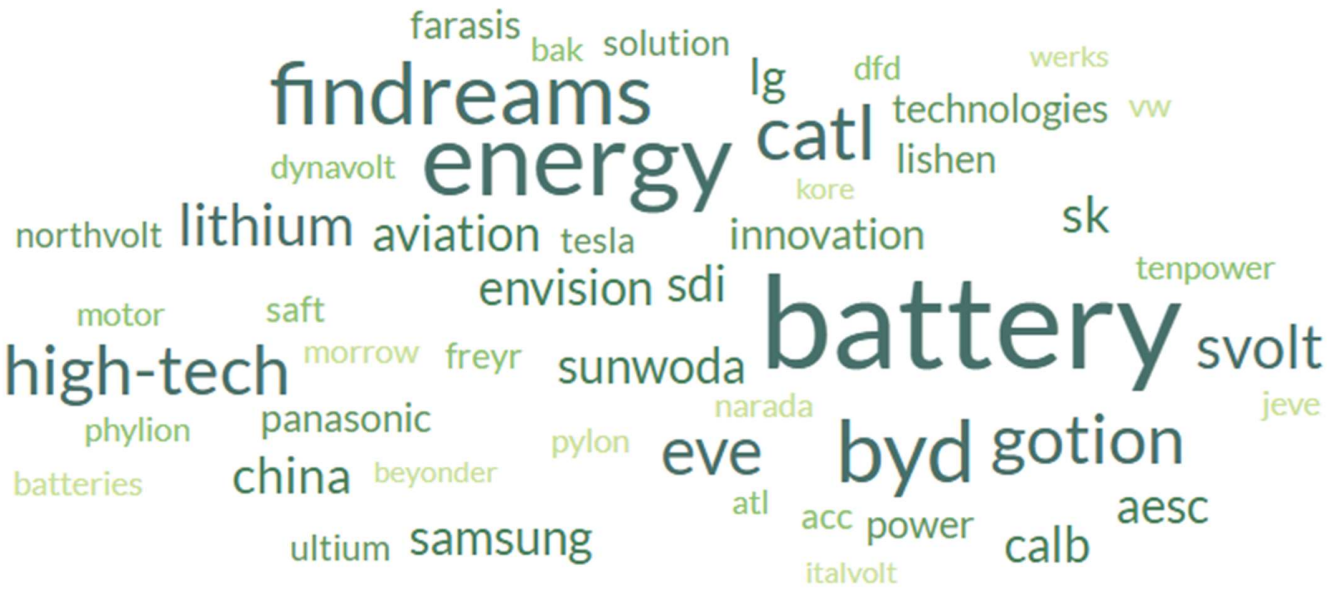

The newsletter focuses on key areas significant to battery value chain

Contents

Raw materials

1. Aqua Metals & Impossible Metals Partner to Build Sustainable U.S. Critical Minerals Supply Chain

Aqua Metals and Impossible Metals have signed a Memorandum of Understanding (MOU) to jointly explore a fully U.S.-based supply chain for critical minerals essential to electrification, defense, and clean energy technologies. The alliance will combine Impossible Metals' seabed mineral collection—using polymetallic nodules—and Aqua Metals' AquaRefining™ platform to process metals such as nickel, cobalt, copper, manganese, and rare earths. Their goal is to establish low-carbon, closed-loop refining that reduces waste and environmental impact. The partnership aims to reduce reliance on overseas suppliers, particularly China, strengthening domestic mineral supply resilience. Aqua Metals will refine the minerals collected domestically and convert them into high-purity metals. Impossible Metals is advancing its autonomous deep-sea robotics system, Eureka III, designed to collect nodules without harming visible marine life. This agreement marks a key step toward a more transparent, sustainable, and secure U.S. critical minerals infrastructure.

https://ir.aquametals.com/press-releases/detail/324/aqua-metals-and-impossible-metals-sign-mou-to-advance

2. Bonnie Claire Project Yields Significant Rubidium & Cesium Alongside Lithium

Nevada Lithium Resources has announced significant discoveries of rubidium (Rb) and cesium (Cs) within drill cores from its 100%-owned Bonnie Claire lithium project in Nye County, Nevada. Test work shows these critical minerals persist through lithium and boron recovery stages and appear in the Pregnant Leach Solution. Assays from recent drilling confirm notable cesium (~248 ppm over ~318 ft) and rubidium (~313 ppm over ~299 ft) concentrations in the Lower Zone. These grades strongly correlate with lithium and boron, adding substantial value to the project's resource base. With a projected 61-year mine life and an estimated 3 million tonnes of annual ore processing capacity, Bonnie Claire could play a pivotal role in bolstering U.S. supply of critical minerals. The findings highlight the potential for economic recovery of rubidium and cesium as by-products alongside lithium. The company is now assessing feasibility studies to incorporate these discoveries into its established processing flowsheet, enhancing overall project economics and strategic importance.

https://nevadalithium.com/news-release/nevada-lithium-announces-significant-amounts-of-critical-minerals-rubidium-and-cesium/

