



DETERMINING VALUE IN DATA CENTERS

LET THE EXPERTS AT MARSHALL & STEVENS BE YOUR GUIDE

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INTRODUCTION

The data center industry is evolving at an unprecedented pace, driven by advancements in cloud computing, artificial intelligence, and the increasing demand for data storage and processing. As data centers expand in size and complexity, stakeholders, including investors, operators, and financial institutions, require precise valuation and advisory services to navigate this dynamic landscape.

Marshall & Stevens provides specialized valuation, advisory, and financial due diligence services to support clients in making strategic decisions.

Data centers are the backbone of modern business operations, enabling cloud computing, data analytics, AI, and digital transactions. Their rapid expansion is fueled by increasing internet penetration, the surge in digital content consumption, and growing remote work trends. However, this growth presents challenges in managing power consumption, ensuring operational efficiency, and maintaining sustainability.

MARKET OVERVIEW: GROWTH AND KEY TRENDS

The data center industry is experiencing significant growth. Global spending on data center systems reached \$260 billion in 2024, reflecting a 10% increase from the previous year ([statista.com](https://www.statista.com)).

In the U.S., data center market revenue is expected to reach \$137.5 billion in 2025, with an annual growth rate of 11.44% through 2029, resulting in a projected market volume of \$212.1 billion ([statista.com](https://www.statista.com)).

Additionally, demand for colocation services has surged, with industry revenue increasing at a compound annual growth rate (CAGR) of 4.6% over the past five years and reached roughly \$16.2 billion in 2024 ([ibisworld.com](https://www.ibisworld.com)).

THE BACKBONE OF THE DIGITAL ECONOMY: WHAT'S FUELING DATA CENTER GROWTH?

These growth drivers collectively underscore the evolving value proposition of data centers as critical infrastructure assets. As digital transformation accelerates across industries, the strategic importance of data centers—combined with increasing demand, regulatory pressures, and technological innovation—continues to drive valuation premiums. Investors and stakeholders must consider not only traditional metrics such as location and capacity, but also emerging factors like sustainability, scalability, and resilience when assessing data center value in today's market.

KEY GROWTH DRIVERS INCLUDE:

- **Cloud Expansion:** Increased reliance on cloud-based applications and storage solutions.
- **5G & Edge Computing:** The shift to low-latency, high-speed computing is driving demand for new infrastructure.
- **Sustainability & Energy Efficiency:** Investments in green technologies and renewable energy sources are becoming industry priorities.
- **Cybersecurity & Compliance:** Increased regulatory scrutiny and security requirements necessitate robust data center strategies.
- **Job Creation:** The data center industry supports thousands of jobs in construction, IT, and facility management.
- **Real Estate Development:** Data center growth is driving significant real estate investments in key markets such as Northern Virginia, Texas, and Arizona, with several other states offering key incentives.



THE ROLE OF ENERGY STORAGE SYSTEMS

Energy Storage Systems (ESS) are rapidly becoming a foundational element in next-generation data center infrastructure. As demand for uptime, energy efficiency, and environmental responsibility grows, ESS offer strategic advantages that go beyond backup power. These systems not only enhance operational resilience but also contribute to long-term cost savings and the successful integration of renewable energy sources.

As data centers evolve into more sustainable, decentralized, and intelligent facilities, energy storage will continue to play a central role in supporting grid stability, operational flexibility, and environmental performance.

KEY BENEFITS OF ESS IN DATA CENTERS INCLUDE:

- **Reliability:** Provides critical backup power to ensure uninterrupted operations during grid outages or power fluctuations.
- **Cost Savings:** Enables load shifting by storing energy during off-peak hours when electricity is cheaper and using it during peak demand.
- **Integration with Renewables:** Facilitates the use of intermittent renewable sources like solar and wind by storing excess energy for use when generation is low.
- **Sustainability:** Helps data centers meet carbon reduction and ESG goals by reducing dependence on fossil fuels and lowering emissions.



TRANSMISSION AND EASEMENTS FOR ENERGY DISTRIBUTION: ENABLING THE FLOW OF POWER FROM DATA CENTERS TO THE GRID

As data centers increasingly adopt energy storage systems and renewable energy integration, the ability to transmit stored energy efficiently and legally becomes a crucial component of overall infrastructure planning.

Easements provide the legal rights to install, access, and maintain transmission lines and other energy infrastructure across public or private land. Without these rights, energy distribution from data centers to the grid—or directly to end-users—can be delayed or obstructed, impacting both operational goals and compliance requirements.

