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Global Energy Storage

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Battery Weekly 19 October

North America

GM Taps South Korean Suppliers for LMR Battery Production - The Elec. GM is tapping South Korean suppliers for components, materials and equipment for its next-generation prismatic LMR batteries, which are being jointly developed with LG Energy Solution. GM targets ~33% higher energy density than LFP at similar costs and plans to begin mass production at the Ultium Cells Spring Hill, Tennessee plant in 2028, initially targeting mainstream electric pickups with more than 400 miles of range.

LG Energy Solution Reworks ESS Equipment Supplier Base - The Elec. LG Energy Solution is restructuring its ESS equipment supplier base after key supplier Daejin Machinery defaulted, shifting more orders to suppliers including SYSTEM R&D and HyVISION SYSTEM while seeking additional partners. The changes support LGES's expanding North American ESS manufacturing footprint, including module production in Ohio.

Mercedes-Backed Factorial Energy Partners With Korean Battery Equipment Suppliers - The Elec. US solid-state battery developer Factorial Energy is expanding its pilot production line in Cheonan, South Korea, selecting PNT for dry-electrode equipment and Philenergy for cell-assembly systems. The line will validate manufacturing processes and yields ahead of Factorial's planned future mass-production line in Boston, while supporting commercialization of its lithium-metal solid-state battery technology.

Trafigura secures access to lithium from EnergyX - electrive. Trafigura has signed a 10-year agreement for 100,000 tonnes of battery-grade lithium products from EnergyX's projects in Texas and Chile, in a deal valued at more than US$2 billion at current prices. A significant share is intended for US battery production, supporting more localized lithium supply for the American EV and ESS industries.

Rivian Is Taking Its Battery Recycling Game To The Next Level - InsideEVs. Rivian is expanding its partnership with Redwood Materials to recycle battery manufacturing scrap and end-of-life EV batteries, while suitable used packs will be repurposed for stationary energy storage. Redwood is already deploying 10 MWh of second-life storage at Rivian's Normal, Illinois plant and says its recycling process can recover more than 95% of critical minerals including lithium, nickel, cobalt and copper.

Asia

Chinese Lithium Slumps 10% After EU Deal Slashes Hybrid Exports - BNEF. Chinese lithium futures fell 10% to RMB104,740/tonne after an EU-China agreement to restrict Chinese hybrid vehicle exports weakened battery-material demand expectations. The decline adds to pressure from softer expected EV and ESS growth, with Goldman Sachs expecting the lithium market to move toward balance in 4Q26 and into surplus over the following two years.

Changan and CATL to expand battery capacity to 75 GWh - electrive. Changan and CATL plan to expand their joint battery manufacturing capacity from 50 GWh to 75 GWh, with an additional 25 GWh facility expected to begin operations in 2027. The partnership will also deepen cooperation on solid-state and sodium-ion batteries, supporting Changan's Avatr, Deepal and Nevo EV brands.

BMW launches sixth-gen battery production in Shenyang - elective. BMW has started series production of its Gen6 high-voltage batteries in Shenyang, its third Gen6 battery facility globally, supporting locally produced Neue Klasse EVs in China. The new large cylindrical cells

See the Disclosure Appendix of this report for required disclosures, analyst certifications and other important information. Alternatively, visit our Global Research Disclosure Website.

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deliver >20% higher energy density and up to 30% improvements in charging speed and range, while adopting a cell-to-pack architecture.

GBT begins series production of solid-state battery cells - electrive. China's Greater Bay Technology (GBT) has started series production of all-solid-state battery cells in Guangzhou on a converted lithium-ion line with initial capacity of 1 GWh, expandable to 4 GWh. Its technology targets 260–480 Wh/kg depending on cell generation and uses an organic-inorganic composite electrolyte designed to enable solid-state production on largely conventional lithium-ion equipment.

Seres commits Aito to CATL batteries long-term - electrive. Seres has extended its long-term battery partnership with CATL, keeping CATL batteries across the entire Aito model range. CATL will add another 10–12 GWh of battery production capacity at the Seres Super Factory in Chongqing, taking total capacity to more than 20 GWh, while cooperation will expand into charging, battery services and overseas markets.

