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Alternative Power

By *Guy Youngs*, Forecast & Adoption Lead

Will Hydrogen Fuel Cell Trucks Follow Car Storyline?



*Guy
Youngs*

A decade ago, many people believed they were the future, not battery-electric cars. The debates raged and it was common to have press releases, auto executive statements, and debates about the future of hydrogen-powered cars.

In the last decade or so, the market apparently has decided that hydrogen-powered cars do not make sense, and they can't compete in the market as a result. Despite this situation, there are still plenty of discussions, trials, and vehicle development

programs for hydrogen-powered trucks.

In theory, hydrogen can compete in the truck market, but in practice, it's an entirely different matter. Battery technology keeps improving rapidly, and solutions for battery-electric trucks are becoming clear. If battery costs keep coming down — as expected — and proper charging hubs for heavy-duty electric vehicles get developed, battery-electric trucks seem set to win the day.

Source: *CleanTechnica* [Read The Article](#)

PSR Analysis: The problems surrounding hydrogen have yet to be resolved (supply chain, leakage problems, shipping hydrogen around the world, the high cost of hydrogen powertrains, limited hydrogen fueling industry and infrastructure). Meanwhile, BEV trucks are surging ahead in the race, and it's getting less and less likely that hydrogen will survive. **PSR**

IEA Global Outlook Shows U.S. Falling Behind On EVs

The U.S. had a robust policy in place to promote the adoption of electric cars, and it used all the tools conservatives say they like — carrots such as financial incentives instead of sticks such as mandates. But now, according to the IEA (International Energy Agency), USA is moving backwards while the rest of the world continues to move forward.

In its EV Global Outlook 2025 report, the IEA says that 20% of new cars sold worldwide in 2024 were electric, a definition that includes plug-in hybrids as well as battery-electric cars.

Prior to President Trump's election, it was predicting US EV sales would be nearly half of all new car sales by 2030. The IEA now expects battery-electric and plug-in hybrid vehicles to account for just 20% or so of US sales in 2030.

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Alternative Power

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These critical minerals includes so-called “Rare Earths,” a group of 17 metallic elements with unique properties that make them indispensable to modern technology.

Source: [CleanTechnica](#) **Read The Article**

PSR Analysis: The irony is that most of that money was scheduled under the IRA was to flow to Republican states, but now the jobs and tax revenues those funds would have made possible, are in danger of being lost. By the end of the current administration in the USA, they will be many years behind the rest of the world and may not be able to catch up. **PSR**

Critical Minerals for Clean Energy Concentrated in Few Countries

The world's sources of critical minerals are increasingly concentrated in just a few countries, most notably China, leaving the global economy vulnerable to supply cutoffs that could disrupt economies and hit consumers with higher prices, a report from International Energy Agency (IEA) has stated.

The report looked at the availability of minerals and metals that may be small in quantity but large in impact when it comes to shifting the economy away from fossil fuels toward electricity and renewable energy.

These critical minerals includes so-called “Rare Earths,” a group of 17 metallic elements with unique properties that make them indispensable to modern technology. They're essential components in smartphones, electric cars, wind turbines, medical scanners and advanced defense systems. They're also needed in LEDs, lasers, glass production, steelmaking and petroleum refining. These materials include metals such as Lithium, Graphite, Copper, Titanium and Nickel.

Source: [MSN](#) **Read The Article**

PSR Analysis: With China dominating Rare Earths, many countries are just waking up to a potential bottleneck and the use of minerals in geo-political bargaining. Some analysts suggest that the USA's shortfall of some of these Rare Earths, might be the reason behind President Trump's 90 day pause on tariffs and the subsequent willingness to negotiate on this subject. According to the IEA, the golden rule relating to critical minerals is diversity, something that doesn't currently exist. **PSR**

Sodium Batteries: Yet Another Sign EVs Are Here To Stay

The rising demand for zero-emission mobility goes beyond the nice idea of preventing a catastrophic climate crisis. EVs are a better fit for the connected, electrified lifestyle of the 21st century; they offer more opportunities for convenience, they are more useful for weathering power outages and climate-connected emergencies, and they are more adaptable to the needs of fleet managers, among other advantages.

However, while some researchers note that “salt batteries” are not quite ready for prime time, other stakeholders — including industry leader CATL — are already

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Alternative Power

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laying plans for mass production. Last month, CATL also burned up the Internet when it announced a suite of two sodium-ion batteries ready for full volume production by the end of this year.

The hero of the EV revolution, lithium-ion battery technology, is beginning to make room for new battery chemistries that offer a more abundant and accessible supply chain, reduce the reliance on toxic inputs, and achieve both cost and safety improvements.

