India's Data Centre Capacity to Grow 4x to ~4 GW by 2030

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Synopsis

In this report, CareEdge Ratings provides an overview of Data Centre growth dynamics in India versus the global market, the key drivers supporting large-scale expansion, expected investments, and the underlying infrastructure requirements crucial to sustain this growth. The report also highlights key financial aggregates of major DC industry players.

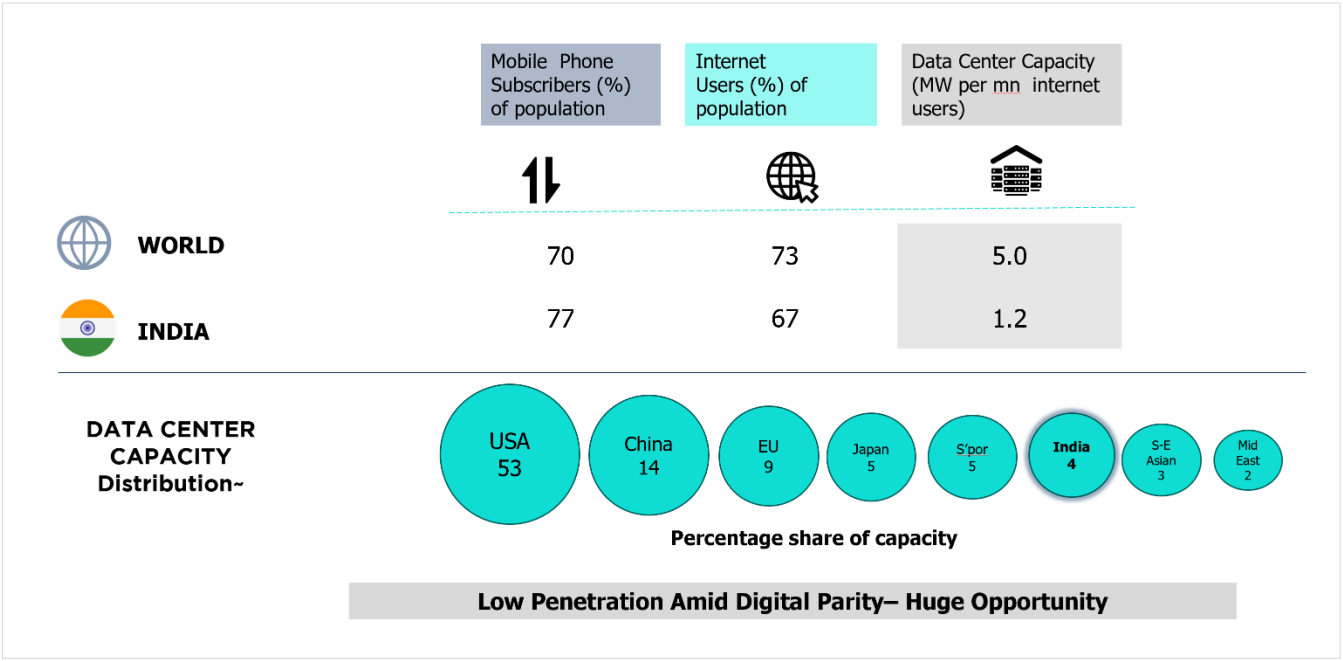
- India's Data Center capacity per million internet users remains significantly lower at 1.2 MW per million users, compared with the world average of 5 MW per million users. Digitisation, India's cost competitiveness in building Data Centres, and the increasing adoption of Artificial Intelligence (AI) are key factors driving strong growth in Data Centres in the country. India's share in the global Data Centre market is approximately 4% in 2025, with a capacity of 1.2 GW, which is likely to reach 4 GW by 2030.
- The cost of constructing and operating Data Centers in India is significantly lower compared with global peers. India's construction costs are roughly 30–40% lower than those of China and the U.S., supported by relatively lower land prices and benefits from competitive electricity tariffs. These factors, combined with supportive Government measures, make India an attractive destination for Hyperscalers and global Cloud Providers.
- India's co-location (co-lo) Data Centre capacity has registered major growth since FY21 and doubled to 1.2 GW during the four years FY22–FY25 (FY refers to April 1 to March 31). According to CareEdge Ratings, capacity is expected to quadruple to 4 GW by FY30, requiring an estimated investment of ~Rs 1.5 lakh crore. The capacity growth thus far has been complemented by high absorption levels with utilisation above 90% on average during FY22–FY25. Going forward, strong demand is expected to support steady absorption.
- The sector enjoys strong revenue visibility through long-term contractual arrangements, which ensure stable cash flows and promote high customer stickiness. With continued capacity growth and sustained absorption levels, the industry is expected to witness a revenue CAGR of around 24% during FY26–FY30. EBITDA margins are likely to remain broadly stable (40%–42%), although leverage levels may remain relatively elevated due to a high capex cycle in the development phase.
- Infrastructure readiness—particularly with regards to (i) Power availability and Transmission Infrastructure, (ii) Water-Usage Efficiency, and (iii) Connectivity—remains an area of focus to support large-scale expansion plans. Power generation is not an immediate concern, as the country's power capacity, including renewable energy contributions, is rising in tandem with demand. Yet, power infrastructure, especially the upgradation of existing substations and power evacuation, is inadequate to support the Data Centre growth. The Transmission infrastructure target has been lagging, with additional network (in terms of circuit kilometres) expected to reach ~33% of the target for FY26.

