SECTOR UPDATE

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EV/Mobility Team

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Rechargeable Batteries (091580)

AI data centers and batteries

- We forecast that the US data center ESS battery market will double by 2030, driven by the AI boom.
- Competing factors are affecting the sector's outlook: opportunities are emerging from growth in the US ESS market amid President Trump's heavy tariffs on China, but utilization rates across the North American battery supply chain may see limited improvement if the EV market fails to expand..
- Among Korean rechargeable battery value chain players, cell makers with ESS mass-production capacity in the US and prismatic battery component makers stand to benefit most.

WHAT'S THE STORY?

US ESS battery market to double by 2030 on AI data center boom: In the US, which accounted for 39% of global data center electricity demand in 2024, ESS battery installation demand should more than double from 35 GWh in 2024 to 76 GWh in 2030. Yet, the ESS battery portion of total North American battery demand should fall to 17% by 2030 after rising from 10% in 2024 to 23% in 2025.

Heavy tariffs on China bode well for Korea firms' US market share: In the US ESS market—where Chinese-made LFP prismatic batteries hold a 90% share—President Trump's tariffs on China should raise ESS purchase costs by around 58% in 2026. This will likely allow Korean battery makers with US-based ESS LFP production facilities to capture market share.

AI data center expansion positive, but limited in impact on utilization at North American battery facilities: AI-driven data center expansion should lift demand for ESS batteries, including uninterruptible power supply (UPS) systems. However, given President Trump's energy stance (unfavorable to renewables) and EV policy (unfavorable to EV adoption—*eg*, abolishing the EV mandate), AI-related ESS demand alone is likely to be insufficient to significantly improve utilization rates across the North American battery supply chain.

Cell makers with ESS mass-production capacity and prismatic component suppliers to benefit most more than materials makers: Within the Korean rechargeable battery value chain, material makers appear less attractive given the limited outlook for utilization rate improvement in North America. We prefer: 1) LG Energy Solution and Samsung SDI among cell makers with US ESS mass-production capacity, as controlling shareholders stand to gain more from AMPC benefits; and (2) Mplus (equipment) and Sangsin EDP (housing components) for their exposure to the ESS prismatic battery business.

AT A GLANCE

LG Energy Solution (373220 KS, 463,000)		
Target price	KRW550,000	18.8%
BUY		
Samsung SDI (006400 KS, 315,000)		
Target price	KRW350,000	11.1%
BUY		
mPlus Corp (259630 KQ, 15,030)		
Target price	n/a	
Not Rated		
SANGSIN ENERGY DISPLAY PRECISION CO.,LTD (091580 KQ, 14,330)		
Target price	n/a	
Not Rated		

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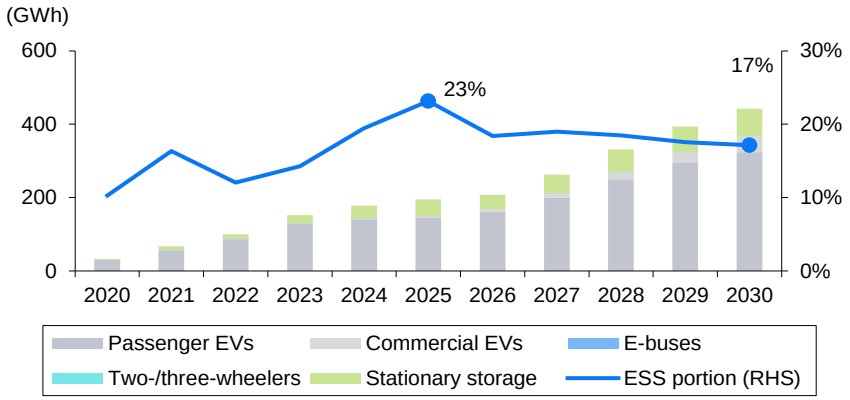
US demand for batteries, by application



Source: BNEF, Samsung Securities

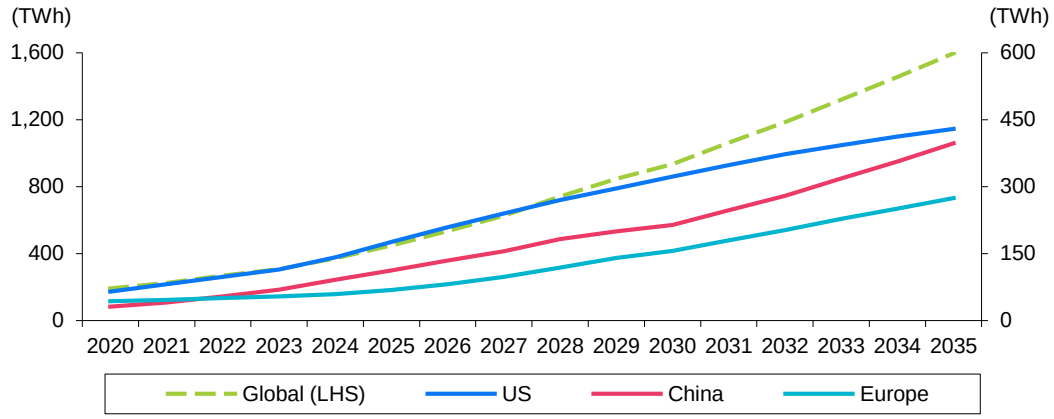
Outlook for AI data centers, battery market

US leading growth in the AI data center market

US accounts for roughly half of global AI data center market by number of facilities

Global AI data center electricity demand to quadruple within 10 years: According to Cloudscene, as of Sep 2024, more than 11,800 data centers were in operation worldwide, with the US hosting 5,388 (46%) and China 449 (3.8%). These figures, however, reflect the number of facilities rather than their processing capacity, which varies widely by data center. Based on BNEF data tracking global AI data center electricity demand—a better measure of market scale—the sector is expected to almost quadruple in size, from 449 TWh in 2025 to 1,596 TWh in 2035.

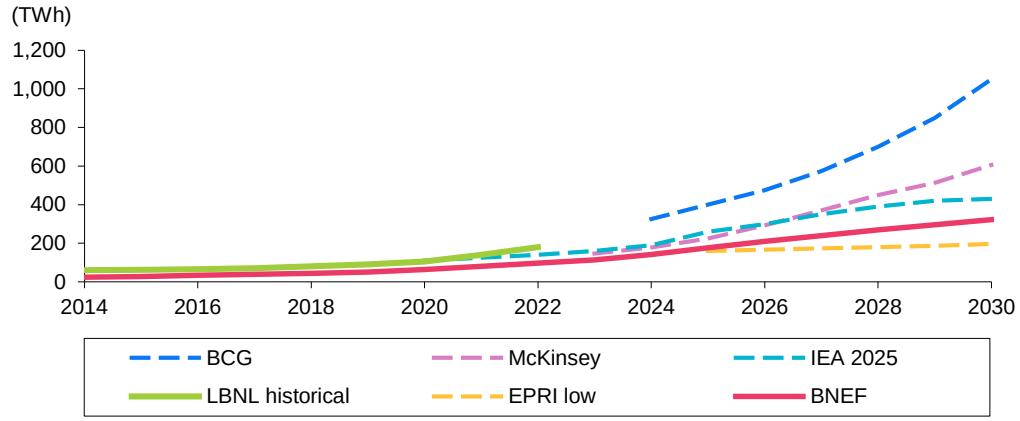
Global AI data center power demand outlook: Fourfold growth over the next decade



Source: BNEF

US driving global data center electricity demand: According to BNEF, US data centers consumed 142 TWh of electricity in 2024 (39% of the global total), with demand projected to grow at a CAGR of 15% to reach 323 TWh by 2030. However, estimates differ significantly among research firms due to varying assumptions about AI data center composition and model types. BCG has the most-aggressive forecasts, projecting a much steeper rise in US data center electricity demand, which it estimates at 1,050 TWh by 2030—over three times BNEF's forecast and exceeding Japan's total 2023 electricity consumption of 898 TWh.

Range of US data center power demand projections: 322 TWh to 1,050 TWh by 2030

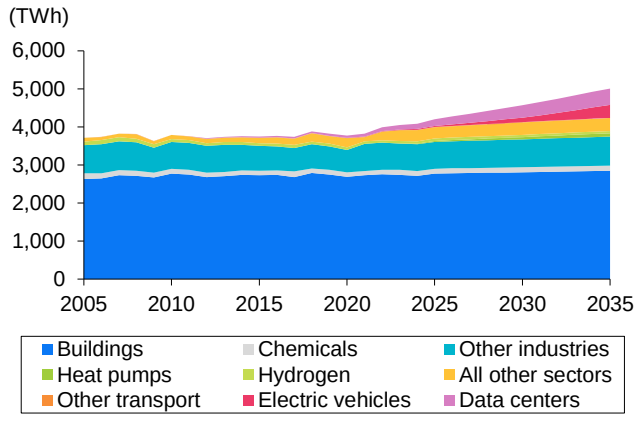


Source: BNEF

AI driving surge in US data center energy demand: The Lawrence Berkeley National Laboratory attributes the recent surge in US data center energy consumption primarily to AI and cryptocurrency mining[1], with AI workloads being the main driver. Training and inference of large AI models require massive parallel computing power, resulting in electricity-hungry GPU servers. Energy use by AI servers has risen more than twentyfold, from 2 TWh in 2017 to 40 TWh in 2023, underscoring AI's role as the key growth catalyst for the US data center market.

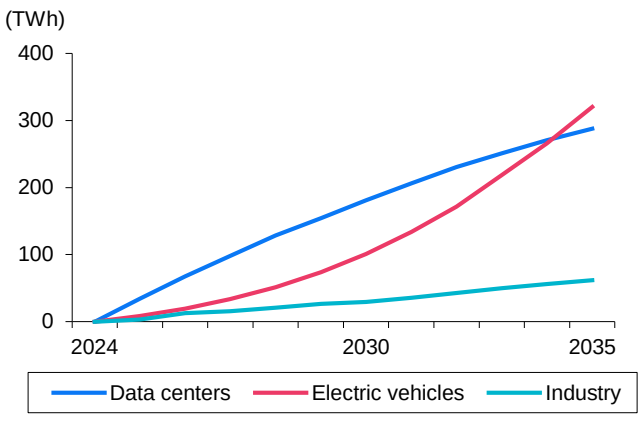
According to BNEF, data centers accounted for 3.5% of total US electricity consumption in 2024, a share expected to rise to 10.5% within a decade. Between 2024 and 2034, data centers and EVs are projected to be the two largest sources of new power demand. In the near term, data centers will likely dominate incremental consumption, as major technology firms with deep pockets—such as Amazon and Microsoft—continue to make large-scale investments, while EV-related demand growth remains slower.

Changes in US power demand, by sector



Source: BNEF

New sources of power demand: Data centers and EVs



Source: BNEF

[1] Since it is difficult to verify how servers are being utilized, all such centers are generally referred to as AI data centers

Share of power consumption by US data centers and EVs

Power demand	2024	2025E	2026E	2027E	2028E	2029E	2030E	2031E	2032E	2033E	2034E	2035E
EV	0.6%	0.8%	1.0%	1.4%	1.8%	2.4%	3.0%	3.8%	4.8%	5.9%	7.1%	8.4%
Data center	3.5%	4.3%	5.1%	5.9%	6.6%	7.2%	7.9%	8.5%	9.1%	9.6%	10.1%	10.5%

Source: BNEF, Samsung Securities

AI data center UPS battery market to double over 2024-2030: Can the battery market grow as fast as data centers? While annual data center power consumption exceeds total energy discharged from EV batteries—an eye-opener for some investors—two distinctions are crucial: 1) batteries in data centers function primarily as backup power (not to meet ongoing operational load); and 2) "power consumption" refers to energy used over a year, whereas backup batteries are sized for short-duration contingencies. In other words, data center battery installations are for backup or grid-stabilization and do not supply the facility's normal operations.

In line with US data center growth, demand for uninterruptible power supply (UPS) systems—including battery backup units (BBUs)[2]—should almost double from 4.3 GWh in 2024 to 8.2 GWh in 2030. Because a UPS primarily bridges the gap between a grid outage and the activation of a backup diesel generator, typical sizing is around 1.5× the protected load with 1-5 minutes of use. By contrast, grid-connected ESS—paired more often with renewables and used in weak-grid areas or where interconnections are limited—addresses system-level needs rather than server-level backup.

ESS to account for 17% of North American battery market by 2030: Amid the AI data center boom, ESS installations should rise from 35 GWh in 2024 to 76 GWh in 2030, while North American EV battery demand increases from 144 GWh to 366 GWh. Under the Biden administration's clean-energy push, ESS's share of the North American battery market rose from 10% in 2020 to an estimated 23% in 2025. However, given President Trump's unfavorable stance toward renewables (*eg*, solar), ESS is likely to comprise only 17% by 2030. Without parallel expansion of a power supply network that accompanies ESS batteries—*eg*, renewables—UPS growth alone will not meet market expectations.

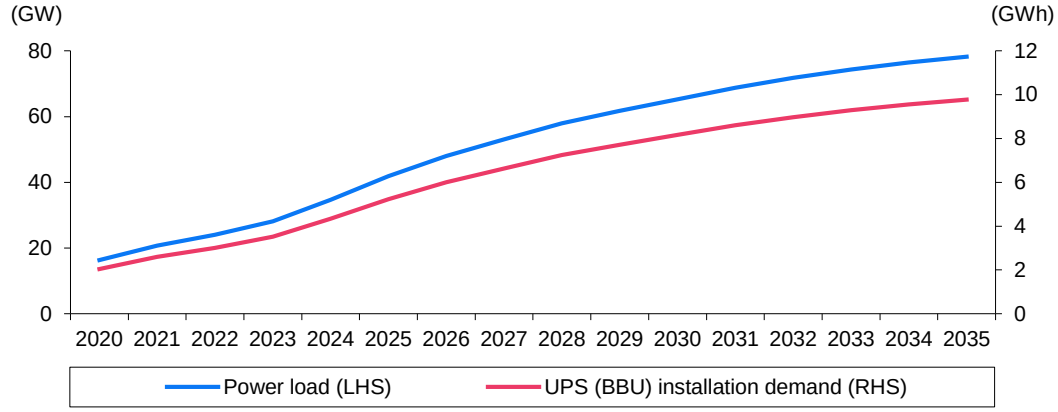
[2] An uninterruptible power supply (UPS) serves the same role as battery back-up unit (BBU)

US data center power load, UPS, ESS, and EV battery demand outlook

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Data center market																
Power load (GW)	16.4	20.7	24.1	28.2	34.7	41.8	48.0	53.1	57.9	61.7	65.3	68.8	71.8	74.3	76.5	78.2
Power demand (TWh)	65	81	98	114	142	176	209	240	270	296	323	348	372	393	412	430
UPS (BBU) installation demand* (GWh)	2.0	2.6	3.0	3.5	4.3	5.2	6.0	6.6	7.2	7.7	8.2	8.6	9.0	9.3	9.6	9.8
ESS market																
Annual ESS installations (GWh)	3.4	11.0	12.1	21.7	34.7	45.2	38.2	49.8	61.2	69.1	75.8	83.6	89.6	95.6	103.4	109.6
ESS battery share (%)	**10%**	**16%**	**12%**	**14%**	**19%**	**23%**	**18%**	**19%**	**18%**	**18%**	**17%**	**16%**	**15%**	**13%**	**13%**	**13%**
EV market																
EV battery demand (GWh)	29.5	56.1	88.2	130.5	143.6	149.9	169.4	212.7	270.1	324.9	366.3	448.5	521.8	619.6	680.4	750.8
EV battery share (%)	90%	84%	88%	86%	81%	77%	82%	81%	82%	82%	83%	84%	85%	87%	87%	87%

Note: *Assumes 1.5× the protected load for a data center, with 5 minutes of use
Source: BNEF, Samsung Securities estimates

Estimated US data center power load vs UPS installation capacity



Source: BNEF, Samsung Securities estimates

AI data centers: Power demand-supply issues

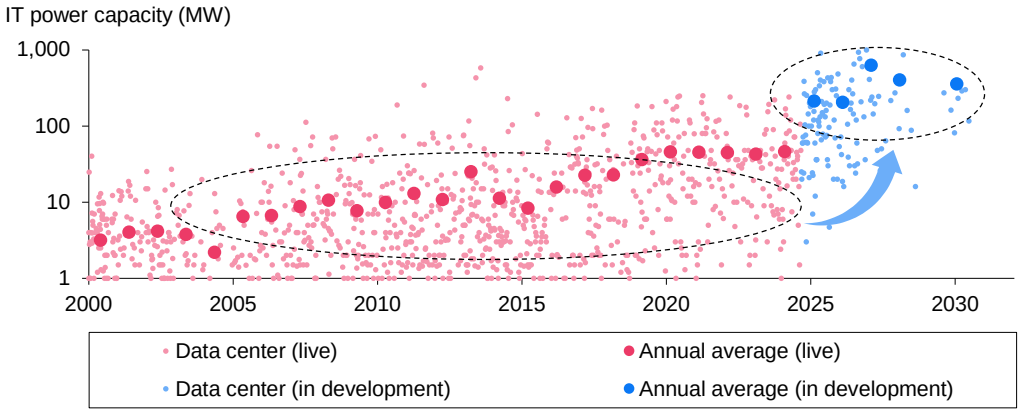
AI data center numbers expanding, and so is their power consumption

Data centers' energy demand soaring amid the AI boom

Data centers' IT power capacity rocketing due to growing AI workloads: Average power demand per facility, which was around 10 MW through the mid-2010s, surpassed 50 MW by 2020 and now often exceeds 100 MW[3]. This shift reflects the growing dominance of hyperscalers—major IT firms operating their own large-scale infrastructure—over the traditional mix of small retail and mid-sized wholesale centers. While data centers once focused mainly on email and storage, they now underpin complex cloud computing and AI training/inference workloads.