KEY CONSIDERATIONS FOR ENERGY TRANSMISSION AND EASEMENT MANAGEMENT INCLUDE:

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- **Regulatory Compliance:** Navigating federal, state, and local regulations is essential to secure and maintain transmission easements legally and efficiently.
 - **Strategic Planning:** Early-stage planning minimizes project delays, ensures right-of-way access, and reduces the risk of legal disputes or land-use conflicts.
 - **Utility Partnerships:** Collaborating with utility providers can streamline the permitting process, ensure grid compatibility, and optimize long-term infrastructure access. Proper management of transmission pathways and easements not only supports uninterrupted energy flow but also plays a critical role in aligning data center operations with long-term sustainability and energy distribution strategies.

WHY DATA CENTERS? TAX INCENTIVES FUELING GROWTH AND SUSTAINABILITY

Tax incentives such as Investment Tax Credits (ITCs) and tax equity financing play a vital role in shaping the financial landscape of modern data center development. By lowering upfront costs and improving return on investment, these mechanisms encourage the adoption of renewable energy technologies and sustainable infrastructure. For data center developers, aligning projects with these incentives not only enhances economic feasibility but also supports broader environmental and ESG goals.

However, navigating the complex web of state and federal regulations requires strategic planning and continuous monitoring, as legislative changes can significantly impact project timelines and financing structures. As the industry evolves, these tax-driven incentives remain powerful levers in unlocking value and accelerating innovation in data center growth.

INVESTMENT TAX CREDITS AND TAX EQUITY FINANCING

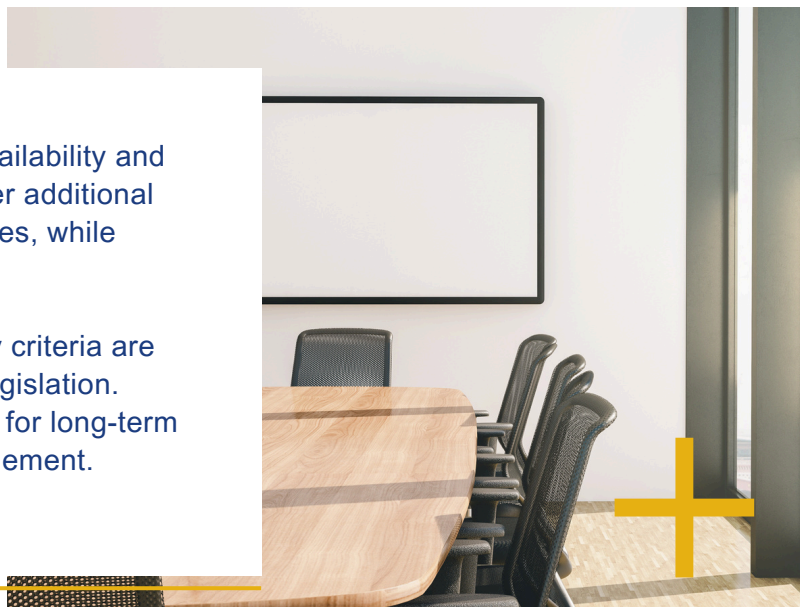
Investment Tax Credits (ITCs) and **Tax Equity Financing** have become pivotal financial mechanisms for the data center industry—especially for projects incorporating renewable energy and energy-efficient technologies.

Investment Tax Credits: These credits directly reduce federal tax liabilities for businesses investing in qualified renewable energy systems or infrastructure upgrades aimed at energy efficiency. For data centers, ITCs can significantly improve project economics and accelerate sustainability goals.

Tax Equity Financing: Through this model, developers partner with investors who contribute upfront capital in exchange for tax benefits associated with ITCs. This structure enables the development of large-scale, capital-intensive data center projects that prioritize clean energy integration.

POLICY CONSIDERATIONS:

- **State and Federal Regulations:** Incentive availability and structure vary by jurisdiction. Some states offer additional credits, exemptions, or favorable zoning policies, while others have more restrictive frameworks.
- **Legislative Changes:** ITC rates and eligibility criteria are subject to change through federal and state legislation. Continued monitoring of policy shifts is critical for long-term planning, investment strategy, and risk management.



POWER PURCHASE AGREEMENTS AND STRATEGIC PARTNERSHIPS

As data centers scale and seek to meet both operational and environmental goals, Power Purchase Agreements (PPAs) and strategic energy partnerships have become essential tools. PPAs enable data centers to procure renewable energy—often directly from wind or solar projects—at fixed, long-term rates. This not only mitigates exposure to energy market volatility but also advances corporate sustainability and carbon reduction commitments.