India's Data Centre Capacity Vs Global Peers

Digital transformation is catalysing economic growth and driving large-scale data creation. When India's digital penetration is superimposed on that of global counterparts, it is observed that India has a fairly similar digital landscape to the rest of the world. For instance, the share of mobile subscribers (77%) and internet penetration

(67%) as of 2025 is closer to the world average of 70% and 73%, respectively. However, the Data Center capacity per million internet users in India is only 1.2 MW, compared with the world average of 5 MW per million users.

Exhibit 1: Comparison of India and Global Digital Metrics



MW: Megawatt, Data as od October 2025
Source: CareEdge Ratings and Industry Reports

As seen in Exhibit 1 above, India has attained digital parity with the world average, despite a low Data Centre share of ~4% of the world average capacity of ~30 GW, thereby implying immense growth potential.

Key growth drivers

A. Digital Transformation – fast forwarding India's economic growth

India is set to become the world's third-largest economy by 2030, with technology expected to play a pivotal role in this transition. The wave of digitisation—driven by the expansion of e-commerce, fintech platforms, online streaming, and gaming services—is anticipated to increase the number of internet users and boost internet penetration (the percentage of the population using the internet). Wireless data usage has doubled between 2020 and 2025, rising from around 11 GB per month to about 22 GB per month. During the same period, the internet user base has nearly tripled, reaching close to one billion users, and is expected to exceed 1.3 billion by 2030. The rollout of 5G, which already accounts for around 35% of total users, is further accelerating data creation and cloud adoption. These factors collectively strengthen the demand for Data Center infrastructure.

B. Competitive advantage in the medium term- critical to be unleashed in time

Data Centre setup is capital-intensive, with roughly 40% of costs allocated to hard costs (i.e., land and buildings, including fit-outs), 40% to the electrical system, and the remaining 20% to heating, ventilation, and cooling systems. India offers a cost advantage for setting up Data Centers, aided by relatively lower land and labour costs. The capex required to establish a Data Centre in India is approximately 30–40% lower than in China and the United States of America, primarily due to lower land prices. India also has competitive electricity

tariffs, with costs nearly 50% lower than those in the United States of America. These factors make India an attractive destination for hyperscalers and global cloud providers.

C. Government incentives & regulatory push- catalysing DC investments

Recognising the strategic importance of digital infrastructure, the Government of India has launched multiple measures to accelerate Data Center growth. The Union Budget 2026–27 introduced tax holidays for foreign cloud service providers, encouraging hyperscale investments. The proposed National Data Centre Policy aims to streamline operations and attract additional capital, while granting Data Centres infrastructure status, enabling access to long-term financing. Several States are also offering incentives such as stamp duty exemptions, power subsidies, single-window clearances, and land availability near industrial corridors and IT hubs. Together, these initiatives are creating a supportive policy environment and accelerating the expansion of India's Data Center ecosystem.

D. Artificial Intelligence – the growth propeller

AI applications require high-performance computing and large-scale data storage, resulting in higher Data Centre capacity requirements. Traditionally, Data Centers primarily supported conventional workloads such as enterprise IT systems and cloud storage. However, as AI training and inference workloads rapidly adopt, the mix is gradually shifting. Globally, AI investments crossed nearly USD 1 trillion between 2020 and 2025, with the United States and China accounting for about 75% of these investments. As illustrated in Exhibit 2, India is also witnessing steady momentum, with cumulative AI investments of around USD 20 billion and annual investments of approximately USD 2–2.5 billion. In 2024, the Indian government has committed an investment of Rs 10,372 crore (under the India AI Mission) over a period of five years, which will also support the development of Data Centres.

