Korea Battery Industry Association

K-Battery Ecosystem

& Global Strategic Partnership

May 14, 2026 | EU Delegation to the Republic of Korea

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01

Global Trade Environment

Global Trade Environment

FROM FREE TRADE TO STRATEGIC SUPPLY CHAINS

Energy Transition Accelerating

Global shift to electricity-based systems across transport, power, and industry at unprecedented speed.

Batteries Redefined as Strategic Assets

Beyond EV parts — batteries now power renewable energy storage, digital infrastructure, and national security.

De-sinicization as Shared Policy Goal

EU and U.S. both pursuing supply chains that exclude Chinese-controlled raw materials and components.

FTA & Tariff Leverage

Korea's bilateral and multi-lateral trade relations position K-Battery firms within preferred supply chain networks.

*"As the existing order based on free trade wavers, and **countries have begun to prioritize establishing domestic supply chains for key industries and securing strategic resources.** In particular, the **battery and EV sectors are at the center of this change."***

Europe: Battery Booster & Industrial Accelerator Act (IAA)

Battery Booster Strategy (Dec 2025)

An integrated EU industrial strategy to strengthen the battery value chain

Objective: Support the decarbonization transition and competitiveness of Europe's automotive industry, while securing energy independence through a complete domestic battery ecosystem.

Raw Materials Processing & Refining

Battery Cell Manufacturing

Recycling & Circular Economy

€1.8B

Total Investment

incl. €1.5B interest-free loans to made-in-Europe battery cell producers

Draft Industrial Accelerator Act (Mar 2026)

14.3%	20%	+5.7pp
EU Manufacturing Share of GDP	2035 Target Manufacturing Share	Gap to Bridge in ~10 Years

China and the U.S. are intensifying industrial protection and subsidy policies, placing growing competitive pressure on EU manufacturers — **particularly in low-carbon, EV, and battery sectors**. This **accelerating competition has prompted calls within the EU for urgent supply chain restructuring and stronger domestic industrial support**.

*A **new EU industrial policy legislation, IAA** designed to simultaneously **achieve climate goals and strengthen manufacturing competitiveness** — responding to **growing industrial rivalry from China and the United States**.*

EU Origin = Content produced within the EU. In public procurement, products from FTA partners, customs union members, and GPA signatory countries may qualify as equivalent to EU origin, subject to conditions. ☞ **Korea is a preferred battery partner for the EU.**

Europe: Battery Booster & Industrial Accelerator Act (IAA)

Korea as a Preferred Battery Partner for the EU

80%+

of EU battery cell production capacity is held by Korean cell manufacturers

LG Energy Solution · Samsung SDI · SK On

Source: European Council on Foreign Relations 2026

Korea–EU FTA

Products made in Korea can qualify as EU-equivalent origin under IAA public procurement provisions

GPA Membership

Korea's GPA signatory status provides a second qualification route under the EU origin equivalence framework

In-EU Manufacturing

All three Korean cell makers operate gigafactories within EU member states, strengthening supply chain localization

U.S. Policy: MAGA Strategy & Manufacturing Reconstruction

POLICY CHANGES UNDER OBBBA

EV Tax Credits Terminated

Consumer EV tax credits (up to $7,500 for new/used EVs) ended Sept 30, 2025. Biden's 50% EV sales target by 2030 revoked by executive order.

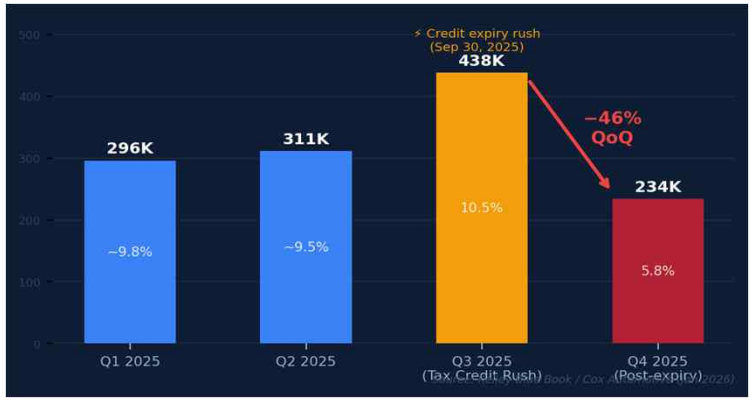
EV Charging Infrastructure Suspended

Federal funding allocation for EV charging infrastructure suspended. Clean energy mandates rolled back under OBBBA restructuring of IRA provisions.

FEOC Rules Tightened (45X / AMPC)

The OBBBA maintains the AMPC for batteries until Dec 31, 2032 and transferability to third parties, under the IRA, while strengthened regulations that disqualify entities from tax credit benefits depending on whether material assistance was provided by a PFE.

U.S. EV SALES 2025 — POLICY SHOCK



Source: Kelley Blue Book / Cox Automotive, *U.S. EV Sales Report Q4 2025*, January 2026

U.S. STRATEGIC BATTERY INTERESTS

- Defense & military energy efficiency upgrades
- Domestic manufacturing revival (invest-in-US pressure)
- De-Sinicization of battery supply chains (FEOC/45X)

While EV consumer subsidies ended, market electrification continues. US strategic priorities — defense efficiency, do mestic manufacturing, and de-Sinicized supply chains — keep battery industry investment elevated.