Standard Energy Urges Lawmakers to Expand ESS Demonstration Projects - The Elec. South Korea's Standard Energy is calling for expanded demonstration projects and manufacturing support for non-lithium ESS technologies, particularly its vanadium-ion batteries. The company argues that increased testing opportunities and production support could accelerate commercialization of alternative storage technologies in a Korean ESS market currently dominated by lithium-ion batteries.

Eco&Dream Raises 35 Billion Won for Battery Materials - The Elec. Eco&Dream has raised KRW35 billion to fund raw-material purchases as it targets record precursor shipments in 2027. The company is also expanding into next-generation materials for LFP, LMR and all-solid-state batteries, including sulfide solid electrolytes and lithium sulfide.

Nio completes nearly 1.2 million battery swaps over 7-day holiday, sets daily record twice - CnEVPost. Nio completed 1.19 million battery swaps during China's seven-day National Day holiday, with average daily swaps up 22% YoY and a new daily record of 183,664 swaps. Nio currently operates 4,168 swap stations, including 1,073 highway locations, highlighting increasing utilization of its battery-swapping network.

Europe

Europe's $40 Billion Battery Bet Set for Big Winter Payout - BNEF. Europe's battery storage fleet is positioned for a potentially strong winter as increasing gas prices and variable renewable generation widen intraday electricity-price spreads. Europe has invested around US $40 billion in batteries since the 2022 energy crisis, while UK battery revenues are increasingly shifting toward wholesale trading, which accounted for roughly 73% of sector revenue in the 12 months through August.

Fraunhofer stabilises aluminium anodes for lithium-ion batteries - electrive. Fraunhofer IPA and the University of Stuttgart have developed a new aluminium-anode architecture designed to control volume expansion during cycling. The technology eliminates graphite, silicon and the conventional copper current collector, potentially lowering material and manufacturing costs while remaining compatible with existing battery production infrastructure.

ProLogium and Rimac target 2028 for solid-state battery vehicle tests - electrive. ProLogium and Rimac Technology are developing a cell-to-pack architecture for solid-state pouch cells, targeting a functional battery segment in 2027, a full pack in 2H27 and on-road vehicle testing in 2H28. ProLogium will supply cell technology while Rimac handles battery-system integration, thermal management and pack architecture.

ACC announces five million battery cells 'Made in France' - electrive. Automotive Cells Company (ACC) has produced its five-millionth battery cell at its Douvrin factory in France, enough cumulative output for nearly 40,000 vehicles. A second 12.9 GWh production block is planned to start in 2027, taking total capacity to nearly 26 GWh, with the longer-term site target at around 40 GWh.

Cell bypass aims to extend the usable life of EV batteries - electrive. Researchers at Chalmers University of Technology have studied reconfigurable battery packs capable of bypassing weaker individual cells, potentially extending EV battery life by more than 20% under optimal conditions. The approach could also improve residual values and second-life usability, although it remains at the research and prototype stage. [electrive.com]

Peugeot Revives The RCZ As A Sexy Solid-State Sports Car - InsideEVs. Peugeot has unveiled the RCZ Vision, an electric sports-car concept featuring a Factorial-developed solid-state battery and 1,000V architecture. Peugeot claims up to 600 km of range and 10–80% charging in 10 minutes, although the RCZ Vision remains a concept without confirmed series-production plans.

OTHERS

'Major' OEM to test Gelion's NES cathode platform - elective British-Australian battery developer Gelion has signed an agreement with an unnamed top-15 global automaker to evaluate its Nano Encapsulated Sulfur (NES) cathode technology in multiple configurations, including

liquid and solid electrolytes and lithium-metal and graphite anodes. The technology aims to reduce reliance on critical raw materials and potentially integrate with existing battery production lines, although the program remains at the evaluation stage.