Exhibit 2: Investment in AI Startups (2020-2025)

In USD bn	Global	USA	China	India
AI infrastructure	1072	643	163	20
Generative AI	86.6	71.2	4.2	0.7
AI Compute	153.9	97.1	31.2	0.5

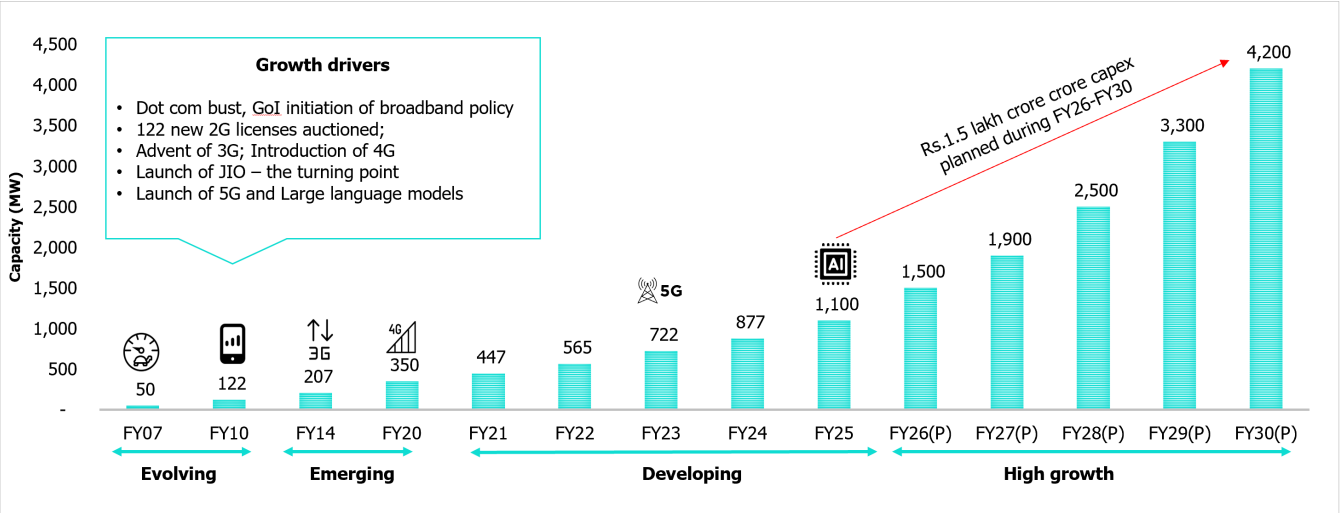
Source: oecd.ai

High Growth Phase with Large-scale Investments

Capacity to quadruple to ~ 4 GW by FY30, with underlying investment of Rs. 1.5 lakh crore

The Indian Data Centre co-location (co-lo) capacity has doubled to 1.2 GW over the four years FY22-FY25. As per CareEdge Ratings, capacity is expected to quadruple over the next five years ending FY30 as seen in Exhibit 3 below -