02

Global EV and Battery Market

Global EV Market – EV Sales

Global EV Market: Accelerating Toward the Mainstream

21M

Units Sold in 2025

↑ >20% YoY

1 in 4

New Cars Were EV

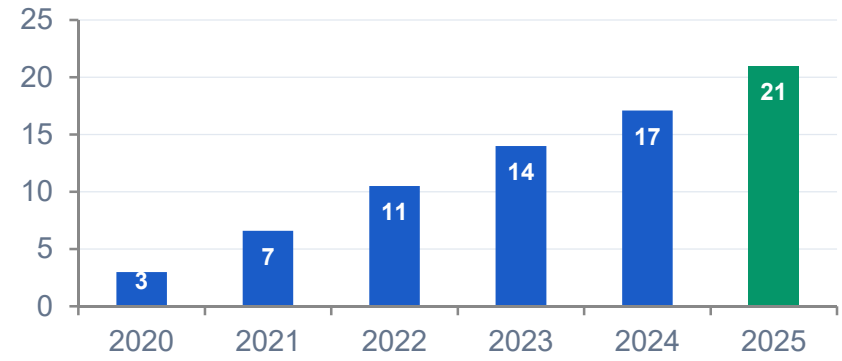
Global share 25%+

>50%

EV Share Projected by 2035

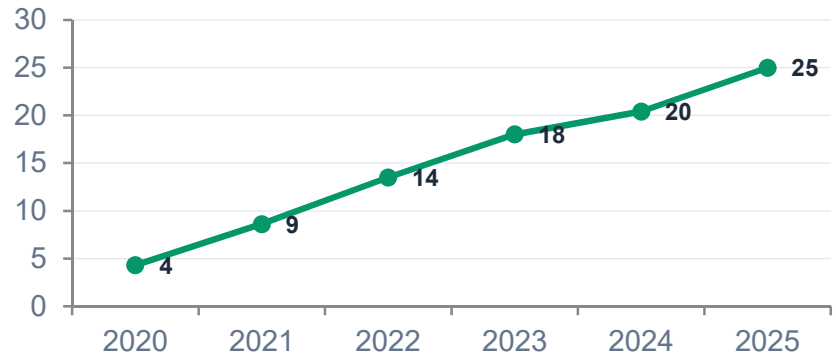
IEA WEO Stated Policies Scenario

Annual Global EV Sales (Million Units)



2025 = IEA Global Energy Review 2026 data

EV Share of New Car Sales (%)



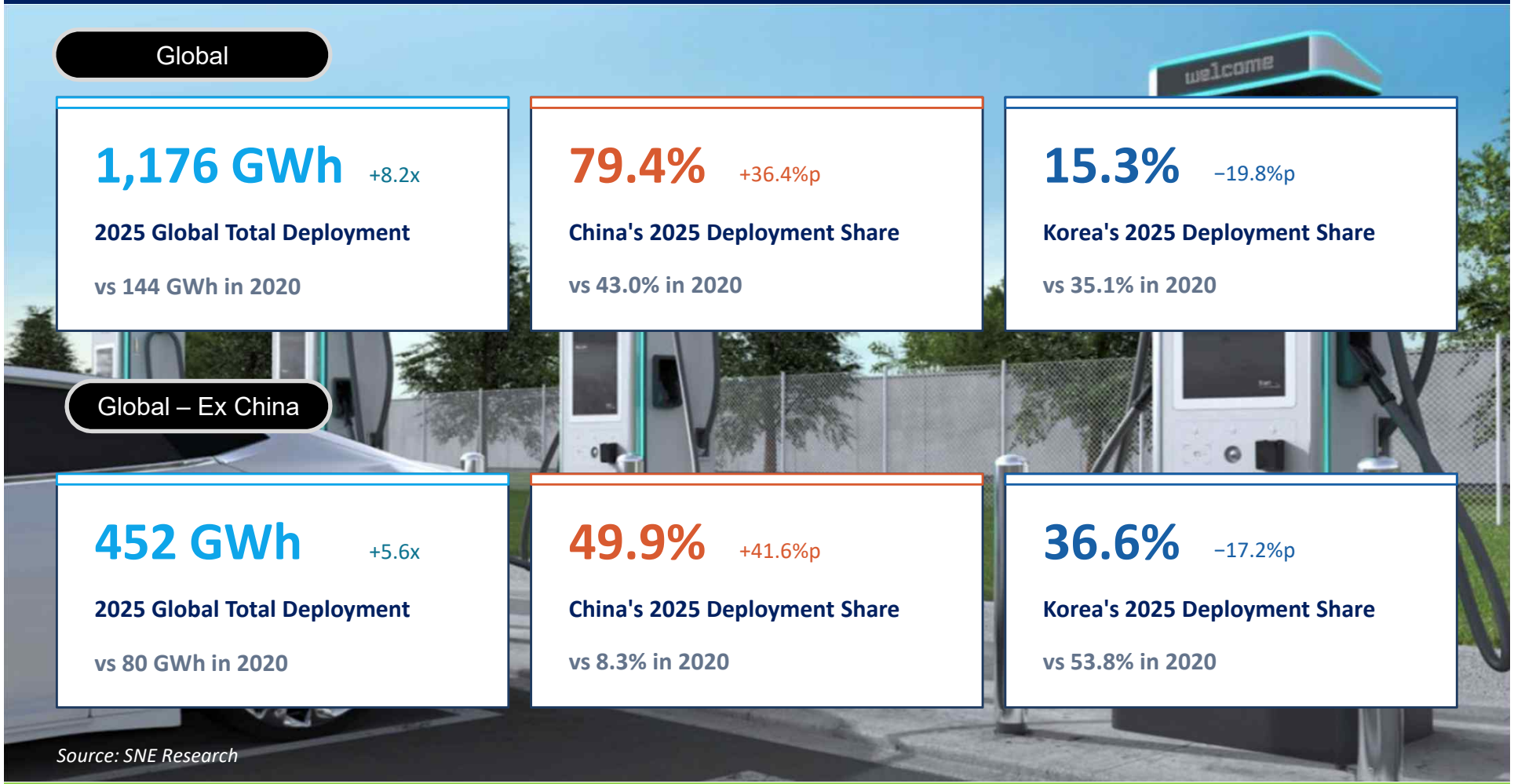
Source: IEA Global EV Outlook 2025; 2025 data from IEA Global Energy Review 2026

