



Infrastructure Planning Report

North America — Chicago



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Iron Mountain Data Centers (IMDC) has compiled this Infrastructure Planner to give you a balanced overview of key colocation markets - their strengths and weaknesses, and the latest issues and opportunities.

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2023 to 2030

North America
colocation
forecast
CAGR 11.5%

MARKET
VALUE by 2030
= \$43BN

35% of global colo
spend in 2023
= \$20 BN

Source: [grandviewresearch.com](https://www.grandviewresearch.com)

North American Infrastructure

North America continues to be the highest revenue contributor to the \$55 BN+ global data center colocation market, accounting for around 35% of demand. According to GrandViewResearch, the North American market is forecast to exceed \$43 BN by 2030, with a CAGR of 11.5%, but with the boom in cloud and AI-driven demand even these figures are beginning to look conservative

The U.S. is the key force behind North American growth. The bulk of data center infrastructure is located in a small number of key strategically-located hotspots - Northern Virginia; Dallas/Fort Worth; Chicago; Silicon Valley; Phoenix; Atlanta; Hillsboro and New York Tri-State. The last year has seen record levels under construction, with primary market supply growing 26% year-over-year and over 3 GW under construction, a 46% year-over-year increase.

Key Drivers

The generative AI boom, digital transformation, the growing adoption of multi-cloud, and network upgrades to support 5G are critical drivers of this growth. User requirements are growing in both size and number while power and supply chain constraints are creating challenges, and this, combined with rising power costs, means that prices are rising extremely fast. Average prices across key markets for a 250-500 kW requirement increased by a record 18.6% in 2023.

On the wholesale/hyperscale side, major deals of 60 MW and above are now common. As demand accelerates, space availability is becoming tighter and to avoid potential capacity bottlenecks down the line, pre-leasing 24-36 months ahead of use is now the norm, applying to over 80% of current builds in key markets. As a result, vacancy rates in the primary markets were extremely low (3.7%) in H2 2023.

Developments in Key North American Markets

Market	Inventory (MW)	Y-o-Y Change (MW)	Available MW/Vacancy Rate	Y-o-Y Change* (bps)	2023 Net Absorption (MW)	Y-o-Y Change (MW)	Rental Rates (kW/mo)**
Northern Virginia	2,499.1	▲ 439.0	34.7 / 1.4%	▲ 41	424.4	▼ -12.5	\$150-\$190
Dallas/ Ft. Worth	565.3	▲ 173.1	41.6 / 7.4%	▲ 129	155.2	▲ 110.9	\$135-\$170
Chicago	559.6	▲ 217.4.0	11.7 / 2.1%	▼ -407	226.8	▲ 178.8	\$145-\$155
Silicon Valley	427.7	▲ 48.1	31.0 / 7.3%	▲ 498	25.7	▼ -36.7	\$155-\$250
Phoenix	360.0	▲ 35.5	14.2 / 3.9%	▼ -453	48.8	▲ 4.5	\$170-\$200
Atlanta	310.0	▲ 57.5	41.1 / 13.3%	▲ 965	18.0	▼ -15.0	\$120-\$130
Hillsboro	262.4	▲ 94.0	6.5 / 2.5%	▼ -96	93.3	▲ 28.9	\$125-\$170
New York Tri-State	190.0	▲ 12.5	12.3 / 6.5%	▼ -135	14.1	▼ -4.0	\$170-\$180

*Vacancy Y-o-Y changes are calculated by comparing the difference between H2 2022 and H2 2032.

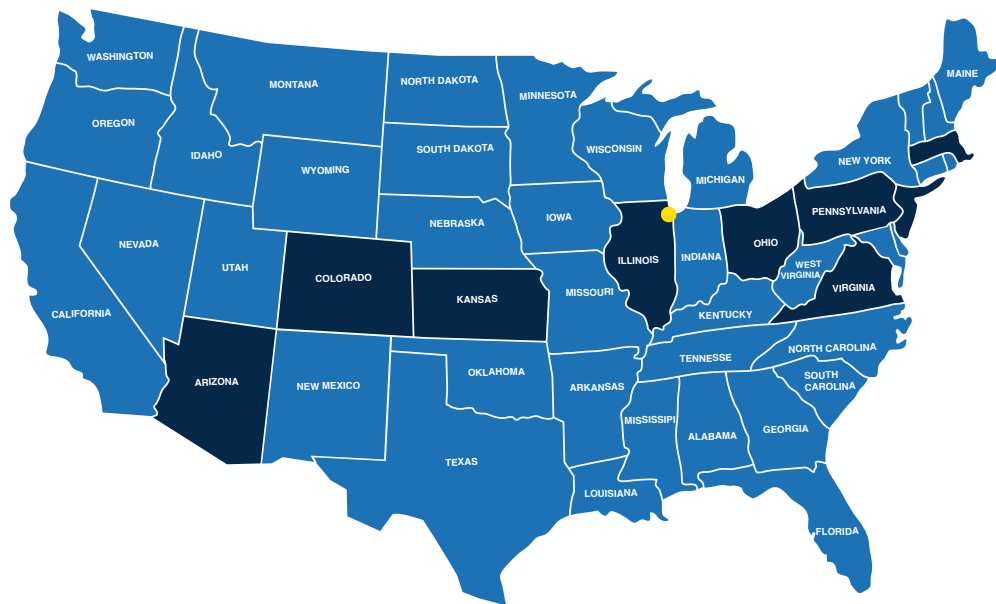
**Rental rates are quoted asking rates for 250+ kW at N+1/Tier III requirements.