EXHIBIT 1: **Key commodities price performance**

	Price 16-Oct	Ccy	Mkt cap $bn	P/E 26E	EV /EBITDA 26E	%1D	%1W	%1M	%1Y	1Y px chart
Metal prices (US$/tonne)										
LiCO (spot)	15,922					-2.7%	-15%	-21%	56%	
LiOH (spot)	14,502					-2.5%	-16%	-22%	40%	
LiCO (contract)	18,630					0.0%	-1%	3%	96%	
LiOH (contract)	16,950					0.0%	-8%	-8%	87%	
Cobalt (spot)	36,380					-6.5%	-6%	-10%	-14%	
Nickel (spot)	15,221					-1.9%	-3%	-5%	0%	
Component prices										
Cathode NMC811						-0.9%	-7%	-11%	5%	
Cathode LFP						-1.1%	-10%	-15%	25%	
Precursor NMC811						-0.8%	-2%	-5%	-10%	
Precursor LFP						0.0%	1%	2%	55%	
Artificial Graphite						0.0%	0%	0%	6%	
Natural Graphite						0.0%	0%	0%	0%	
Electrolyte NMC						0.0%	0%	2%	35%	
Electrolyte LFP						0.0%	0%	2%	50%	
Separator						0.0%	0%	0%	28%	
Spot battery cell cost (US$/kWh)										
LFP	57					-0.2%	-2%	-3%	9%	
NMC532	76					-0.5%	-3%	-6%	3%	
NMC622	72					-0.5%	-4%	-6%	0%	
NMC811	76					-0.4%	-3%	-6%	4%	
Spot battery pack cost (US$/kWh)										
LFP	70					-0.2%	-1%	-3%	-9%	
NMC532	107					-0.4%	-2%	-5%	2%	
NMC622	105					-0.4%	-2%	-5%	0%	
NMC811	108					-0.3%	-2%	-4%	3%	

Source: Bloomberg, Baiinfo, Bernstein analysis and estimates (cell and pack cost)