Europe: EV Subsidy Trends

Europe is moving in a direction contrasting with the U.S. — EU maintains its 2035 ICE(Internal Combustion Engine) ban and is expanding EV subsidies with a renewed commitment to electrification.

Country	2023	2024	2025	2026	Key Notes
Germany	€4,500	Abolished	Abolished	€1,500–6,000	Subsidy abolished Dec 2023; Income-linked subsidy reintroduced in 2026 (budget ~€3B to 2029)
UK	Abolished	Abolished	£1,500–3,750	£1,500–3,750	EV subsidy reintroduced Jul 2025 for vehicles under £37,000; budget increased to £1.3B, extended to 2030
France	€7,000	€4,000–7,000	€4,000	€5,700	Subsidy funding shifted from government budget to Energy Saving Certificate (CEE) contributions; up to €5,700 for low-income
Italy	€6,000	€11,000	€11,000	€11,000 (to Jun)	EcoBonus resumed Sep 2025 via PNRR funds (~€600M); up to €11,000 with scrappage; low-income households prioritised
Spain	€7,000	€13,750	€7,000	Plan Auto+	MOVES III to end by 2025; Plan Auto+ from 2026 with €400M budget; ~€7,000 level maintained; instant point-of-sale discount

Global EV Battery Markets



Global

1,176 GWh +8.2x

2025 Global Total Deployment

vs 144 GWh in 2020

79.4% +36.4%p

China's 2025 Deployment Share

vs 43.0% in 2020

15.3% −19.8%p

Korea's 2025 Deployment Share

vs 35.1% in 2020

Global – Ex China

452 GWh +5.6x

2025 Global Total Deployment

vs 80 GWh in 2020

49.9% +41.6%p

China's 2025 Deployment Share

vs 8.3% in 2020

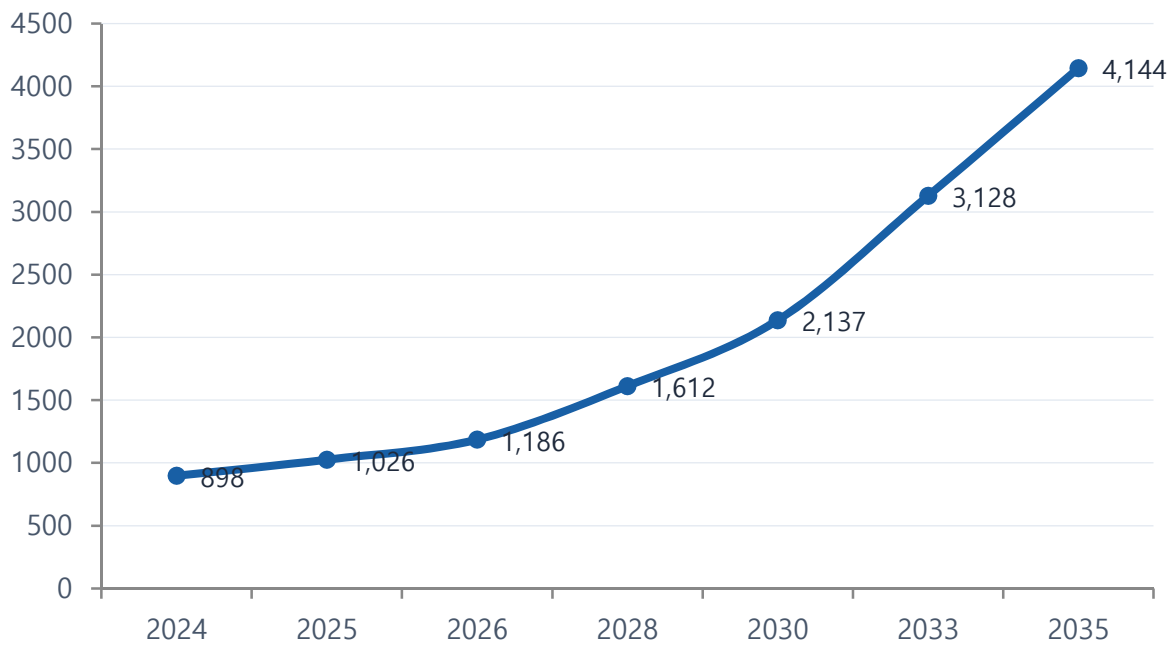
36.6% −17.2%p

Korea's 2025 Deployment Share

