

North America Data Center Power - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts (2024 - 2029)

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Abstracts

The North America Data Center Power Market size is estimated at USD 14.80 billion in 2024, and is expected to reach USD 22 billion by 2030, growing at a CAGR of 6.83% during the forecast period (2024-2030).

Data centers are among the most energy-intensive building types, which consume 10 to 50 times the energy per floor space as a typical commercial office building. These spaces contribute to approximately 2% of the total US electricity use, and as the country's use of information technology grows, data centers and servers are likely to need more energy as well. The growing establishment of IT infrastructure, mechanization, and cloud-oriented operations has additionally highlighted the significance of constant power supply and steady operation of data centers and server spaces, leading to the growth of the market.

Key Highlights

Under Construction IT Load Capacity: The upcoming IT load capacity of the North American data center market is expected to reach above 25,000 MW by 2030.

Under Construction Raised Floor Space: The country's construction of raised floor areas is expected to exceed 85 million sq. ft. by 2030.

Planned Racks: The region's total number of racks to be installed is expected to reach more than 4 million units by 2030. The United States is expected to house the maximum number of racks by 2030.

Planned Submarine Cables: Close to 100 submarine cable systems connect North America, and many are under construction. One such cable, GigNet-1, started its service in 2023. It stretches over 1,104 kilometers and has landing points in Boca Raton, United States.

North America Data Center Power Market Trends

IT and Telecom to Hold Significant Share

The need for high-performance computing in technologies like cloud computing has led to the development of scalable, efficient, and flexible business operations, prompting many mid-sized companies to establish effective data centers like web hosting clouds and colocation centers. As a result, the increasing use of data centers has sparked a growing interest in cloud and mega data centers, which require massive amounts of power for data-intensive operations, thus creating a high demand for PDUs and UPSs.

An additional 30 million smartphone connections are expected by 2025, which will drive the ongoing shift away from outdated networks (2G and 3G) and fuel smartphone growth in the coming years. The projected more-than-threefold increase in mobile data traffic in North America by 2027 will be largely driven by the growing number of smartphone users.

The post-pandemic economic rebound, combined with robust sales of 5G smartphones and targeted marketing efforts, have collectively contributed to a surge in momentum. There is a growing consumer appetite to upgrade to 5G, with existing 5G customers demonstrating a heightened interest in augmenting their plans to encompass additional features such as video and music streaming, online gaming, live sports, and cloud storage.

As the 5G network continues to expand and improve, it is expected to facilitate the growth of emerging edge applications that require fast and high-capacity data transfer. To accommodate this shift, large-scale service providers are looking to upgrade their automation with next-generation power distribution units (PDUs) that prioritize modularity and safety in design, given the increasing capacity and limited space.

The growth of the data center power market is directly related to the launch of data centers and various market players investing in the data center expansion in the country. The data center power market is anticipated to flourish. For instance, in 2023, NetActuate, a prominent worldwide provider of network and infrastructure solutions,

publicized the launch of a new data center location in Montreal. In addition to NetActuate's existing location in Toronto, this location gives its clientele new opportunities for in-country redundancy and disaster recovery.

United States to Hold Significant Growth

The US internet penetration rate stood at 97.1% of the total population at the start of 2024, and such a factor focuses on the significant digitization trend. Recent economic incentives and tax benefits have been significant drivers of data center construction in the country. Approximately 27 states leverage these factors to attract data center projects. Sweeping Data Center Tax Exemptions were passed in Illinois as part of its USD 45 billion capital construction budget. The law exempts qualifying data centers from state and local sales tax on the equipment front for the next ten years.

In 2023, around 1 in 4 dollars was invested in startups across the region; AI is generating more buzz compared to the previous years and has seen a plethora of enormous financings recently looking for companies in the space, including those to OpenAI and Anthropic.

The increasing power consumption and IT load capacities from the data center resulted in increasing the adoption of new power infrastructure solutions across the region. For instance, Dominion, a US utility, expects to connect 15 data centers to the grid in Virginia throughout 2024 after connecting 15 facilities in 2023, totaling almost a gigawatt of capacity. The utility stated that individual facility demand is growing from around 30MW to 60-90MW, and campus requests now range from 300MW to several GW.

In order to serve the growing requirement for data center power solutions, key players in the country are focusing on expanding production capacities and developing new products based on evolving market trends. For instance, Schneider Electric introduced the industry's first 4-in-1 combination outlets, APC NetShelter Rack PDU Advanced, which provides up to 50% more power with double the outlets per Rack PDU to support high-density applications and rising server rack densities.

Schneider Electric plans to expand its manufacturing facilities with an investment of around USD 140 million in 2024. The new plant in Mt. Juliet is expected to begin operations, including product shipping, by 2024 and be fully operational by 2025. Thus, rising investment in data centers and upcoming innovation would boost the demand for

the country's data center power market.