EXHIBIT 2: **Key companies price performance and valuation**

	Price 16-Oct	Ccy	Mkt cap $bn	P/E 26E	EV /EBITDA 26E	%1D	%1W	%1M	%1Y	1Y px chart
Cell makers										
LGES	403,000	KRW	70.8	n.a.	16.8x	0.1%	0%	10%	-3%	
Samsung SDI	530,000	KRW	32.1	71.9x	15.9x	-1.9%	-7%	-3%	122%	
CATL	275.2	CNY	193.4	13.3x	9.2x	-1.2%	-8%	-13%	-25%	
CALB	15.4	HKD	3.5	8.8x	2.1x	0.6%	-4%	-6%	-52%	
EVE Energy	46.8	CNY	15.2	13.9x	8.8x	-0.4%	-9%	-3%	-44%	
Gotion	27.7	CNY	7.5	25.3x	6.1x	-1.8%	-9%	9%	-34%	
Sunwoda	18.2	CNY	5.0	16.8x	5.4x	-1.4%	-12%	2%	-41%	
Farasis	9.0	CNY	1.6	n.a.	n.a.	-1.0%	-8%	1%	-49%	
Lithium Miners/Refiners										
Albemarle	98.2	USD	11.6	8.6x	4.2x	0.2%	-3%	-13%	3%	
SQM	60.5	USD	17.1	8.3x	4.0x	-1.9%	-5%	-13%	36%	
Pilbara Minerals	3.0	AUD	6.7	16.4x	8.1x	0.3%	-15%	-30%	12%	
Ganfeng Lithium	23.8	HKD	10.8	5.6x	5.9x	-7.0%	-21%	-28%	-48%	
Tianqi Lithium	36.3	CNY	8.7	8.8x	3.2x	-1.5%	-12%	-14%	-24%	
Cathode										
LG Chem	254,000	KRW	13.5	n.a.	2.4x	0.8%	-11%	-6%	-19%	
EcoPro BM	106,900	KRW	8.1	498.7x	53.5x	0.9%	-17%	0%	-24%	
L&F	93,700	KRW	2.9	n.a.	13.3x	-10.5%	-19%	-18%	-5%	
Umicore	20.6	EUR	5.7	11.1x	4.9x	-0.6%	-2%	-5%	21%	
Ningbo Ronbay	21.1	CNY	2.2	39.0x	10.2x	-1.9%	-14%	-11%	-25%	
Beijing Easpring	37.4	CNY	3.0	18.2x	11.7x	-2.1%	-11%	-2%	-44%	
GEM	5.9	CNY	4.5	15.8x	4.9x	-2.6%	-6%	-5%	-31%	
Huayou Cobalt	32.1	CNY	9.1	8.6x	3.5x	-0.2%	-10%	-9%	-50%	
Dynanonic	36.2	CNY	1.5	12.1x	4.8x	-2.8%	-21%	-12%	-13%	
Anode										
Posco	171,600	KRW	11.5	513.9x	47.1x	-0.8%	-11%	-9%	-10%	
Putailai	19.4	CNY	6.2	12.8x	7.9x	-1.4%	-13%	-13%	-28%	
Shanshan	10.6	CNY	3.6	n.a.	n.a.	-1.5%	-11%	-5%	-19%	
Separator										
Asahi Kasei	1,603	JPY	13.9	14.8x	5.4x	2.3%	1%	2%	35%	
SK IE	17,480	KRW	1.1	n.a.	-21.9x	-1.6%	-6%	6%	-44%	
Toray Industries	1,246	JPY	11.9	23.2x	7.2x	2.0%	1%	2%	35%	
W-Scope	142	JPY	0.1	n.a.	n.a.	1.4%	-4%	2%	-37%	
Yunnan Energy	46.0	CNY	6.7	19.5x	7.8x	-4.9%	-4%	-4%	8%	
Shenzhen Senior	14.0	CNY	2.9	28.5x	9.0x	-2.1%	-11%	-10%	4%	
Sinoma Science	42.5	CNY	10.7	23.6x	9.9x	0.0%	-18%	-21%	40%	
Electrolyte										
Enchem	19,690	KRW	0.3	n.a.	n.a.	-0.1%	-11%	-4%	-76%	
Tinci Minerals	28.6	CNY	8.7	9.2x	6.6x	-2.9%	-20%	-13%	-19%	
Capchem	55.1	CNY	6.2	18.7x	13.8x	-2.1%	-15%	-24%	20%	
Jiangsu Guotai	7.4	CNY	1.8	9.4x	n.a.	-0.4%	-4%	-4%	-15%	
Shanshan	10.6	CNY	3.6	n.a.	n.a.	-1.5%	-11%	-5%	-19%	
Equipment Maker										
Hirano	1,692	JPY	0.2	16.0x	n.a.	1.4%	-4%	-6%	4%	
CKD	5,030	JPY	2.2	27.0x	14.1x	1.4%	-14%	1%	53%	
Wuxi Lead	31.0	CNY	7.5	21.1x	16.5x	-4.3%	-16%	-2%	-44%	
Shenzhen Yinghe	18.9	CNY	1.8	18.3x	11.0x	-4.4%	-17%	-10%	-39%	
Zhejiang HangKe	17.3	CNY	1.6	19.6x	16.1x	0.6%	-16%	-15%	-47%	
Guangdong Lyric	43.0	CNY	1.1	46.5x	19.0x	4.0%	2%	29%	-29%	
Shenzhen United	17.0	CNY	0.9	17.3x	10.6x	0.4%	-12%	-17%	-27%	

Source: Bloomberg (all estimates), Bernstein analysis

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Company Models

CATL | LG Energy Solution | Samsung SDI

LG Chem | EcoPro BM | Posco Future M

Tianqi Lithium

Sungrow

Industry Models

Model: ESS tracker

Model: Monthly EV Tracker

Model: Battery Gigafactory Database

Industry model: Global EV TAM

Industry model: Global ESS TAM

Industry model: Battery TAM

Industry model: Battery supply and demand

Blackbook

Battery Utopia

Battery Tech Roadmap 2023: Faster, Higher, Stronger

Turn Up the Voltage... Investing Across the Battery Value Chain

Global Energy Storage: Resistance is Futile

Initiation Report

Global Energy Storage: Initiating Coverage. Lithium Positive (Tianqi) and Negative Cathodes (EcoPro BM, Posco Future M)

Sungrow: Solar Eclipse - Initiating at Market-Perform (PT RMB65)

Recent Research

Electric Revolution: Which battery makers are winning the battle for market share

Global Energy Storage: Data center battery intensity rises as sentiment cools

Bernstein Energy: Raising battery demand estimates on ESS and CATL target price to HKD770

Global Energy Storage: Sodium-ion batteries to disrupt the LFP market

Global ESS TRACKER - June 2026: ESS momentum continues in China

EV TRACKER - April 2026: New markets lead recovery in global EV sales

Global Energy Storage: Battery takeaways from Beijing Auto Show

EV TRACKER - 2025: Solid year of 20% growth, but expectations are for slower 2026

CATL: A winner in the age of energy disruption

Future of Tech: Can China achieve AI supremacy?