vs 53.8% in 2020

Source: SNE Research

Global EV Battery Demand Forecast — 2024 to 2035



2024
898 GWh
Base year

2026
1,186 GWh
+32% vs 2024

2030
2,137 GWh
~2.4x vs 2024

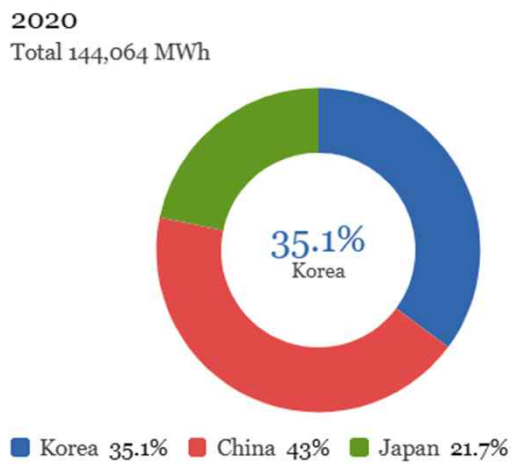
2035
4,144 GWh
~4.6x vs 2024

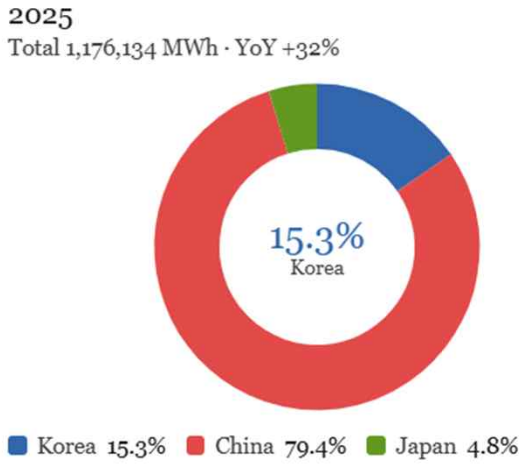
15% CAGR projected growth from 898 GWh (2024) to 4,144 GWh (2035). Expansion driv en by EV adoption in China, Europe, and emerging markets.

Source: SNE Research Global EV and Battery Shipment Tracker & IEA Global EV Outlook 2026

Global Position of K-Battery – Global Market

- In the 2025 global battery market, the market share of Korean batteries stood at **15.3%**, representing a **19.7 percentage point drop** compared to 2020.
- **China**'s market share surged nearly twofold, skyrocketing from **43%** to **79.4%**.
- China has dominated the global market by leveraging massive government support and its vast domestic market to achieve vertical integration and a monopoly over core raw materials, all while spearheading the expansion of price-competitive LFP batteries.





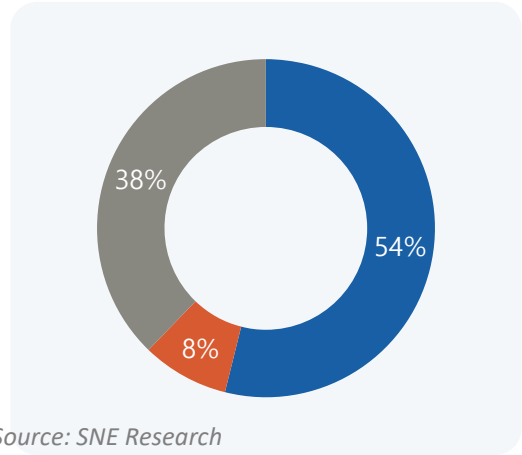
Source: SNE Research

Global Position of K-Battery – Ex-China Global Market

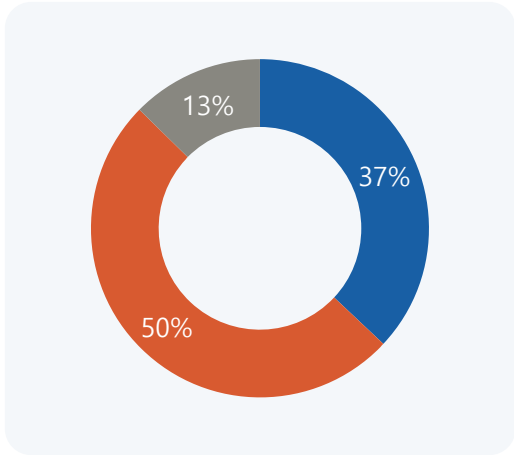
- ***Chinese battery makers*** *are rapidly expanding into* ***Europe and emerging markets*** *with strong price competitiveness.*
- ***China's share is projected to rise from 37.6% (2024) to 47.2% (2025)****, overtaking non-China players for the first time.*