PUBLIC-PRIVATE PARTNERSHIPS AND OFFTAKE AGREEMENTS

In addition to PPAs, collaborative models like Public-Private Partnerships (PPPs) and offtake agreements are playing a growing role in energy strategy:

- **Public-Private Partnerships:** These collaborations between government entities and private developers can accelerate infrastructure buildouts, reduce capital costs, and enable large-scale data center development, especially in regions offering incentives or public funding support.
- **Offtake Agreements:** These long-term contracts guarantee a reliable power supply by securing future energy output from providers, helping to stabilize operations and hedge against supply fluctuations or price spikes.

Together, PPAs, PPPs, and offtake agreements represent a strategic approach to aligning energy procurement with financial predictability, regulatory compliance, and ESG-driven performance.

VALUATION AND ADVISORY SERVICES

As data centers continue to grow in complexity, scale, and strategic importance, the need for accurate, defensible valuations and expert advisory services becomes increasingly critical.

Marshall & Stevens delivers integrated valuation and consulting solutions tailored specifically for the data center sector, supporting informed investment decisions, risk management, and regulatory compliance.

Our multidisciplinary approach spans real estate, equipment, finance, infrastructure, and tax—offering holistic insights for owners, operators, investors, and lenders alike.



REAL ESTATE VALUATION

Market-Based Value Opinions: In-depth valuation reports based on recent market activity, demand drivers, and comparable facilities.

Competitive Market Analysis: Assessment of key location factors such as power availability, cooling infrastructure, fiber connectivity, and zoning conditions.

Appraisals for Multiple Purposes: Tailored valuations for financing, acquisitions, investment planning, tax appeals, and financial reporting.

Expert Witness Services: Independent valuation testimony for litigation, condemnation, partnership disputes, and regulatory matters.

MACHINERY & EQUIPMENT VALUATION

Equipment Appraisal: Valuation of backup power systems (generators, UPS), cooling systems (CRAC units, chillers), IT equipment, and structured cabling.

Lifecycle and Depreciation Analysis: Evaluating functional and economic obsolescence, expected service life, and replacement cost.

Insurance and Tax Reporting Support: Providing insurable values and support for personal property tax compliance

FINANCIAL VALUATION & ADVISORY

Enterprise Valuations: Determining the fair value of operating data center businesses for investment, exit planning, or M&A transactions.

Purchase Price Allocation (ASC 805): Assigning value to tangible and intangible assets post acquisition in compliance with U.S. GAAP.

Impairment Testing: Goodwill and long-lived asset impairment analyses (ASC 350/360) to meet financial reporting requirements.

Feasibility Studies and Market Assessments: Supporting go/no-go decisions with financial modeling and demand forecasting.

ENERGY & INFRASTRUCTURE ADVISORY

Energy Cost Optimization: Analyzing utility tariffs, load profiles, and system efficiencies to reduce energy spend.

Renewable Integration Feasibility: Evaluating the financial viability of solar, battery storage, and microgrid systems.

Sustainability Strategy Development: Advising on carbon reduction, redundant power planning, and environmental impact mitigation.

COST SEGREGATION & TAX CONSULTING

Cost Segregation Studies: Breaking down construction or acquisition costs into shorter-life assets to accelerate depreciation schedules.

Energy Tax Credit Identification: Assessing eligibility for federal, state, and local energy efficiency incentives.

Lease and CapEx Compliance: Supporting accurate financial treatment of capital expenditures and lease accounting standards (ASC 842/IFRS 16).

LITIGATION SUPPORT

Expert Witness Testimony: Independent, defensible valuation opinions for court proceedings and arbitration.

Financial Damage Assessments: Quantifying losses related to contracts, utility service interruptions, or construction delays.

Regulatory and Contract Disputes: Support in matters involving tax appeals, easement rights, purchase price disputes, and shareholder actions.

CONCLUSION:

TRUSTED VALUATION & ADVISORY FOR A RAPIDLY EVOLVING INDUSTRY



Marshall & Stevens delivers a truly holistic approach to data center valuation—one that integrates deep expertise in real estate, critical equipment, financial modeling, tax optimization, and litigation support.

In an industry defined by technological innovation, regulatory shifts, and large-scale capital investment, our multidisciplinary team ensures that every aspect of a data center's value is accurately assessed and strategically positioned.

Marshall & Stevens has been a leader in the valuation and appraisal industry since its founding in 1932. Our commitment to precision, transparency, and client-focused solutions empowers stakeholders to make informed decisions, mitigate risk, and unlock long-term value. Whether you're planning an acquisition, seeking financing, navigating tax complexities, or resolving a dispute, Marshall & Stevens stands as a trusted partner in achieving your business objectives. Let's power your strategy with clarity and confidence.

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