3. India Launches ₹1,500 Crore Scheme for Critical Mineral Recycling

India's Union Cabinet has approved a ₹1,500 crore incentive scheme under the National Critical Mineral Mission to accelerate recycling of e-waste, lithium-ion battery scrap, and end-of-life vehicle components. The six-year programme, running from FY2025-26 to FY2030-31, offers both Capex and Opex subsidies to support the establishment, modernisation, and expansion of recycling infrastructure. Capex support includes a 20% subsidy for eligible plant, machinery, and utilities, with reduced rates for delayed commencement. Opex subsidies will be based on incremental sales, starting at 40% in the second year and rising to 60% by the fifth year. The scheme sets caps of ₹50 crore per large entity and ₹25 crore per small one, with additional limits on Opex benefits. One-third of the total outlay is reserved for start-ups and smaller recyclers to encourage participation. It targets creation of at least 270 kilotonnes of annual recycling capacity, yielding about 40 kilotonnes of critical minerals. The initiative is expected to attract nearly ₹8,000 crore in investments and generate around 70,000 jobs. Industry leaders have welcomed the scheme as a game-changer for India's recycling landscape and critical mineral self-reliance.

https://auto.economictimes.indiatimes.com/news/auto-components/iesa-welcomes-1500-crore-critical-mineral-recycling-scheme-to-transform-indias-e-waste-management/124013212

SK Innovation Goes Global with BMR Lithium-Recovery Tech

SK Innovation has entered the global market by licensing its proprietary Battery Metal Recycling (BMR) technology through an MOU with U.S. engineering firm KBR. The partnership will combine SK's BMR with KBR's PureLi® crystallization method to purify lithium solutions and produce battery-grade lithium hydroxide, with SK receiving royalties. Unlike traditional methods, BMR enables direct lithium hydroxide recovery, improving efficiency and cost-effectiveness. The

agreement was signed at the Fastmarkets European Battery Raw Materials Conference 2025 in Lisbon. SK has been developing BMR since 2017 and operates a demonstration plant capable of processing used batteries equivalent to 800 EVs annually. The technology is supported by over 100 global patent applications. SK also claims it already meets EU's upcoming recovery rate standards, with recovered lithium performing comparably in new batteries. KBR highlighted the method's advantages over wet, dry, and carbon-reduction techniques. Together, the companies aim to establish a strong global presence in battery recycling and strengthen lithium supply chain resilience.

https://skinnonews.com/global/archives/22010

4. Ascend Elements & GEM Partner Under MOU to Scale Battery Recycling in Europe

Ascend Elements (USA) and GEM Co., Ltd. (China) have signed a Memorandum of Understanding to jointly explore battery recycling and engineered battery materials production in Europe. The collaboration aims to align with EU regulations—especially the EU Battery Regulation and Battery Passport initiative—emphasizing recyclability, traceability, and use of recycled content. GEM brings its recycling expertise and capacity for mass production of recovered metals and battery materials, while Ascend leverages its existing commercial operations in Europe. Together, they plan to build a localized, circular supply chain for lithium-ion battery recycling and critical minerals recovery. The partnership is intended to help meet market demand and regulatory requirements more efficiently. Ascend's CEO emphasized that the alliance de-risks their European strategy and accelerates their ability to provide capabilities currently missing in Europe. GEM's chairman called the partnership a milestone in building a sustainable industrial ecosystem. This move marks a strategic effort to combine technical expertise and regional infrastructure to support clean energy transition goals in Europe.

https://www.prnewswire.com/news-releases/ascend-elements-and-gem-sign-memorandum-of-understanding-mou-to-explore-battery-recycling-and-material-collaboration-in-europe-302558344.html

5. Aquatech Acquires Koch's Li-Pro DLE Tech, Expands PEARL Platform

Aquatech has acquired Koch Technology Solutions' direct lithium extraction (DLE) business, bringing the Li-Pro™ Lithium Selective Sorption (LSS) tech and its associated intellectual property into Aquatech's PEARL™ process technology platform. With this move, PEARL becomes a full flowsheet solution—from extraction through purification to crystallization—offering high-purity battery materials for electric vehicles and utility storage. The deal transfers all active Li-Pro extraction projects, licenses, agreements and performance guarantees to Aquatech, including the demonstration plant operations in the Smackover Formation, where Li-Pro has achieved over 95% lithium recovery in more than 12,000 operational cycles. One major project in the portfolio, the Smackover joint venture with Standard Lithium and Equinor, aims for an initial capacity of 22,500 tonnes per annum of lithium carbonate equivalent by 2028. Aquatech will offer Li-Pro LSS both as a standalone licensing option and as part of their PEARL full flowsheet. The acquisition is meant to reduce technological risk, speed up project timelines, and bring down lithium production costs. Aquatech's leadership highlights that integrating upstream and downstream processing under one platform addresses a critical gap in the sector. Koch will continue to benefit via existing customers and investments in related companies. The combined capabilities position Aquatech to scale its lithium offerings more competitively in the Americas and Europe.

https://www.aquatech.com/blog/aquatech-acquires-kochs-direct-lithium-extraction-business