Total Deployment Growth	Korea Share Change	China Share Change	Japan Share Change
79,914 → 452,633 MWh	**53.8% → 36.6%**	**8.3% → 49.9%**	**37.7% → 12.5%**
+5.7x	−17.2%p	+41.6%p	−25.2%p

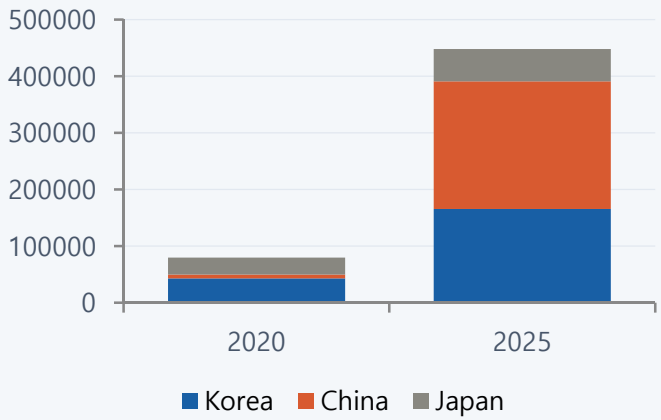
Market Share — 2020



Market Share — 2025



Deployment (MWh) — 2020 vs 2025



Source: SNE Research

03

Expanding Beyond EVs

Diversification of Battery Demand

K-Battery Strength — and the Growing Chinese Challenge

No.1 in NCM Battery
No.2 Battery Producer Globally

Overseas Capacity Leader

Technology Differentiation

⚠ Growing Chinese Challenge

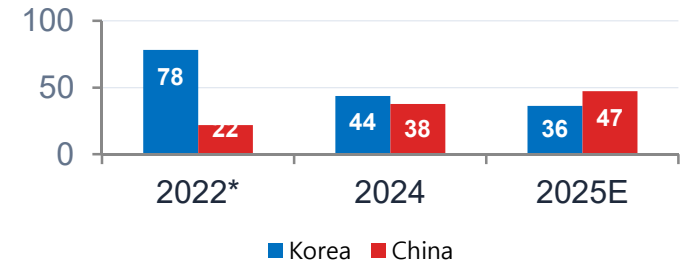
Full Vertical Integration
China dominates the entire battery supply chain — from mining & refining to cathode/anode, cell manufacturing, and EV production.

Price Advantage
Battery prices in China are lower than Europe and North America, creating severe cost pressure on Korean manufacturers.

~75% of Traded Batteries
China produces roughly three-quarters of all batteries traded globally as of 2024. Its domestic manufacturing capacity exceeds 85% of world total. (IEA)

Battery Market Share: Korea vs. China

(ex-China global market, %)



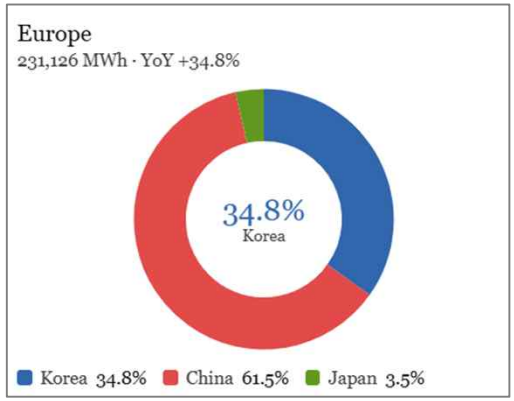
⚠ **2025E: China overtakes Korea for the first**

*Source: IEA Global EV Outlook 2025; SNE Research. *2022 = EU market ref. 2024–2025E = global ex-China market. 2025 is projected.*

Global Battery Regulations

① EU Market: Responding to IAA and Local Content Requirements

- **EUBR, IAA and Battery Booster:** Regulations mandating higher local production shares serve as a strategic entry barrier, favoring Korean companies that have already established large-scale production hubs in Poland and Hungary.
- **De-Sinicization:** Europe's efforts to build a non-China-dependent supply chain enable localized Korean firms to solidify their roles as indispensable partners for European OEMs.
- **Trusted country**: Korea is firmly established as a 'trusted partner' in the global battery supply chain, serving as a reliable alternative to 'Foreign Entities of Concern' (FEOC).