Source: CBRE Research, CBRE Data Center Solutions, H2 2023.

The Chicago Market

Greater Chicago is experiencing unprecedented demand for and build-out of data center space, with no signs of a slowdown. The city is both the third largest in the US and home to the third largest data center market in North America, making it the sixth largest market in the world after Northern Virginia, Singapore, London, Tokyo and Dallas/Fort Worth.

Strategically situated in the Midwest's leading digital economy, Chicago has an advanced cloud market, a compelling tax incentive package for data centers, a thriving digital economy, robust power supply and competitive pricing. The city is a major hub for Internet and financial infrastructure, with thriving manufacturing, transport, ICT and healthcare sectors driving demand. The colder Illinois climate reduces the need for cooling which is a key consideration with power considerations increasingly trumping geographical ones. Also, the city is at low risk of hurricanes and earthquakes.



Even with rates rising, Chicago is still the most affordable primary data center market in the U.S. The city also offers exceptionally rich interconnection opportunities for data centers, with over 100 networks, a range of internet exchanges, and easy low-latency access to major metros like Milwaukee, Indianapolis, Detroit, and St. Louis, as well as Canada's largest city, Toronto.

The rise of the market has made scalable high-power space in new facilities hard to come by, particularly closer to the city center. Despite the huge leap in power consumption, electricity providers remain confident that they can continue to meet demand.