6. Nigeria Gets $1.5 Million Boost to Launch Battery Recycling Facilities

All On, a Nigerian impact investment firm seeded by Shell, has committed US$1.5 million to Hinckley E-Waste Recycling Ltd. to establish Nigeria's first state-of-the-art lithium-ion battery recycling and reuse facility, along with a used lead-acid battery recycling plant. The investment aims to tackle rising e-waste challenges while supporting sustainable solar energy solutions. The move follows a study revealing urgent need for commercial-scale recycling infrastructure to properly manage end-of-life batteries and protect public health. Hinckley, Nigeria's first government-approved e-waste recycler, will use the funds to formalize collection, build globally compliant recycling operations, and transition away from informal and unsafe battery disposal. The project is expected to lower solar product costs, generate jobs, and strengthen Nigeria's clean-energy and recycling ecosystem. Leaders say this will also help protect communities currently exposed to health risks from informal e-waste methods. All On's backing supports building a sustainable battery supply chain that delivers both environmental and economic value.

https://batteriesnews.com/all-on-earmarks-15mln-to-advance-battery-recycling-in-nigeria/

EV and Batteries

7. India's Big Push in Li-Ion Battery Manufacturing — TDK Plant Inaugurated in Haryana

Union Minister Ashwini Vaishnaw has inaugurated TDK Corporation's advanced lithium-ion battery manufacturing plant in Sohna, Haryana, with an initial investment of around ₹3,000 crore. The facility is designed to produce 20 crore (200 million) battery packs annually for mobile phones, wearables, ear-wearables, and laptops, meeting nearly 40% of India's demand of about 50 crore packs per year. Set up under the Electronics Manufacturing Cluster (EMC) Scheme, the plant is expected to generate over 5,000 direct jobs. Preparatory training for workers has already begun at TDK's AT Bawal facility. Production will start in small volumes by the fourth quarter of this calendar year, with capacity scaling up as demand grows. The project is seen as a milestone in India's Atmanirbhar Bharat initiative, aiming to boost self-reliance in electronics manufacturing. It will also significantly reduce dependence on imports, strengthen domestic supply chains, and support the country's growing electronics and clean energy ecosystem.

https://telematicswire.net/vaishnaw-inaugurates-tdk-li-ion-battery-plant-in-haryana/

8. India's EV Shift: From Early Adoption to Everyday Mobility

India is witnessing a major transformation in urban mobility as electric vehicles (EVs) move from niche status to a regular sight in cities, driven by government incentives, changing consumer behaviour, and technological adaptations. There are 5.675 million registered EVs in the country as of February 2025, and EVs now represent 7.66% of all vehicle sales. FAME-II and PM E-DRIVE are among the key programmes supporting sales of two-wheelers, buses, and other high-usage segments. The rise of LFP (Lithium Iron Phosphate) batteries is helping meet local needs for affordability, thermal stability, long life, and reduced dependency on cobalt or nickel supply chains. EV manufacturers and battery tech firms are tailoring their products for India's climate, roads, and charging constraints. Infrastructure is expanding too, with over 9,300 charging points in place under government support schemes. Despite progress, air pollution from $PM_{2.5}$ and PM_{10} remains a serious issue, reinforcing the need for cleaner mobility. The alignment of policy, industry, and consumer demand is positioning EVs as central to reducing emissions, improving public health, and achieving long-term environmental goals.

https://auto.economictimes.indiatimes.com/news/industry/indias-electric-vehicle-revolution-transforming-urban-mobility-and-ending-pollution/123776685

9. Ford's $2B Overhaul in Louisville to Deliver Affordable EVs

Ford is investing $2 billion to revamp its Louisville, Kentucky assembly plant to build more affordable electric vehicles (EVs). This is part of a broader investment plan totaling $5 billion, which also includes a major battery facility in Michigan. The Louisville plant will be converted from producing gasoline-powered cars to EVs, using a new universal platform aimed at cutting costs. The first product from this conversion will be a midsize electric pickup, expected in 2027, with a base price target of about $30,000. The new platform design reduces complexity: 20% fewer parts, faster assembly (15% quicker), and fewer workstations. The shift is intended to help Ford compete better with lower-cost international EV makers, especially those based in China. Together, the Kentucky and Michigan projects will support or create nearly 4,000 jobs. Ford aims for this model to be both sustainable and profitable—moving away from past EV ventures that lost money. The move also aligns with U.S. efforts to strengthen domestic EV supply chains and manufacturing capacity.

https://www.foundry-planet.com/d/ford-announces-2-billion-investment-for-affordable-evs-in-louisville-usa/

10. Lopal's Indonesia Unit in $840M Deal to Supply LFP Cathode Materials to CATL

Lopal Technology, through its Indonesian subsidiary Lithium Source (Asia Pacific), has signed a procurement agreement to supply 157,500 tonnes of lithium-iron phosphate (LFP) cathode materials to CATL's overseas plants from Q2 2026 through