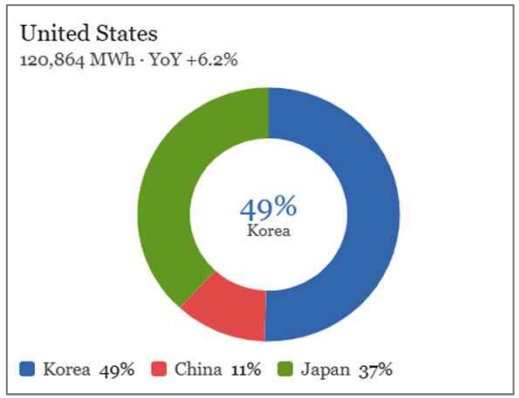


② U.S. Market: Benefiting from De-risking and Supply Chain Realignment

- **OBBBA & PFE Regulations:** The OBBBA strengthened regulations that disqualify entities from tax credit benefits depending on whether material assistance was provided by a PFE. It provides a powerful competitive advantage for Korean firms.

- **NDAA 2025**: DoD's China Military Company list blocks federal battery purchases from flagged firms for national security—grants. Korean companies a prime opportunity to secure stable market share.

- K-Battery companies operate **standalone manufacturing factories or/and JV** with major OEMs (GM, Ford, Stellantis, etc.), driving **massive capital investment** and creating **tens of thousands of high-quality jobs** across the U.S.



Opportunities: Diversification of K-Battery Demand

New mega-demand segments are fundamentally reshaping the battery industry's growth landscape

Renewable Energy ESS

Grid storage & solar/wind integration

↑ Emerging

AI Data Center ESS

Power stability for AI workloads

↑ Emerging

Defense & Robotics

Unmanned systems & humanoid robots

↑ Emerging

Drones & UAM

eVTOL((electric Vertical Take-off and Landing)), logistics & tactical drones

↑ Emerging

EV (Baseline)

Still the largest demand driver

Core Market

Total energy-sector battery demand crossed 1 TWh in 2024 (IEA). Beyond EVs, ESS, defense, robotics, and UAM ar e emerging as structural growth drivers — each requiring distinct battery specifications and creating new competi tive opportunities for Korean manufacturers.

ESS: Two High-Growth Markets

Renewable Energy ESS

$76.7B	$172.2B	6×
Market Size 2025	Projected 2030	Capacity Growth 200→1,200 GWh

- ☀ Solar & wind intermittency buffer — store surplus daytime generation, discharge during evening peak demand
- LFP battery dominates: long cycle life, low cost, safe — China has strong advantage here
- Largest installations: utility-scale projects of 100 MWh–1 GWh now routine across US, Europe, Australia

AI Data Center ESS

$1.2B	$4–6B	28–38%
Market Size 2025	Projected 2030	Annual Growth CAGR

- AI workloads fluctuate 30%→100% load instantly — batteries provide millisecond-level power stabilisation
- 5,400+ data centers in the US alone (Mar 2025)
  US DOE projects DCs consuming up to 12% of US power within 3 years
- Adjacent-BESS trend: operators deploy batteries on-site to bypass grid interconnection queues — 2–3× larger than traditional UPS- estimates

Renewable ESS prioritises **energy capacity & low cost (LFP dominant, China-led)**.
AI Data Center ESS prioritises **output power, response speed & safety (NMC/LFP, Korean makers competitive).**

Source: BloombergNEF (BNEF): Energy Storage Outlook, AI Data Center Power Infrastructure report

ESS: Two High-Growth Markets

Battery demand is rapidly expanding far beyond Electric Vehicles (EV) and Energy Storage Systems (ESS) is emerging as new massive sources of Battery demand.

EV :
Global EV (BEV·PHEV·HEV) battery installations reached **1,176 GWh** in 2025, representing a **32% year-on-year increase**.

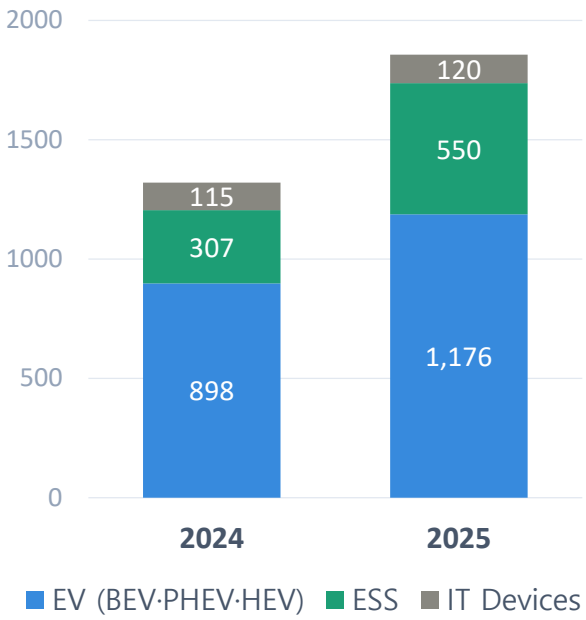
ESS :
The global LiB-ESS market reached **550 GWh** in 2025, up **79%** from 307 GWh recorded in 2024.

As of 2025, LFP battery accounts for over 90% of global battery energy storage systems (BESS). The key driver has been a decline in LFP battery prices of more than 15%, making them on average over 40% cheaper than NCM battery.