Massive energy consumption of AI data centers: AI facilities perform two main types of computation. "Training" data centers require enormous computing power and energy to process large datasets and develop large language models (LLMs). "Inference" data centers, meanwhile, support real-time user interactions with pretrained models and therefore need to be located near major population centers to minimize latency. These requirements are forcing a reconfiguration of both cloud architectures and regional power grids. For context, a single hyperscaler facility (*eg*, AWS) can consume over 100 MW—comparable to the electricity usage of a small US city—and some AI sites now draw 200-500 MW.

Changes in data center IT power scale with computing demand



Source: BNEF, Samsung Securities

[3] According to DC Byte, 59% of data centers now consume less than 5 MW, around 92% consume less than 50 MW, and only 4% use more than 100 MW

Major announced AI data center construction projects (2025)

IT capacity	Project	Key features
103 MW	SK Group & AWS AI Data Center	Korea: Capacity to house 60,000 GPUs
100 MW	Foxconn & Nvidia	Taiwan: Initial phase starts at 40 MW
200 MW	Iron Mountain	US: Data-center-scale campus
500 MW	Humain* & Nvidia	Saudi: Built for sovereign AI models; hosts hundreds of thousands of GPUs
500 MW	Team Naver	Morocco: Phase 1 (40 MW) to start in 4Q this year
500 MW	CURRENC	Malaysia: Phase 1 (100 MW) scheduled for completion at end-2026

Note: *Saudi sovereign fund subsidiary
Source: Media, Samsung Securities

Advanced GPUs driving up energy use

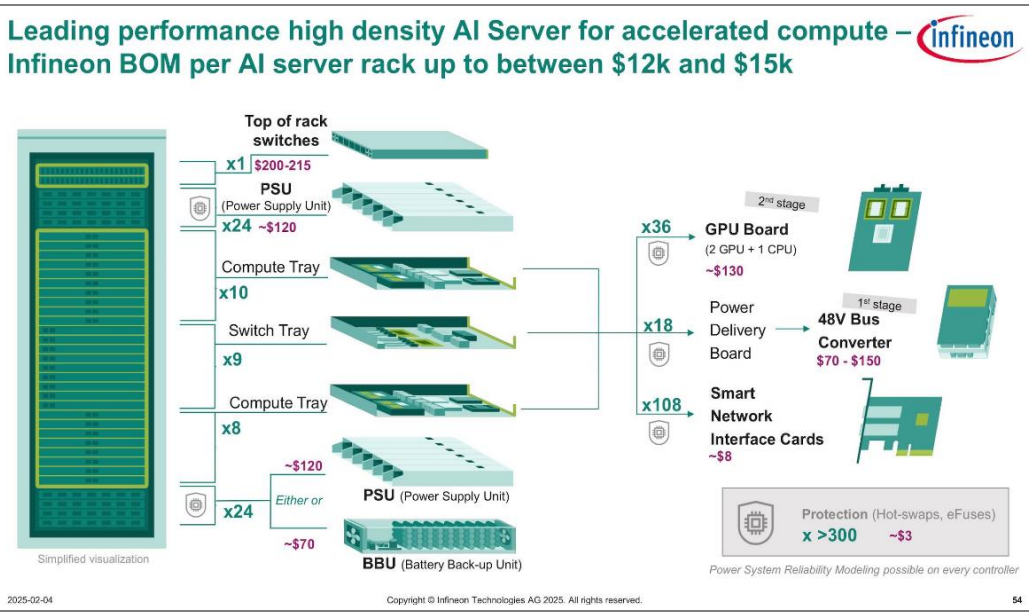
Data center GPUs consume massive amounts of energy: AI data centers rely on thousands of GPUs or specialized accelerators to train LLMs powering generative AI applications[4]. A conventional CPU consumes roughly 100-200 W, but Nvidia's Hopper H100 GPU, purpose-built for LLM training, uses about 700 W. Whereas a single GPU once drew the same power as an LED bulb, modern models consume as much electricity as a microwave oven. Nvidia's newest GPU, the Blackwell, raises this to 1,200 W—around 70% higher than the H100.

Data center energy needs scale with GPU performance and platform design: According to BNEF, Nvidia's DGX H100 server houses eight H100 GPUs, while a DGX SuperPOD system featuring this server contains 1,016 GPUs distributed across 127 nodes. With each GPU's power draw being around 700 W, a SuperPOD requires roughly 1.4 MW of power.

Energy usage varies widely depending on AI platform architecture and training requirements. For example, Meta's Llama4 model was reportedly trained using more than 100,000 H100 GPUs. Assuming eight GPUs per server, this equates to about 12,500 servers—or around 100 SuperPOD systems—with total IT load approaching 140 MW solely for servers. Including cooling and other facility systems, total power consumption would be considerably higher.

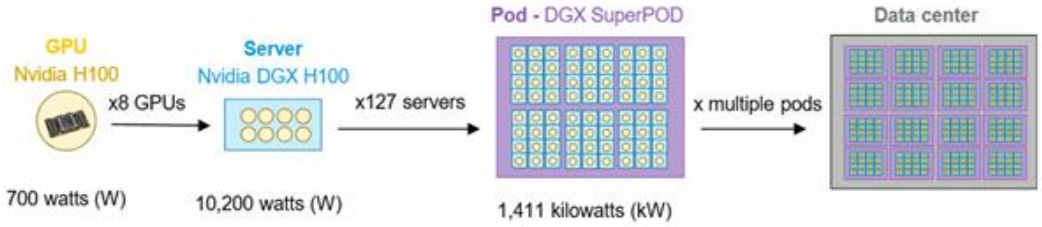
[4] AI accelerators (GPUs, TPUs, and ASICs) are built for parallel computing, enabling the efficient processing of AI workloads

Data center server rack and GPU configurations (example)



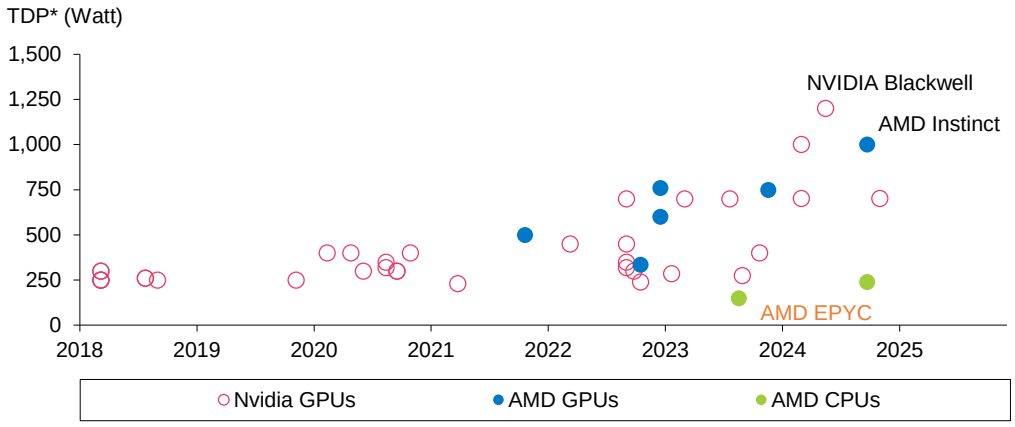
Source: Infineon

GPU configuration for LLM training in data centers



Source: BNEF

Power consumption of major GPUs and CPUs in data centers



Note: *TDP = thermal design power, which is the power load that cooling systems must handle, accounting for heat generation, when GPUs operate at maximum load

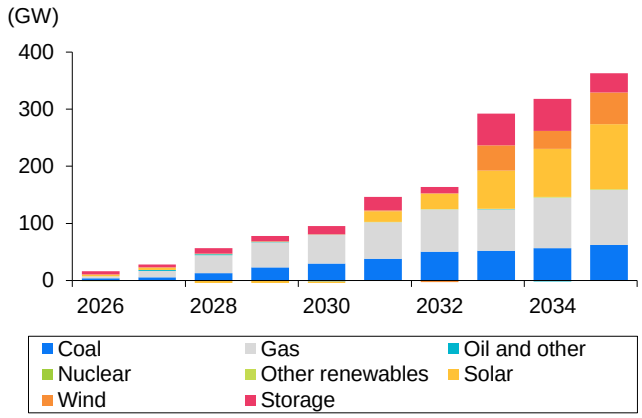
Source: BNEF

AI data centers' power demand straining power grids

Massive energy required for GPUs and LLM training

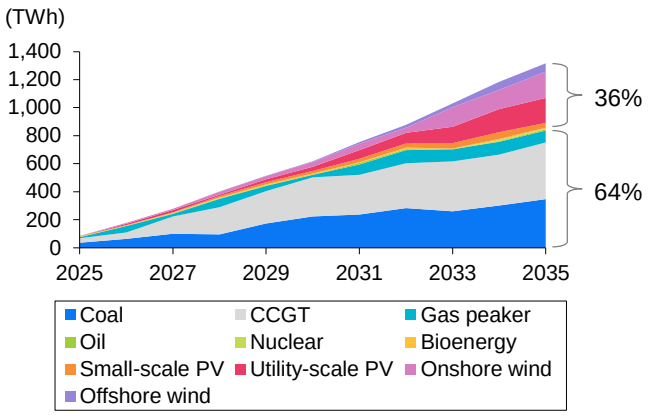
Data centers rely heavily on gas and fossil fuels: With AI data centers consuming growing amounts of energy, BNEF projects that meeting rising demand will require both expansion of traditional generation (notably natural gas) and large-scale development of renewable capacity such as solar and wind. To prevent overloading public grids, an estimated 362 GW of new generation capacity will be needed worldwide by 2035—with 44% from fossil fuels, 47% from renewables, and 9% from energy storage. Despite continued investment in solar and nuclear power, fossil fuels are likely to remain the dominant source of data center energy through 2035, given the cost and lead time required for renewable development.

Data center power demand projections:
Additional required generation capacity



Source: BNEF

Data centers power supply source projections:
63% of power to be met by fossil fuels, the rest renewables



Source: BNEF

Hyperscalers bypassing public power grids: Confronted with grid congestion, long connection timelines, and rising transmission costs, hyperscalers are increasingly securing dedicated power sources. Some, such as Microsoft, are partnering directly with utilities, while Amazon is exploring small modular reactors (SMRs), and Google and Meta are investing heavily in renewable energy procurement. These efforts aim to avoid the delays and cost overruns associated with grid expansion and connection bottlenecks.

Hyperscalers' strategies to bypass public grids

Company	Strategy	Details	Decision timing
Microsoft	Nuclear power	Signed a 20-year power purchase agreement (PPA) with Constellation Energy for electricity from the Three Mile Island nuclear plant	Sep 2024
Amazon	SMR	Secured 320 MW of power purchase rights through an SMR investment partnership with Energy Northwest	Oct 2024
Google	Geothermal, solar, wind	Launched a project to achieve 100% carbon-free energy usage by 2030	Sep 2020
Meta	Renewables	Signed a large-scale 374 MW renewable energy PPA with RWE	Aug 2024

Source: Media, Samsung Securities

Renewable energy prospects positive but President Trump policies pose headwinds: Projects like Arizona's Battery Energy Storage System (BESS) and new transmission lines highlight ongoing momentum toward integrating renewables into data center operations. The AI-driven digital economy is also providing fresh impetus for climate and clean-energy investment. However, policy direction under the Trump administration presents challenges[5]. The Offshore and Beyond Borders Business Act (OBBBA), enacted in July, moved up the expiration of investment tax credits for solar projects from the originally planned end-2027. In August, the US Internal Revenue Service tightened eligibility rules for renewable tax credits for solar and wind projects[6]. According to the notice, the definition of "construction commencement: has been made more stringent, and projects must now begin construction before Jul 5, 2026, to qualify for the credit." These changes should front-load investment through 1H26 but offer few catalysts for new renewable projects thereafter.

Changes in tax credit eligibility for solar and wind projects

Item	Old	New	Note
Construction start criteria	① 5% safe harbor*; or ② Physical work test	5% safe harbor abolished; only physical work test recognized	Effective for projects starting after Sep 2, 2025
Physical work test requirements	Substantial physical work commencement recognized	Same	Simple preparatory work excluded
Safe harbor exception	Applicable to all project sizes	Exception limited to solar projects ≤1.5 MW	Applicable to residential or small commercial
Start deadline	-	Must begin construction before Jul 5, 2026	No tax credit if construction starts later
Commercial operation deadline	-	Must begin operation before Dec 31, 2027	Eligibility maintained if completed within period
Continuous construction requirement	Continuous construction or continuous effort required	Same	Deemed satisfied if operation starts within 4 years

Note: *Regulation defining the project's start date as the point when the taxpayer incurs at least 5% of the project's total expected cost
Source: IRS, Samsung Securities

Virginia data center grid incident (Jul 2024): In Jul 2024, Northern Virginia—the world's largest data center hub—experienced a major grid disturbance triggered by high data center power usage. The event began with a lightning arrestor fault on a transmission tower that caused a brief voltage fluctuation. Detecting the anomaly, local data centers immediately disconnected from the grid and switched to on-site batteries and backup generators. This abrupt withdrawal removed roughly 1,500 MW of load from the grid—equivalent to Iceland's entire electricity demand. Traditional grids are ill-equipped to dynamically handle such sudden, large-scale load shifts, and the rapid drop in demand caused regional frequency instability. Grid operators narrowly avoided a blackout by quickly reducing generator output. As AI data centers continue to scale in size and density, the risk of similar incidents will increase, underscoring the need for greater on-site backup capacity and for regulators to implement safeguards against grid frequency volatility.

[5] In early October, the Trump administration abruptly cancelled the 'Esmeralda 7' project—a 602 GW solar power facility planned in the Nevada desert
[6] This action serves as part of the follow-up measures to the OBBBA Act and the energy executive order announced by President Trump on Jul 7

Blackout cases caused by frequency fluctuations

Region	Year	Cause of major blackout	Frequency imbalance description
Spain	2021	Wildfire near French transmission line caused line failure	Disconnection from continental grid led to large-scale power shortage
Texas (US)	2021	Cold wave froze generation facilities, gas supply disruption	Surge in demand and major generation loss caused grid frequency to drop to critical levels
Northeastern US	2003	Failure of aging transmission lines and cascading grid faults	Line and plant disconnections reduced supply, causing frequency decline

Source: Media, Samsung Securities

AI data centers and batteries

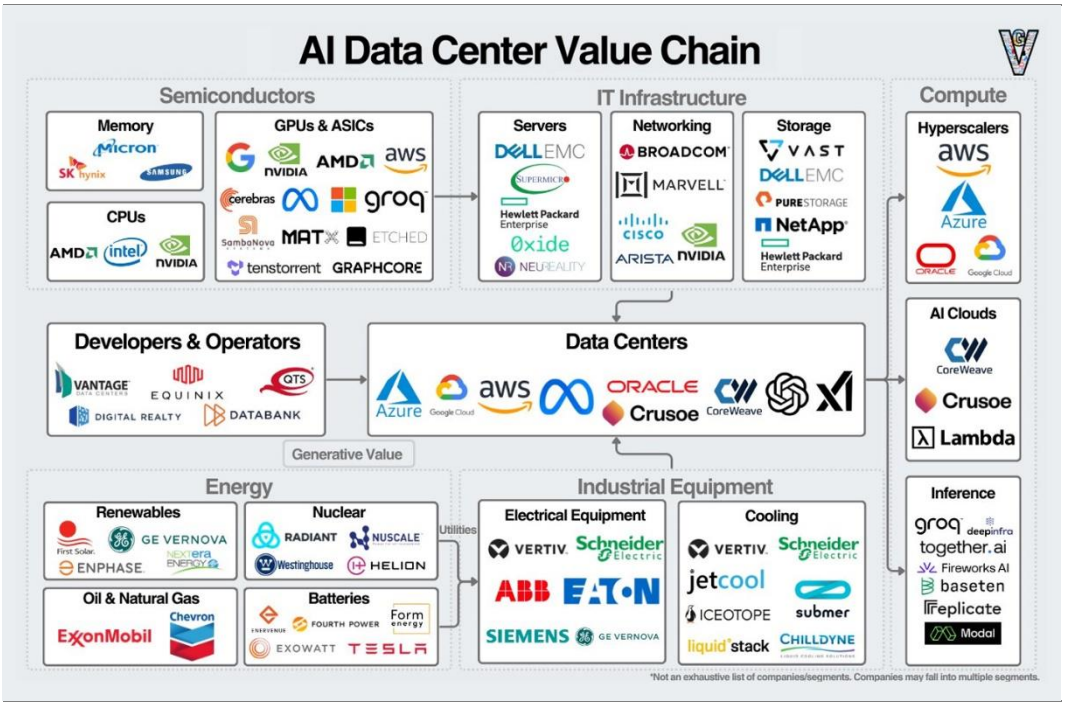
AI data center ecosystem and basic structure

AI data center ecosystem and fundamental architecture

AI data center value chain and batteries: Batteries, which supplement the power grid within AI data centers, are becoming increasingly important as the ecosystem expands. Upstream, chipmakers such as Nvidia are driving higher AI workloads by improving GPU performance, which in turn raises data center power requirements. The IT infrastructure of data centers consists of servers, networking equipment, and storage systems. These facilities are typically operated by specialized providers such as Vantage and Equinix and used by: 1) cloud service companies for hosting and storage; and 2) hyperscalers such as Amazon and Google for AI model training and inference.