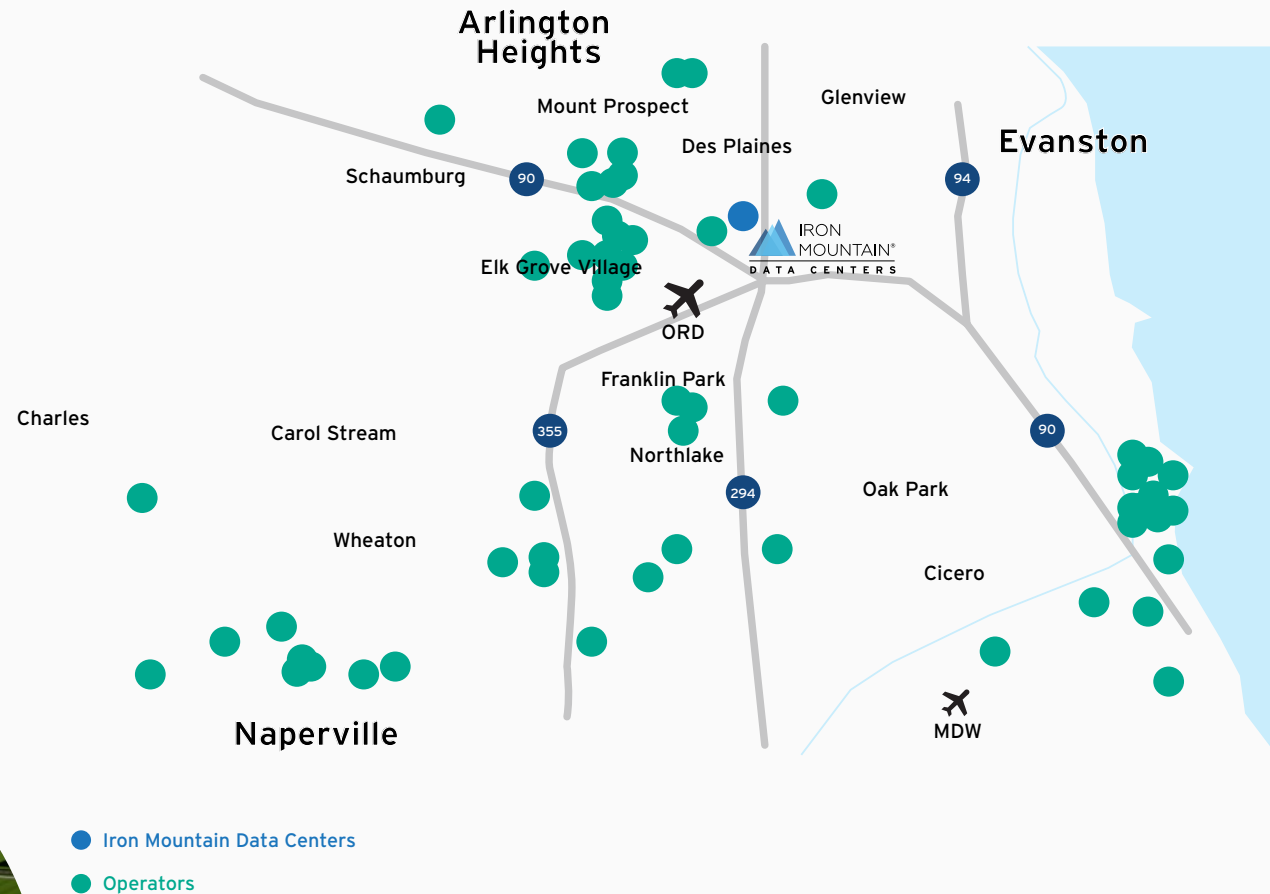
Key Drivers

- > **Connectivity:** 100+ network providers, mature cloud zones, advanced and improving backbones
- > **Cost:** competitive power costs compared to other North American markets, as well as strong tax incentives
- > **Economy:** large population, thriving digital economy with many highly successful sectors
- > **Location:** strategically located for north eastern USA and Canada
- > **Safety:** low risk of natural disasters
- > **Climate:** cool climate reduces requirements for expensive cooling

Geography

There are over 120 data centers, fairly evenly spread across the Greater Chicago area. There is a large cluster of facilities downtown near the waterfront, but these tend to be longer-established data centers which can suffer from outmoded architecture and space constraints. The other very sizeable and dense cluster has grown up more recently west of O'Hare in Elk Grove Village.

There are smaller groups of facilities spread across the south of the city in areas such as Northlake and Franklin Park and a group to the north in Mount Prospect. Iron Mountain Data Centers has a highly scalable new facility located close to the Elk Grove Village cluster in Des Plaines, 15 miles from downtown and just 7 minutes from Chicago O'Hare International Airport.



Issues & Opportunities

Digital opportunities abound in the Chicago region as it rises further up the rankings to become one of the world's leading hubs. This clearly creates significant capacity and planning issues, but these are being dealt with better here than in many other more constrained markets.

Limited Availability

Demand levels are such that more complex RFPs are increasingly making way for letters of understanding, to speed up the pre-booking of premium data center space. This is mainly due to the fact that in H2 2023 space availability in the Chicago market fell close to an all-time low of 2.1% (CBRE).

New Design Considerations

Chicago is a famously built-up city. The limited availability of land in the Greater Chicago area is driving data center operators to create multi-storey facilities. Sustainability and good neighbor measures are becoming more common, with features such as recycled materials for builds, enhanced sound-proofing and more creative and engaging design and landscaping.

Mature Clouds

Chicago is an exceptionally mature cloud market, with availability zones for all the major clouds serving its 10 million-strong population. Low-latency fixed and mobile infrastructure that is fast enough to support the city's thriving financial services sector is available to all in most areas.

Effective Incentives

Chicago's data center incentives package, developed in 2019, is seen as a key enabler of this recent boom. The Illinois Data Centers Investment Program exempts data centers and their customers from paying sales taxes on equipment like storage, servers, and liquid cooling solutions. This has helped drive recent investment levels in the Greater Chicago Market.

Power

Chicago's investment in competitively-priced power availability offers a competitive edge over other markets, many of which are predicted to reach capacity limits soon. However, major medium-term investments will have to be made to ensure adequate low-to-no-carbon power sources for digital infrastructure.