2031. The deal is valued at over ¥6 billion (about USD 840 million). Lopal's Indonesian facility, which started operations in October and bulk deliveries in January, will handle the supply. Production is already in mass production mode and aligned with CATL's specifications. Phase I of the project has a 30,000-tonne capacity, while Phase II, set to add 90,000 tonnes, is under construction and expected by end-2025. The total project capacity is designed to reach 120,000 tonnes annually. The agreement highlights the growing global demand for LFP batteries due to their cost advantages, safety, and sustainability compared to ternary chemistries. This supply contract strengthens CATL's raw material security for its overseas expansion. It also positions Lopal as a key global supplier in the fast-growing LFP cathode materials market.

https://chemweek.com/document/show/phoenix/6081400/Lopals-Indonesian-unit-to-supply-LFP-materials-to-CATLs-overseas-plants?connectPath=&searchSessionId=e6f820a9-efd3-4d17-97c5-bfb87c97a0a1

11. Mercedes-Benz Locks in $11B Battery Supply Deal with LG Energy Solution

Mercedes-Benz has signed multi-year agreements worth about US$11 billion with LG Energy Solution to secure long-term EV battery cell supply for Europe and the U.S. The contracts cover 107 gigawatt hours (GWh) of cylindrical 46-series cells, with 32 GWh allocated to Europe and 75 GWh to U.S. operations. The European contract began on September 2, 2025, and will run until December 31, 2035. The U.S. deal starts on July 30, 2029, and will last through December 31, 2037. These orders represent the largest ever placed for LG's cylindrical 46-series cells. For Mercedes-Benz, the agreements ensure supply chain security as it scales EV production across key markets. For LG Energy Solution, the deal strengthens its goal of becoming the leading battery supplier in North America while expanding capacity in Europe. This long-term partnership marks a major milestone in securing essential components for the global EV transition.

https://www.automotivedive.com/news/mercedes-benz-secures-long-term-battery-supply-deal-11b-lg-energy-solution/759644/

12. Nanoramic Secures Strategic Investment from ITOCHU for Neocarbonix Scale-Up

Nanoramic, a developer of advanced battery materials, has received a strategic equity investment from ITOCHU Corporation, with further funding from existing investor Top Material, to accelerate global commercialization of its Neocarbonix® battery technology. The funding will be used to meet growing customer demand and to build a more robust global supply chain. Neocarbonix® is engineered to slot into existing battery production lines and deliver gains in cost efficiency, energy density, power, and fast-charging performance. Nanoramic recently raised $44 million in a round co-led by GM Ventures and Catalus Capital, with participation from Samsung Ventures, and has begun commercial shipments from its new facility in Woburn, Massachusetts. ITOCHU will play a key role by providing its logistics and supply chain expertise, while Top Material supports scale-up infrastructure. The partnership is intended to de-risk supply chain challenges for customers adopting Neocarbonix. Nanoramic's CEO stated that this investment signals strong commercial momentum and paves a "reliable path" for broader adoption. With this backing, the company aims to expand its reach globally and strengthen its position in the advanced battery materials market.

https://www.nanoramic.com/post/nanoramic-inc-raises-44-million-to-advance-the-commercialization-of-neocarbonix

13. CATL Scales Up in Europe with New Battery Packs from Hungary Plant

CATL is gearing up production at its new €7.3 billion factory in Debrecen, Hungary, with plans to deliver two customized battery pack variants for BMW and Volkswagen: a long-life model built for 12 years and ~758 km range, and a fast-charging LFP-based version offering ~478 km after just 10 minutes of charging. The plant, with 100 GWh capacity, is expected to begin production in December and has enough output to serve about 2 million EVs annually, each with ~500 km range. It follows CATL's existing European footprint from its plant in Thuringia, Germany, which has 14 GWh capacity. With increasing demand, CATL hopes these new packs tailored for European conditions—especially cold weather performance—will help it compete with rivals like BYD. The strategy underscores CATL's push to be the go-to battery supplier for leading automakers in Europe and strengthen its market position outside China.

https://www.bloomberg.com/news/articles/2025-09-10/catl-modifies-hungary-battery-factory-after-ev-demand-shift

14. Japan's Battery Storage Surge Faces Regulatory Headwinds

Japan is witnessing a surge in investment in battery energy storage systems (BESS), with about US$2.6 billion committed since December 2023 to balance power supply-demand mismatches and reduce curtailments. Regions such as Tohoku and Kyushu, where renewable generation is high but transmission is constrained, are leading in project development. Companies submitted grid connection requests totaling over 113 GW last fiscal year, nearly triple the previous year. However, upcoming regulatory changes may slow growth, as capacity auctions shift to favor longer-duration batteries with at least six hours of discharge. The next LTDA auction will allocate only 800 MW of storage capacity, down from 1.7 GW earlier, while natural gas and nuclear power allocations are set to increase. These rules could make projects more expensive, requiring larger land use and complex permitting. Battery firms fear the policy shift will reduce investment appeal and undermine renewable integration. Some industry voices warn it may entrench fossil fuel and nuclear reliance. With Japan's current grid-connected BESS at just 0.23 GW, decisions now will heavily influence the nation's clean energy transition trajectory.