Given their enormous and continuous power needs, data centers rely primarily on stable grid electricity supported by power and cooling system providers such as ABB and Schneider. However, they also require: 1) uninterruptible power supply (UPS) batteries for emergency backup; and 2) energy storage system (ESS) batteries, which are often integrated with renewable sources in regions with unstable grids. The size and configuration of the AI data center battery market therefore vary depending on the operator's AI strategy, data center location, chip performance, and type of power grid.

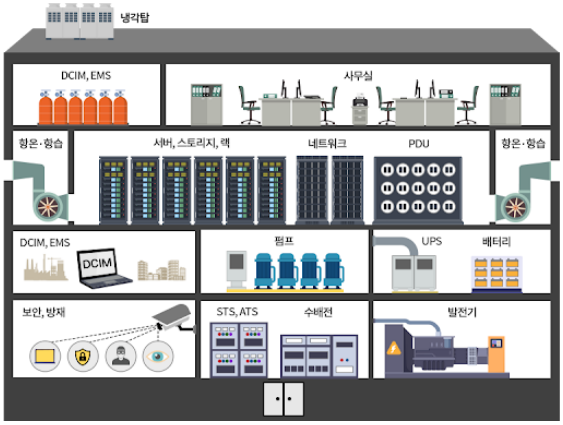
AI data center value chain



Source: Generative Value

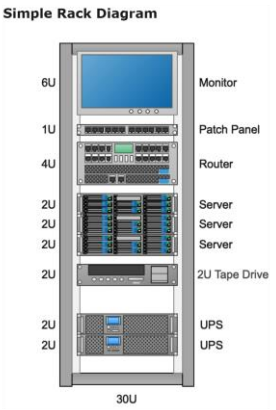
Data center hardware composition[7]**:** A data center's infrastructure can be broadly divided into: 1) IT systems; 2) power infrastructure; and 3) cooling systems. The IT layer includes servers, storage, and networking equipment. Servers—responsible for computation and hosting AI workloads—contain CPUs, GPUs, and AI accelerators, as well as memory and network interfaces. Storage systems handle massive datasets, enabling high-speed retrieval and efficient management. These components are mounted in racks that collectively draw substantial power. To ensure uninterrupted operation, UPS or battery backup units (BBUs) are integrated as secondary power sources for use during grid outages.

Data center infrastructure: IT systems, power, and cooling



Source: LS Electric

Basic structure of data center servers



Source: Edrawsoft

[7] This report aims to analyze data centers' power consumption and the related role of batteries; it addresses only IT systems and power infrastructure

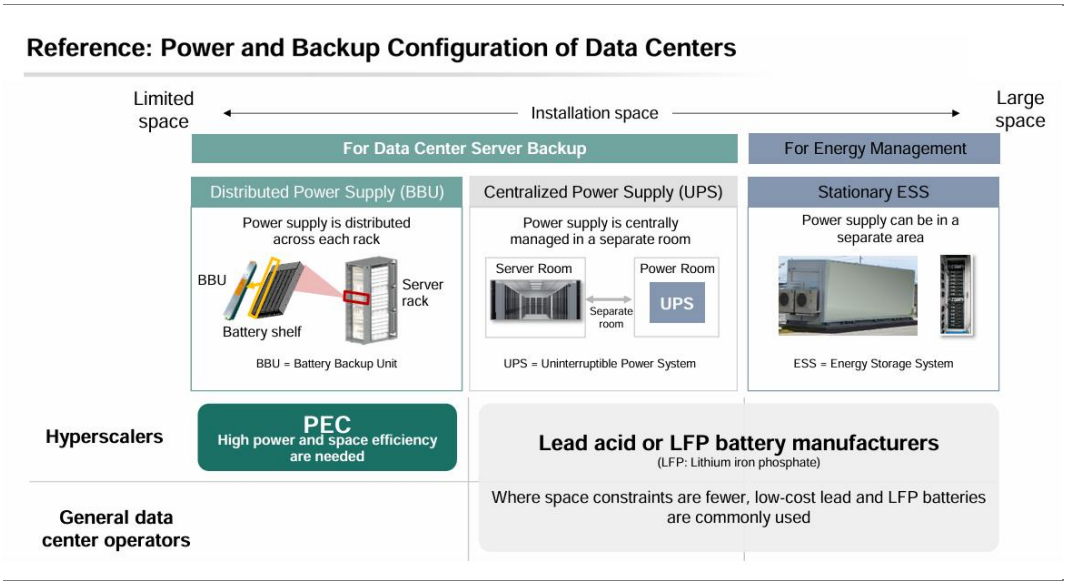
Backup power indispensable for stable operation

Continuous power consumption and redundancy: Continuous uptime is critical for data centers, requiring constant power for servers, environmental control (temperature and humidity), and cooling systems, which dissipate heat from high-performance computing equipment. Although data centers primarily depend on the power grid, they employ multi-layered redundancy systems—including generators and UPS—to prevent downtime caused by outages, frequency fluctuations, or facility maintenance. This is why batteries play a vital role as backup power sources.

Integrating renewables and storage: To reduce dependence on the grid and optimize energy efficiency, some operators are incorporating renewable energy sources. In such cases, ESS batteries are essential for storing excess renewable power.

BBUs, UPS, and ESS as key backup power sources: Data center batteries provide instantaneous power and stabilize voltage and frequency until backup generators come online. Emergency backup batteries are either built into server racks as BBUs, or installed externally as UPS systems. Both BBUs and UPSs deliver immediate power to critical systems during the brief transition before diesel generators activate. Unlike UPSs and BBUs, energy storage systems (ESS) are deployed strategically to reduce dependence on the grid by storing intermittent renewable energy such as solar and wind for later use. Data centers located in regions with abundant and inexpensive electricity typically have little incentive to install standalone ESS.

Data center battery types: BBU, UPS, and ESS

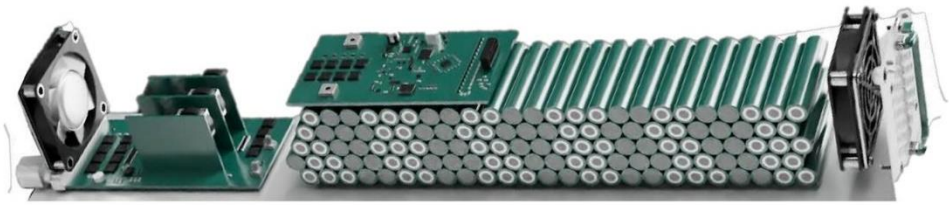


Source: Panasonic

Prismatic LFP batteries to dominate data center applications (excluding BBUs): High-output, compact cylindrical batteries are typically used as BBUs, as servers require DC-DC voltage conversion. UPS systems, installed outside the servers, generally use high-output prismatic or pouch-type batteries. ESS, which store larger volumes of energy, are more expensive but face fewer space constraints, making prismatic lithium iron phosphate (LFP) batteries the preferred choice. As overall power consumption at data centers continues to grow, prismatic LFP batteries are also expected to gain

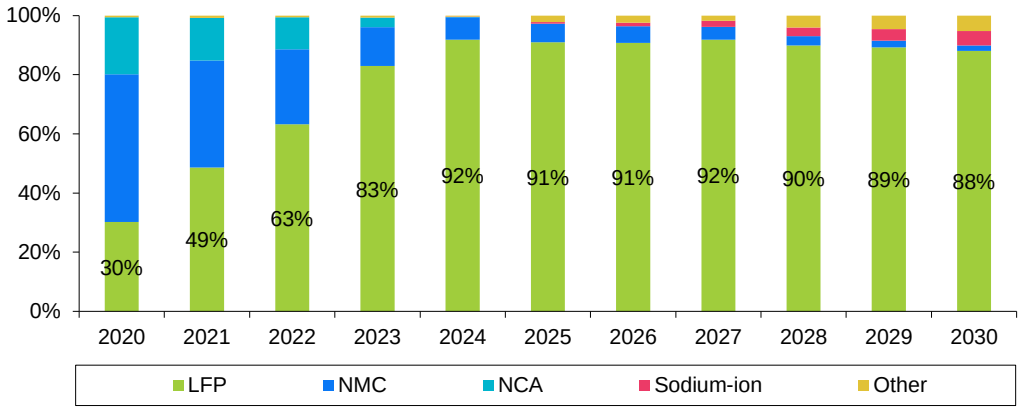
share in UPS applications, benefiting from economies of scale and the difficulty of producing large-capacity pouch cells.

BBUs require small cylindrical batteries



Source: Infineon

Shift in ESS battery chemistry mix: Prismatic LFP dominance



Source: BNEF

ESS battery cell form factors

Type	Company	ESS cell energy capacity (Ah)	Note
Prismatic	CATL	587	Announced at CATL Tech Day (Apr 2025)
	Samsung SDI	263	Exhibited at RE+ 2025, Las Vegas (Sep 2025)
Pouch	LG Energy Solution	159	Mass-producing JF2 cells (elongated design from JF1, 56.6 Ah)

Source: Media, Samsung Securities

UPS typically designed for 1-5 minutes of backup: Hyperscalers calculate their required backup capacity based on operational needs, drawing from either BBUs within server racks or UPS systems located externally. A 100 MW data center typically requires around 8 MWh of UPS capacity, assuming backup power equal to 1.5 times IT load (*ie*, 150 MW) and a three-minute duration. If backup time is under one minute, the requirement drops to about 2.5 MWh; if extended to five minutes, it rises to 12.5

MWh. On this basis, a 1 GW data center would require roughly 80 MWh of UPS battery capacity. This explains why UPS battery demand appears modest relative to total data center load (as we discussed earlier).

ESS linked to renewable power: Because data centers consume vast amounts of electricity, they are usually built in regions with stable power grids. In such areas, ESS installations are unnecessary. However, in locations where grids are weak or unstable—necessitating supplementary renewable generation—ESS are essential to maintain a reliable power supply. Data centers with steady grid connections and no renewable integration have little reason to install standalone ESS batteries.

Grid-connected ESS system

Source: Google Gemini

Era of AI data centers and implications for Korean rechargeable battery value chain

Opportunity in the US ESS market vs limited utilization upside

Korean firms expected to win US ESS market share given President Trump's heavy China tariffs

Anticipation for earnings uplift driven by greater ESS battery production in US: Since 2H, expectations have risen that Korean battery makers will benefit from ESS market growth in the US. While the primary driver is a constructive US ESS outlook—underpinned by AI data center investment—there are other factors, too. First, ESS operations are poised to lift Korean companies' earnings. Following the early termination of IRA EV tax credits at end-September, AMPCs from US ESS operations should exceed those from US EV battery operations. Unlike EV batteries produced through JVs with North American automakers, ESS businesses are operated independently by Korean cell makers (or with only minor involvement of North American automakers), allowing controlling shareholders to capture a larger share of AMPCs.

Anticipation for market-share gains, led by tariffs on China, LFP production in US: In addition, President Trump's heavy tariffs on China are pushing US AI data center developers to source non-Chinese ESS batteries to curb project cost inflation. Because LFP dominates ESS, this shift is particularly favorable for Korean players. Importantly, Korean cell makers are now producing ESS-grade LFP in the US—led by LG Energy Solution (LGES)—broadening the supplier base for AI data center developers in the US. Reflecting this, LGES in late July signed a KRW5.9t LFP supply contract with a North American customer for Aug 2027-Jul 2030.

Under President Trump's tariff policy, US duties on Chinese ESS batteries are set to reach 40.9% in 2025 and 58% in 2026. With batteries accounting for roughly 56%[8] of an ESS price (ex-China), these tariffs imply an approximately 32% increase in US ESS system costs. Historically, Korean makers exported high-nickel ternary ESS batteries from Korea, but they are now making ESS LFP batteries in the US. With the elimination of the price disadvantage caused by the difference in chemistry (ternary vs LFP), Korean suppliers are well positioned to take share from Chinese rivals facing steep tariffs—despite higher US labor and manufacturing costs.

[8] For more details, see our report *August: ESS market hopes, lithium price rebounds* (Aug 12, 2025).

Change in US tariffs on Chinese ESS batteries vs procurement costs for Korean ESS batteries made in US and Korea

Tariff	Chinese ESS batteries		Korean ESS batteries	
	2025	2026	Produced in Korea	Produced in US
Base import tariff	3.4%	3.4%		
Section 301 tariff	7.5%	25%		
General tariff on Chinese imports*	20%	20%		
Section 232 tariff (effective May 3, 2025)	0% (not applicable)	0% (not applicable)		
Reciprocal tariff (effective Apr 3, 2025)	10%	10%	15%	
Total tariff	40.9%	58.4%	15%	0%
Price compared to Chinese ESS batteries (2026)			-43.4%	-58.4%

Note: *Sometimes referred to as the fentanyl tariff—Following the US-China summit at APEC on Oct 30, the fentanyl tariff was reduced from 20% to 10%
Source: BNEF, Samsung Securities

LGES: LFP supply contract and demand estimates

Agency	Counterparty	Contract amount	Period	Annual ESS demand*
LGES	Undisclosed	KRW5.9t	Aug 1, 2027-Jul 1, 2030	12.6

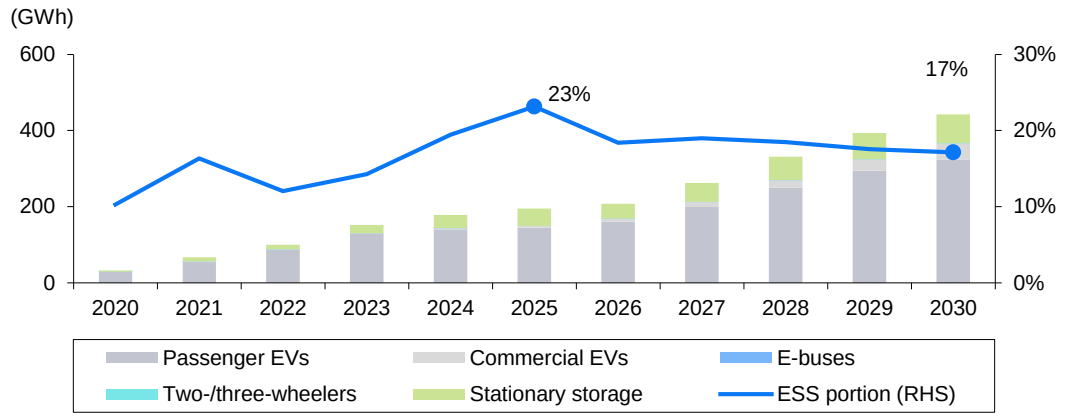
Note: BNEF estimates, reflection of 56% of US ESS system price in 2025 (average USD204/kWh) + exchange rate applied in disclosure (KRW/USD 1,379.6)
Source: LGES, BNEF, Samsung Securities estimates

ESS demand growth alone insufficient to lift North American utilization rates

ESS portion of North American battery demand to fall from 23% in 2025 to 17% in 2030: The AI boom should continue to support demand for data centers and ESS (and, hence, demand for UPS and BBUs). Yet, incremental ESS demand from 24/7 applications has practical limits, as ESS delivers its greatest value when paired with renewables in weak-grid regions. While ESS orders may be pulled forward ahead of the expiration of the Investment Tax Credit for ESS, the policy backdrop remains challenging given the Trump administration's unfavorable stance on renewables. We forecast that ESS demand will grow at a 16.5% CAGR through 2030, reaching 17% of North American battery demand by 2030. But without a meaningful acceleration in demand for passenger EVs—which accounts for more than 75% of North American battery demand—the three leading Korean cell makers are likely to see only limited utilization-rate improvement in the US[9].

[9] In BNEF's latest 2024-2035 global battery demand outlook, the downward revisions to projected EV battery demand is 5.9x the upward revision to projected ESS battery demand. For more details, see our report *Dialogue with the market #40: Rising expectations for US ESS battery market* (Jul 30, 2025)

US demand for batteries, by application



Source: BNEF, Samsung Securities

US battery demand, by application

(GWh)	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2024-2030 CAGR	2020-2024 CAGR
Passenger EVs	29.1	55.1	86.8	128.4	140.6	144.8	160.9	199.2	249.8	294.7	324.1	15%	48%
Commercial EVs	0.1	0.8	1.1	1.8	2.7	4.7	8.1	12.9	19.6	29.1	41.0	57%	116%
Electric buses	0.2	0.1	0.2	0.2	0.2	0.3	0.4	0.5	0.6	0.7	0.8	23%	11%
Electric two-/three-Wheelers	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.4	35%	13%
ESS	3.4	11.0	12.1	21.7	34.7	45.2	38.2	49.8	61.2	69.1	75.8	14%	79%
Total	32.9	67.0	100.2	152.2	178.3	195.1	207.6	262.5	331.3	393.9	442.1	16%	53%
ESS share	**10%**	**16%**	**12%**	**14%**	**19%**	**23%**	**18%**	**19%**	**18%**	**18%**	**17%**		

Source: BNEF, Samsung Securities

Era of AI data centers; implications for Korean rechargeable battery value chain

Segment-specific approach required

Drivers such as the AI data center boom and US ESS growth supported the Korean rechargeable battery value chain in October. However, without parallel growth in renewables—which require ESS for grid integration—Korean cell makers will struggle to lift utilization across their North American supply chains on backup power demand (UPS, BBU) alone.

