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INDUSTRY ANALYSIS

AI Data Center Map of Korea

Operational readiness and break-even conditions of four AI data center projects in Korea

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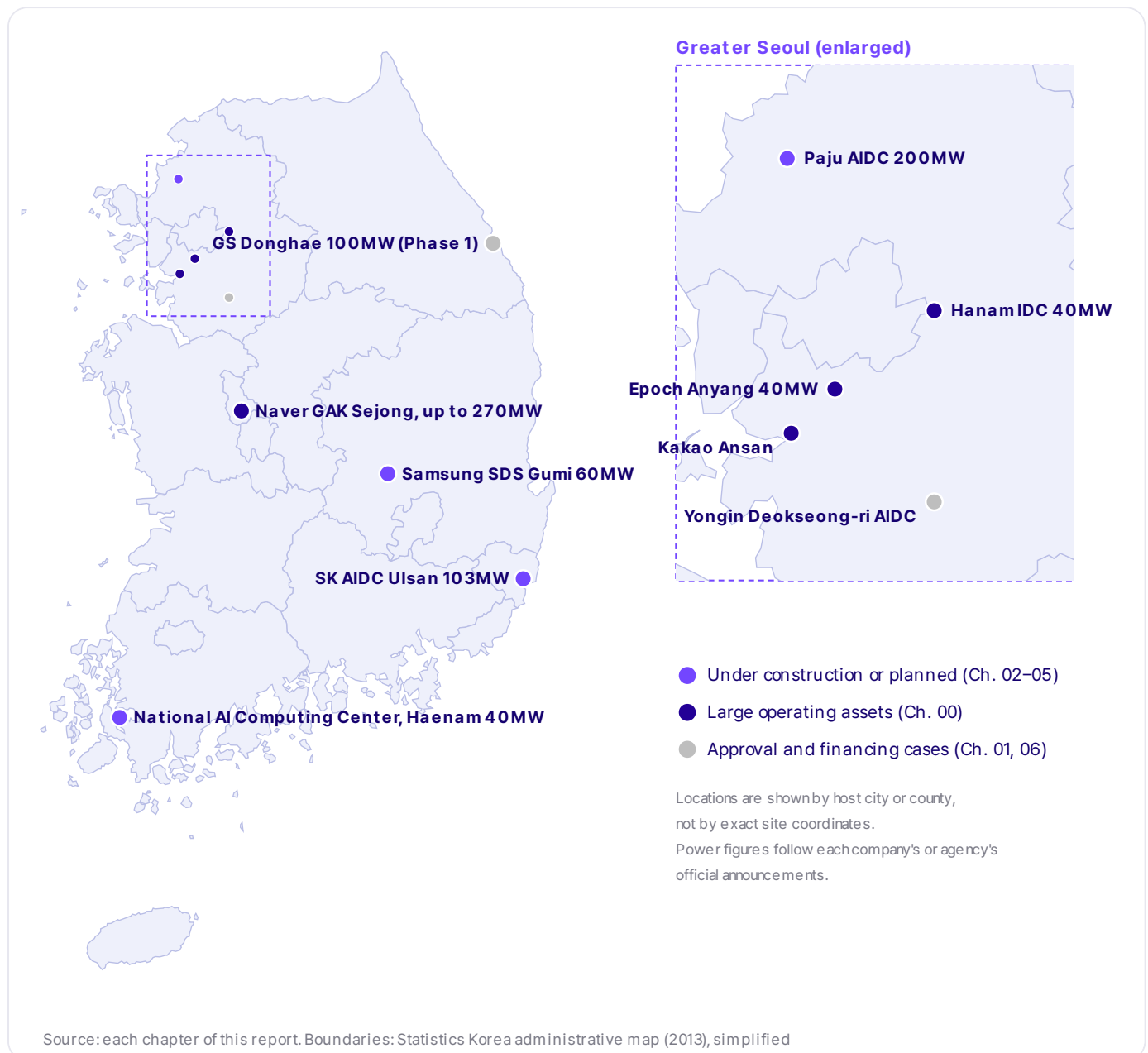
Bitplanet Research Lab

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Major Korean data centers on the map

The map marks four large projects under construction or in development (Chapters 02–05), four large operating assets (Chapter 00), and two reference cases for power approval and financing (Chapters 01 and 06), each placed on its host city or county. Power figures follow each company's or agency's official announcement; because the bases differ (utility supply capacity, project scale, and so on), they are not summed. Kakao Ansan and Yongin Deokseong-ri, whose power figures are not discussed in the text, are shown by location only.



Conflict of interest disclosure The publisher of this report is a listed company that holds bitcoin as a treasury asset and pursues businesses related to digital assets and AI and data center infrastructure. Conflicts of interest may exist in topic selection and interpretation. This issue covers four third-party data center projects in which the publisher has no involvement, and includes no projects or metrics of the publisher itself. The figures and outlooks of external cases have no bearing on any assessment of the publisher's own business.

EXECUTIVE SUMMARY

Securing power and demand, and what it takes to reach break-even

WHY IT MATTERS

Securing power and demand alone does not guarantee a data center's profitability. When a project reaches its break-even point (BEP) depends on actual rents, occupancy, and financing terms. Drawing on public sources, this report compares the operational readiness of four data centers, in Paju, Ulsan, Haenam, and Gumi, and the break-even conditions specific to each business model.