Exhibit 3: Capacity Present and Projected

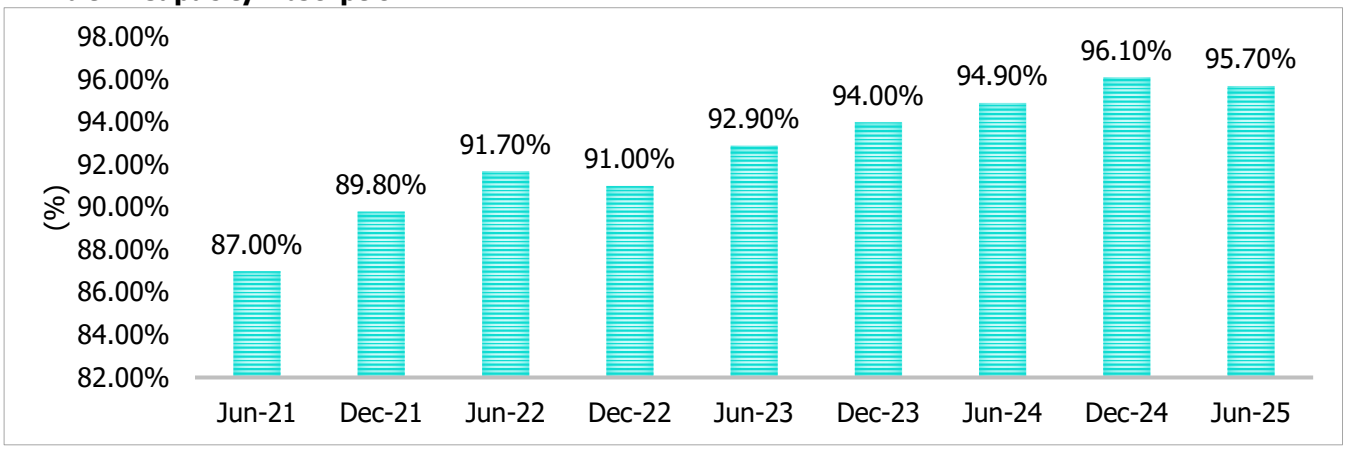


Source: CareEdge Ratings and Industry Reports

CareEdge Ratings estimates an investment of Rs. 1.5 lakh crore for the above-mentioned capacity augmentation during FY26-30. In addition, tenants are expected to spend 1.5x – 2x of this amount on IT equipment, taking the overall investment potential to nearly Rs. 3–4 lakh crore.

The capacity growth has been complemented by strong absorption above 90% as seen in Exhibit 4. This reflects strong demand from hyperscale cloud providers, enterprise clients, and the BFSI segment, which has helped maintain relatively low vacancy levels in the market. Going forward, AI-driven workloads and continued digitalisation are expected to sustain strong demand, helping maintain healthy absorption levels even as new capacities come online.

Exhibit 4: Capacity Absorption



Source: Industry Reports

State of Infrastructure Requirement and Readiness

Power costs account for 70–75% of a Data Center's operating expenses. As AI workloads rise, driving higher rack power density, overall power demand is expected to increase sharply. This will also require advanced cooling technologies at a time when water scarcity is already surmounting in several major cities.

With peak demand expected to double by FY31, India is adding significant power generation capacity while increasing the share of the Renewable Energy (RE) mix. The Power Usage Efficiency (PUE[1]The cost of a Conventional Data Centre is presently between 1.5x–1.9x; the adoption of Advanced Cooling Technology and increased RE shall support reducing PUE and foster Green DCs. However, gaps in transmission infrastructure may still pose challenges.

Reliable connectivity is equally critical for low-latency operations. India has 17 cable landing stations across five coastal cities—Mumbai, Chennai, Cochin, Tuticorin, and Trivandrum—supporting fast, secure international data transfer essential for global AI workloads. Existing undersea cable systems provide strong connectivity, and upcoming submarine cables will further expand bandwidth capacity.

Key Financial Metrics of Major Data Centre Players

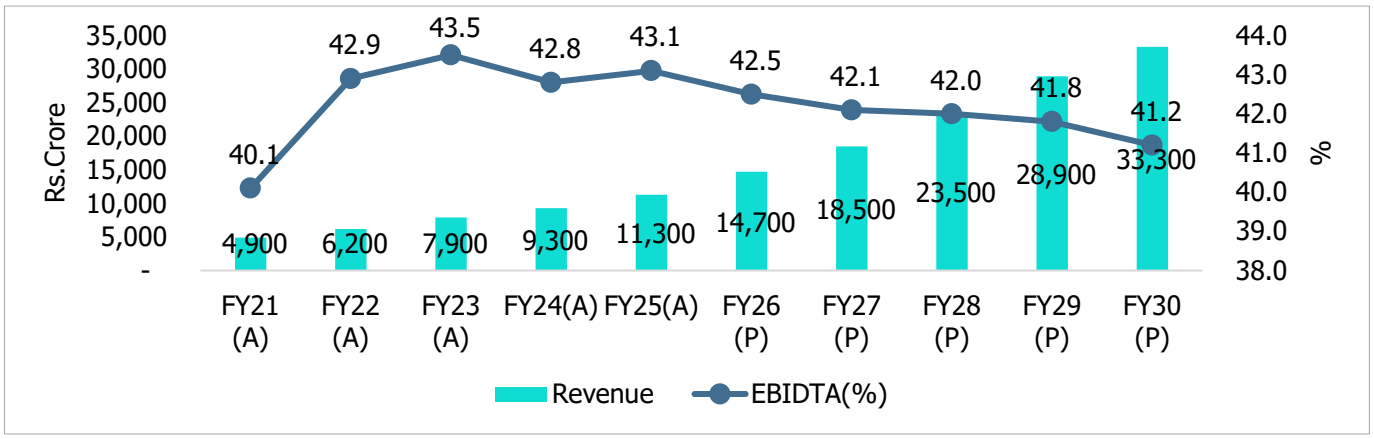
Stable margins with Long Term contracts assuring revenue visibility