Prefer cell makers over materials, as ESS mass-production in US supports earnings: Limited utilization upside in North America implies limited earnings leverage across the full Korean value chain (including materials players), with demand for EV batteries (not ESS ones) still the primary driver of utilization. In addition, LFP is the dominant chemistry in the US ESS market, and Korean cathode makers have yet to secure LFP mass-production capabilities at scale.

By contrast, Korean cell makers operating independent ESS LFP lines in the US can capture larger AMPC benefits than EV battery JVs, supporting higher dividend payouts to controlling shareholders. LG Energy Solution is already benefiting, and Samsung SDI should follow. LGES plans to expand independent ESS LFP capacity at its Michigan plant to 17 GWh by end-2025 and 30 GWh+ by end-2026, positioning it for the largest AMPC increase among Korean peers. Samsung SDI plans to convert high-nickel NCA capacity at its Indiana JV to 6.5 GWh of ESS LFP by end-2025 and 12 GWh by end-2026, which should increase AMPC versus prior configurations. SK On also intends to convert part of the SK Battery America facility for ESS LFP production to meet market demand.

Korean cell makers' US capacity vs ESS demand in US

(GWh)	2023	2024	2025E	2026E	2027E
LGES	45	70	92	184	
LGES ESS	0	0	17	30	
Samsung SDI	0	8	17	63	
Samsung SDI ESS	0	0	7	19	
SK On	22	22	31	50	
SK On ESS	0	0	0	1	
Total US capacity (year-end installed basis)	67	100	140	297	
Total ESS capacity	**0**	**0**	**24**	**50**	
US ESS demand	22	35	45	38	50
Lagging ratio of cell capacity vs US ESS demand (1-year lag)*	**0%**	**0%**	**0%**	**62%**	**99%**

Note: *Comparison based on year-end installed capacity of the three Korean cell makers, lagged by one year relative to ESS demand
Sources: BNEF, Samsung Securities estimates

Prismatic-type expanding presence; opportunities for assembly equipment, housing: A defining feature of AI data center batteries (excluding server-integrated BBUs) is the growing use of prismatic cells. Given LFP's dominance in US ESS, the prismatic format—which supports larger-capacity cells and cost competitiveness versus pouch—should gain share, which points to opportunities for Korean players (namely, prismatic battery-related housing and assembly equipment makers), especially considering the Trump administration's heavy tariffs on Chinese-made goods. Tesla's Megafactory, which produces the Megapack[10] utility-scale ESS, also utilizes prismatic LFP. Taken together, prismatic batteries are poised to become a key format in US ESS demand.

Rising exposure to ESS prismatic cells at Korean cell makers creates openings for equipment and component suppliers for three reasons. First, to meet growing demand for ESS prismatic batteries, pouch-focused cell makers are likely to repurpose idle capacity rather than build entirely new lines. Among assembly equipment vendors, Mplus stands out for its solid financials and strong record of supplying prismatic battery-use tap welding/packaging equipment to Hyundai Motor.

Second, ESS cells are larger than EV cells, supporting higher ASPs for housing; to serve North American cell makers, housing suppliers will need local production, and the exclusion of incumbent Chinese vendors should improve their win rates.

Third, North American automakers, including GM, are increasing adoption of prismatic cells, further broadening the addressable market. Against this backdrop, we highlight Sangsin EDP, which already has North American facilities and the ability to expand both its customer base and product portfolio.

Key suppliers of rechargeable battery can components

Cell manufacturer	Cylindrical can suppliers	Prismatic can suppliers
LGES	LT Precision (Korea) Dongwon Systems (Korea) Kedali (China)	None
Samsung SDI	Sangsin EDP (Korea) Dongwon Systems (Korea)	Sangsin EDP (Korea) Shinhung SEC (Korea) Kedali (China)

Source: Media, Samsung Securities

[10] Capable of storing up to 3.9 MWh per unit. The Megafactory in Lathrop, California, which came online in 2022, targets annual production capacity of 40 GWh

Global rechargeable battery value chain: Valuations

	Segment	Company	Mkt cap	Performance (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)		OPM (%)		EPS growth (%)	
			(KRWb)	1m	6m	2025E	2026E	2025E	2026E	2025E	2026E	2025E	2026E	2025E	2026E	2025E	2026E
Korea	Cells	LG Energy Solution*	105,066	25.8	28.7	2,441.1	99.7	5.0	4.7	23.9	17.7	0.3	4.2	7.9	11.9	nm	2347.5
		Samsung SDI*	20,872	23.3	36.0	n/a	27.4	1.0	1.0	29.6	10.9	-2.2	3.6	-8.7	4.6	nm	nm
		SK Innovation*	21,132	20.7	30.6	n/a	113.7	0.8	0.8	20.0	12.1	-4.2	0.4	0.1	2.4	nm	nm
	Cathodes	LG Chem*	29,119	38.5	84.6	386.1	22.7	0.9	0.9	9.6	7.2	0.1	3.5	4.3	7.4	nm	1601.9
		L&F	4,285	53.2	76.9	n/a	143.9	8.5	7.9	n/a	31.5	-36.8	4.7	-10.1	3.3	nm	nm
		Ecopro BM*	16,020	37.9	61.8	971.9	303.0	9.6	9.3	76.8	54.2	1.1	3.0	3.3	3.8	nm	220.8
		Cosmo AM&T	1,899	32.6	41.9	331.8	61.4	3.8	3.6	n/a	n/a	1.1	6.0	2.3	9.7	-67.6	440.3
	Cathodes/ anodes	Posco Future M*	17,923	40.3	56.5	834.5	237.8	4.9	4.7	75.0	46.8	0.4	2.1	1.6	3.3	nm	250.0
	Silicon anodes	Daejoo Electronic	1,147	4.8	-14.4	46.6	32.2	4.5	4.0	29.7	21.3	10.9	12.7	12.3	15.0	-35.8	44.5
		Hansol Chemical	2,312	-1.4	72.3	15.1	13.0	2.1	1.8	11.1	9.4	14.4	14.8	19.1	20.7	23.3	15.6
		Dongjin Semichem	2,134	0.4	40.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Electrolytes	Soulbrain	2,108	-4.4	51.6	16.6	12.2	1.9	1.6	8.3	5.6	12.0	14.2	16.6	20.0	6.6	36.2
		Dongwha Enterprise	500	7.4	14.7	n/a	n/a	0.6	0.6	22.6	12.2	-1.3	-1.7	-0.4	2.2	nm	nm
		Enchem	1,922	14.2	4.3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	n/a
	Lithium salt	Foosung	724	10.3	54.6	n/a	39.0	2.4	2.2	15.9	13.4	-4.1	5.9	5.3	6.2	nm	nm
		Chunbo*	577	32.9	58.3	n/a	n/a	1.6	1.7	30.2	22.1	-0.9	0.1	4.9	3.9	nm	nm
	Separators	SKIET*	2,674	13.7	45.7	n/a	n/a	1.1	1.1	n/a	35.4	-5.2	-2.2	-59.4	-9.1	nm	nm
		WCP	289	22.2	8.7	n/a	n/a	0.3	0.3	n/a	16.2	-11.4	-6.4	-71.0	-4.0	nm	nm
	Elecfoil	Lotte Energy Materials*	1,396	11.0	16.9	n/a	1,777.3	0.9	1.0	n/a	18.3	-7.2	-0.2	-13.4	0.2	nm	nm
		Solus Advanced Materials	621	11.2	10.9	n/a	197.6	1.1	1.2	132.2	17.2	-8.7	0.2	-10.0	2.2	nm	nm
		SKC*	4,063	2.5	5.3	n/a	n/a	3.3	3.7	1,518.1	28.3	-24.3	-12.0	-10.3	1.0	nm	nm
	Conductive additives	Advanced NanoProducts	782	31.4	13.5	117.3	50.0	3.2	3.0	42.5	24.2	2.7	6.0	5.8	11.7	nm	134.6
		Jeio	291	16.7	-7.7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	n/a
	Recycling	Sungeel Hitech	528	21.0	24.1	n/a	n/a	3.8	4.2	n/a	27.8	-44.3	-5.6	-24.1	0.8	nm	nm
		Sebitchem	209	39.1	125.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	n/a
	Parts	Sang-A Frontech	278	0.6	14.2	56.7	34.6	1.4	1.4	17.2	13.3	2.5	4.1	3.5	6.0	-22.3	63.8
		Shinheung SEC*	205	0.2	20.5	n/a	21.3	0.7	0.7	9.6	7.3	-1.4	3.0	0.5	4.1	nm	nm
		Sangsin EDP	157	1.2	54.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Equipment	SFA*	871	-4.0	14.9	9.7	6.6	0.8	0.7	5.4	4.1	8.9	11.9	8.0	10.1	nm	46.7
		Hana Technology	253	19.9	56.4	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	n/a
		People & Technology	1,016	13.7	2.9	11.9	9.1	n/a	n/a	n/a	n/a	14.0	14.0	14.9	12.7	-42.2	30.5
		Wonik PNE	175	32.5	67.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	nm	n/a
	Other	Ecopro	11,975	77.6	77.8	n/a	125.0	7.6	7.2	72.3	40.5	-1.0	5.9	2.2	4.6	nm	nm
		Posco Holdings*	25,453	12.9	21.0	21.9	13.3	0.5	0.4	6.6	5.7	2.0	3.3	3.5	4.7	-0.5	64.0
China	Cells	CATL	345,798	1.3	59.8	24.7	20.2	5.5	4.6	15.1	11.8	23.5	24.3	18.7	18.8	34.6	22.7
		BYD	183,124	-3.2	-20.9	20.2	15.9	3.7	3.1	7.4	5.7	19.4	20.4	5.1	6.1	6.6	26.7
		Gotion High Tech	15,078	-6.1	106.2	52.2	33.0	2.7	2.5	20.9	15.6	5.5	7.8	4.2	5.2	24.3	58.0
		EVE Energy	31,901	5.2	92.1	33.7	22.8	3.9	3.4	20.5	15.1	11.7	15.6	8.2	9.4	22.9	47.5
	Lithium	Tianqi Lithium	14,921	7.4	66.6	85.4	35.1	1.8	1.7	16.5	10.7	1.9	4.5	38.0	43.7	nm	143.3
		Jiangxi Ganfeng	23,177	14.4	100.3	295.0	67.5	2.8	2.7	47.8	27.5	1.1	4.1	4.0	9.6	nm	338.5
	Cobalt	Nanjing Hanrui	2,953	-3.4	44.6	42.2	40.1	2.5	2.4	n/a	n/a	6.0	6.0	7.2	5.9	78.6	5.3
		Zhejiang Huayou	23,543	17.6	83.7	18.9	16.1	2.6	2.3	11.7	9.7	14.2	15.1	11.2	12.5	37.0	17.3
		China Molybdenum	65,257	24.1	117.6	20.1	17.5	4.1	3.5	8.8	7.6	21.5	21.3	14.4	15.8	29.3	14.6
	Cathodes/ anodes	Shenzhen Dynanonic	2,261	7.0	44.0	n/a	46.7	2.1	2.0	40.9	14.6	-9.8	3.5	-6.1	3.2	nm	nm
		Beijing Easpring	7,029	9.0	69.4	44.0	33.8	2.4	2.3	23.9	18.3	5.6	6.8	7.9	8.2	64.8	30.3
		Ningbo Shanshan	5,830	-8.4	102.8	39.1	27.7	1.3	1.2	16.0	14.3	3.1	4.4	5.2	5.7	nm	40.9
	Electrolytes	Guangzhou Tinci	12,661	5.1	91.5	65.1	44.7	4.7	4.4	28.9	22.2	6.6	9.3	7.2	8.9	114.6	45.5
		Shenzhen Capchem	6,846	-0.9	47.7	28.3	21.6	3.2	2.9	17.7	13.7	11.3	13.5	14.1	15.0	34.6	30.5
	Separators	Cangzhou	1,404	7.3	20.1	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
		Mingzhu Plastic	3,345	-8.5	33.4	41.4	27.4	1.6	1.6	16.8	12.2	3.9	5.5	12.0	14.3	16.5	51.1

	Segment	Company	Mkt cap	Performance (%)		P/E (x)		P/B (x)		EV/EBITDA (x)		ROE (%)		OPM (%)		EPS growth (%)	
			(KRWb)	1m	6m	2025E	2026E	2025E	2026E	2025E	2026E	2025E	2026E	2025E	2026E	2025E	2026E
Japan	Cells	Panasonic	42,396	13.2	18.3	13.5	13.9	0.9	0.9	6.2	7.1	6.8	6.1	4.7	4.6	-22.4	-8.3
		GS Yuasa	3,699	12.0	60.2	14.1	11.4	1.1	1.0	6.7	6.1	8.1	9.6	8.1	8.8	-18.8	17.4
	Cathode	Sumitomo Metal Mining	13,498	15.7	56.7	31.9	18.5	0.8	0.7	21.2	15.5	2.5	4.1	2.2	4.2	-23.4	66.1
		Tanaka Chemical	123	-0.5	1.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Anode	Tokai Carbon	2,287	5.3	23.0	16.5	12.0	0.8	0.7	n/a	n/a	4.8	5.6	8.4	10.1	nm	37.5
		Nippon Carbon	480	-0.9	5.3	8.1	14.0	n/a	n/a	n/a	n/a	n/a	n/a	13.0	14.7	51.8	-42.4
		Showa Denko	10,176	8.5	138.4	35.2	15.2	1.6	1.5	11.1	8.4	4.7	10.6	4.0	7.8	-57.3	131.0
	Electrolytes	Stella Chemifa	526	-1.0	15.3	14.8	16.4	n/a	1.1	n/a	n/a	7.7	6.9	12.5	12.3	101.0	-11.8
	Separators	Sumitomo Chemical	7,216	-3.1	43.5	24.6	18.1	0.8	0.8	6.5	7.2	2.7	5.1	6.8	5.4	nm	33.1
		Ashai Kasei	15,626	1.5	26.1	14.4	12.5	0.9	0.9	6.8	6.0	6.2	7.0	6.7	7.3	194.1	7.5
		W-Scope	132	2.0	15.5	n/a	n/a	0.3	n/a	2.3	n/a	-0.1	n/a	11.1	n/a	nm	nm
		Toray Industries	14,881	-0.2	5.6	16.8	16.9	0.8	0.8	8.8	8.5	5.1	5.0	5.3	5.4	355.6	-6.1
		Nippon Kodoshi	231	-1.9	39.6	13.6	10.5	1.0	0.9	n/a	n/a	7.6	n/a	15.6	18.3	29.1	25.5
US	EVs	Furukawa	6,200	3.9	122.4	22.9	17.2	1.9	1.8	11.6	9.8	8.8	10.8	3.6	4.5	386.8	22.5
	Lithium	Tesla	2,089,418	1.1	84.5	251.0	181.4	18.4	16.7	110.4	90.1	7.3	8.7	5.0	6.9	-17.6	38.3
		Albemarle	15,375	13.5	66.6	n/a	255.7	1.1	1.1	15.7	13.5	-1.3	1.4	1.4	3.1	nm	nm
		SQM	16,958	-2.1	20.1	20.2	13.7	2.1	2.0	10.1	7.9	11.0	14.9	24.5	27.1	n/a	47.2
		FMC	5,303	-16.5	-24.6	8.5	7.6	0.8	0.8	7.4	6.9	9.4	10.2	17.5	18.1	33.9	11.5
Other	Cathodes	Umicore S.A	6,908	22.9	107.5	13.7	12.5	1.9	1.8	7.1	6.9	13.9	13.2	15.4	8.2	nm	9.2

Note: *Our coverage; As of Oct 22,
Source: Bloomberg

COMPANY UPDATE

2025. 10. 14

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LG Energy Solution (373220)

Cylindrical-battery demand tops forecasts in 3Q

- LG Energy Solution on Oct 13 announced preliminary 3Q results showing operating profit of KRW601.3b (up 22% q-q), beating consensus by 17%, thanks to stronger-than-expected demand for cylindrical products and one-off gains.
- It should be able to sustain differentiated earnings from domestic peers, supported by two factors that can offset weakness in the US EV market. We maintain our target price and BUY rating.

AT A GLANCE

BUY

Target price	KRW440,000	22.2%
Current price	**KRW360,000**	
Market cap	KRW84.2t/USD59.1b	
Shares (float)	234,000,000 (17.6%)	
52-week high/low	KRW427,000/KRW268,000	
Avg daily trading value (60-day)	KRW101.2b/ USD71.0m	

ONE-YEAR PERFORMANCE

	1M	6M	12M
LG Energy Solution (%)	1.3	7.3	-12.4
Vs Kospi (%pts)	-4.1	-27.2	-36.5

KEY CHANGES

(KRW)	New	Old	Diff
Recommend.	BUY	BUY	
Target price	440,000	440,000	0.0%
2025E EPS	-1,237	-1,237	0.0%
2026E EPS	5,158	5,158	0.0%

SAMSUNG vs THE STREET

No of estimates	22
Target price	441,238
Recommendation	3.9

※ Rating: 4 < → BUY, 3 = HOLD, 2 > → SELL

WHAT'S THE STORY?

Preliminary 3Q25 results top consensus: LG Energy Solution's (LGES) preliminary 3Q results showed sales of KRW5.7t (up 2% q-q) and an operating profit of KRW601.3b (up 22% q-q)—while the former came in line with consensus, the latter beat consensus (KRW514.5b) and our forecast (KRW531.3b) by 17% and 13%, respectively. Stronger than expected demand for cylindrical products and recognition of some one-off gains led to three straight quarter of earnings surprise.