WHAT HAPPENED

Between August 2024 and March 2026, 522 data center projects in the Seoul metropolitan area applied for the preliminary technical review of the power system impact assessment, with a combined requested capacity of 33,592 megawatts (MW). Only 10 projects (1,010MW) received final supply approval^{[1][2]}. Among the four data centers analyzed, Paju AIDC (LG Uplus) is the only one that has both confirmed power supply and a pre-completion lease for its first building^[3].

WHAT TO WATCH

The detailed rules to come in the power system impact assessment notice and in the enforcement decree of the Special Act on the Promotion of the Artificial Intelligence (AI) Data Center (AIDC) Industry, and the trend in main-review approvals in the metropolitan area, warrant close attention^{[4][5][6]}.

Whether Paju's first building is completed in June 2027 and Ulsan's Phase 1 (41MW) begins operating in November 2027 as targeted are also key checkpoints^{[3][7]}. Once actual lease terms and post-launch revenue and cost data become public, the break-even timing can be estimated in far more concrete terms.

10 · 1,010MW

Final power supply approvals in the Seoul metropolitan area, count and capacity (1.9% of 522 applications, cumulative Aug 2024–Mar 2026)

[2]

200MW

Confirmed power supply capacity of Paju AIDC (Approved investment for Phases 1 and 2 combined: KRW 1.9645 trillion)

[8] [3]

4 projects

Operational readiness of the Paju, Ulsan, Haenam, and Gumi data centers, compared on power, demand, and capital

Scope of analysis: Chapters 02–05

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Four large projects compared on power, demand, and capital

We compared the four sites in Paju, Ulsan, Haenam, and Gumi on secured power, tenant demand, capital sourcing, and operating targets. This is neither a census of all data centers in Korea nor a representative sample. Because business models and the items included in investment figures differ, investment size alone cannot rank the projects economically. Power status is summarized from each project owner's official announcements, and projects at different administrative stages are not placed on the same footing.

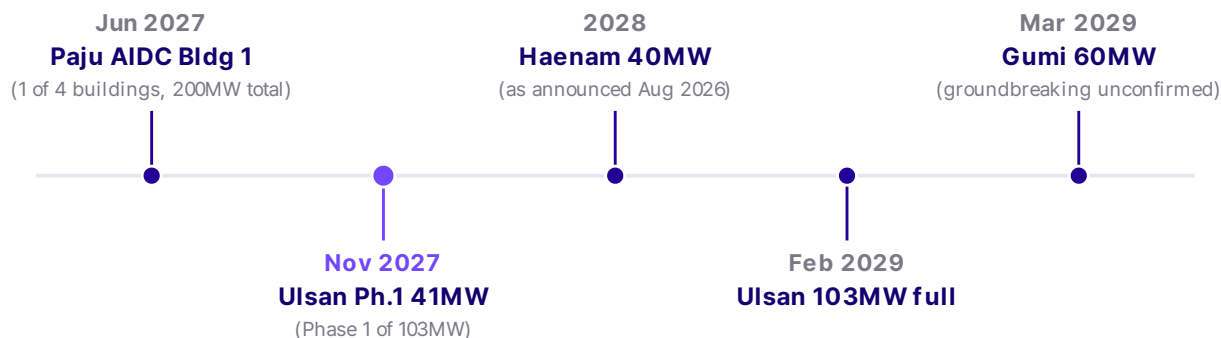
Item	Paju AIDC (Ch. 02)	SK AI DC Ulsan (Ch. 03)	National AI Computing Center, Haenam (Ch. 04)	Samsung SDS Gumi (Ch. 05)
Business model	Leasing	Commercial (SK–AWS partnership)	Public infrastructure (public–private)	Owner-operated services (AI and GPU)
Project owner	LG Uplus	SK affiliates in partnership with AWS; SK Ecoplant builds the infrastructure	SPC Koark, with Samsung SDS as largest shareholder	Samsung SDS
Capital and investment	Own cash (approved Phase 1 and 2 total: KRW 1.9645 trillion)	KRW 7 trillion in total (including USD 4 billion from AWS)	Government, policy finance, private. MSIT: KRW 2.5 trillion or more; Haenam County: KRW 2.9 trillion	Own funds, KRW 427.3 billion (building and facilities; further AI infrastructure investment possible)
Disclosed capacity	200MW (supply confirmed)	103MW target, Phase 1 41MW	40MW (utility supply)	60MW (basis not specified)

Item	Paju AIDC (Ch. 02)	SK AI DC Ulsan (Ch. 03)	National AI Computing Center, Haenam (Ch. 04)	Samsung SDS Gumi (Ch. 05)
Power status	200MW supply confirmed (company announcement)	Power secured for current construction (press reports citing industry sources)	Power use application filed with KEPCO; supply approval unconfirmed	Supply approval unconfirmed
Demand and contracts	Building 1 leased before completion; terms undisclosed	Construction agreement with AWS; lease and revenue-sharing terms undisclosed	Plan to provide AI capacity to industry, academia, and research institutes	Plan to provide AI and GPU services
Stage and operating target	Construction began May 2025; Building 1 targeted for completion June 2027	Groundbreaking Aug 29, 2025; 41MW targeted for Nov 2027	Groundbreaking ceremony Aug 3, 2026; completion targeted for 2028	Groundbreaking unconfirmed; operation targeted for Mar 2029