Global Energy Storage: Key battery trends from 3000 electric vehicles

The Long View: Batteries to only get better

Global Energy Storage: Are rising metal prices a risk to battery maker margins?

Global Energy Storage: Inside the gigafactory arms race

Tianqi Lithium: 1Q26 Best Idea - Energy storage powers lithium upside. Outperform

Global Energy Storage: China sodium-ion battery cost breakthrough

Global Energy Storage: 2026 Outlook. Power storage set to continue to drive the battery rally

Global Energy Storage: 2026 Lithium Outlook. How high can prices go?

Global Energy Storage: ESS demand drives battery demand into overdrive

Global Energy Storage: Korean battery makers rally on US ESS demand. Is it justified?

Sungrow: A blue sky on ESS optimism - Upgrading to Outperform

Global Energy Storage: Should investors chase the rally in battery stocks?

Global Energy Storage: Why is ESS demand booming?

Global Energy Storage: Increasing CATL price target to CNY420 on blockbuster year for ESS

China EV & Battery Tour Takeaways, 2025 Edition: Steady Evolution

Global Energy Storage: Can US ESS demand offset EV weakness for Korean battery makers

Global Energy Storage: ESS battery demand surpasses electric vehicles

Global Energy Storage: Has a Deepseek moment arrived for solid state batteries?

Global Energy Storage: Downgrading Samsung SDI and LG Chem to Market-Perform as US EV adoption stalls

Global Energy Storage: How CATL won Europe's battery battle

Global Energy Storage: Has the price of lithium bottomed?

CATL: 2Q25 Earnings Preview. So far so good.

Global Energy Storage: Key takeaways from our battery value chain conference

Global Energy Storage: Is LMR the LFP killer?

Global Energy Storage: Valuation of energy storage companies

Electric Revolution: Divergence - Which battery makers have the best EV exposure?

CATL: HK IPO - key investor questions answered

Global Energy Storage: Battery takeaways from Shanghai Auto Show

Global Energy Storage: Impact of US tariffs on energy storage market

Global Energy Storage: A tale of two battery markets

Global Energy Storage: What are the world's lithium leaders saying about the future of lithium?

Global Energy Storage: Key takeaways from the Korea Interbattery Conference 2025

Future of Tech: Lift off for the low-altitude economy

Global Energy Storage: How big is the datacenter opportunity for batteries?

Global Energy Storage: More downside risks ahead for Korean cathode makers

CATL: Does CATL deserve a premium or discount for HK IPO?

CATL: Initial perspectives on HK IPO Plans

Global Energy Storage: Energy storage demand continues to surge on renewables and data centers

Global Energy Storage: Gigafactory expansion still strong but investment slowing

Global Energy Storage: Bigger and better batteries enables the rise of the 700km electric vehicle