- **Small batteries:** We estimate that the small-battery business registered an operating profit of KRW131b (up 46% q-q) for an operating margin of 7%, beating our expectation (KRW99.4b).
- **EV batteries:** The EV battery business likely booked an operating profit of KRW74.5b (up KRW162.9b q-q; for an operating margin of 2.4%), bettering our estimate (loss of KRW3b). With the US tax credit for EVs ending on Sep 30, clients started reducing battery procurement in 3Q. Sales slumped not only in the US (down 31% q-q) but also outside the US (down 5% q-q). Its sales and profit recognition probably include compensation received for customers' failure to take delivery of committed volumes and delays in the agreed commercial operation schedule.

(Continued on the next page)

SUMMARY 3Q RESULTS

(KRWb)	3Q25	Chg		Diff (%)	
		(% y-y)	(% q-q)	Samsung	Consensus
Sales	5,699.9	-17.1	2.4	0.0	3.2
Operating profit	601.3	34.1	22.2	0.0	16.9
Pre-tax profit	341.0	0.5	nm	0.0	-25.7
Net profit	273.3	-51.3	201.6	-0.0	-1.2
Margins (%)					
Operating profit	10.5				
Pre-tax profit	6.0				
Net profit	4.8				

Source: Company data, Fnguide, Samsung Securities estimates

VALUATION SUMMARY

	2024	2025E	2026E
Valuation (x)			
P/E	n/a	n/a	69.8
P/B	3.9	4.0	3.8
EV/EBITDA	28.4	20.1	14.1
Div yield (%)	0.0	0.0	0.0
EPS growth (% y-y)	nm	nm	nm
ROE (%)	-4.9	-1.4	5.6
Per-share data (KRW)			
EPS	-4,354	-1,237	5,158
BVPS	90,240	89,004	94,162
DPS	0	0	0

- **ESS:** We estimate that the ESS business recorded an operating profit of KRW30.3b (up KRW30.1b q-q) for an operating margin of 4.3%, missing our projection (KRW34.9b). The continued addition of ESS lines in the US likely kept sales growing, but due to the temporary withdrawal of workers caused by recent visa issues, the pace of sales growth likely fell short of our initial estimate.
- **AMPCs:** Advanced Manufacturing Production Credits (AMPCs; created under the US Inflation Reduction Act) that LGES recognized in 3Q were KRW365.5b (down 26% q-q; based on estimated sales volume of 7.2 GWh), above our previous estimate of KRW400.1b (based on estimated sales volume of 7.9 GWh). Sales to GM likely declined more sharply than expected, falling 33% q-q from 8.6 GWh in 2Q to 5.8 GWh in 3Q (vs initial estimate of 6.3 GWh). ESS growth continued (from 0.3 GWh to 0.7 GWh).

Cylindrical battery demand to stay strong, driven by client's change of strategy: The strong demand for the company's cylindrical products stems from a strategic shift by its leading EV customer. Previously, the EV maker pursued a global sales strategy centered on a limited number of models—contrasting with traditional automakers. However, amid slowing EV demand growth, it has pivoted toward offering long-body and low-cost trims to better meet diverse local consumer needs. These derivative models are equipped with the company's batteries rather than LFP batteries. (Panasonic supplies for the US market, while LGES covers markets outside the US). Moreover, as the company's cylindrical batteries have limited exposure to the US market, they are relatively insulated from potential demand slowdowns stemming from tax credit removal. We therefore expect cylindrical battery demand to stay strong through 2026.

View—earnings to be decent relative to peers until 1H26: With US EV tax credits gone, automakers are increasing incentives but weakness appears inevitable through 1H26. Demand recovery outlook is also questionable in Europe, given intensifying competition from China. As such, strong EV markets outside the US/Europe or a vibrant US ESS market will be essential for Korean battery makers to protect earnings through 1H26. LGES is the only company that meets these conditions. Supported by its expanding production of ESS-use LFP batteries in the US and new derivative EV model launches by a client leading the Chinese and European markets, its earnings are expected to remain differentiated from domestic peers. We maintain our target price and BUY rating.

Table 1. LGES: 3Q preliminary results and estimates*

(KRWb)	3Q25P	2Q25	2Q24	Consensus	Samsung	Diff (%)			
						Chg (q-q)	Chg (y-y)	Consensus	Samsung
Sales	5,700	5,565	6,162	5,522	5,489	2.4	-7.5	3.2	3.8
Operating profit	601	492	195	514	531	22.2	207.9	16.9	13.2
Pre-tax profit	341	-27	91	459	275	Turned pos	273.7	-25.7	23.8
Net profit	273	91	-24	277	221	201.6	Turned pos	-1.2	23.8
Attributable to parent	32	-297	-472	181	-32	Turned pos	Turned pos	-82.1	Turned pos
Margins (%)									
Operating profit	10.5	8.8	3.2	9.3	9.7				
Pre-tax profit	6.0	-0.5	1.5	8.3	5.0				
Net profit	4.8	1.6	-0.4	5.0	4.0				
Attributable to parent	0.6	-5.3	-7.7	3.3	-0.6				

Note: *Sales and operating profit figures published by company—other figures are our estimates
Source: Company data, FnGuide, Samsung Securities estimates

Table 2. LGES: 3Q estimates, by division

(KRWb)	3Q25P	2Q25	2Q24	Chg (% q-q)	Chg (% y-y)
Sales	**5,700**	**5,565**	**6,162**	**2.4**	**-7.5**
Small batteries	1,882	1,642	1,849	14.6	1.8
EV batteries	3,105	3,534	4,005	-12.1	-22.5
ESS	712	390	308	82.9	131.3
Operating profit	**601**	**492**	**195**	**22.2**	**207.9**
Small batteries	131	90	65	46.3	102.5
EV batteries	75	-88	-215	Turned pos	Turned pos
ESS	30	0	-102	15,445.4	Turned pos
IRA AMPC	366	491	448	-25.5	-18.4
Pre-tax profit	341	-27	91	Turned pos	273.7
Net profit	**273**	**91**	**-24**	**201.6**	**Turned pos**
Margins (%)					
Operating profit	10.5	8.8	3.2		
Small batteries	7.0	5.5	3.5		
EV batteries	2.4	-2.5	-5.4		
ESS	4.3	0.1	-33.0		
Pre-tax profit	6.0	-0.5	1.5		
Net profit	4.8	1.6	-0.4		

Note: Based on consolidated sales and operating profit, as reported by the company
Source: Company data, Samsung Securities estimates

Table 3. LGES: Simulation of tax credit benefits under IRA

(GWh)	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Advanced Manufacturing Production Credits													
Battery cell (USD/kWh)			35.0	35.0	35.0	35.0	35.0	35.0	26.3	17.5	8.8	0.0	
Battery module (USD/kWh)			10.0	10.0	10.0	10.0	10.0	10.0	7.5	5.0	2.5	0.0	
LGES US battery capacity													
Total	**5**	**15**	**45**	**70**	**92**	**184**	**246**	**294**	**294**	**294**	**294**	**294**	
Michigan (100%)	5	5	5	5	5	25	25	25	25	25	25	25	
Michigan ESS (100%)					17	17	33	33	33	33	33	33	
Ultium Cells #1 (50%)		10	40	45	45	45	45	45	45	45	45	45	
Ultium Cells #2 (50%)				20	20	20	30	40	40	40	40	40	
L-H Battery (50%)					5	25	30	40	40	40	40	40	
Nextstar Energy (51%)						17	27	45	45	45	45	45	
Arizona (100%)						36	36	36	36	36	36	36	
HL-GA Battery (50%)							20	30	30	30	30	30	
LGES US battery operating rate													
Total	**80%**	**43%**	**49%**	**53%**	**42%**	**41%**	**61%**	**59%**	**67%**	**74%**	**80%**	**82%**	
Michigan (100%)	80%	80%	80%	29%	67%	33%	53%	58%	63%	68%	73%	75%	
Michigan ESS (100%)					15%	83%	75%	90%	90%	90%	90%	90%	
Ultium Cells #1 (50%)		25%	43%	59%	52%	45%	58%	63%	73%	83%	87%	87%	
Ultium Cells #2 (50%)				21%	23%	20%	35%	38%	48%	58%	68%	78%	
L-H Battery (50%)					1%	30%	54%	64%	69%	74%	79%	84%	
Nextstar Energy (51%)						50%	71%	51%	56%	61%	71%	71%	
Arizona (100%)						1%	36%	61%	76%	81%	86%	86%	
HL-GA Battery (50%)							35%	50%	65%	75%	85%	85%	
LGES US battery production													
Total	**4**	**7**	**15**	**31**	**34**	**56**	**130**	**174**	**197**	**216**	**234**	**241**	
Michigan (100%)	4	4	4	1	3	5	13	14	16	17	18	19	
Michigan ESS (100%)					2	14	25	30	30	30	30	30	
Ultium Cells #1 (50%)		3	11	25	23	20	26	29	33	38	39	39	
Ultium Cells #2 (50%)				4	5	4	11	15	19	23	27	31	
L-H Battery (50%)						4	16	26	28	30	32	34	
Nextstar Energy (51%)						8	19	23	25	27	32	32	
Arizona (100%)						0	13	22	27	29	31	31	
HL-GA Battery (50%)							7	15	20	23	26	26	
LGES IRA tax credit benefits (total; USDm)													
Total			**517**	**1,081**	**1,220**	**2,254**	**5,060**	**7,184**	**8,125**	**6,639**	**4,792**	**2,459**	**39,331**
Battery cell			517	1,074	1,178	1,962	4,314	6,073	6,909	5,674	4,103	2,108	33,913
Battery module			0	7	42	292	746	1,111	1,216	964	689	350	5,418
LGES IRA tax credit benefits (total; KRWb)													
Total			**677**	**1,480**	**1,719**	**3,007**	**6,629**	**9,339**	**10,562**	**8,630**	**6,230**	**3,196**	**51,470**
Battery cell			677	1,470	1,659	2,617	5,652	7,895	8,981	7,377	5,334	2,741	44,404
Battery module			0	10	59	390	977	1,444	1,581	1,254	896	455	7,066
LGES IRA tax credit benefits (controlling interests; USDm)													
Total			**329**	**314**	**489**	**1,514**	**3,673**	**5,877**	**6,489**	**5,185**	**3,682**	**1,884**	**29,437**
Battery cell			329	307	448	1,244	3,002	4,970	5,501	4,409	3,137	1,608	24,954
Battery module			0	7	42	270	672	907	989	776	546	276	4,484
LGES IRA tax credit benefits (controlling interests; KRWb)													
Total			**427**	**408**	**636**	**1,968**	**4,775**	**7,640**	**8,436**	**6,740**	**4,787**	**2,449**	**38,268**
Battery cell			427	399	582	1,617	3,902	6,461	7,151	5,732	4,078	2,090	32,440
Battery module			0	9	54	351	873	1,179	1,285	1,008	709	359	5,829
Present value* of IRA tax credit benefits (controlling interests; KRWb)													
Total			**427**	**408**	**606**	**1,785**	**4,125**	**6,286**	**6,610**	**5,030**	**3,402**	**1,657**	**30,337**
Battery cell			427	399	554	1,467	3,371	5,316	5,603	4,277	2,898	1,415	25,727
Battery module			0	9	52	318	754	970	1,007	752	504	243	4,610

Note: *Discounted to the beginning of 2025, using a discount rate of 5% / Source: Samsung Securities estimates

Table 4. LG Energy Solution: Results and forecasts

(KRWb)	1Q25	2Q25	3Q25P	4Q25E	1Q26E	2Q26E	3Q26E	4Q26E	2023	2024	2025E	2026E
KRW/USD (average)	1,453	1,401	1,387	1,390	1,370	1,350	1,330	1,310	1,306	1,365	1,408	1,340
Sales	**6,265**	**5,565**	**5,700**	**5,976**	**5,992**	**6,656**	**7,580**	**8,342**	**33,745**	**25,620**	**23,507**	**28,570**
Growth (% q-q)	-2.9	-11.2	2.4	4.8	0.3	11.1	13.9	10.0				
Growth (% y-y)	2.2	-9.7	-17.1	-7.4	-4.4	19.6	33.0	39.6	31.8	-24.1	-8.2	21.5
Small batteries	1,710	1,642	1,882	1,890	1,669	1,769	1,942	1,965	9,550	7,363	7,124	7,345
Growth (% q-q)	5.6	-4.0	14.6	0.4	-11.6	5.9	9.8	1.2				
Growth (% y-y)	-21.4	-11.2	9.5	16.7	-2.4	7.7	3.2	4.0	7.7	-22.9	-3.2	3.1
EV batteries	4,110	3,534	3,105	3,112	3,169	3,430	3,691	3,953	21,745	16,408	13,861	14,243
Growth (% q-q)	-2.0	-14.0	-12.1	0.2	1.8	8.2	7.6	7.1				
Growth (% y-y)	9.9	-11.8	-30.5	-25.8	-22.9	-3.0	18.9	27.0	45.7	-24.5	-15.5	2.8
ESS batteries	445	390	712	975	1,154	1,457	1,947	2,423	2,450	1,849	2,522	6,981
Growth (% q-q)	-30.4	-12.4	82.9	36.8	18.4	26.3	33.6	24.5				
Growth (% y-y)	107.4	26.4	3.6	52.6	159.3	274.1	173.3	148.6	35.3	-24.5	36.4	176.8
EBITDA	**1,231**	**1,375**	**1,517**	**1,443**	**1,524**	**1,818**	**2,232**	**2,473**	**4,450**	**3,621**	**5,565**	**8,047**
Growth (% q-q)	94.3	11.7	10.3	-4.9	5.6	19.3	22.8	10.8				
Growth (% y-y)	50.8	47.8	22.2	127.7	23.8	32.2	47.1	71.5	45.6	-18.6	53.7	44.6
Operating profit	**375**	**492**	**601**	**543**	**641**	**838**	**1,116**	**1,245**	**2,163**	**575**	**2,011**	**3,841**
Growth (% q-q)	Turned pos	31.4	22.2	-9.8	18.2	30.7	33.1	11.6				
Growth (% y-y)	138.1	152.0	34.1	To turn pos	71.2	70.3	85.5	129.6	78.2	-73.4	249.4	91.0
Small batteries	117	90	131	75	66	97	203	127	757	195	413	493
Growth (% q-q)	Turned pos	-23.6	46.3	-42.9	-11.6	46.1	110.4	-37.5				
Growth (% y-y)	49.1	38.4	69.8	To turn pos	-43.6	7.8	55.1	69.7	-16.9	-74.3	112.0	19.4
EV batteries	-107	-88	75	19	13	21	4	8	722	-880	-102	45
Growth (% q-q)	Remained neg	Remained neg	Turned pos	-74.9	-32.1	62.3	-82.1	114.2				
Growth (% y-y)	Remained neg	Remained neg	Turned pos	To turn pos	To turn pos	To turn pos	-95.0	-57.7	54.3	Turned neg	To remain neg	To turn pos
ESS batteries	-93	0	30	44	52	66	79	98	7	-219	-19	296
Growth (% q-q)	Remained neg	Turned pos	15,445.4	46.5	18.4	26.3	18.9	24.5				
Growth (% y-y)	Remained neg	Turned pos	43,926.5	To turn pos	To turn pos	33,939.2	160.4	121.3	Turned pos	Turned neg	To remain neg	To turn pos
AMPC	458	491	366	405	510	655	830	1,012	677	1,480	1,719	3,007
Growth (% q-q)	21.3	7.2	-25.5	10.7	26.1	28.3	26.8	22.0				
Growth (% y-y)	142.2	9.6	-21.6	7.3	11.5	33.4	127.1	150.2		118.7	16.1	75.0
Pre-tax profit	**365**	**-27**	**341**	**450**	**497**	**699**	**979**	**1,119**	**2,043**	**349**	**1,128**	**3,294**
Growth (% q-q)	4.5	Turned neg	Turned pos	31.9	-55.9	40.6	40.1	14.3				
Growth (% y-y)	63.7	Turned neg	0.5	To turn pos	36.4	To turn pos	187.2	148.7	105.3	-82.9	223.4	192.0
Net profit	**227**	**91**	**273**	**361**	**385**	**542**	**759**	**867**	**1,638**	**339**	**951**	**2,553**
Growth (% q-q)	-33.1	-60.0	201.6	31.9	-59.5	40.6	40.1	14.3				
Growth (% y-y)	6.8	Turned pos	-51.3	To turn pos	70.1	498.0	177.7	140.5	110.0	-79.3	180.9	168.5
Attributable to parent	-146	-297	32	121	137	240	390	440	1,237	-1,019	-289	1,207
Margins (%)												
EBITDA	19.6	24.7	26.6	24.1	25.4	27.3	29.4	29.7	13.2	14.1	23.7	28.2
Operating profit	6.0	8.8	10.5	9.1	10.7	12.6	14.7	14.9	6.4	2.2	8.6	13.4
Small batteries	6.9	5.5	7.0	4.0	4.0	5.5	10.5	6.5	7.9	2.6	5.8	6.7
EV batteries	-2.6	-2.5	2.4	0.6	0.4	0.6	0.1	0.2	3.3	-5.4	-0.7	0.3
ESS batteries	-21.0	0.1	4.3	4.6	4.6	4.6	4.1	4.1	0.3	-11.9	-0.7	4.2
Pre-tax profit	5.8	-0.5	6.0	7.5	8.3	10.5	12.9	13.4	6.1	1.4	4.8	11.5
Net profit	3.6	1.6	4.8	6.0	6.4	8.1	10.0	10.4	4.9	1.3	4.0	8.9