Sources: [\[9\]](#)[\[10\]](#)[\[11\]](#)[\[12\]](#)[\[7\]](#)[\[13\]](#)[\[8\]](#)[\[14\]](#)[\[15\]](#)[\[3\]](#). Capacities follow company and government announcements and are distinct from IT load available to servers. The Ulsan schedule is as announced in June 2025. Because the items included in each project's investment differ, per-MW costs cannot be compared directly.

Major AIDC operating targets, 2027–2029

Basis: operating or completion targets announced by each company or the government



Sources: ZDNet Korea[9]·Newsis[10]·Aju Business Daily[7]·ZDNet Korea[16]·Digital Daily[15]

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Four large data centers already in operation

Major data centers already in operation include Naver GAK Sejong and Kakao Ansan, both built for their owners' own use^{[17][18]}, and the leased facilities Hanam IDC and Epoch Anyang. Hanam IDC has 40MW of utility supply capacity, and Epoch Anyang (40MW) was completed in early 2025^{[19][20]}. Naver GAK Sejong, opened in November 2023, is designed to reach up to 270MW of utility supply capacity once all six expansion phases are complete; as of October 2025, roughly one sixth of the space was in operation^{[18][21]}. Naver Cloud has announced the second and third expansion phases, but whether construction has actually begun remains unconfirmed^[21]. The operating and expansion status of existing assets should be kept clearly separate from the supply plans of the four new projects.