A key distinguishing feature of the industry is its annuity-like revenue model, supported by long-term contracts ranging from 5 to 15 years with strong counterparties. This structure provides high revenue visibility and stable cash flows.

Based on an assessment of the financials of major Data Center players in India, the revenue of operators has increased from around Rs 4,900 crore in FY21 to about Rs 11,300 crore in FY25. Going forward, revenue is expected to maintain its strong trajectory, with a CAGR of around 24% during FY26–FY30.

EBITDA margins have remained relatively stable at 40–43% during FY22–FY25. Looking ahead, margins are expected to remain broadly stable. However, some moderation may occur due to higher capacity offtake by hyperscalers, which can lead to non-linear pricing transmission based on capacity utilisation.

Exhibit 5: Revenue and EBITDA margin



[1] PUE is arrived at by dividing Total Facility Energy/ IT Equipment Energy. It measures energy efficiency of Data Center and PUE closer to unity indicate higher efficiency and vice versa.

Elevated leverage & debt coverage supported by assured cashflow and resourceful sponsors

The industry is in an investment upcycle, with large, continued investment incurred on a y-o-y basis. The capex financing is observed to be backed by a debt component of 70-80%, with cash flow taking two to three years to realise. Thus, the leverage levels have been elevated. The interest cover has been modest at 2x-3x.

Resourceful sponsors, along with the entry of global funds and private equity investors, support equity requirements. At the same time, the availability of long-term infrastructure debt financing of around 10–15 years provides adequate support for debt servicing. Long-term revenue visibility, aided by contracts with strong counterparties, imparts cash flow stability and continues to attract investor interest.

CareEdge Ratings' View

India continues to benefit from competitive advantages such as lower land costs, relatively lower power costs, and a growing digital ecosystem, which are attracting investments from both domestic and global players. At the same time, the sector enjoys strong revenue visibility through long-term contractual arrangements, which provide stable cash flows and ensure high customer stickiness.

Indian Data Centre capacity is expected to increase to ~ 4 GW by FY30, with a large underlying investment potential of Rs. 1.5 lakh crore over the next year period ending FY30.

Over the last few years, the Data Centre cost has witnessed an increase (ranging between 50% - 70%) led by higher land prices, adoption of advanced cooling technology and investment in RE. At the same time, the commission timelines have also been escalated with changes in scope, delays in receipt of clearances, etc. The increased share of RE in power consumption and the adoption of newer cooling technologies support the industry's sustainability goals, while improving PUE and increasing the share of Green Data Centres.

The global macroeconomic disruptions, amid West Asia conflicts, are unlikely to adversely impact the industry or heighten project execution risks in the medium term. It could potentially add to the demand prospects in the long term. However, in the near term, the impact remains monitorable.

Puja Jalan, Director CareEdge Ratings, says, "The industry is in an upswing with high capex, fundraising capability of strong sponsors and large equity investments targeted to the Indian Data Centre entities. The industry is likely to witness a revenue CAGR of 24% during FY26-30, with steady-state margins ranging between 40% and 42%. The AI-led demand shall catapult the growth story. However, power infrastructure support is critical to realise the industry's potential. Also, the capability to manage cash flows amid rising costs and escalating commissioning timelines shall be key to sustenance."

Tej Kiran, Associate Director CareEdge Ratings, adds, "Global AI investments have crossed nearly USD 1 trillion between 2020–2025, with India witnessing strong momentum supported by government initiatives. While data centre demand is currently driven by enterprise IT and cloud storage, AI-led workloads are expected to power the next phase of growth over the next 5–7 years, with the pace of adoption in India linked to the timely scaling of high-performance Graphics Processing Unit (GPU) availability."

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