Source: Company data, Samsung Securities estimates

Income statement

Year-end Dec 31 (KRWb)	2023	2024	2025E	2026E	2027E
Sales	**33,745**	**25,620**	**23,507**	**28,570**	**36,710**
Cost of goods sold	28,802	22,214	19,403	23,016	29,784
Gross profit	**4,943**	**3,406**	**4,104**	**5,553**	**6,926**
Gross margin (%)	14.6	13.3	17.5	19.4	18.9
SG&A expenses	3,457	4,311	3,812	4,720	6,009
Operating profit	**2,163**	**575**	**2,011**	**3,841**	**7,546**
Operating margin (%)	6.4	2.2	8.6	13.4	20.6
Non-operating gains (losses)	**-120**	**-227**	**-882**	**-546**	**-390**
Financial profit	985	1,048	14	237	494
Financial costs	857	1,261	723	809	868
Equity-method gains (losses)	-32	-49	-6	-6	-6
Other	-215	35	-168	31	-10
Pre-tax profit	**2,043**	**349**	**1,128**	**3,294**	**7,156**
Taxes	405	10	177	741	1,466
Effective tax rate (%)	19.8	2.9	15.7	22.5	20.5
Profit from continuing operations	1,638	339	951	2,553	5,690
Profit from discontinued operations	0	0	0	0	0
Net profit	**1,638**	**339**	**951**	**2,553**	**5,690**
Net margin (%)	4.9	1.3	4.0	8.9	15.5
Net profit (controlling interests)	1,237	-1,019	-289	1,207	3,076
Net profit (non-controlling interests)	401	1,357	1,240	1,346	2,613
EBITDA	4,450	3,621	5,565	8,047	12,840
EBITDA margin (%)	13.2	14.1	23.7	28.2	35.0
EPS (parent-based) (KRW)	5,287	-4,354	-1,237	5,158	13,146
EPS (consolidated) (KRW)	7,000	1,447	4,064	10,912	24,314
Adjusted EPS (KRW)*	5,287	-4,354	-1,237	5,158	13,146

Balance sheet

Year-end Dec 31 (KRWb)	2023	2024	2025E	2026E	2027E
Current assets	**17,208**	**15,327**	**11,702**	**15,515**	**25,683**
Cash & equivalents	5,069	3,899	1,216	2,771	9,307
Accounts receivable	5,128	4,944	4,536	5,513	7,084
Inventories	5,396	4,552	4,177	5,077	6,523
Other current assets	1,615	1,932	1,773	2,155	2,769
Fixed assets	**28,229**	**44,979**	**50,830**	**53,949**	**54,631**
Investment assets	648	1,272	1,228	1,335	1,507
Tangible assets	23,655	38,350	44,280	47,322	47,858
Intangible assets	876	1,285	1,250	1,220	1,193
Other long-term assets	3,050	4,073	4,073	4,073	4,073
Total assets	**45,437**	**60,307**	**62,532**	**69,465**	**80,314**
Current liabilities	**10,937**	**12,055**	**10,407**	**12,478**	**15,585**
Accounts payable	3,094	2,705	2,482	3,017	3,877
Short-term debt	1,576	1,291	1,291	1,291	1,291
Other current liabilities	6,267	8,058	6,634	8,170	10,417
Long-term liabilities	**10,126**	**17,285**	**20,207**	**22,516**	**24,569**
Bonds & long-term debt	7,628	12,641	15,842	17,482	18,460
Other long-term liabilities	2,498	4,644	4,365	5,034	6,109
Total liabilities	**21,064**	**29,340**	**30,615**	**34,994**	**40,154**
Owners of parent equity	**20,201**	**21,116**	**20,827**	**22,034**	**25,110**
Capital stock	117	117	117	117	117
Capital surplus	17,165	17,165	17,165	17,165	17,165
Retained earnings	2,364	1,397	1,108	2,315	5,391
Other	555	2,437	2,437	2,437	2,437
Non-controlling interests' equity	**4,173**	**9,850**	**11,091**	**12,437**	**15,050**
Total equity	**24,374**	**30,967**	**31,918**	**34,471**	**40,160**
Net debt	5,870	11,493	16,518	16,784	11,294

Cash flow statement

Year-end Dec 31 (KRWb)	2023	2024	2025E	2026E	2027E
Cash flow from operations	**4,444**	**5,112**	**3,890**	**6,833**	**11,449**
Net profit	1,638	339	951	2,553	5,690
Non-cash profit and expenses	3,607	4,984	3,839	5,431	7,314
Depreciation	2,150	2,856	3,370	4,026	5,118
Amortization	137	190	185	180	176
Other	1,320	1,939	284	1,225	2,019
Changes in A/L from operating activities	-277	691	-125	300	483
Cash flow from investments	**-9,719**	**-12,065**	**-8,915**	**-7,080**	**-5,934**
Change in tangible assets	-9,821	-12,324	-9,300	-7,068	-5,654
Change in financial assets	-114	-277	40	-95	-152
Other	215	536	346	82	-127
Cash flow from financing	**4,355**	**5,382**	**2,342**	**1,820**	**1,046**
Change in debt	2,895	4,383	2,342	1,820	1,046
Change in equity	0	0	0	0	0
Dividends	0	0	0	0	0
Other	1,460	998	-0	0	0
Change in cash	-869	-1,170	-2,683	1,555	6,536
Cash at beginning of year	5,938	5,069	3,899	1,216	2,771
Cash at end of year	5,069	3,899	1,216	2,771	9,307
Gross cash flow	**5,245**	**5,323**	**4,790**	**7,984**	**13,003**
Free cash flow	**-5,479**	**-7,287**	**-5,410**	**-235**	**5,795**

Financial ratios

Year-end Dec 31	2023	2024	2025E	2026E	2027E
Growth (%)					
Sales	31.8	-24.1	-8.2	21.5	28.5
Operating profit	78.2	-73.4	249.4	91.0	96.5
Net profit	110.0	-79.3	180.9	168.5	122.8
Adjusted EPS**	60.0	nm	nm	nm	154.9
Per-share data (KRW)					
EPS (parent-based)	5,287	-4,354	-1,237	5,158	13,146
EPS (consolidated)	7,000	1,447	4,064	10,912	24,314
Adjusted EPS**	5,287	-4,354	-1,237	5,158	13,146
BVPS	86,328	90,240	89,004	94,162	107,308
DPS (common)	0	0	0	0	0
Valuations (x)					
P/E***	80.9	n/a	n/a	69.8	27.4
P/B***	5.0	3.9	4.0	3.8	3.4
EV/EBITDA	24.7	28.4	20.1	14.1	8.6
Ratios (%)					
ROE	6.4	-4.9	-1.4	5.6	13.1
ROA	3.9	0.6	1.5	3.9	7.6
ROIC	6.7	1.5	3.7	5.8	11.2
Payout ratio	0.0	0.0	0.0	0.0	0.0
Dividend yield (common)	0.0	0.0	0.0	0.0	0.0
Net debt to equity	24.1	37.1	51.8	48.7	28.1
Interest coverage (x)	6.9	1.0	2.8	4.7	8.7

Note: *Excluding one-off items
**Fully diluted, excluding one-off items
***From companies subject to equity-method valuation

Source: Company data, Samsung Securities estimates

COMPANY UPDATE

2025. 9. 30

EV/Mobility Team

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Samsung SDI (006400)

Pinning hopes on line conversion, ESS production

- We expect Samsung SDI's 3Q operating results to miss consensus.
- Earnings should improve in 4Q as the firm's JV in North America (SPE) starts battery shipments to Europe and ESS battery production from 4Q.
- We lift our target price to KRW250,000 and maintain BUY on the stock.

WHAT'S THE STORY?

3Q preview—To miss consensus: We forecast Samsung SDI to post 3Q sales of KRW3.1t and an operating loss of KRW325.6b, the latter slightly missing FnGuide consensus of an operating loss of KRW308.3b. Operating loss should fall q-q, but due mainly to compensation from automakers in Europe at the large-battery unit (about KRW100b in our view; in return for poor EV demand). AMPC should hit just KRW3.1b (vs KRW66.4b in 2Q), hit by a utilization-rate slump at the company's JV in North America (ie, SPE)

Battery unit losses to fall in 4Q as ESS battery production begins at JV: Concerns linger over a fall in downstream EV demand due to the early termination of IRA EV tax credits. We, however, note that the company's utilization rate at the JV will improve in 4Q led by the JV shipping batteries to Europe (at #1 line) and producing ESS batteries (at #2 line) from 4Q, resulting in AMPC jumping to KRW96.7b in 4Q. We now forecast the company's 2026 operating profit at KRW1.2t (vs KRW1.5t previously), expecting its large-battery shipments to grow just 26% y-y and its AMPC to come in at just KRW600.5b (vs our previous forecast of KRW779b).

(Continued on the next page)

SUMMARY FINANCIAL DATA

(KRWb)	2024	2025E	2026E	2027E
Revenue	16,592	13,142	16,395	21,761
Operating profit	363	-1,176	1,199	2,654
Net profit (adj)	576	-622	1,092	2,055
EPS (adj) (KRW)	8,288	-9,733	10,897	20,746
EPS (adj) growth (% y-y)	-70.2	nm	nm	90.4
EBITDA margin (%)	12.9	8.1	23.0	25.7
ROE (%)	3.1	-3.7	4.2	7.5
P/E (adj) (x)	29.2	n/a	18.9	9.9
P/B (x)	0.8	0.8	0.7	0.7
EV/EBITDA (x)	13.4	25.0	7.9	6.0
Dividend yield (%)	0.4	0.5	0.5	0.5

Source: Company data, Samsung Securities estimates

AT A GLANCE

BUY

Target price	KRW250,000	21.4%
Current price	KRW206,000	
Market cap	KRW16.6t/USD11.9b	
Shares (float)	80,585,530 (72.6%)	
52-week high/low	KRW375,949/KRW160,200	
Avg daily trading value (60-day)	KRW105.4b/ USD75.3m	

ONE-YEAR PERFORMANCE

	1M	6M	12M
Samsung SDI (%)	-0.5	5.5	-45.2
Vs Kospi (%pts)	-7.6	-21.3	-57.7

KEY CHANGES

(KRW)	New	Old	Diff
Recommend.	BUY	BUY	
Target price	250,000	240,000	4.2%
2025E EPS	-9,733	-8,178	19.0%
2026E EPS	10,897	12,387	-12.0%

SAMSUNG vs THE STREET

No of estimates	20
Target price	240,737
Recommendation	3.8

※ Rating: 4 < → BUY, 3 = HOLD, 2 > → SELL

Raising target price to KRW250,000; maintaining BUY: We raise our target price for the stock by 4% to KRW250,000. Although we cut our 2026 earnings forecasts for the stock, we reflect the hike in its industry peers' EV/EBITDA multiple from 11x to 12.7x and we raise the discount we apply from 30% to 35% to factor into the early termination of IRA EV tax credits and EV makers' price discount strategy. Our new target price is equivalent to 0.9x implied 2025 P/B. We maintain our BUY rating, as the company's moves (ie, shipping batteries to Europe and producing ESS batteries at SPE) should bode well for shares.

3Q preview

(KRWb)	3Q25E	3Q24	2Q25	Chg	
				(% y-y)	(% q-q)
Sales	3,072.7	3,256.8	3,179.4	-5.7	-3.4
Operating profit	-325.6	72.4	-397.8	To turn neg	To remain neg
Pre-tax profit	-297.1	219.3	-347.2	To turn neg	To remain neg
Net profit	-277.1	230.4	-166.7	To turn neg	To remain neg
Margins (%)					
Operating profit	-10.6	2.2	-12.5		
Pre-tax profit	-9.7	6.7	-10.9		
Net profit	-9	7.1	-5.2		

Source: Company data

Revisions to full-year forecasts

(KRWb)	2025E			2026E		
	Old	New	Diff (%)	Old	New	Diff (%)
Sales	13,189.8	13,142.3	-0.4	17,777.7	16,394.7	-7.8
Operating profit	-1,101.2	-1,176.2	nm	1,483.5	1,198.6	-19.2
Pre-tax profit	-966.6	-1,037.2	nm	1,611.2	1,365.5	-15.3
Net profit	-580.0	-622.3	nm	1,289.0	1,092.4	-15.3

Source: Samsung Securities estimates

Results and forecasts

(KRWb)	1Q24	2Q24	3Q24	4Q24	1Q25	2Q25E	3Q25E	4Q25E	1Q26E	2Q26E	3Q26E	4Q26E	2024	2025E	2026E
Sales	**4,816.2**	**4,085.9**	**3,935.6**	**3,754.5**	**3,176.8**	**3,179.4**	**3,072.7**	**3,713.4**	**3,730.0**	**3,877.2**	**4,138.0**	**4,649.5**	**16,592.1**	**13,142.3**	**16,394.7**
Batteries	4,581.8	3,872.9	3,672.0	3,564.6	2,980.9	2,961.2	2,840.6	3,457.0	3,473.4	3,581.8	3,796.3	4,306.4	15,691.3	12,239.7	15,158.0
LiB (IT)	1,613.5	1,228.1	863.4	690.3	641.6	833.7	875.2	962.8	866.0	822.3	846.8	889.2	4,395.3	3,313.3	3,424.3
LiB (EV+ESS)	2,968.3	2,644.8	2,808.6	2,874.3	2,339.3	2,127.5	1,965.4	2,494.3	2,607.4	2,759.5	2,949.5	3,417.3	11,296.0	8,926.4	11,733.7
Electronic materials	234.4	213.0	263.5	190.0	195.9	218.2	232.1	256.4	256.6	295.3	341.7	343.0	900.8	902.6	1,236.7
Operating profit	**249.1**	**240.9**	**129.9**	**-256.7**	**-434.1**	**-397.8**	**-325.6**	**-18.6**	**95.4**	**247.4**	**374.1**	**481.7**	**363.2**	**-1,176.2**	**1,198.6**
Batteries	214.5	208.0	63.5	-268.3	-452.4	-430.8	-360.5	-62.5	53.6	198.7	314.3	433.9	217.6	-1,306.3	1,000.6
LIB (IT)	72.6	86.0	-19.0	-138.1	-224.6	-72.9	-43.8	28.9	8.7	12.3	25.4	17.8	1.5	-312.3	64.2
LIB (EV+ESS)	95.1	112.3	73.0	106.2	-337.3	-424.3	-319.8	-188.1	-63.2	73.2	160.3	165.7	386.6	-1,269.5	335.9
IRA (AMPC)	46.8	9.6	9.4	13.9	109.4	66.4	3.1	96.7	108.2	113.2	128.7	250.5	79.8	275.6	600.5
Electronic materials	34.6	32.9	66.4	11.6	18.3	33.0	34.9	43.9	41.8	48.7	59.7	47.8	145.5	130.1	198.0
Operating margin (%)	**5.2**	**5.9**	**3.3**	**-6.8**	**-13.7**	**-12.5**	**-10.6**	**-0.5**	**2.6**	**6.4**	**9.0**	**10.4**	**2.2**	**-8.9**	**7.3**
Batteries	4.7	5.4	1.7	-7.5	-15.2	-14.5	-12.7	-1.8	1.5	5.5	8.3	10.1	1.4	-10.7	6.6
Electronic materials	14.8	15.5	25.2	6.1	9.3	15.1	15.0	17.1	16.3	16.5	17.5	13.9	16.2	14.4	16.0

Source: Company data, Samsung Securities estimates

Target-price calculation

(KRWb)		Note
Operating value	**27,731**	
Established business*	9,051	
LIB (IT)	6,859	2025E-2026E EBITDA weighted avg
ECM*	2,192	2025E-2026E EBITDA weighted avg
New growth business	**18,680**	
LIB (EV, ESS)**	18,680	2025E-2026E EBITDA weighted avg
Non-operating value	**6,340**	
Listed subsidiaries	1,083	As of Sep 25 close
Unlisted subsidiaries	420	30% discount to 2024 book value
Samsung Display	4,837	2024 book value
Net debt	**7,670**	End-2025E
Net asset value	26,401	
Discount (%)	35%	Risk of slowdown in market (30%)+Tariff risk(5%)
NAVPS	249,557	
Target price (KRW)	**250,000**	
Current price (KRW)	210,500	As of Sep 25 close
Upside (%)	18.8	

Note: *Calculated by applying peer average EV/EBITDA multiples (12.7x for the LIB (IT) unit, and 8.0x for ECM) to our 2025-2026 weighted average EBITDA forecasts for each division;
**Calculated by applying the peer average EV/EBITDA multiple (12.7x) to our 2025-2026 weighted average EBITDA forecast
Source: Bloomberg, Samsung Securities estimates

AMPC estimates and reflection on net profit (non-controlling interests)

		2024	2025E	2026E	2027E
AMPC estimates	**Capacity (cell) based on installations (at year-end)**				
	Michigan (pack)	3	3	3	3
	SPE 1	33	33	33	33
	GM JV			27	27
	Utilization rate				
	Michigan (pack)	88%	31%	67%	88%
	SPE 1	0%	13%	30%	61%
	GM JV				4%
	Output				
	Michigan (pack)	3	1	2	3
	SPE 1	0	4	10	20
	GM JV	-	-	-	1
	AMPC credit (USD/kWh)				
	Cell	35	35	35	35
	Module/pack	10	10	10	10
	AMPC reflection				
	AMPC (USDm)	59	197	462	901
	AMPC (KRWb)	80	276	600	1,158
Net profit (non-controlling interests) estimates	**Net profit (KRWb)**	576	-622	1,092	2,055
	Net profit (controlling interests)	599	-759	896	1,705
	Net profit (non-controlling interests)	-24	137	197	349
	AMPC net profit (non-controlling interests)	3	113	170	297