01

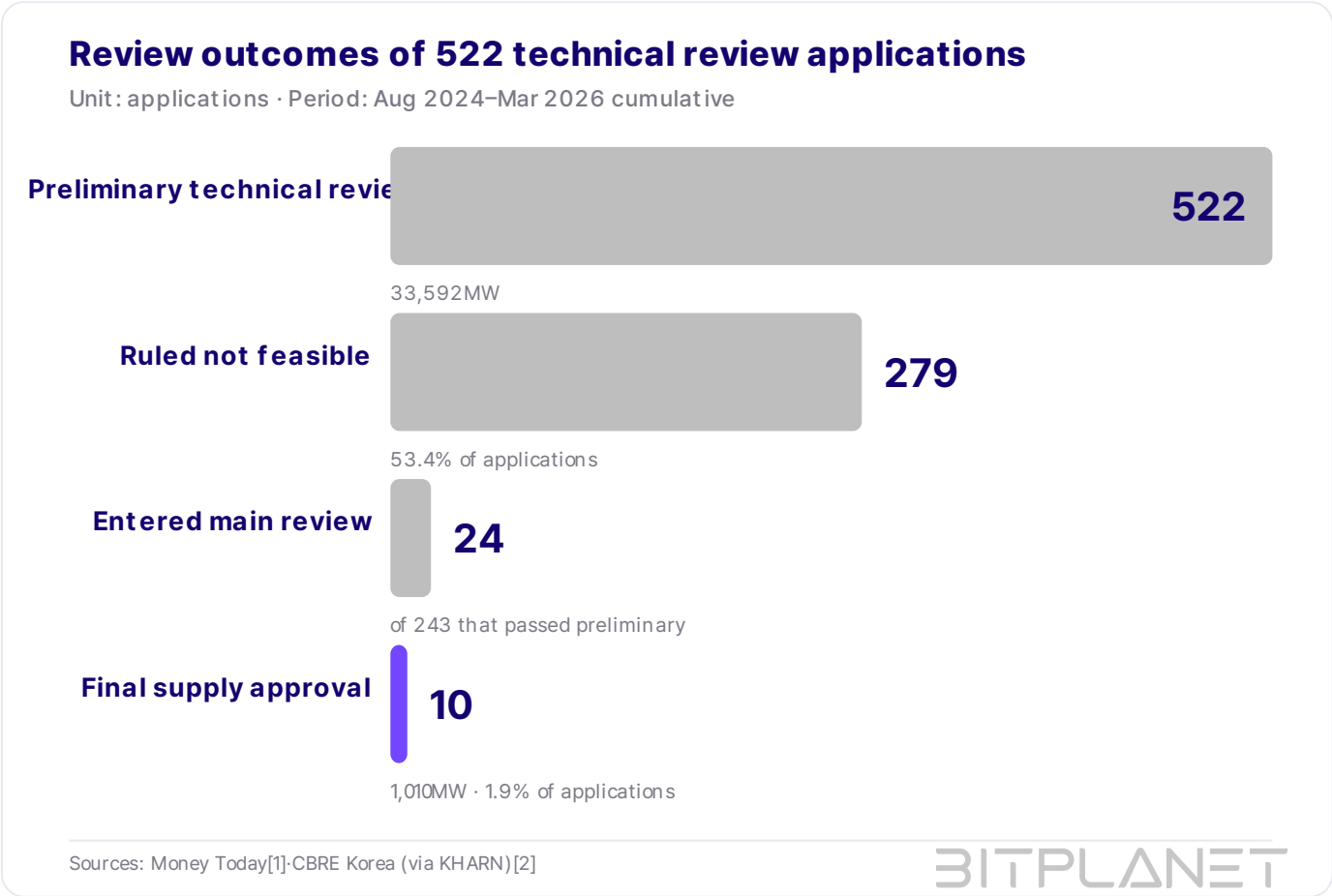
POWER APPROVAL

Only 10 power supply approvals in the metropolitan area

New power supply for data centers in the Seoul metropolitan area is severely constrained. Of the 522 preliminary technical review applications filed between August 2024 and March 2026, 279 (53.4%) were ruled not feasible for supply. Of the 24 that reached the main review, only 10 passed (including one in Seoul). Outside the metropolitan area, by contrast, 187 of 214 applications were

notified that supply was feasible^{[1][2]}. The 10 final approvals in the metropolitan area amount to 1.9% of the 522 cumulative applications. Because applications still under review are included, this ratio should not be read as the approval probability of any individual project.

As of the end of March 2026, 9,583MW of the 63,846MW in cumulative nationwide applications remained in the queue, with supply feasibility not yet decided^[22]. Meanwhile, the GS AI data center in Donghae, Gangwon, passed the power supply review for its Phase 1 (100MW) in September 2026 and is preparing to break ground in November^[23].



The power system impact assessment is a procedure that examines in advance how large-scale power demand would affect the national grid^[4]. After its legal basis, the Special Act on Distributed Energy Promotion, took effect on June 14, 2024^[24] the power authorities have compiled the relevant statistics since August of that year^[1]. The detailed operating rules were issued for public notice in July 2026, but as of September 15 the final notice had not been confirmed as enacted^[4].

Separately, the Special Act on the Promotion of the AI Data Center Industry (AIDC Act) takes effect on March 10, 2027. The Act includes an exemption from the power system impact assessment for new AIDC construction outside the metropolitan area, for the expansion of operating facilities, and for the conversion of existing data centers to AI use. The capacity threshold for eligibility is to be set by presidential decree^{[5][25]}. The Ministry of Science and ICT held a public forum on the

subordinate legislation on September 9, 2026^[6]. Whether the Ulsan, Haenam, and Gumi projects qualify for the exemption will therefore depend on the capacity threshold in the enforcement decree and on each project's specific conditions.

02 Paju AIDC: 200MW of power secured and Building 1 leased

Business model: leasing. Revenue comes from leasing data center space and supporting infrastructure to customers^[14]. Rent per unit and the leased capacity that generates revenue are the key performance metrics.

Status and facts: LG Uplus broke ground on the 200MW Paju AIDC in May 2025. Building 1 is targeted for completion in June 2027, with all four buildings to come online in stages by 2028^{[14][15]}. Board-approved investment totals KRW 1.9645 trillion: KRW 615.6 billion for Phase 1 and KRW 1.3489 trillion for Phase 2^[8]. The company has said it will fund the investment from its own cash without external borrowing^[14]. Power supply of 200MW has been confirmed, and according to the company, Building 1 was fully leased before completion^[3]. As of June 5, 2026, construction was about 20% complete^[15].

Analysis: Because the contracted capacity (MW), term, rent per unit, and the pre-leasing status of Buildings 2 to 4 are undisclosed, the exact operating break-even point cannot be calculated^{[14][3]}. Even though the company has pointed to rising colocation rents, the level of rent actually contracted is unconfirmed^[14]. Keeping the ramp-up period, the lag between signing and actual revenue, as short as possible is what eases the early financial burden.

03 SK AIDC Ulsan: power secured for current construction, 1GW expansion still under discussion

Business model: commercial (SK-AWS partnership). The project is jointly pursued by SK Group and Amazon Web Services (AWS)^[11]. Because the lease and revenue-sharing terms are undisclosed, it cannot be compared directly with a conventional leasing business.

Status and facts: SK Telecom, SK Ecoplant, AWS, and Ulsan Metropolitan City held the groundbreaking ceremony on August 29, 2025. SK Broadband and other affiliates participate in the project, and SK Ecoplant is responsible for infrastructure construction. In June 2025, SK and AWS had signed the definitive agreement to build the center^[11]. The targets announced by the Ministry of

Science and ICT at the time were initial operation of Phase 1 (41MW) in November 2027 and full operation of 103MW in February 2029. The KRW 7 trillion total project cost includes AWS's USD 4 billion investment^[7].

According to press reports in September 2026, power has been secured for the initial facilities now under construction. SK, however, has not officially disclosed the exact capacity, citing a non-disclosure agreement (NDA)^[12]. SK Group Chairman Chey Tae-won said on September 11 that discussions on an additional expansion of about 900MW had made substantial progress^[26], while Korea Electric Power Corporation (KEPCO) explained that no formal administrative application for additional supply had been filed^[12]. Discussions on expansion do not amount to final approval of power supply.

Analysis: It cannot be assumed that the partnership with AWS translates directly into fixed lease income for SK^[11]. Because the breakdown of total investment (construction, equipment, and so on) is not clearly separated, direct comparison with other projects' facility investment is limited.