Source: SNE Research

Global LiB Demand by Segment

2024 vs 2025 | Source: SNE Research



EV growth
+32%
898 → 1,176 GWh

ESS growth
+79%
307 → 550 GWh

ESS share
23%→30%
+7 ppts

Total growth
+40%
1,320 → ≈1,846 GWh

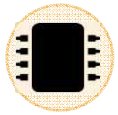
04

Future Outlook and Proposal

K-Battery Future Outlook

Market Growth

- Amidst the EV Chasm, Korea is rapidly pivoting its industrial structure toward the **ESS** market.
- Korean companies are beginning mass production of **LFP** batteries in 2026, recapturing market share in the mid-to-low price EV and ESS segments.
- Korea is excelling in high-output, long-life solutions for large-capacity **ESS**, meeting the explosive demand driven by global AI Data Center, defense, and robot expansions.



Technology Paradigm Shift

- Solid-state, lithium-sulfur, and sodium-ion batteries to enter commercialization in the 2030s.
- Samsung SDI and LGES targeting solid-state EV batteries by 2027–2030.
- Cost reduction and efficiency via advanced Cell-to-Pack (CTP) expertise, Dry Electrode, and Silicon Anode technologies.

Supply Chain Realignment

- US & EU de-Sinicization accelerates Korea's strategic value in global supply chains.
- Korea leverages mineral partnerships, standard-setting, and battery recycling leadership.
- Korean manufacturers' global production network positions them as preferred partners.

Key Issues between Korea-EU

Korea–EU Strategic Partnership

Since 1963 **Diplomatic Relations** 60+ years of partnership	**Since 2011** **EU–Korea FTA** 1st EU FTA in Asia	**€41.8B** **Korea's FDI into EU** 2024 stock	**€124B** **Bilateral Trade** 2025 goods trade	**EU's 8th** **Korea's Global Rank** largest trade partner

EU Battery Policy Issues

EUBR

In the 3Q of this year, a series of delegated and implementing acts are expected to be adopted to provide specific implementation guidelines for the **EUBR**. The most critical aspects of these acts include the finalization of the methodology for calculating the **carbon footprint** and the establishment of a verification system for the share of **recycled content**.

Typically, there is a grace period of 6 to 12 months following the adoption of such secondary legislation before full enforcement begins. Given the current timeline, if the acts are finalized in Q3 2026, it is anticipated that mandatory reporting and disclosure obligations will come into full effect starting in early 2027.

REACH PFAS Restriction

The ECHA is currently pushing forward a proposal to comprehensively restrict the manufacture and use of PFAS, often referred to as "forever chemicals," under the REACH regulation. This has sparked significant concern within the industry, as the restriction targets essential materials for battery manufacturing, such as **PVDF (binders), PTFE (separator coatings), and fluorinated electrolyte additives**.

While the current proposal considers a transition period of either 5 or 12 years for battery-related items, there is an overwhelming consensus that these timelines fail to reflect the industrial reality.

It is being emphasized that if these regulations are enforced without sufficient technical review, it will not only lead to a surge in battery production costs within Europe but also trigger a collapse of the supply chain. Ultimately, this could severely hinder the European Union’s ability to achieve its own Green Deal objectives.

Korea’s Proposals to the EU

EUBR Implementation & Sufficient Grace Period

We recommend the application of a long **grace period to ensure sufficient preparation for implementation**. It is also necessary to prevent the duplication of reporting requirements between the EUBR and other EU environmental regulations. Furthermore, establishing robust measures for **data security and the protection of trade secrets** is a matter of great urgency.

PFAS Exception Request & Technical Cooperation

Given that there are currently **no viable alternatives** at the present technical level, the industry is calling for **indefinite derogation** for PFAS used in batteries until technically proven alternatives are fully established, rather than a mere temporary grace period.

Local Content & Procurement Priority

We hope that local production requirements will be strengthened to **prevent low-cost Chinese LFP batteries** from undercutting the prices of Korean battery cell manufacturers' products in the EU market. We request that priority be given to Korean batteries produced within the EU in public procurement processes.

Korea's Readiness as the Core Partner

With its leadership in battery technology and established global Giga manufacturing plants, including those in Europe, Korea is poised to serve as the cornerstone of a trusted, de-Sinicized global battery supply chain in the EU. Cooperation with Korean battery companies goes beyond business — it is the foundation of a mutual strategic partnership to tackle the shared challenge of energy transition together.

05

KBIA Overview

KBIA Overview

Founded in 2011

Established as the representative private body for the domestic battery industry. It serves as a **central hub** linking industry, government, and research institutes to secure global dominance.

251 Member Companies

The membership covers the **entire battery supply chain**, including cell manufacturers, cathode/anode materials, components, equipment, and recycling.

These companies drive innovation across not only for **Electric Vehicle (EV)** and **Energy Storage Systems (ESS)**, but also for advanced technologies such as **AI Data Centers, and robotics** as well as for **military applications**.

Governance and Leadership

Currently led by the **CEO of POSCO Future M, Eom, Gi-chen** as the Chairman of the KBIA.

The **Vice Chairman** group consists of **15 CEOs** representing the Big 3 cell manufacturers and key players in materials, components, and equipment across the entire Battery value chain.