Global Energy Storage: 2025 Lithium Outlook. Rising from rock bottom

Global Energy Storage: Outlook 2025. New markets to drive battery growth

BERNSTEIN TICKER TABLE

			16 Oct 2026		TTM	Reported EPS				Reported P/E (x)		
			Closing	Price	Rel.							
Ticker	Rating	Cur	Price	Target	Perf.	Cur	2025A	2026E	2027E	2025A	2026E	2027E
300750.CH (CATL)	O	CNY	277.00	770.00	(39.2)%	CNY	16.14	21.10	26.28	17.2	13.1	10.5
3750.HK (CATL)	O	HKD	441.00	740.00	(32.1)%	CNY	16.14	21.10	26.28	23.3	17.8	14.3
051910.KS (LG Chem)	M	KRW	252,000	312,000	(33.8)%	KRW	(13,258.70)	2,693.22	28,743	(19.0)	93.6	8.8
373220.KS (LGES)	M	KRW	402,500	351,000	(18.6)%	KRW	(4,580.94)	(2,364.33)	10,225	(87.9)	(170.2)	39.4
006400.KS (SDI)	M	KRW	540,000	520,000	107.1%	KRW	(9,933.80)	1,751.66	18,577	(54.4)	308.3	29.1
247540.KS (EcoPro BM)	U	KRW	105,900	140,000	(39.2)%	KRW	403.00	854.00	1,963.00	262.8	124.0	53.9
300274.CH (Sungrow)	O	RMB	76.86	151.00	(68.0)%	RMB	6.55	6.93	7.95	11.7	11.1	9.7
002466.CH (Tianqi Lithium)	O	CNY	36.44	80.00	(38.4)%	CNY	0.28	3.90	7.75	129.1	9.3	4.7
9696.HK (Tianqi Lithium)	O	HKD	23.86	65.00	(61.4)%	CNY	0.28	3.90	7.75	72.0	5.2	2.6
ASIAX			1,831.65									

O - Outperform, M - Market-Perform, U - Underperform, NR - Not Rated, CS - Coverage Suspended

Source: Bloomberg, Bernstein estimates and analysis.

I. REQUIRED DISCLOSURES

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Bernstein brand

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The Bernstein brand has three categories of ratings:

- Outperform: Stock will outpace the market index by more than 15 pp
- Market-Perform: Stock will perform in line with the market index to within +/-15 pp
- Underperform: Stock will trail the performance of the market index by more than 15 pp

Coverage Suspended: Coverage of a company under the Bernstein research brand has been suspended. Ratings and price targets are suspended temporarily, are no longer current, and should therefore not be relied upon.

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Not Covered (NC) denotes companies that are not under coverage.

Bernstein brand stock ratings are based on a 12-month time horizon.

Autonomous brand – common stocks

The Autonomous brand rates common stocks as indicated below. As our benchmarks we use the Bloomberg Europe 600 Financials Price Return Index (E600BK) and Bloomberg Europe Dev Mkt Financials Large and Mid Cap Price Ret Index EUR (EDMFI) index for developed European banks and Payments, the Bloomberg Europe 600 Insurance Price Return Index (E600IN) for European insurers, the S&P 500 and S&P Financials for US banks and Payments coverage, S5LIFE for US Insurance, the S&P Insurance Select Industry (SPSIINS) for US Non-Life Insurers coverage, the Bloomberg Emerging Markets Financials Large, Mid and Small Cap Price Return Index (EMLSF) for emerging market banks and insurers and Payments, and the Bloomberg Japan Financials Large & Mid Cap Price Return Index (JPFILM) for Japanese Financials. Ratings are stated relative to the sector (not the market).

The Autonomous brand has three categories of common stock ratings:

- Outperform (OP): Stock will outpace the relevant index by more than 10 pp
- Neutral (N): Stock will perform in line with the market index to within +/-10 pp
- Underperform (UP): Stock will trail the performance of the relevant index by more than 10 pp

Coverage Suspended: Coverage of a company under the Autonomous research brand has been suspended. Ratings and price targets are suspended temporarily, are no longer current, and should therefore not be relied upon.

Not Rated: A rating assigned when the stock cannot be accurately valued, or the performance of the company accurately predicted, at the present time. The covering analyst may continue to publish research reports on the company to update investors on events and developments.

Those denoted as 'Feature' (e.g., Feature Outperform FOP, Feature Under Outperform FUP) are our core ideas.

Not Covered (NC) denotes companies that are not under coverage.

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The Autonomous brand has three categories of preferred stock ratings:

- Outperform (OP): The total return of the preferred instrument is expected to outperform preferred securities of other issuers operating in similar sectors or rating categories over the next six months.
- Neutral (N): The total return of the preferred instrument is expected to perform in line with preferred securities of other issuers operating in similar sectors or rating categories over the next six months.
- Underperform (UP): The total return of the preferred instrument is expected to underperform preferred securities of other issuers operating in similar sectors or rating categories over the next six months.

Autonomous preferred stock ratings are based on a 6-month time horizon.

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