

India AI Data Centre Cooling 2026–2035

Market outlook, technology transition, supplier gaps
and investment priorities





India AI Data Centre Cooling

2026–2035

Market evidence, technology choices and Indian supplier capability

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[V1] identifies a located primary record supporting the stated claim; [modelled] identifies a disclosed calculation or conditional assumption. A publisher is the primary source for its own forecast, which remains an attributed estimate. PUB identifiers resolve in References and the workbook source register.

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Glossary & Abbreviations

The following terms and abbreviations appear throughout this report. They are presented here for ready reference. Where an abbreviation has multiple expansions in industry usage (e.g., DLC), the expansion used in this report is the one shown.

Table 0-1. Key terms and abbreviations

Term	Meaning	Term	Meaning
AI	Artificial intelligence	MW	Megawatt
BMS	Building management system	OEM	Original equipment manufacturer
CDU	Coolant distribution unit	PFAS	Per- and polyfluoroalkyl substances
CRAC	Computer room air conditioner	PLI	Production-linked incentive
CRAH	Computer room air handler	PUE	Power usage effectiveness
DCIM	Data-centre infrastructure management	QD	Quick disconnect
DLC	Direct liquid cooling	RDHx	Rear-door heat exchanger
EPC	Engineering, procurement and construction	TAM	Total addressable market
HVAC	Heating, ventilation and air conditioning	TCO	Total cost of ownership
IP	Intellectual property	TDP	Thermal design power
IRR	Internal rate of return	TR	Ton of refrigeration
kW	Kilowatt	WUE	Water usage effectiveness

Executive Summary

1. Findings

India has a documented cooling opportunity, but the earlier proprietary market forecasts do not have an auditable foundation. This edition replaces them with attributed external benchmarks, a dated capacity inventory and selected company evidence. Commercial opportunities should be screened at the project and product level; neither announced megawatts nor corporate revenue establishes cooling orders.

Cushman & Wakefield reports 1,789 MW operational, 509 MW under construction and 3,351 MW planned in its H1 2026 coverage. These categories describe different stages and must remain separate. Construction completion would bring that inventory to 2,298 MW; completion of the entire identified pipeline would bring it to 5,649 MW before retirements or scope changes. These are conditional arithmetic cases, not promised delivery. [V1/modelled: PUB-16]

Local capability is broader than the earlier draft suggested. Schneider announced a Bengaluru liquid-cooling factory, Vertiv and Netweb announced rack-level co-engineering, and Voltas describes conventional and oil-free centrifugal chillers. Local manufacturing, Indian ownership, domestic component content and ownership of design IP are distinct questions. [V1: PUB-24 to PUB-26]

2. Market scope

For a future Techadyant market build, measure annual expenditure by data centres in India on cooling equipment, thermal controls, fluids and separately billed installation and service. Exclude compute, civil construction, general office HVAC and power equipment. Count a bundled system once. Component sales incorporated in that bundle are not an additional final-customer market. Replacement components and fluids enter only when separately purchased during the measurement year.

The public benchmark table preserves each publisher's scope and forecast endpoint. Its estimates are not averaged, added or converted at an assumed exchange rate. The former segment totals and regional allocations are withdrawn from report conclusions and retained in the editorial history. No proprietary 2035 market total is asserted.

3. Technology selection

Cooling is selected for the complete server and facility design. NVIDIA documents an air-cooled DGX B200 configuration; a chip-power threshold alone cannot establish a universal requirement for direct liquid cooling. Operators should specify inlet conditions, heat capture, residual air loads, redundancy, controls and service access for the actual equipment. [V1: PUB-05]

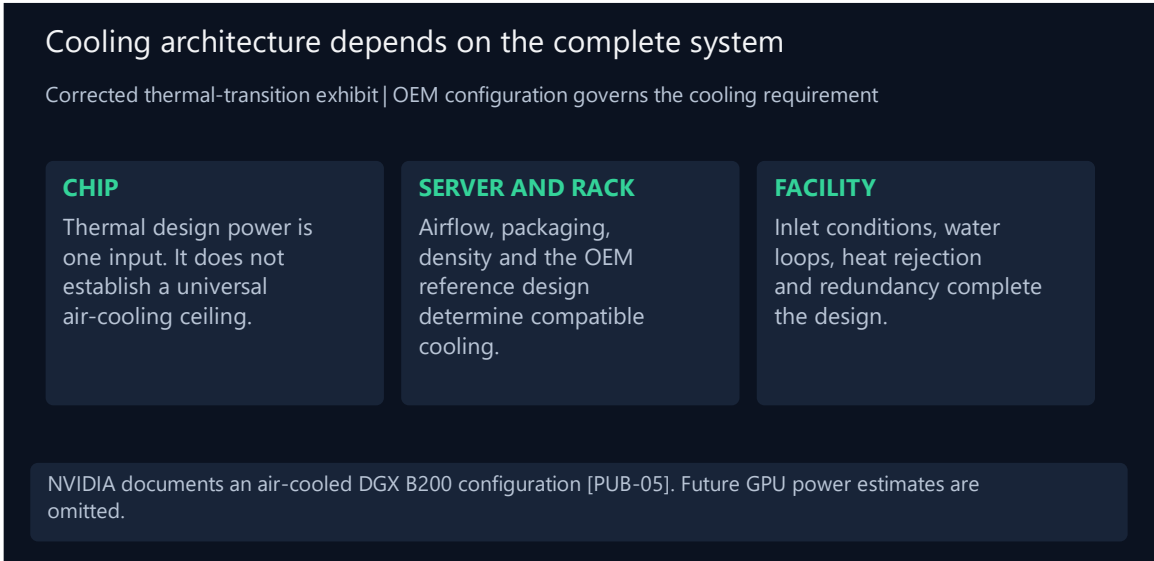


Figure ES-1. Cooling architecture depends on the complete system

Source and scope: NVIDIA documents an air-cooled DGX B200 configuration [PUB-05]. Future GPU power estimates are omitted.