North America Data Center Power Industry Overview

The North American data center power market is moderately fragmented and has gained a competitive edge in recent years. Some major players are ABB Ltd, Siemens AG, Raritan Inc. (Legrand), and other players. These major players with prominent market share focus on expanding their customer base across the region. These companies leverage strategic collaborative initiatives to increase their market share and profitability.

January 2024 - Legrand acquired ZPE Systems Inc., a Fremont, California-based company that offers critical solutions and services to deliver resilience and security for customers' business-critical infrastructure. The acquisition brings together ZPE's secure and open management infrastructure and services delivery platform for data center, branch, and edge environments to Legrand's comprehensive data center solutions of overhead busways, custom cabinets, intelligent PDUs, KVM switches, and advanced fiber solutions. ZPE Systems will become a business unit of Legrand's Data, Power, and Control (DPC) Division.

March 2023 - Vertiv Group Corp. announced that its Vertiv Geist Upgradeable Rack PDUs now come with a Combination Outlet C13/19, simplifying purchasing, inventory management and deployment. The universal C13/C19 outlet on Vertiv Geist Upgradeable Rack PDUs can easily accommodate new rack configurations, eliminating the need to modify or replace rPDUs as rack densities increase.

Additional Benefits:

The market estimate (ME) sheet in Excel format

3 months of analyst support

Contents

1 INTRODUCTION

- 1.1 Study Assumptions and Market Definition
- 1.2 Scope of the Study

2 RESEARCH METHODOLOGY

3 EXECUTIVE SUMMARY

4 MARKET INSIGHTS

4.1 Market Overview

4.1.1 Industry Attractiveness - Porter's Five Forces Analysis

4.1.1.1 Bargaining Power of Suppliers

4.1.1.2 Bargaining Power of Buyers

4.1.1.3 Threat of New Entrants

4.1.1.4 Threat of Substitutes

4.1.1.5 Intensity of Competitive Rivalry

4.2 Impact of the Recent Geopolitical Developments of Data Center Infrastructure Market

4.3 Industry Ecosystem Analysis - Data Center Power Infrastructure

4.4 Market Drivers

4.4.1 Rising Adoption of Mega Data Centers and Cloud Computing

4.4.2 Increasing Demand to Reduce Operational Costs

4.5 Market Challenges

4.5.1 High Cost of Installation and Maintenance

4.6 Market Opportunities

4.6.1 Emergence of Green Data Centers and Increasing Energy Efficiency in Existing DC Facilities

4.7 Analysis of Key Trends in Data Center Power & Back-up Solutions

4.7.1 Advancements in Microgrid and Move Toward Renewable Energy-based Sources

4.7.2 Emergence of Software-defined Power Solutions

4.7.3 Adoption of Advanced UPS Solution

4.8 Current Regulatory Scenario and Standards Related to Power Consumption in Data Center in North America

5 ANALYSIS OF DATA CENTER FOOTPRINT IN NORTH AMERICA

5.1 Analysis of Current DC Footprint in Terms of IT Load Capacity & Number of Data Centers in United States & Canada

5.2 Analysis of Key Hotspots in the United States (Top 15 Hotspots will be Analyzed in the Region)

5.3 Analysis of Overall Spending on Data Center Infrastructure in North America

6 NORTH AMERICA DATA CENTER POWER MARKET SEGMENTATION

6.1 By Type

6.1.1 By Solution Type

6.1.1.1 Power Distribution Solution

6.1.1.2 Power Back Up Solutions

6.1.2 By Service (Design & Consulting, Integration, Support & Maintenance)

6.2 By Data Center Type

6.2.1 Colocation

6.2.2 Enterprise & Cloud

6.2.3 Hyperscalers

6.3 By End-user Application

6.3.1 BFSI

6.3.2 IT and Telecom

6.3.3 Government

6.3.4 Manufacturing

6.3.5 Media & Entertainment

6.3.6 Other End User

6.4 By Country

6.4.1 United States

6.4.2 Canada

7 COMPETITIVE LANDSCAPE

7.1 Company Profiles*

7.1.1 Vertiv Group Corp.

7.1.2 ABB Ltd

7.1.3 Schneider Electric

7.1.4 Tripp Lite (Eaton)

7.1.5 Raritan Inc. (Legrand)

7.1.6 Enlogic (nvent)

7.1.7 Kohler Co.

7.1.8 LayerZero Power Systems

7.1.9 Toshiba International Corporation

7.1.10 Siemens AG

7.1.11 Cummins Inc.

7.1.12 Legrand

8 INVESTMENT ANALYSIS

9 FUTURE OUTLOOK OF THE MARKET

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