04 National AI Computing Center, Haenam: 40MW of public AI capacity, completion targeted for 2028

Business model: public infrastructure. A public-private joint venture that provides AI computing resources to industry, academia, and research institutes^[9]. Alongside usage-fee revenue, the delivery of public computing capacity is a central measure of performance.

Status and facts: The National AI Computing Center in Solaseado, Haenam, is being built with 40MW of utility supply capacity and 15,000 AI chips. The groundbreaking ceremony was held on August 3, 2026, and completion is targeted for 2028^[9].

On project cost, the Ministry of Science and ICT announced KRW 2.5 trillion or more (2026–2030), while Haenam County announced KRW 2.9 trillion (June 2026)^{[9][10]}. The difference in items covered by the two figures has not been clearly established. Meanwhile, Koark, the special purpose company (SPC) that owns the project and in which Samsung SDS is the largest shareholder, has filed a power use application with KEPCO. From 2027, part of the computing capacity is to be supplied early using Samsung SDS's existing data center resources^[9].

Analysis: Haenam offers usage vouchers and fee discounts to startups and research institutes^[9]. Performance should therefore be judged not only on lease income but also on whether the policy goal of supplying public AI infrastructure is met. Filing a power use application also does not mean that supply approval has been granted.

05 Samsung SDS Gumi: 60MW for AI and GPU services, groundbreaking unconfirmed

Business model: owner-operated services. Samsung SDS operates the data center infrastructure itself and provides AI and GPU cloud services to customers^[13]. Service revenue and equipment investment determine the profit structure.

Status and facts: Samsung SDS decided to build a 60MW AI data center on the site of its Gumi Plant 1 and, on January 2, 2026, disclosed an investment of KRW 427.3 billion. This amount covers building and facility construction, and further investment may follow as AI infrastructure such as GPUs is added^{[13][16]}. The original plan targeted groundbreaking in July 2026 and operation in March 2029, but as of September 15 neither the actual start of construction nor the result of the power system impact assessment had been confirmed.

Analysis: Building and basic facility investment alone cannot support a simple comparison of unit costs or cost advantages against other data centers. Gauging the profitability of the AI and GPU services Samsung SDS will operate itself requires a combined look at the service revenue outlook and the scale of additional equipment investment, including high-cost GPU servers.

06 BREAK-EVEN

Break-even in perspective: differences in contract terms and financing structures

Comparing break-even points requires a precise understanding of which costs are included. The 'operating break-even' used in this report means the level at which revenue covers pure operating expenses (OPEX) and interest on borrowings. This differs from accounting break-even, which reflects depreciation, and must also be distinguished from the payback period, the time it takes to fully recover the initial capital invested.

Rents and contract terms. Colocation rents in the Seoul metropolitan area rose from about KRW 140,000 per kilowatt (kW) per month in 2019 to about KRW 250,000 in 2025. Of new metropolitan supply, the share committed through occupancy or pre-leasing was high, at 99.7% in 2024 and

99.4% in 2025, and 16% and 23.5% of the supply scheduled for completion in 2027 and 2028, respectively, is already pre-leased^[2]. Because the time remaining to completion differs, however, the gap in pre-leasing rates alone is not enough to conclude that demand has weakened.

In the domestic market, the common contract structure discounts rent in the early period and then fixes the annual escalation at about 2%. Large global contracts of 10MW or more, by contrast, are increasingly set for terms of 10 years or longer with 3% annual escalation or indexation to the consumer price index (CPI)^[2].

Hanam IDC, for example, charges rent per kW on the committed capacity and settles electricity separately per kilowatt-hour (kWh)^[27].

Reference cases: Gwacheon IDC and Hanam IDC

Gwacheon IDC: In July 2025, LS Securities estimated that Gwacheon IDC would need an average annual utilization rate of about 25% to break even. The estimate takes into account rising depreciation and the interest burden on borrowings, and differs from the actual outcome^[28]. This utilization rate cannot be applied to other data centers as is.

Hanam IDC: According to Macquarie Korea Infrastructure Fund's investor relations materials for the first quarter of 2026, Hanam IDC has signed leases covering 99% of its target IT load (25.44MW). The company expects contracted rent on the full target IT load to begin accruing around mid-2027^[29]. Even after leases are signed, there is a lag before revenue actually flows in, and that point is not the same as reaching break-even.

Financing. Even with power approval and tenants secured, a project can stall if financing fails. In 2026, a data center development in the metropolitan area triggered an event of default (EOD) after it failed to pay the land balance on time, despite having signed a 20MW power use contract with KEPCO, and creditors demanded early repayment^[30]. By contrast, the Yongin Deokseong-ri AI data center (total project cost about KRW 1.4 trillion), which has not disclosed an anchor tenant, secured KRW 710 billion in main project financing (PF) in April 2026^[30]. This is why the mere disclosure of a tenant should not be taken as a guide to financing prospects.

▲ Counterargument

Pre-leasing reduces early vacancy risk, but it also locks in the rent escalation. Under a contract with a fixed annual increase of about 2%, a surge in market rents cannot be passed through to lease income right away^[2]. Securing tenants early therefore does not necessarily mean higher profitability.