Source: Samsung SDI, Samsung Securities estimates

Income statement

Year-end Dec 31 (KRWb)	2023	2024	2025E	2026E	2027E
Sales	**21,437**	**16,592**	**13,142**	**16,395**	**21,761**
Cost of goods sold	17,655	13,499	12,062	12,393	15,405
Gross profit	**3,782**	**3,094**	**1,080**	**4,002**	**6,356**
Gross margin (%)	17.6	18.6	8.2	24.4	29.2
SG&A expenses	2,237	2,820	2,256	2,803	3,702
Operating profit	**1,545**	**363**	**-1,176**	**1,199**	**2,654**
Operating margin (%)	7.2	2.2	-8.9	7.3	12.2
Non-operating gains (losses)	**924**	**219**	**139**	**167**	**50**
Financial profit	958	1,129	91	111	88
Financial costs	1,157	1,603	465	514	609
Equity-method gains (losses)	1,017	801	513	570	570
Other	105	-108	0	0	-0
Pre-tax profit	**2,469**	**582**	**-1,037**	**1,365**	**2,704**
Taxes	403	7	-415	273	649
Effective tax rate (%)	16.3	1.2	40.0	20.0	24.0
Profit from continuing operations	1,979	520	-622	1,092	2,055
Profit from discontinued operations	87	55	0	0	0
Net profit	**2,066**	**576**	**-622**	**1,092**	**2,055**
Net margin (%)	9.6	3.5	-4.7	6.7	9.4
Net profit (controlling interests)	2,009	599	-759	896	1,705
Net profit (non-controlling interests)	57	-24	137	197	349
EBITDA	3,273	2,148	1,059	3,771	5,589
EBITDA margin (%)	15.3	12.9	8.1	23.0	25.7
EPS (parent-based) (KRW)	27,788	8,288	-9,733	10,897	20,746
EPS (consolidated) (KRW)	28,574	7,959	-7,978	13,289	24,996
Adjusted EPS (KRW)*	27,774	8,288	-9,733	10,897	20,746

Balance sheet

Year-end Dec 31 (KRWb)	2023	2024	2025E	2026E	2027E
Current assets	**9,187**	**10,334**	**11,689**	**11,995**	**14,398**
Cash & equivalents	1,524	1,885	4,773	3,368	2,947
Accounts receivable	2,875	2,729	2,219	2,768	3,675
Inventories	3,297	2,879	2,446	3,052	4,050
Other current assets	1,490	2,841	2,250	2,807	3,726
Fixed assets	**24,852**	**30,263**	**30,190**	**34,134**	**39,525**
Investment assets	11,394	11,187	9,050	11,065	14,391
Tangible assets	11,893	17,707	19,834	21,810	23,913
Intangible assets	859	668	606	558	520
Other long-term assets	705	701	701	701	701
Total assets	**34,039**	**40,597**	**41,879**	**46,129**	**53,923**
Current liabilities	**8,519**	**10,856**	**10,333**	**10,483**	**12,683**
Accounts payable	2,119	906	1,198	1,494	1,983
Short-term debt	2,298	5,394	5,394	5,594	6,194
Other current liabilities	4,103	4,557	3,742	3,395	4,506
Long-term liabilities	**5,613**	**8,174**	**8,504**	**11,589**	**15,204**
Bonds & long-term debt	2,850	5,064	6,014	8,514	11,164
Other long-term liabilities	2,763	3,111	2,490	3,075	4,040
Total liabilities	**14,132**	**19,030**	**18,837**	**22,072**	**27,887**
Owners of parent equity	**18,511**	**19,766**	**21,104**	**21,923**	**23,552**
Capital stock	357	357	416	416	416
Capital surplus	5,002	5,002	6,943	6,943	6,943
Retained earnings	12,336	12,780	11,954	12,773	14,402
Other	817	1,628	1,791	1,791	1,791
Non-controlling interests' equity	**1,396**	**1,801**	**1,938**	**2,134**	**2,484**
Total equity	**19,907**	**21,567**	**23,042**	**24,057**	**26,035**
Net debt	3,665	9,679	7,670	10,727	14,353

Cash flow statement

Year-end Dec 31 (KRWb)	2023	2024	2025E	2026E	2027E
Cash flow from operations	**2,104**	**-138**	**1,561**	**2,965**	**4,206**
Net profit	2,066	576	-622	1,092	2,055
Non-cash profit and expenses	1,498	2,397	1,667	2,664	3,520
Depreciation	1,660	1,795	2,173	2,524	2,897
Amortization	68	80	62	48	37
Other	-230	522	-568	92	585
Changes in A/L from operating activities	-938	-2,622	461	-129	-213
Cash flow from investments	**-4,105**	**-4,920**	**-4,244**	**-4,553**	**-5,088**
Change in tangible assets	-4,037	-6,263	-4,300	-4,500	-5,000
Change in financial assets	-77	428	56	-53	-88
Other	9	915	-0	0	-0
Cash flow from financing	**903**	**5,544**	**2,776**	**1,610**	**3,185**
Change in debt	578	5,941	843	1,686	3,261
Change in equity	0	0	2,000	0	0
Dividends	-72	-70	-67	-77	-77
Other	396	-327	0	0	0
Change in cash	-1,090	361	2,888	-1,405	-421
Cash at beginning of year	2,614	1,524	1,885	4,773	3,368
Cash at end of year	1,524	1,885	4,773	3,368	2,947
Gross cash flow	**3,564**	**2,972**	**1,044**	**3,756**	**5,574**
Free cash flow	**-1,945**	**-6,409**	**-2,739**	**-1,535**	**-794**

Financial ratios

Year-end Dec 31	2023	2024	2025E	2026E	2027E
Growth (%)					
Sales	6.5	-22.6	-20.8	24.7	32.7
Operating profit	-14.5	-76.5	nm	nm	121.4
Net profit	1.3	-72.1	nm	nm	88.1
Adjusted EPS**	2.9	-70.2	nm	nm	90.4
Per-share data (KRW)					
EPS (parent-based)	27,788	8,288	-9,733	10,897	20,746
EPS (consolidated)	28,574	7,959	-7,978	13,289	24,996
Adjusted EPS**	27,774	8,288	-9,733	10,897	20,746
BVPS	269,440	287,707	268,178	278,587	299,284
DPS (common)	973	973	973	973	973
Valuations (x)					
P/E***	16.6	29.2	n/a	18.9	9.9
P/B***	1.7	0.8	0.8	0.7	0.7
EV/EBITDA	11.6	13.4	25.0	7.9	6.0
Ratios (%)					
ROE	11.5	3.1	-3.7	4.2	7.5
ROA	6.4	1.5	-1.5	2.5	4.1
ROIC	9.6	1.9	-3.0	3.8	7.2
Payout ratio	3.3	10.9	-9.9	8.4	4.4
Dividend yield (common)	0.2	0.4	0.5	0.5	0.5
Net debt to equity	18.4	44.9	33.3	44.6	55.1
Interest coverage (x)	5.6	1.1	-2.5	2.3	4.4

Note: *Excluding one-off items
**Fully diluted, excluding one-off items
***From companies subject to equity-method valuation

Source: Company data, Samsung Securities estimates

COMPANY UPDATE

2025. 11. 7

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mPlus (259630)

Small but strong equipment maker

- We visited mPlus to check on how it is faring—it turned around y-y in 2Q.
- The company should enjoy new order momentum in 2H amid growing global demand for prismatic batteries.
- We see the firm as being a viable medium- to small-sized equipment maker that: 1) should see its earnings grow in 2025; and 2) boasts financial stability.

WHAT'S THE STORY?

2Q results up q-q: mPlus reported 2Q sales of KRW59.6b, an operating profit of KRW12.2b (turning around y-y), and an operating margin of 21% (vs 10% in 1Q). The earnings growth owed to: 1) the inclusion of high-margin projects in its sales (sales recognition comes later for the equipment industry); and 2) its carrying out more maintenance/repair work for its clients amid hikes in their utilization.

To enjoy new-order momentum in 2H on rising demand for prismatic batteries: As global automakers consider making strategic investments in prismatic LFP cells, the company stands to win more related orders. Having already won pouch- and prismatic-type tab welding/packaging equipment orders from Hyundai Motor Company (HMC) in 2H, the company may win additional orders from both domestic and overseas automakers (which are seeking to cut their investments and operating costs) thanks in part to its newly-developed ultra-fast notching equipment (which can process 600 sheets per minute (PPM)).

(Continued on the next page)

AT A GLANCE

Not Rated

Target price	n/a
Current price	KRW14,990
Market Cap	KRW182.24b/USD125.88m
Shares (float)	12,157,656 (73.4%)
52-week high/low	KRW18,330/KRW7,000
Avg daily trading value (60-day)	KRW4.1b/ USD2.8m

ONE-YEAR PERFORMANCE

	1M	6M	12M
mPlus Corp (%)	9.9	99.6	70.7
Vs Kosdaq (%pts)	4.5	60.4	41.3

KEY CHANGES

(KRW)	New	Old	Diff
Recommend.	Not Rated		
Target price	n/a		
2025E EPS	n/a		
2026E EPS	n/a		

SAMSUNG vs THE STREET

No of estimates	n/a
Target price	n/a
Recommendation	n/a

※ Rating: 4 < → BUY, 3 = HOLD, 2 > → SELL

SUMMARY FINANCIAL DATA

	2021	2022	2023	2024
Revenue (KRWb)	76	117	340	129
Operating profit (KRWb)	(14)	(10)	24	10
Net Profit (KRWb)	(8)	(15)	20	11
EPS (adj) (KRW)	n/a	n/a	122,016	66,985
EPS (adj) growth (%)	nm	nm	nm	(45.1)
EBITDA margin (%)	(16.1)	(6.6)	8.3	10.2
ROE (%)	(14.6)	(28.1)	30.6	13.8
P/E (adj) (x)	n/a	n/a	n/a	n/a
P/B (x)	n/a	n/a	n/a	n/a
EV/EBITDA (x)	n/a	n/a	(0.3)	2.9
Dividend yield (%)	n/a	n/a	n/a	n/a

Source: Company data, Samsung Securities estimates

Viable medium- to small-sized equipment maker that should log notable earnings growth in 2025: We expect the company's 2025 sales to come in at KRW172b (up 40%) given its 1H sales of KRW82.8b, an order backlog of KRW226b (as of end-2Q), and likely 2025 new orders of KRW190b. Assuming an operating margin of 10% (vs 8% in 2024; rising y-y thanks to sales-mix improvements), we estimate its 2025 operating profit at KRW18b (vs KRW10.1b in 2024). Considering the effective corporate tax rate of 25%, its shares are trading at 9.3x P/E and 1.3x P/B. With cash holdings of KRW46.9b (as of end-2Q; equivalent to 40% of its market cap), we believe that its financial liquidity is stable.

Income statement

Year-end Dec 31	2020	2021	2022	2023	2024
Sales	**159**	**76**	**117**	**340**	**129**
Cost of goods sold	136	76	113	300	104
Gross profit	**23**	**1**	**4**	**40**	**25**
Gross margin (%)	14.4	0.8	3.4	11.8	19.3
SG&A expenses	13	15	14	16	15
Operating profit	**10**	**(14)**	**(10)**	**24**	**10**
Operating margin (%)	6.3	(18.3)	(8.5)	7.0	7.8
Non-operating Gains (Losses)	**(5)**	**2**	**(11)**	**(0)**	**3**
Financial Profit	3	5	8	9	12
Financial Costs	9	4	20	9	10
Gains (Losses) in Equity Method	0	0	0	0	0
Other	1	0	0	0	1
Pre-tax profit	**5**	**(12)**	**(21)**	**24**	**13**
Taxes	(1)	(4)	(6)	4	2
Effective tax rate (%)	(21.9)	33.0	27.4	15.5	13.0
Profit from continuing operations	6	(8)	(15)	20	11
Profit from discontinued operations	0	0	0	0	0
Net profit	**6**	**(8)**	**(15)**	**20**	**11**
Net margin (%)	3.7	(10.6)	(13.1)	5.9	8.5
Net profit (Controlling Interests)	6	(8)	(15)	20	11
Net profit (Non-controlling Interests)	0	0	0	0	0
EBITDA	12	(12)	(8)	28	13
EBITDA margin (%)	7.3	(16.1)	(6.6)	8.3	10.2
EPS (parent) (KRW)	35,681	n/a	n/a	122,016	66,985
EPS (consolidated) (KRW)	35,681	n/a	n/a	122,016	66,985
Adjusted EPS (KRW)*	35,681	n/a	n/a	122,016	66,985

Balance sheet

Year-end Dec 31	2020	2021	2022	2023	2024
Current assets	**101**	**137**	**269**	**256**	**228**
Cash & equivalents	3	5	12	75	44
Accounts receivable	10	15	28	21	17
Inventories	44	93	201	113	113
Other current assets	43	24	29	47	55
Fixed assets	**40**	**42**	**52**	**64**	**65**
Investment assets	0	1	2	0	2
Tangible assets	31	31	35	43	53
Intangible assets	1	1	1	1	1
Other long-term assets	8	9	15	20	9
Total assets	**141**	**178**	**321**	**320**	**293**
Current liabilities	**61**	**106**	**229**	**240**	**166**
Accounts payable	5	37	48	22	8
Short-term debt	4	23	41	22	39
Other current liabilities	52	46	141	195	120
Long-term liabilities	**22**	**20**	**36**	**7**	**42**
Bond & long-term debt	18	16	35	6	35
Other long-term liabilities	4	4	1	0	7
Total liabilities	**82**	**126**	**265**	**246**	**208**
Owners of parent equity	**59**	**52**	**56**	**74**	**85**
Capital stock	6	6	6	6	6
Capital surplus	40	42	30	30	32
Retained earnings	15	6	22	42	51
Other	(2)	(2)	(2)	(4)	(5)
Non-controlling interests equity	**0**	**0**	**0**	**0**	**0**
Total equity	**59**	**52**	**56**	**74**	**85**
Net debt	22	41	76	(8)	38

Cash flow statement

Year-end Dec 31	2020	2021	2022	2023	2024
Cash flow from operations	**7**	**(13)**	**(36)**	**111**	**(20)**
Net profit	6	(8)	(15)	20	11
Non-Cash Profit and Expense	19	11	21	33	15
Depreciation	1	1	2	4	3
Amortization	0	0	0	0	0
Others	18	9	19	29	12
Changes in A/L from Operating Activities	(18)	(15)	(41)	58	(44)
Cash flow from investments	**(5)**	**(3)**	**(11)**	**(21)**	**(23)**
Change in Tangible Assets	(4)	(1)	(2)	(11)	(13)
Change in Financial Assets	(0)	0	(1)	(0)	(0)
Other	(0)	(2)	(8)	(10)	(10)
Cash flow from financing	**(2)**	**18**	**55**	**(25)**	**11**
Change in debt	(11)	20	42	(19)	14
Change in equity	n/a	n/a	n/a	n/a	n/a
Dividends	0	(1)	0	0	(1)
Other	n/a	n/a	n/a	n/a	n/a
Change in cash	(1)	2	7	64	(32)
Cash at beginning of year	4	3	5	12	75
Cash at end of year	3	5	12	75	44
Gross cash flow	**25**	**3**	**6**	**53**	**26**
Free cash flow	**3**	**(14)**	**(38)**	**100**	**(33)**

Financial ratios

Year-end Dec 31	2020	2021	2022	2023	2024
Growth (%)					
Sales	51.9	(51.8)	52.5	191.6	(62.1)
Operating profit	266.9	nm	nm	nm	(57.7)
Net profit	191.4	nm	nm	nm	(45.1)
Adjusted EPS**	191.4	nm	nm	nm	(45.1)
Per share data (KRW)					
EPS (parent)	35,681	n/a	n/a	122,016	66,985
EPS (consolidated)	35,681	n/a	n/a	122,016	66,985
Adjusted EPS **	35,681	n/a	n/a	122,016	66,985
BPS	20,180	17,817	19,390	25,469	29,062
DPS (common)	n/a	n/a	n/a	n/a	n/a
Valuations (x)					
P/E***	n/a	n/a	n/a	n/a	n/a
P/B***	n/a	n/a	n/a	n/a	n/a
EV/EBITDA	1.9	n/a	n/a	(0.3)	2.9
Ratios					
ROE (%)	11.7	(14.6)	(28.1)	30.6	13.8
ROA (%)	4.1	(5.1)	(6.1)	6.2	3.6
ROIC (%)	15.5	(11.1)	(6.8)	22.3	10.0
Payout ratio (%)	n/a	n/a	n/a	n/a	n/a
Dividend yield (Common, %)	n/a	n/a	n/a	n/a	n/a
Net debt to equity (%)	37.9	78.5	134.5	(11.0)	45.1
Interest coverage (x)	5.1	(11.6)	(2.9)	5.0	2.1

Note: *Excluding one-off items
**Fully diluted, excluding one-off items
***From companies subject to equity-method valuation

Source: Company data, Samsung Securities estimates

COMPANY UPDATE

2025. 11. 7

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Sangsin EDP (091580)

Maker of housing for prismatic, cylindrical batteries

- Sangsin EDP is a prismatic and cylindrical battery parts maker. It now sees positive demand-side changes in the competitive landscape.
- Given global automakers' preference for 46-pi cylindrical and prismatic form factors, the company should see a rise in shipments of related parts.
- Sangsin EDP is expected to enjoy: 1) product-mix improvement, led by rising demand for ESS; and 2) client-base diversification, as cell makers pursue a multi-vendor strategy.