4. Domestic capability

The revised company register records specific products, facilities or transactions instead of uncalibrated readiness scores. India presence does not prove local production of every component. Likewise, a domestic factory does not establish indigenous intellectual property or a measured local-content percentage. The earlier cold-plate and quick-disconnect import ratios are removed because no consistent product-level numerator and denominator support them.

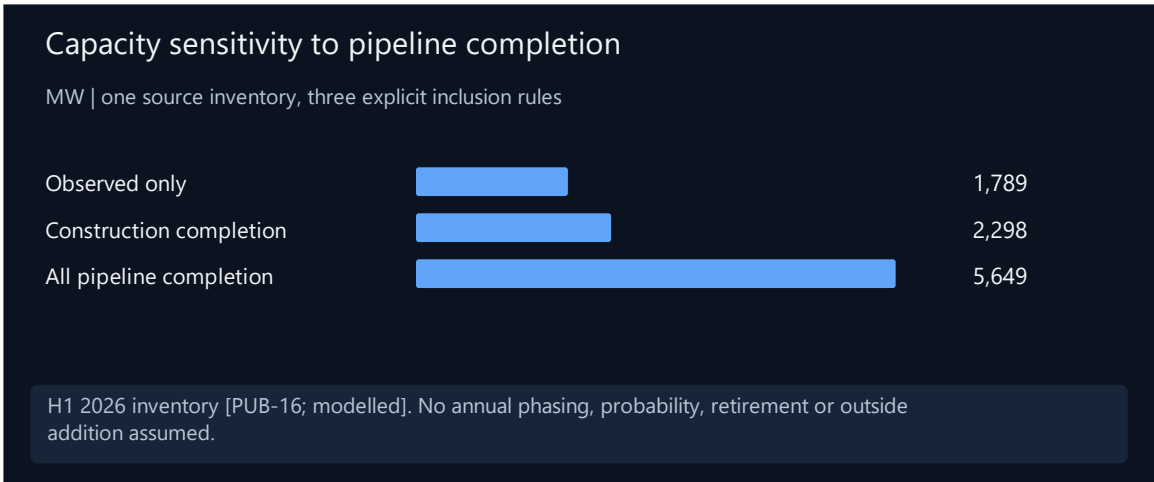


Figure ES-2. Capacity sensitivity to pipeline completion

Source and scope: H1 2026 inventory [PUB-16; modelled]. No annual phasing, probability, retirement or outside addition assumed.

5. Delivery risks

The main execution risks are power and water availability, project timing, equipment compatibility, quality control and service support. The capacity sensitivity does not assign probabilities to construction or planned projects. Environmental and policy assumptions must be tested against the applicable instrument and site; a proposed incentive is not contracted income.

6. Actions for decision makers

Operators should tender a complete thermal scope and require acceptance tests. Manufacturers should choose a defined product, secure design rights and prove repeatable quality before adding capacity. Investors should link funding to qualified orders and cash conversion. Public support should address testing, skills and qualification barriers with measurable outcomes. These are Techadyant recommendations, not forecasts of market share or investment returns.

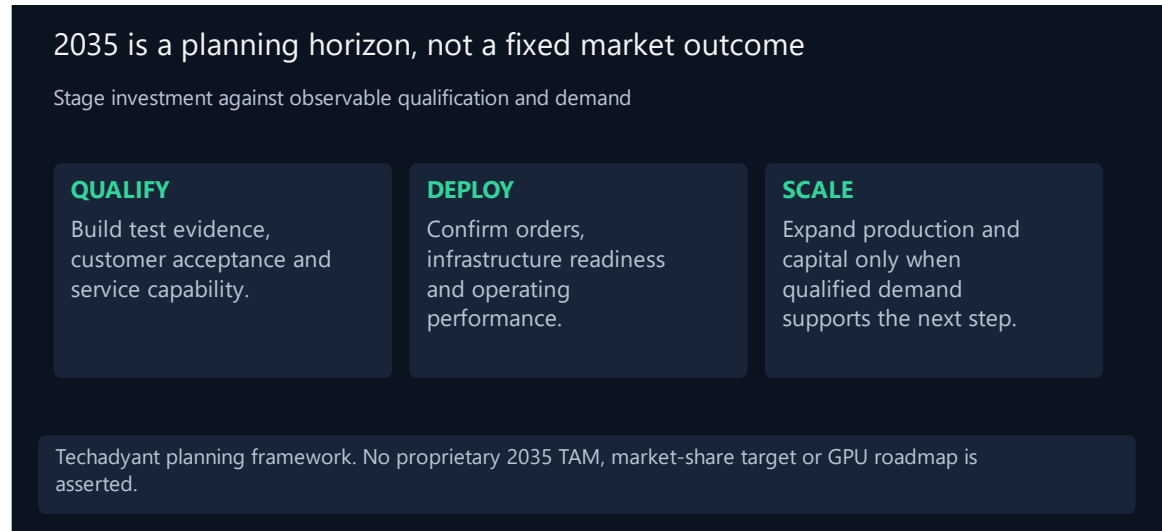


Figure ES-3. 2035 is a planning horizon, not a fixed market outcome

Source and scope: Techadyant planning framework. No proprietary 2035 TAM, market-share target or GPU roadmap is asserted.