▲ Counterargument

If the AIDC Act widens the exemption from the power system impact assessment outside the metropolitan area, the permitting burden may fall^{[5][25]}. An exemption from permitting, however, does not guarantee a stable supply of power. Expanded power infrastructure must coincide with firm tenant demand and workable financing terms.

What to check for each project

Paju AIDC: The actual contracted rent per unit and initial discount terms, the contracted volume and term, and the pre-leasing rate of Buildings 2 to 4 need to be established. The timing of rent collection after Building 1 is completed, and the level of operating costs and interest on borrowings, should also be confirmed.

SK AIDC Ulsan: Whether the Phase 1 facility now under construction begins normal operation should be checked. The SK-AWS contract structure needs to be clarified, whether it is a plain lease or a revenue-sharing arrangement, along with the split of facility investment and operating costs. The power application and approval status for the additional 900MW expansion, and whether the investment is finalized, should also be monitored.

National AI Computing Center, Haenam: Before operation, final approval of the 40MW power supply and adherence to the completion schedule should be confirmed. After operation, the level of public subsidies, the fee structure, the actual computing capacity delivered and its utilization, and the cost burden of fee subsidies warrant review.

Samsung SDS Gumi: The actual start of construction and passage of the power system impact assessment should be confirmed first. Once those two conditions are established, the scale of additional GPU and server investment, the status of customer demand, and the trend in AI and GPU service revenue should be tracked.

C CONCLUSION

Break-even gaps driven by rent, occupancy, and financing

When a data center reaches break-even is determined by rent per unit, occupancy, and financing terms. Even for facilities of the same size, the point at which operating costs and interest are covered varies widely with the rent actually contracted, when revenue begins accruing on contracted capacity, and the

interest burden of financial borrowings. Even with pre-leases signed, delays in tenants' actual move-in and rent collection inevitably add to the early financial burden^{[27][28][29]}.

INTERPRETATION

Author's interpretation

The profitability of the Paju AIDC project depends on the detailed lease terms, while for SK AIDC Ulsan the key variable is how revenue and costs are settled between SK and AWS. The Haenam data center must be assessed together with its policy purpose of supplying public AI capacity, and the Samsung SDS Gumi data center requires a combined calculation of revenue from its own AI and GPU services and the equipment investment. Because the four projects differ in business model and in the scope of disclosed information, it is not possible at this point to say which will reach break-even first.

Market impact and implications

Author's interpretation and recommendations

What it means for the market. Among operators that have secured power, what matters is winning customers and raising server utilization. The four data centers analyzed in this report target completion and operation in 2027–2029^{[31][7][9][16]}. According to CBRE's July 2026 tally, only 16.0% of the metropolitan data center supply scheduled for 2027, and 23.5% of that for 2028, has been pre-leased^[31]. As new supply gradually comes into view, how quickly uncontracted capacity is converted into leases may separate operators' profitability.

These pre-leasing rates, however, are measured on the IT load of metropolitan data centers and do not directly represent demand for the four AIDCs. CBRE read the figures as customers securing space in advance out of concern about supply shortages driven by future power constraints^[31]. If grid connection delays push back new completions, or if remaining capacity is absorbed early, a market-wide 'supply shortage' may continue to set the tone rather than competition among operators for customers.

Checkpoints for operators. Operators need the flexibility to phase and adjust capital expenditure (CAPEX) and cash outlays in line with tenants' actual move-in and utilization schedules. Operators relying on external borrowings in particular must have a contingency funding plan to absorb fixed operating costs and interest when completion or operation is delayed. As the Hanam IDC case shows, even a high lease signing rate is followed by a lag before the full contracted rent comes in^[29]. Operators should therefore measure the lag between signing and actual revenue precisely and build it into their cash flow plans.

Indicators to track. Going forward, adherence to target completion and power supply schedules should be tracked, along with the time series of pre-leasing rates for supply in the same completion year. Once a center is operating, the key management indicators should be diversified by business model. Leasing data centers should track contracted capacity, capacity actually in server operation, and capacity actually billed as distinct measures. Integrating the applicable rent per unit with borrowing rates and repayment schedules is what makes it possible to see how growth in contracted capacity affects actual revenue and the offsetting of financing costs. For the public infrastructure model, the core indicators are the allocation of public AI computing capacity by institution and company and its actual utilization rate. For the owner-operated service model, the utilization of high-cost servers and equipment and the resulting trend in cloud service revenue should be monitored closely.

