (2010–2020).

42.5%

Thermoelectric power share of U.S. water withdrawals.

14.5%

Public supply share of total water withdrawals, including homes, businesses, industry (like data centers) and public services.

NO INFRASTRUCTURE, NO REUSE

The use of recycled water requires the proper infrastructure to be built between water treatment plants and users.

Fact:

Causes of water shortages include weather, inadequate infrastructure, population increases and inefficient water use such as agricultural irrigation systems.

Fact:

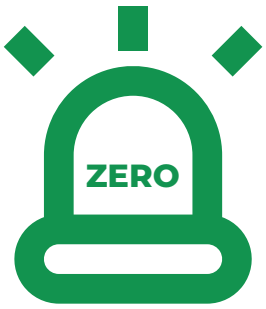
CoreSite follows best practices and best-in-class building design. We recirculate and resuse water for cooling whenever possible.

MYTH NO. 4

Noise affects people living nearby, causing health concerns.

Fact:

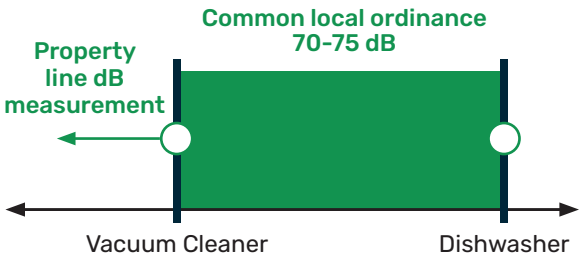
During many years of operation, CoreSite has received no noise violations related to the operation of its data centers.



Number of Noise Violations Across Years of Data Center Operation

Fact:

CoreSite conducts noise studies, even when they're not required by local government. Noise levels are measured at the property line to ensure they don't exceed the 70 to 75 decibel level, a common local ordinance. This level is like the sound of a vacuum cleaner or dishwasher.



WHAT DATA CENTERS DO FOR US AND THE ECONOMY

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- Protect the privacy of data within U.S. borders against cyber threats.
- Host critical infrastructure for emergency services.
- Support healthcare such as telehealth visits and records management.
- Enable banks and other financial entities to conduct daily operations.
- Support the development of emerging technology, much of which involves AI.
- Contribute to our competitiveness in the global economy.
- Provide access to supercomputer processing and secure cloud storage, leveling the field for small and large businesses.[11]

U.S. GDP growth in the first half of 2025 was almost entirely driven by investment in data centers and information processing technology.[12]

Fact:

CoreSite locates and positions equipment to minimize noise spread.

MYTH NO. 5

Air quality in and near data centers is compromised, causing health concerns.

Fact:

CoreSite performs air quality modeling at every new site to establish a baseline and to ensure that any sources of emissions on the property will not cause or contribute to a violation of air quality standards as determined by the Environmental Protection Agency as well as state departments of air and environmental quality.

Fact:

Throughout CoreSite data center construction, water trucks spray the site to minimize dust and help prevent dust particles from becoming airborne, which improves air quality and complies with environmental rules. CoreSite follows all state and local municipality regulations for erosion control performing all Stormwater Pollution Prevention Plans (SWPP) requirements to ensure that debris does not wash out from our project sites or end up in the public drainage systems. During construction, our sites are also secured by fencing for physical security to maintain safety for the community.

Dust control

Erosion control

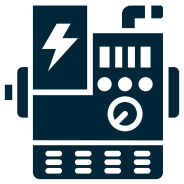
Site security

MINIMAL LONG-TERM TRAFFIC IMPACT

After CoreSite data center construction is complete, there is minimal traffic to and from the site, resulting in very low long-term impact on the community.

Fact:

CoreSite generators typically run less than 20 hours per year, and the runtime is primarily for testing and maintenance. CoreSite's state-of-the-art electrical architecture requires less maintenance and testing to occur on generator power than older and less robust designs. Because CoreSite exceeds the industry standard of 99.999% uptime at its facilities, generators are used infrequently for emergency backup or when utility companies request help to relieve utility grid demand peak summer usage. CoreSite closely monitors the local Air Quality Index and avoids running generators for testing and maintenance during times of poor outdoor air quality.



<20 Hours/Year

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The Critical Role of Data Centers in Modern Society

We all play a part in data center growth. Data centers are built to meet the demand for "digital everything" on which our society depends.

Not all data centers are alike. Hyperscale facilities, multi-tenant colocation data centers, enterprise on-premises data centers and edge data centers differ significantly in their purpose and functions.

Multi-tenant colocation data centers like CoreSite house multiple businesses in a facility, unlike other types of data centers. The multi-tenant model enables tenants to share resources and costs.

We believe collaboration is the best way to shape the data center industry in the future. Ideally, data center builders and operators, data center tenants, communities, state and local governments, public service commissions, energy companies and policy makers can work together toward shared goals.

THE DIGITAL FUTURE

47% Increase

Global internet users expected to grow by nearly half in five years.

5.35 Billion → 7.9 Billion

From 2024 to 2029, the number of internet users will surge worldwide.[13]

Learn More

Education is the first step toward understanding data centers and the critical role they play in modern society. Many common myths don't reflect how data centers really work or the important benefits they bring to communities and our modern lives. To learn more about CoreSite and our commitment to being a good neighbor, visit our Community Page. You can also explore the following resources to learn more about data centers, why they matter and how they enable the world we rely on every day:

- **CoreSite's Knowledge Base, a source of videos, infographics, articles, reports and more.**
- **CoreSite video, The Place Where Data Moves the World.**
- **Deloitte, As Generative AI Asks for More Power, Data Centers Seek More Reliable, Cleaner Energy Solutions.**
- **Forbes, No Turning Back the Digital Clock: Why Data Centers Matter Far More Than You Think.**
- **Urban Land Institute, Local Guidelines for Data Center Development.**
- **Data Center Knowledge, U.S. Data Center Tax Incentives: A Special Report.**

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