WHAT'S THE STORY?

Rechargeable battery housing: Sangsin EDP makes rechargeable battery parts. The company listed on the Kosdaq in 2007. In 1H, large cans and cylindrical cans accounted for a respective 58% and 29% of its total sales. Its key clients include companies making prismatic and cylindrical batteries (*eg*, Samsung SDI). The largest shareholder and related parties hold a combined 28.7% stake (of which the largest shareholder holds 11.4%pts).

(Continued on the next page)

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AT A GLANCE

Not rated

Target price	n/a
Current price	**KRW12,330**
Market Cap	KRW164.34b/USD113.52m
Shares (float)	13,328,219 (71.3%)
52-week high/low	KRW14,870/KRW6,540
Avg daily trading value (60-day)	KRW2.4b/ USD1.7m

ONE-YEAR PERFORMANCE

	1M	6M	12M
Sangsin EDP (%)	7.7	64.2	26.5
Vs Kosdaq (%pts)	2.4	32.0	4.7

KEY CHANGES

(KRW)	New	Old	Diff
Recommend.	Not rated		
Target price	n/a		
2025E EPS	n/a		
2026E EPS	n/a		

SAMSUNG vs THE STREET

No of estimates	n/a
Target price	n/a
Recommendation	n/a

※ Rating: 4 < → BUY, 3 = HOLD, 2 > → SELL

SUMMARY FINANCIAL DATA

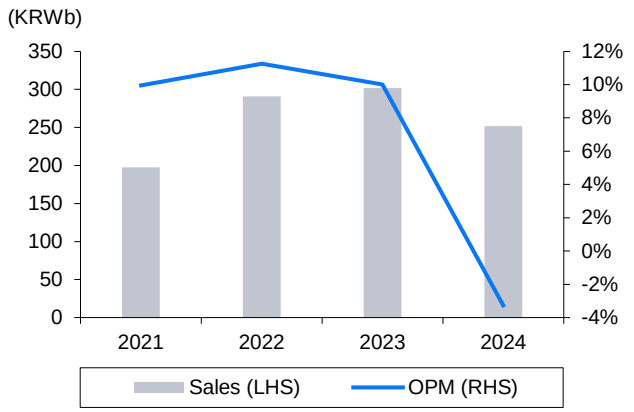
(KRWb)	2021	2022	2023	2024
Revenue	198	291	302	252
Operating profit	20	33	30	(8)
Net profit	18	24	26	1
EPS (adj) (KRW)	1,551	2,169	2,322	57
EPS (adj) growth (%)	102.8	39.8	7.0	(97.6)
EBITDA margin (%)	15.1	15.3	14.5	3.4
ROE (%)	20.2	21.9	19.5	0.4
P/E (adj) (x)	n/a	n/a	n/a	n/a
P/B (x)	n/a	n/a	n/a	n/a
EV/EBITDA (x)	1.1	0.7	0.4	7.4
Dividend yield (%)	n/a	n/a	n/a	n/a

Source: Company data, Samsung Securities estimates

Four demand-side positives in battery housing market: First, we foresee a rise in North American demand for ESS, where the prismatic form factor is the mainstay. As ESS batteries have more capacity per cell than EV batteries, a rise in demand for ESS should boost parts makers' sales via ASP hikes. Second, global automakers such as GM and VW, which long depended on pouch batteries, have begun adopting prismatic batteries, which bodes well for battery housing makers. Third, demand for 46-pi cylindrical batteries is on the rise. With Korean cell makers expanding capacity, related players should enjoy increases in shipments and ASP. Fourth, parts makers stand to gain from the industry's client base diversification. Housing parts need to be manufactured near a cell maker's production line, and cell makers need to take a multi-vendor strategy to meet growing demand.

To benefit from earnings growth and prismatic form factor expansion in 4Q: Sangsin has suffered poor profitability due to faltering utilization at key clients. From 4Q, however, margins should improve, led by rising ESS orders at the company's clients. Although its 2025 sales are likely to come in flat y-y (vs KRW251.8b in 2024), its operating profit should improve notably (following an operating loss of KRW8.2b in 2024). The company appears well-positioned for earnings growth given that: 1) one of its client—a manufacturer of prismatic batteries—is building a 12 GWh LFP line in North America, which should run at full tilt from 2026; 2) the same client's JV with GM has 27 GWh of capacity scheduled to come online in 2027; and 3) another client in North America has unveiled plans to manufacture prismatic LFP batteries.

Sangsin EDP: Sales and operating profit (2021-2024)



Source: DART

Key suppliers of battery cans

Cell manufacturer	Cylindrical can suppliers	Prismatic can suppliers
LG Energy Solution	LT Precision (Korea), Dongwon Systems (Korea), Kedali (China)	None
Samsung SDI	Sangsin EDP (Korea), Dongwon Systems (Korea)	Sangsin EDP (Korea), Shinheung SEC (Korea), Kedali (China)

Source: Press release, Samsung Securities estimates

Income statement

Year-end Dec 31 (KRWb)	2020	2021	2022	2023	2024
Sales	**152**	**198**	**291**	**302**	**252**
Cost of goods sold	119	160	235	245	226
Gross profit	**33**	**38**	**56**	**57**	**26**
Gross margin (%)	21.8	19.2	19.3	18.9	10.2
SG&A expenses	14	18	23	27	34
Operating profit	**19**	**20**	**33**	**30**	**(8)**
Operating margin (%)	12.8	9.9	11.3	10.0	(3.3)
Non-operating gains (losses)	**(7)**	**3**	**(3)**	**(1)**	**5**
Financial profit	1	2	0	1	2
Financial costs	7	2	2	4	5
Equity-method gains (losses)	0	0	0	0	0
Other	(2)	4	(1)	3	8
Pre-tax profit	**12**	**23**	**30**	**30**	**(3)**
Taxes	2	5	6	3	(4)
Effective tax rate (%)	20.7	23.7	18.7	11.7	119.9
Profit from continuing operations	10	18	24	26	1
Profit from discontinued operations	(1)	0	0	0	0
Net profit	**9**	**18**	**24**	**26**	**1**
Net margin (%)	5.7	8.9	8.4	8.7	0.3
Net profit (controlling interests)	9	18	24	26	1
Net profit (non-controlling interests)	0	0	0	0	0
EBITDA	29	30	45	44	9
EBITDA margin (%)	19.4	15.1	15.3	14.5	3.4
EPS (parent-based) (KRW)	765	1,551	2,169	2,322	57
EPS (consolidated) (KRW)	765	1,551	2,169	2,322	57
Adjusted EPS (KRW)*	765	1,551	2,169	2,322	57

Balance sheet

Year-end Dec 31 (KRWb)	2020	2021	2022	2023	2024
Current assets	**79**	**94**	**127**	**153**	**123**
Cash & equivalents	36	30	41	82	62
Accounts receivable	25	33	46	39	19
Inventories	12	24	28	25	31
Other current assets	6	6	13	7	11
Fixed assets	**82**	**107**	**117**	**137**	**195**
Investment assets	2	2	1	3	2
Tangible assets	77	102	112	130	184
Intangible assets	1	1	2	1	1
Other long-term assets	2	3	3	3	8
Total assets	**161**	**201**	**244**	**291**	**318**
Current liabilities	**79**	**86**	**108**	**130**	**136**
Accounts payable	12	20	29	26	25
Short-term debt	41	48	54	84	97
Other current liabilities	25	17	25	20	14
Long-term liabilities	**10**	**14**	**14**	**14**	**28**
Bonds & long-term debt	8	11	13	11	26
Other long-term liabilities	2	2	1	3	2
Total liabilities	**89**	**99**	**122**	**144**	**164**
Owners of parent equity	**72**	**101**	**122**	**147**	**154**
Capital stock	7	7	7	7	7
Capital surplus	30	38	38	38	38
Retained earnings	40	56	79	103	99
Other	(4)	1	(2)	(2)	9
Non-controlling interests' equity	**0**	**0**	**0**	**0**	**0**
Total equity	**72**	**101**	**122**	**147**	**154**
Net debt	28	32	32	18	63

Cash flow statement

Year-end Dec 31 (KRWb)	2020	2021	2022	2023	2024
Cash flow from operations	**23**	**19**	**37**	**47**	**(2)**
Net profit	9	18	24	26	1
Non-cash profit and expenses	25	17	27	22	12
Depreciation	10	10	12	13	17
Amortization	0	0	0	0	0
Other	15	7	15	8	(5)
Changes in A/L from operating activities	(7)	(11)	(8)	8	(8)
Cash flow from investments	**(1)**	**(32)**	**(30)**	**(27)**	**(40)**
Change in tangible assets	(11)	(33)	(29)	(31)	(43)
Change in financial assets	1	(0)	(0)	(0)	(2)
Other	9	1	(1)	5	5
Cash flow from financing	**(9)**	**6**	**9**	**22**	**18**
Change in debt	(6)	(3)	12	27	27
Change in equity	n/a	n/a	n/a	n/a	n/a
Dividends	(1)	(1)	(1)	(2)	(2)
Other	n/a	n/a	n/a	n/a	n/a
Change in cash	10	(6)	11	42	(20)
Cash at beginning of year	26	36	30	41	82
Cash at end of year	36	30	41	82	62
Gross cash flow	**33**	**35**	**51**	**48**	**13**
Free cash flow	**10**	**(16)**	**7**	**15**	**(46)**

Financial ratios

Year-end Dec 31	2020	2021	2022	2023	2024
Growth (%)					
Sales	16.4	30.2	47.2	3.7	(16.5)
Operating profit	113.0	0.9	66.7	(7.8)	nm
Net profit	79.4	102.8	39.8	7.0	(97.6)
Adjusted EPS**	79.4	102.8	39.8	7.0	(97.6)
Per-share data (KRW)					
EPS (parent-based)	765	1,551	2,169	2,322	57
EPS (consolidated)	765	1,551	2,169	2,322	57
Adjusted EPS**	765	1,551	2,169	2,322	57
BVPS	6,227	8,724	10,529	12,648	13,261
DPS (common)	n/a	n/a	n/a	n/a	n/a
Valuations (x)					
P/E***	n/a	n/a	n/a	n/a	n/a
P/B***	n/a	n/a	n/a	n/a	n/a
EV/EBITDA	1.0	1.1	0.7	0.4	7.4
Ratios (%)					
ROE	12.8	20.2	21.9	19.5	0.4
ROA	5.6	9.7	11.0	9.8	0.2
ROIC	15.3	13.1	18.8	17.0	0.9
Payout ratio	n/a	n/a	n/a	n/a	n/a
Dividend yield (common)	n/a	n/a	n/a	n/a	n/a
Net debt to equity	39.3	31.1	26.1	12.4	41.1
Interest coverage (x)	10.1	14.2	15.5	8.0	(1.6)

Note: *Excluding one-off items;
**Fully diluted, excluding one-off items;
***From companies subject to equity-method valuation

Source: Company data, Samsung Securities estimates

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- As of 11/14 2025, Samsung Securities shared group affiliation with Samsung SDI.
- As of 11/14 2025, Samsung Securities' holdings of shares and debt instruments convertible into shares of SANGSIN ENERGY DISPLAY PRECISION CO.,LTD would, if such debt instruments were converted, exceed 1% of the outstanding shares.
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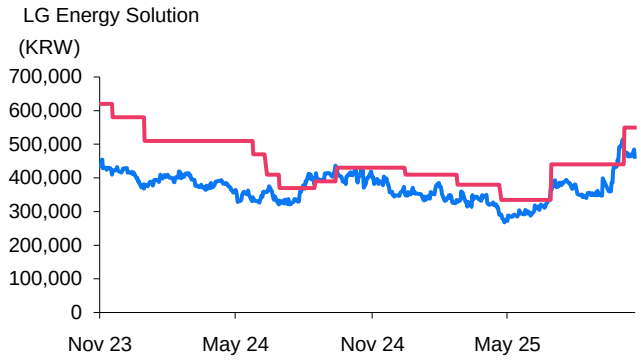
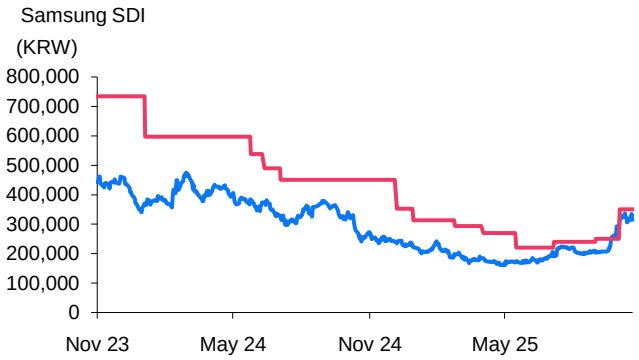
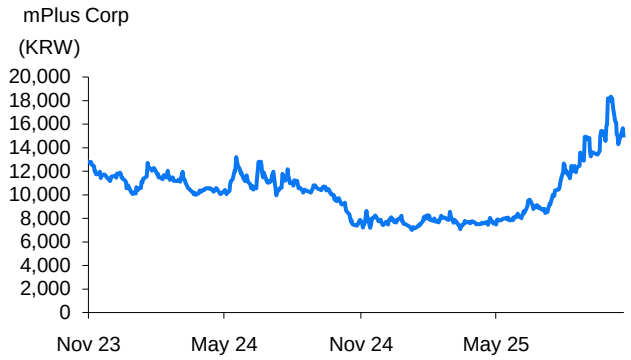
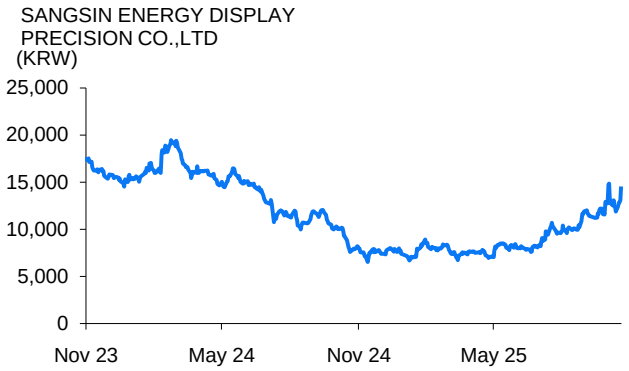
Target price changes in past two years









Rating changes over past two years (adjusted share prices)

LG Energy Solution												
Date	2023/10/25	12/14	2024/1/26	6/20	7/8	7/25	9/11	10/10	2025/1/10	3/21	5/19	7/25
Recommendation	BUY	BUY	BUY	BUY	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	BUY
Target price (KRW)	620000	580000	510000	470000	410000	370000	390000	430000	410000	380000	335000	440000
Gap* (average)	-30.96	-29.64	-25.18	-27.55	-15.22	-3.89	5.00	-9.14	-14.77	-12.67	-10.19	-12.74
(max or min)**	-20.40	-25.43	-17.75	-23.62	-8.54	11.35	0.38	-0.70	-5.98	-5.26	9.85	16.82
Date	10/31	11/14										
Recommendation	HOLD	BUY										
Target price (KRW)	550000	440000										
Gap* (average)	-14.25											
(max or min)**	-11.91											

Samsung SDI												
Date	2023/10/26	2024/1/30	6/20	7/8	7/30	2025/1/2	1/24	3/21	4/28	6/11	8/1	9/26
Recommendation	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY	BUY
Target price (KRW)	734275	597210	538468	489517	450355	352452	313291	293710	270000	220000	240000	250000
Gap* (average)	-41.99	-32.48	-32.88	-28.53	-31.99	-33.69	-32.91	-37.37	-37.02	-18.49	-12.36	-5.25
(max or min)**	-32.53	-20.33	-29.27	-22.10	-15.76	-30.69	-22.81	-30.50	-32.00	-6.36	-6.25	17.20
Date	10/28											
Recommendation	BUY											
Target price (KRW)	350000											
Gap* (average)												
(max or min)**												

mPlus Corp	
Date	2025/11/14
Recommendation	Not Rated
Target price (KRW)	n/a
Gap* (average)	
(max or min)**	

SANGSIN ENERGY DISPLAY PRECISION CO.,LTD	
Date	2025/11/14
Recommendation	Not Rated
Target price (KRW)	n/a
Gap* (average)	
(max or min)**	

Note: * [(average, maximum, or minimum share price over duration of target price minus target price) / target price] x 100%
** Maximum/minimum share price if new target is higher/lower than market close on the business day prior to target price change

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Company

BUY	Expected to increase in value by 15% or more within 12 months and is highly attractive within sector
HOLD	Expected to increase/decrease in value by less than 15% within 12 months
SELL	Expected to decrease in value by 15% or more within 12 months

Industry

OVERWEIGHT	Expected to outperform market by 5% or more within 12 months
NEUTRAL	Expected to outperform/underperform market by less than 5% within 12 months
UNDERWEIGHT	Expected to underperform market by 5% or more within 12 months

* Note: Effective Jul 27, 2023, BUY, HOLD, and SELL criteria are based on expectations of share-price moves of 15% or more within 12 months

Percentage of ratings in 12 months prior to 2025.09.30

BUY(83.5%)·HOLD(16.5%)·SELL(0%)

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