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[17]	Kakao opens its first own data center: 'best stability in Korea' (Korean: 카카오, 첫 '자체 데이터센터' 오픈..."안정성 국내 최고") https://www.newspim.com/news/view/20240611000836	Newspim (뉴스핌)	2024-06-11
[18]	Naver's 'GAK Sejong' data center to carry the next 10 years: the hyperscale era begins (Korean: 네이버 10년 책임 질 '각 세종' 데이터센터...하이퍼스케일 시대 연다) https://www.bloter.net/news/articleView.html?idxno=608037	Bloter (블로터)	2023-11-06
[19]	Hanam Data Center (asset overview: completed 2023-11-28, 40MW utility supply, 25.44MW IT load, tenant LG CNS) (Korean: 하남 데이터센터 자산 개요) Primary https://www.mkif.com/ko/assets/hanam-data-center.html	Macquarie Korea Infrastructure Fund (맥쿼리한 국인프라투자회사)	Date not stated
[20]	'We will lose them all': foreign heavyweights snap up prime Korean assets (Korean: "이러다 다 뺏겨" 해외 큰손,韓 알짜 매물 '쭈뼌') https://marketin.edaily.co.kr/News/Read?newsId=01144726642071832	Edaily Market In (이데일리 마켓인)	2025-02-18
[21]	Naver Cloud to break ground on GAK Sejong Phases 2 and 3 'as early as year-end' (Korean: 네이버클라우드, 각 세종 2·3차 구축 '이르면 연말 착공') https://www.thebell.co.kr/front/newsview.asp?key=202510270910271020102172	The Bell (더벨)	2025-10-27
[22]	Regional AIDC power assessment 'bottleneck': 10GW waiting (Korean: 지방 AIDC 전력평가 '병목'...대기만 10GW) https://www.sedaily.com/article/20075225	Seoul Economic Daily (서울경제)	2026-08-03
[23]	Donghae AI data center passes power supply review, November groundbreaking in sight (Korean: 동해 AI 데이터센터 전력공급 심의 통과...11월 착공 가시화) https://www.kado.net/news/articleView.html?idxno=2070895	Kangwon Domin Ilbo (강원도민일보)	2026-09-07
[24]	Special Act on Distributed Energy Promotion takes effect June 14 (Korean: 분산에너지 활성화 특별법 6월 14일부터 시행된다) Primary https://www.motir.go.kr/kor/article/ATCL3f49a5a8c/169176/view?displayAuthor=&endDtD=&mnO=&pageIdx=1&rowPageC=0&searchClear=on&searchCategory=0&searchCondition=1&searchKeyword=&startDtD=	Ministry of Trade, Industry and Energy (산업통상자원부)	2024-06-13

#	Title · URL	Publisher	Date
[25]	National Assembly enacts 'Special Act on the Promotion of the AI Data Center Industry': national strategic SOC and special zones (Korean: 국회, 'AI데이터센터 산업 진흥 특별법' 입법...국가 전략 SOC·특구 지정) https://www.hankooki.com/news/articleView.html?idxno=332202	Daily Hankooki (데일리한국)	2026-05-07
[26]	'SK Ulsan AIDC 900MW expansion has made substantial progress' (Korean: "SK 울산 AIDC 900MW 확장 상당히 진척") https://www.fnnews.com/news/202609131805554245	Financial News (파이낸셜뉴스)	2026-09-13
[27]	Macquarie Korea Infrastructure Fund (088980): digital asset added with Hanam Data Center acquisition (Korean: 맥쿼리인프라(088980) 하남 데이터센터 매입으로 디지털 자산 추가) https://www.samsunggpop.com/common.do?cmd=down&contentType=application%2Fpdf&inlineYn=Y&saveKey=research.pdf&fileName=2010%2F2024073109544577K_02_03.pdf	Samsung Securities Research (삼성증권 리서치)	2024-07-31
[28]	Time for a change: finding cloud-migration beneficiaries (Gwacheon IDC break-even estimate, p.48) (Korean: 바꿀 때 됐잖아, 클라우드 전환 수혜주 찾기) Primary https://msg.ls-sec.co.kr/eum/K_20250708_31922_15.pdf	LS Securities Research (LS증권 리서치)	2025-07-08
[29]	Q1 2026 IR presentation (Hanam Data Center operations and construction status, p.13) (Korean: 2026년 1분기 IR 자료) Primary https://www.mkif.com/assets/mkif/ko-kr/investor-centre/public-filings-and-reports/2026/2604-ir-general-presentation-1Q-2026-kor.pdf	Macquarie Korea Infrastructure Fund (맥쿼리한국인프라투자회사)	2026-04
[30]	AI reshapes real estate finance trends: even a data center in EOD finds a new owner (Korean: 부동산금융 트렌드 바꾼 AI...EOD 난 데이터센터도 새 주인 찾아) https://www.investchosun.com/site/data/html_dir/2026/07/21/2026072180105.html	Invest Chosun (인베스트조선)	2026-07-22
[31]	Korea Data Center Investment: the scarcity premium created by supply constraints and exit prospects (pp.20, 24, 31) (Korean: 한국 데이터센터 투자: 공급 제약이 만드는 희소성 프리미엄과 Exit 가능성 진단) Primary https://www.cbrekorea.com/insights/reports/한국-데이터센터-투자	CBRE Korea (CBRE코리아)	2026-07-12