Chairman

POSCO 포스코퓨처엠
Eom, Gi Chen
CEO

Vice Chairman

LG 에너지솔루션
Kim, Dong Myung
CEO

SAMSUNG 삼성SDI
Choi, Joo Sun
President&CEO

SK 온
Lee, Seok Hee
CEO

W-SCOPE KOREA CO., LTD
Jun, Yeong Ok
CEO

EcoPro BM
Choi, Moon Ho
CEO

enchem
Oh, Jung Kang
CEO

Choi, Su An
CEO

umicore
Park, Sang Hoon
CEO

LX인터내셔널
Koo, Harrison
CEO

DAEJOO
Lim, Il Ji
CEO

POWERLOGICS
Jang, Dong Hoon
CEO

SungEel HiTech
Yi, Kang Myung
CEO

Eco&Dream
Kim, Min Yong
CEO

VITZRO CELL
Jang, Seung Kook
CEO & Vice Chairman

KBIA
Park, Tae Seong
Vice Chairman

Governance and Leadership

Dedicated board of **Executive Directors** featuring leaders from companies such as Dongwha Electrolyte, Lotte Chemical, SFA, A-PRO, Mintech, JR Energy Solution, and YujinTechnology.

Executive Directors


Dongwha Electrolyte
Seung, Ji Soo
CEO


롯데케미칼
Choi, Young Heon
Head of Future Technology Center


SFA
Kim, Sang Kyung
CEO


A-PRO
Lim, Jong Hyun
CEO


(주)윤성에프앤씨
YUNSUNG F&C CO., LTD.
Park, Chi Yeong
CEO


MinTech
Hong, Young Jin
CEO


PSM (주)강원이솔루션
Shin, Jin Yong
CEO


KUMYANG
Ryu, Kwang Ji
CEO


JR에너지솔루션
JR ENERGY SOLUTION
Oh, Duke
CEO


KBIA
Choi, Jong Seo
Executive Director

Audit


(주)유진테크놀로지
Lee, Mi Yeon
CEO

Global Battery Industry Leaders and Member Companies

Member companies include **not only global battery cell leaders** such as LG Energy Solution, Samsung SDI, and SK On, but also **materials and components companies** including LG Chem, POSCO Future M, EcoPro, L&F, Dongwha Electrolyte, Enchem, and Lotte Chemical. The ecosystem further extends to **parts and equipment providers** such as Powerlogics and Eugene Technology, as well as **recycling and critical minerals companies** including SungEel Hi-Tech, Korea Zinc, LS MnM, and LX International.

Battery Cells

- LG Energy Solution
- SAMSUNG SDI
- SK on

Components

- POSCO FUTURE M
- L&F Co., Ltd.
- EcoPro BM
- LG Chem
- DAEJOO
- 에코앤드림 Eco&Dream

Materials

- Yujin Technology
- SK nexilis
- enchem
- Hanwha
- TotalEnergies
- Dongwon Systems
- SCOPE
- LOTTE ENERGY MATERIALS

Equipment

- POWERLOGICS 파워로직스
- LS ELECTRIC
- SFA
- AVIS
- MinTech
- PNE
- CIS
- A-PRO
- WONIK PNE

Recycling

- SungEel HiTech
- Korea Zinc
- SK ecoplant

Critical Minerals

- LS MnM
- LX International
- Korea Zinc

Global Strategic Partnerships

The association is expanding its network with representative battery organizations in key regions, including the United States, Europe, Japan, and Latin America:

NAATBatt

PRBA

RECHARGE

BASC

BAJ

ALPiBa

Domestic Key Activities

- **Exhibition & Conference:** Hosting international exhibitions every year (InterBattery)
- **Policy Advocacy**: Supporting a sustainable battery ecosystem in response to national and global policies
- **Battery Academy:** Developing a skilled workforce and enhancing industry expertise.
- **International Cooperation:** Promoting global collaboration through seminars and strategic forums

Exhibition

2026 Interbattery Exhibition & Conference

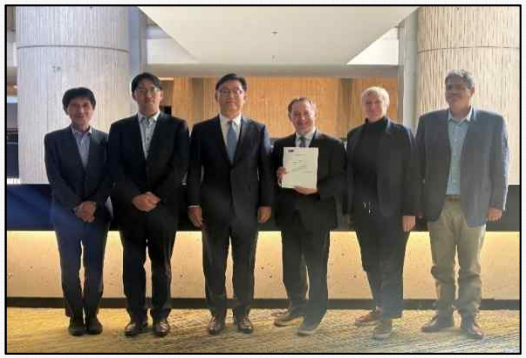
Policy Support

National Assembly Forum on Secondary Battery

Workforce Training

Korea Battery Academy

International Cooperation Activities



World Battery Forum(KBIA is a member of WBF)

OBBBA Seminar with Law Firm

2026 Korea-US Battery Forum in the Defense

Korea-Australia Battery Seminar

EU Battery Environmental Compliance and Strategy Seminar

Thank you

KBIA 한국배터리산업협회
Korea Battery Industry Association