https://www.reuters.com/sustainability/boards-policy-regulation/japan-scales-up-batteries-companies-worry-rule-changes-may-curb-growth-2025-09-09/

15. Hyundai's Georgia Battery Plant Startup Delayed by 2-3 Months After Immigration Raid

Hyundai Motor's joint-venture battery plant in Georgia with LG Energy Solution will face a 2-3 month startup delay following a large U.S. immigration raid, according to CEO José Muñoz. The $7.6 billion facility was initially expected to begin operations later in 2025. Around 475 workers, mostly South Koreans contracted through LG suppliers, were detained in what became the largest single-site immigration enforcement action in U.S. history. Muñoz noted that the construction phase relies heavily on specialized skills and equipment not yet widely available in the U.S. To manage the disruption, Hyundai plans to source batteries from other facilities, including a nearby joint plant with SK On. The raid has also sparked policy discussions between South Korea and the U.S. about creating new visa categories for foreign technical labor. Despite the setback, Hyundai reaffirmed its commitment to the project and its long-term U.S. EV strategy. Company leaders emphasized the need for policy reforms to avoid similar bottlenecks in the future. The plant remains central to Hyundai's goal of expanding EV production and supply chain resilience in North America.

https://www.cnbc.com/2025/09/11/hyundai-battery-plant-faces-at-least-2-3-month-delay-following-raid-ceo-says.html

16. Li Auto, CATL Deepen Partnership on Battery Safety & Supercharging Tech

Li Auto and CATL have signed a five-year comprehensive strategic cooperation agreement to strengthen collaboration around battery safety and supercharging technology. CATL will supply high-performance, high-safety, high-quality power battery systems across Li Auto's full vehicle lineup, including ternary lithium, M3P, LFP, and sodium-ion batteries. The two firms also plan to jointly expand both domestic and international operations, pushing forward battery technology innovation and global deployment. To date, more than one million Li Auto vehicles have been delivered with CATL batteries—with no thermal runaway incidents reported. Earlier, Li Auto launched a battery pack co-developed with CATL that supports 5C ultra-fast charging for its Mega MPV. The new agreement further cements CATL as a key supplier for Li Auto's long-term product strategy. It also underscores the emphasis on safety and performance in EV battery development as competition intensifies.

https://autonews.gasgoo.com/new_energy/70039104.html

Salt and Electrolyte

17. Toyota Tsusho Takes 25% Stake in South Korea's LG-HY BCM to Secure Battery Materials Supply

Toyota Tsusho Corporation has acquired a 25% ownership stake in LG-HY BCM Co., Ltd., a joint venture between LG Chem and Huayou Cobalt that manufactures cathode active materials for lithium-ion batteries. This move reduces Huayou Cobalt's share in LG-HY BCM from 49% to 24%, making Toyota Tsusho the second-largest shareholder after LG Chem. LG-HY BCM operates a plant in Gumi, South Korea, with an annual production capacity of 66,000 tonnes of cathode material. By investing, Toyota Tsusho aims to ensure stable supply of critical materials such as nickel, manganese, and cobalt, which are essential for battery performance and longevity. The company plans to supply these materials primarily to battery manufacturers in North America, reinforcing its role in the global EV supply chain. This strategic investment is also about securing supply chain resiliency amid intensifying demand and stricter environmental regulations. Toyota Tsusho intends to contribute not just capital but also participate in the manufacturing business to more closely manage sourcing, production, and

quality. The deal is part of broader shifts in battery material ownership meant to address geopolitical risk and ensure eligibility under incentive regimes such as the U.S. Inflation Reduction Act.

https://www.toyota-tsusho.com/english/press/detail/250909_006689.html

18. Neogen & Morita Joint Venture to Produce $LiPF_6$ Salt in Gujarat

Neogen Chemical's subsidiary, Neogen Ionics Limited (NIL), has entered a joint venture with Japan's Morita Investment Limited to form Neogen Morita New Materials Limited (NML). The JV will focus on the production, development, and sale of solid $LiPF_6$ salt, a critical electrolyte material for lithium-ion batteries. Under the agreement, NIL will hold at least an 80% stake, while Morita will hold up to 20%. NML's manufacturing facility will be located in Pakhajan, Gujarat, leveraging NIL's domestic presence and Morita's 30+ years of expertise in lithium salt manufacturing. Board representation will include up to four directors from NIL and one from Morita, assuming certain shareholding thresholds. The investment size is yet to be finalized pending detailed engineering work and will be contributed in proportion to shareholding. The partnership marks one of the first major Indo-Japanese collaborations in the battery materials space. It supports India's growing push to strengthen its clean energy and EV ecosystem. The news has boosted investor sentiment for Neogen, reflecting optimism in its role in global battery supply chains.

https://chemweek.com/document/show/phoenix/6082274/Indias-Neogen-Chemicals-partners-with-Japanese-firm-Morita-Chemicals-to-produce-lithium-salt?connectPath=&searchSessionId=9ff7de0f-c867-4e74-8b95-4669b4d66704