Data limitations and calculation basis

① Limitations of the analysis and data

- ◆ **Scope of verification:** We compared four projects under construction or in development that were presented in public announcements at 40MW or more. The definition of capacity differs by project. The reference date of the analysis is September 15, 2026. For Gumi, the start of construction is unconfirmed. Gwacheon IDC and Hanam IDC are used as reference cases for break-even estimates and the timing of lease revenue.
 - ◆ **Selection criteria:** Paju, Ulsan, Haenam, and Gumi were selected from projects for which the owner, investment plan, and operating or completion target could all be confirmed in public sources. The four cases were used to compare the leasing, commercial partnership, public infrastructure, and owner-operated service models. They are neither a survey of all domestic projects meeting the capacity threshold nor a representative sample.
 - ◆ **Cases excluded from the detailed comparison:** The detailed comparison by business model was limited to the four projects above. GS Donghae is introduced as a reference case that passed the power supply review. GAK Sejong, Kakao Ansan, Hanam IDC, and Epoch Anyang, which are already in operation, are treated as reference cases separate from the new projects. Yongin Deokseong-ri is introduced only as a financing case.
 - ◆ **Scope of market data:** Rents, pre-leasing rates, and contract practices are secondary citations via KHARN, cross-checked against the CBRE Korea original (pp.20, 24, 31)^{[2][31]}. Pre-leasing rates are measured on the IT load (MW) of metropolitan supply assets and do not represent all AIDCs in Korea. Whether rents are quoted per kW of IT load and whether electricity is included are not specified in the original either.
 - ◆ **Discrepancies between sources:** The project cost of the National AI Computing Center differs by source: the Ministry of Science and ICT announced KRW 2.5 trillion or more, while Haenam County announced KRW 2.9 trillion.
 - ◆ **Limits of applying the reference cases:** The approximately 25% for Gwacheon IDC is the average annual utilization needed to break even, as estimated by LS Securities in July 2025 from cost and revenue projections. It is neither an actual outcome nor an industry-wide benchmark. The 99% for Hanam IDC is a lease signing rate, and mid-2027 is the company's expected point at which rent on the full contracted load begins accruing. Because the two cases differ in metric and cost scope, the figures cannot be compared directly^{[28][29]}.
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- ◆ **Scope of investment figures:** Haenam includes AI chip procurement, while Gumi is centered on the building and basic facilities. For Ulsan, the items included in the total investment could not be separated either, so investment amounts cannot be compared directly across projects. Paju's KRW 1.9645 trillion is the sum of the approved amounts for Phases 1 and 2. Whether the separately reported land purchase of KRW 105.3 billion is included in this sum could not be confirmed from the original disclosure. We therefore did not add the land purchase to the total, nor did we present the sum as a total including land.
- ◆ **Limits on procedural status:** Whether the power system impact assessment notice has been enacted, whether Samsung SDS Gumi has broken ground, and whether GAK Sejong Phases 2 and 3 have started construction could not be confirmed as of September 15, 2026.
- ◆ **Nature of sell-side materials:** The Samsung Securities and LS Securities materials^{[27][28]} are brokerage research covering the respective stocks. They were used to confirm contract structures and the basis of break-even estimates; investment opinions and target prices were not cited.

② Basis for key figures

Ratios and totals we calculated ourselves are distinguished from estimates and projections presented by sources.

Metric	Basis and interpretation	Reference point	Source
Metropolitan power supply approval rate 1.9%	10 final approvals ÷ 522 cumulative applications × 100, rounded to one decimal place. Distinct from the approval probability of an individual project	2024-08~2026-03	[2]
Paju approved investment total, KRW 1.9645 trillion	Phase 1 KRW 615.6 billion + Phase 2 KRW 1.3489 trillion. Whether land purchase is included is unconfirmed	Reported 2026-07-29	[8]
Gwacheon IDC break-even average annual utilization, about 25%	LS Securities estimate, reflecting rising depreciation and interest on borrowings. Distinct from actual outcomes	Projection dated 2025-07-08	[28]
Hanam IDC lease signing rate 99% and full contracted rent accrual	Signing rate against the 25.44MW target IT load. Rent on the full contracted load is expected to begin accruing in mid-2027. Distinct from break-even timing	Q1 2026 IR	[29]

③ Methodology

- ◆ **Source hierarchy:** Official materials from companies and regulators take precedence, followed by raw data and aggregator databases, specialist media, syndicated media, and community sources, in that order.
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- ◆ **Source classification:** A source is classified as primary only when the original document was verified directly. Where the original could not be obtained, the citation is marked as secondary and the fact that the original was not obtained is stated.
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- ◆ **Reference and retrieval dates:** Values fixed at a specific point in time carry a reference date; dashboard figures that change in real time carry a retrieval date.
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- ◆ **Handling of conflicting figures:** Where differing figures are found, both are presented. When a reference value must be chosen, disclosure of the calculation scope, clarity of the retrieval date, and separability of line items take precedence over the prominence of the outlet, and the reason for the choice is stated in the text.
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- ◆ **Our own estimates:** The formulas for ratios and totals we calculated ourselves, and the basis of estimates and projections presented by sources, are set out in Appendix ②.
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- ◆ **Legal and regulatory interpretation:** Regulator materials are cited only to the extent of explaining the general classification of structures and their potential applicability, and are not extended into an official classification or approval of any specific product. Descriptions of product structures and regulatory interpretation are kept in separate paragraphs.
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- ◆ **Conflict of interest disclosure:** The same disclosure wording is placed in a fixed position at the top of every report.
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