AI Demand

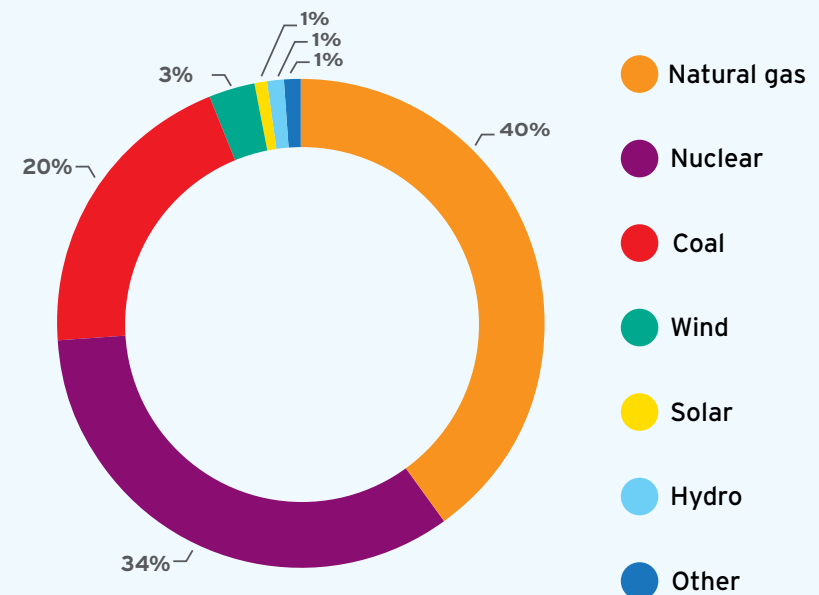
The CEO of Exelon Corp, parent company to Chicago's largest provider ComEd, recently stated that AI development will be the key driver in an exponential increase in electricity needs to feed the current pipeline of data center projects in the Chicago region. He stressed that the surge in demand would not initially be met by more power generation; instead, new data centers would at first be served by existing excess capacity, and then with imported electricity from other areas followed by newly constructed sources of power.

Improving the mix

Data center developers are attracted to ComEd's low electricity rates, low-carbon generation from nuclear reactors and state tax incentives. Around a third of available power is from nuclear power plants. In the medium term significant investment in wind and hydro generation will be needed to reduce the current reliance on gas and coal.



Market fuel mix



Connectivity

The Chicago region offers access to over 100 network providers and numerous internet exchanges including the Chicago Internet Exchange (ChIX), AMS-IX Chicago, and DE-CIX Chicago. Every major cloud offers extensive low-latency availability zones.

New Routes

- › Fiber infrastructure continues to be built out to service and interconnect new data center developments, particularly around the Elk Grove Village area.
- › The Illinois State Toll Highway Authority (ISTHA) is deploying new fiber along key fiber-optic network routes to increase capacity.
- › Many carriers such as AT&T, Verizon, Comcast, Astound Broadband, Crown Castle, Zayo and Lumen are deploying new infrastructure in and around the city.
- › There is a new carrier-neutral underwater cable under way, crossing Lake Michigan to Grand Rapids. This will offer a new lower-latency long-haul route.

Latency

Colocation in Chicago provides low-latency reach to the North and Canada and to the Eastern seaboard, 31 ms to Miami, 17 ms to Minneapolis, and 16 ms to Toronto; 17 ms to New York, and 25 ms to Washington (Prince William County).



Iron Mountain Data Centers in Chicago

Iron Mountain's new CHI-1 facility is ideally located in Des Plaines, Illinois, 15 miles from downtown and 7 minutes from Chicago O'Hare International Airport. It is being built out in phases on a 13-acre campus to offer 315,000 ft² of secure, compliant and sustainable colocation space with versatile 100% renewable power and cooling suitable for both traditional and high-density power needs. CHI-1 will offer 8 MW of customer power from October 2025 swiftly ramping up to 36 MW by early 2028.



CHI-1

- › Strategically located: State-of-the-art facility in one of Chicago's most space-constrained and connectivity-rich neighborhoods
- › AI-Ready: GPU-ready new build offering industry-leading compliance and carbon-free power
- › Room to grow: Tier III facility expanding to 315,000 ft²/ customer space and 36 MW of power
- › Reliable & efficient: Leading levels of reliability and efficiency with optimal uptime availability and efficiency levels
- › Sustainable: world-leading environmental standards that support the most ambitious ESG targets, with BREEAM sustainable build accreditation and 100% renewable power.





About Iron Mountain Data Centers

Iron Mountain Data Centers operates a global colocation platform that enables customers to build tailored, sustainable, carrier and cloud-neutral data solutions. As a proud part of Iron Mountain Inc., a world leader in the secure management of data and assets trusted by 90% of the Fortune 1000, we are uniquely positioned to protect, connect and activate high-value customer data. We lead the data center industry in highly regulated compliance, environmental sustainability, physical security and business continuity. We collaborate with our 1,300+ customers in order to build and support their long-term digital transformations across our global footprint, which spans three continents.

[IRONMOUNTAIN.COM/DATA-CENTERS](https://ironmountain.com/data-centers)

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