19. EcoPro & Green Li-ion Forge LOI for Recycled NCM Hydroxide Supply

EcoPro Materials (South Korea) and Green Li-ion (Singapore-based) have signed a Letter of Intent to form a long-term strategic partnership to supply recycled NCM (nickel-cobalt-manganese) hydroxide starting in 2026. Green Li-ion's Atoka, Oklahoma, facility will produce the recycled material, which EcoPro intends to purchase for five years, ramping up production as part of an expansion plan. The agreement begins with mass production trials of recycled NCM hydroxide and could extend to include other battery materials. The LOI is non-binding but outlines both parties' commitment to formalize supply agreements once commercial terms are finalized. Green Li-ion uses its modular GREEN HYDROREJUVENATION™ technology to turn spent Li-ion batteries into cathode and anode materials. EcoPro specializes in producing high-nickel precursors for battery cathodes, supported by advanced particle control and metals management. This partnership is intended to bolster the circular economy in EV battery materials and improve supply chain sustainability. For Green Li-ion, it means scaling up its Atoka facility significantly. For EcoPro, it secures a steady stream of recycled feedstock to meet rising global battery demand.

https://www.prnewswire.com/news-releases/ecopro-materials-and-green-li-ion-announce-loi-to-establish-long-term-strategic-partnership-for-recycled-ncm-hydroxide-supply-302561809.html

20. LG Chem & Toyota Group Strengthen Cathode Materials Strategy with Equity Deal

LG Chem has sold a 25% stake in its Gumi cathode materials plant to Toyota Tsusho Corporation, making Toyota Tsusho the second-largest shareholder after LG Chem. The change shifts ownership to LG Chem (51%), Toyota Tsusho (25%), and Huayou Cobalt (24%), down from Huayou's previous 49%. This restructuring ensures the Gumi plant meets the U.S. IRA's new PFE (Prohibited Foreign Entity) rules, introduced in July 2025, which restrict access to certain tax credits for entities with over 25% ownership by restricted parties. The Gumi facility has an annual capacity of 66,000 tonnes and uses LG Chem's "Precursor Free" LGPF process, which skips precursor steps and directly sinters custom metal feedstocks — improving product competitiveness. Toyota Tsusho intends to direct much of the cathode output to battery manufacturers in North America, aligning with growing demand in that region. LG Chem is also expanding its production base globally, with facilities in Cheongju and Gumi in Korea, a plant in Tennessee (opening in H2 2026) in the U.S., and operations in Wuxi, China. In recent years, LG Chem has secured major customer contracts, including one large supply deal worth KRW 25 trillion for powering over 5 million EVs for General Motors, and additional agreements with entities like Toyota-Panasonic. The partnership with Toyota Tsusho is seen as a move to boost supply chain resilience, regulatory compliance, and global market access for LG Chem's cathode materials.

https://www.lgcorp.com/media/release/29349

21. LS Group Boosts Localization of Battery Materials in Korea

LS Group is accelerating its push to localize battery material production through its affiliates, targeting long-term growth amid global demand shifting away from China. A precursor plant by LS-L&F Battery Solution (LLBS), a joint venture between LS Group and L&F Co., is set to be completed in Saemangeum, North Jeolla Province, by the end of September 2025. This plant represents a 1 trillion won (~US$717 million) investment and will have an annual capacity of about 40,000 tons of precursor materials—around 90% of which are currently imported from China. Meanwhile, LS MnM Inc., the group's non-ferrous smelting arm, is developing a nickel sulfate facility in Onsan, expected to begin operations in the first half of 2026 with a capacity of ~20,000 tons. The plan is for LS MnM to supply this nickel sulfate to LLBS, which will then produce precursors for cathode material manufacturer L&F, stitching together a vertically integrated battery materials value chain. Leadership of the initiative is under CEO Koo Dong-hwi, who has rapidly moved up and is being credited with driving the group's secondary battery materials strategy. The move is partly driven by U.S. policies favoring material supply chains with less Chinese content, notably via the Inflation Reduction Act and related legislation. Korea, outside China, now stands out as one of the few with large-scale cathode production, and LS sees opportunity to meet both domestic and international demand. As LS ramps up capacities, it also seeks partnerships with nickel producers abroad (e.g. Indonesia) to ensure stable raw material supply. LS Group believes despite current market challenges, battery materials will be a key growth engine, helping diversify from traditional metal businesses and contribute to industrial resilience.

https://pulse.mk.co.kr/news/english/11419636

LFP-ESS and Start ups

22. Hithium & Storion Push Non-Lithium BESS Forward in U.S

Hithium has introduced a portfolio of lithium-ion and sodium-ion battery energy storage systems (BESS) in the U.S. aimed at supporting data centres, including a 6.25 MWh, 8-hour duration system and a 2.28 MWh sodium-ion unit, along with a lifespan model built for AI-data centre ESS needs. Storion Energy, meanwhile, secured its first customer for vanadium electrolyte from its continuous production line for use in a vanadium redox flow battery (VRFB) installation (9.6 MW/48 MWh) in Texas. The vanadium electrolyte delivery will be made by Storion and Largo Physical Vanadium for a customer named TerraFlow Energy. Storion's production line was helped by a US Department of Energy grant under the MAKE IT program. For Hithium, the goal is to meet both base and peak demand in data centres, improve renewable usage, and deliver reliability under dynamic load swings via combined Li-ion/Na-ion solutions. Remaining challenges include providing precise degradation insights and ensuring long operational lifetimes under high stress, while also keeping costs competitive. The developments illustrate broader trends in shifting away from pure lithium-ion systems, integrating alternative chemistries, and emphasizing domestic supply chains for non-lithium battery tech.

https://www.energy-storage.news/hithium-storion-announce-non-lithium-bess-advances-in-us/

23. China Aims for Massive Energy Storage Build-out by 2027

China plans to more than double its new energy storage (NES) capacity to about 180 GW by 2027, backed by strong policy support and large-scale investments. By the end of 2024, the country had already installed around 73.76 GW / 168 GWh of NES, marking a year-on-year increase of over 130%. Most of the growth is being driven by lithium-ion battery systems, which now account for nearly 60% of new installations, while pumped hydro's share is gradually declining. Provinces such as Inner Mongolia, Xinjiang, Shandong, Jiangsu, and Ningxia are leading the expansion. To achieve the 2027 target, China expects to invest roughly ¥250 billion (about US$35 billion). This build-out is intended to accelerate renewable energy integration, balance grid supply and demand, and reduce curtailment in regions with high wind and solar capacity. The move also reflects China's strategy to strengthen energy security and decarbonize its power sector. However, challenges around regulation, project costs, and land availability could temper the pace of deployment. Despite this, the ambitious plan underscores China's role as a global leader in energy storage and the clean energy transition.

https://www.newenergyera.com/news/china-plans-to-add-over-100-gw-of-new-energy-storage-within-three-years.html

24. SK On Enters U.S. BESS Market with Major Flatiron Deal

SK On has secured a battery energy storage system (BESS) supply agreement with Flatiron Energy Development, marking its entry into the U.S. stationary storage market. Under the deal, SK On will deliver up to 7.2 GWh of lithium iron phosphate (LFP)-based BESS units for Flatiron's projects in New England and other U.S. states through 2030. The first deliverables include 1 GWh of containerised LFP BESS for a Massachusetts project, expected to begin shipping in the second half of 2026. To meet demand, SK On will repurpose part of its EV battery production lines at its Commerce, Georgia facility—SK Battery America (SKBA)—to produce LFP batteries for storage. This strategy helps SK On diversify beyond electric vehicles, leveraging its manufacturing base in the U.S. Importantly, the BESS solutions will emphasize modularity for flexible scaling, plus safety features like heat propagation prevention and diagnostic systems. The partnership reflects growing demand for American-made battery storage under rising energy storage needs. It also positions SK On to benefit from U.S. policies favoring domestic content and non-China supply chains. Overall, the deal strengthens SK On's footprint in the U.S. energy storage sector and signals a shift toward securing long-term growth beyond automotive applications.

https://www.energyglobal.com/energy-storage/08092025/sk-on-expands-into-us-bess-market/

25. Tongwei Begins 100 MW / 200 MWh Shared Energy Storage Project in Sichuan

Tongwei New Energy has broken ground on its Jintang shared energy storage power station—a 100 MW / 200 MWh independent facility in the Jintang Economic Development Zone, Sichuan Province. The project uses lithium-iron phosphate (LFP) batteries and a highly integrated intelligent energy management system. It aims to enhance power supply resilience for both Tongwei's Jintang base and surrounding enterprises. Key functions include peak shaving, renewable energy absorption, emergency backup, and reducing power costs. This facility is one of Sichuan's first "new-type" energy storage demonstration projects. It aligns with China's policy goals under the Special Action Plan for Large-Scale New-Type Energy Storage Construction (2025-2027), which promotes expanding grid-side storage at critical nodes. Backed by local government support and cooperation, the project is expected to move forward quickly. The storage station is seen as a key element for strengthening grid stability in the Chengdu-Anyue Industrial Park region.

https://www.energytrend.com/news/20250916-50143.html

26. Sunwoda Unveils 684Ah & 588Ah High-Capacity Storage Cells at RE+25

Sunwoda has introduced two large-capacity energy storage cells — a 684Ah model and a 588Ah model — at RE+25, targeting diverse grid, utility, and off-grid applications. The 684Ah cell uses stacked electrode technology to achieve over 440 Wh/L volumetric energy density, and features thermal-electric separation plus a 3D heat dissipation structure to enhance safety and stability. It promises a service life of over 20 years, and is container-friendly (10-, 20-, and 30-foot options), reducing container usage by 27%, lowering assembly time, and cutting levelized cost of electricity (LCOE) by around 8%. The 588Ah cell, using proven winding technology with low-lithium-loss innovation, delivers about 10,000 cycles at 70% state-of-health, with energy efficiency up to 96.5%, directional venting, and strong safety measures. Mass production of the 684Ah model is slated for Q4 2025 to meet growing demand. Sunwoda continues expanding its global manufacturing footprint, with plants in China, Thailand, Hungary and elsewhere, to support faster deployment and localized supply. The new cells are part of a broader company strategy to build a mature, flexible, reliable product portfolio that provides value over long lifecycles.

https://www.prnewswire.com/news-releases/sunwoda-debuts-684ah--588ah-energy-storage-cells-globally-at-re-25-empowering-diverse-applications-302552171.html

27. EDF Teams Up with Fidra Energy for Big UK Battery Storage Project

EDF has entered a partnership with Fidra Energy to manage and optimize two battery storage units located at Thorpe Marsh in Yorkshire. These units are part of a larger plan to deploy 560 MW of storage capacity by 2027. The site sits on a former coal power station, adjacent to a major National Grid substation. Once fully operational, the project aims to power up to 785,000 homes during periods of peak demand. EDF will use its in-house Powershift platform and provide "route-to-market" services to ensure the batteries are used efficiently across energy markets. Fidra Energy is backed by institutional investors, including EIG, and the facility is set to be one of the UK's largest battery storage sites. The full site capacity is projected to reach 1.4 GW (2.9 GWh), making it a major component of Britain's energy transition. Construction is expected to be completed in mid-

2027. In addition to improving grid stability, the project reflects the UK's shift from fossil generation to large-scale storage solutions.

https://www.renewableenergymagazine.com/storage/edf-signs-longterm-optimisation-deal-with-fidra-20250912

28. Sungrow to Deliver 220 MWh Battery Storage in Sicily with PowerTitan 2.0

Sungrow has signed a supply deal with EP Produzione for a 100 MW / 220 MWh utility-scale battery energy storage system (BESS) in Trapani, Sicily, using its PowerTitan 2.0 platform. The system will consist of 44 PowerTitan 2.0 units and provide a 2-hour discharge duration. This is the first Italian deployment of PowerTitan 2.0. It aims to improve grid stability and help integrate renewable energy in Sicily through services like frequency regulation, peak shaving, and load balancing. PowerTitan 2.0 offers advanced safety features, integrated power conversion systems (PCS), battery management (BMS) and energy management (EMS), liquid cooling, and a compact modular design. The AC-DC block design allows direct AC output, reducing installation time and cost. EP Produzione, part of the European energy group EPH, views this as its third electrochemical storage project in Italy. The project supports Italy's goals of enhancing energy grid flexibility and reducing dependency on fossil-fuel generation. Sungrow is positioning Italy as a strategic market by expanding its local support, sales, and technical infrastructure.

https://www.ess-news.com/2025/09/18/sungrow-to-supply-220-mwh-battery-project-in-sicily/

Technology and Regulatory

29. How US's "One Big Beautiful Bill" (OBBB) Powers Up Lithium Recycling

The OBBB introduces tougher sourcing rules for manufacturers seeking the 45X tax credit, forcing them to rely less on foreign-influenced or "Prohibited Foreign Entities" and more on domestic or non-PFE materials. Produced or recycled lithium within the U.S. becomes a high-leverage asset under these new rules, helping companies qualify for incentives by fulfilling both non-PFE and domestic content requirements. As of 2026, at least 60% of material costs must come from non-PFEs and by 2030, that increases to 85%. By 2027, key components such as gigafactory modules must have at least 65% U.S.-sourced material costs. The bill unlocks over US$9.5 billion in federal funding across grants, loans, and contracts to build out critical mineral production, processing, and recycling infrastructure. Recycled lithium is positioned as a strategic material—less expensive, traceable, and capable of satisfying both new sourcing mandates. These policies effectively turn recycling from a sustainability sidebar into a central pillar of U.S. energy and industrial strategy. Manufacturers are now redesigning supply chains with compliance front and center. The next several years, especially the early 2030s, will define who leads in domestic lithium recovery and battery material security.
https://www.neumaterials.com/news/how-americas-obbb-supercharges-us-lithium-recycling

30. New CoFe-2DSA Catalyst Boosts Zinc-Air Battery Lifespan to ~3,500 Cycles

Researchers at Monash University have developed a cobalt-iron catalyst called CoFe-2DSA that dramatically improves the performance of zinc-air batteries. The new catalyst enabled the batteries to withstand nearly 3,500 charge–discharge cycles, far exceeding typical lifespans. CoFe-2DSA disperses cobalt and iron atoms on ultra-thin, porous, nitrogen-doped carbon sheets, which enhances critical oxygen reactions at the air cathode. This structure accelerates both the oxygen reduction reaction during discharge and the oxygen evolution reaction during recharge. It also suppresses side reactions and structural degradation that usually limit cycle life. Metal-air batteries like zinc-air offer high energy density and low cost but have been limited by poor durability and sluggish kinetics. The breakthrough addresses these barriers and significantly boosts efficiency and stability. While still at the research stage, the development could bring zinc-air batteries closer to commercial viability for grid storage, backup systems, and off-grid power. If scaled, this technology has the potential to provide safer, cheaper alternatives to lithium-ion in targeted applications.

https://interestingengineering.com/energy/cofe-2dsa-catalyst-metal-air-battery