Source: *CleanTechnica* [Read The Article](#)

PSR Analysis: The new sodium-ion battery is not designed to compete directly against NMC Li-ion in all EVs as its energy density is comparable to LFP Lithium ion batteries, with an energy density of 175Wh/kg. While the battery will need some tweaks, it does support superfast charging and has a good battery life too. There will be a cost advantage over Lithium ion batteries and possibly most importantly sodium is not a critical mineral. **PSR**

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DATAPOINT: Outboard Engine Production 684,000

By *Carol Turner*, Senior Analyst, Global Operations

684,000 units is the estimate by Power Systems Research of the number of Outboard Engines expected to be produced worldwide in 2025.

An Outboard Engine is a propulsion unit for boats consisting of a self-contained unit that includes engine, gearbox and propeller or jet drive, designed to be affixed to the outside of the transom.

This product information comes from industry interviews and from two proprietary databases maintained by Power Systems Research: **EnginLink™**, which provides information on engines, and **OE Link™**, a database of equipment manufacturers.

Exports: Collectively, to 60% worldwide. Yamaha reports: 11.4% Europe, 30.3% NA & 58.3% ROA (2025 Factbook, 2024 stats).

Market Share: This is total units produced including private labeling. With combined plant total of 42%, Yamaha leads in production of Outboard Engines (Japan & Thailand). In second position is Tohatsu with 16% (Japan); third, is Mercury Marine with combined plant total of 14.5%.

Trends. In 2024, production of Outboard Engines, from manufacturers included in this report, decreased 8.5%. Production is expected to gain 8.3% in 2025 over 2024 production. Sales have seen a slight dip since Covid but are expected to see an increase with the demand for new models that were introduced in 2025.

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DataPoint Report

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Prior year's sales increased due to Covid-19 related factors, boat sales soared when stay-at-home requests commenced. However, manufacturing dropped mostly due to BRP cancelling production of Evinrude motors in May of 2020.

Additional factors: Yamaha reported unit sales of 279,000 in 2020, a 10% cut from 310,000 in 2019 (Yamaha Factbook 2021). Mercury Marine discontinued a variety of unpopular Mariner & Mercury models especially 2-stroke models for ROW use.

Outboard motor production peaked in 2018; this was mostly attributed to the demand for new models along with a soaring economy.

Outboard motors tend to last decades before they are replaced.

According to UML News, the latest EPA non-road engine emission regulations passed in 2012 guarantee ground-breaking technological improvements on future innovations in the outboard motor industry. Many new motors being manufactured are lighter and more fuel efficient.

Boating is an extremely popular recreational activity worldwide and enthusiasts want a motor that is also versatile. The growth in recreational boating over the past several years has been achieved in large part due to corresponding advances in outboard power. Expect production of outboard engines to gain up to 10% by 2030.

Battery Electric

2023: 1269

2024: 2301 **2023-2024:** 81% increase

2025: 3403 **2024-2025:** 48% increase

Companies:

Elco: 100% battery powered

Mercury Marine (US)

Thai Yamaha Motor

Tohatsu Marine (Japan)

Yamaha Marine (Japan) **PSR**

Global Report

By *Chris Fisher*, Senior Commercial Vehicle Analyst



*Chris
Fisher*

2025 Heavy Truck Sales in Russia Expected to Decline Sharply

MOSCOW—(TASS) Sales of heavy trucks in Russia in 2025 may decline by 23% year-on-year to 85,000 units, Mikhail Matasov, Deputy General Director of the Russian truck producer Kamaz, told reporters. "The market will be poor in 2025. We currently estimate it at 85,000 units against 110,000 this year. We think that 85,000 is even optimistic," he said.

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Global Report

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"If there is no construction, then there will be fewer dump trucks (needed). We also provide trucks for cargo transportation industry - if there are fewer of them, then there will be fewer haulage trucks"

Matasov noted that the decline in sales can be attributed to a decrease in demand for cargo transportation.

"If there is no construction, then there will be fewer dump trucks (needed). We also provide trucks for cargo transportation industry - if there are fewer of them, then there will be fewer haulage trucks," he explained.

"The plan for 2025 is, in my opinion, 10,000 units. But we don't know if there will be that many, because Chinese brands have large warehouse stocks," Matasov added.

Earlier, the National Agency for Direct Investments (NAPI) presented a forecast according to which sales of new trucks in 2025 may decrease by 13.5% year-on-year to 110,400.

Under the baseline sales scenario for 2024, sales of trucks will total 127,800 units. Under a positive scenario, the volume of sales of new trucks in 2025 will be 120,600, under a pessimistic scenario it will be 100,300 units.

Source: TASS

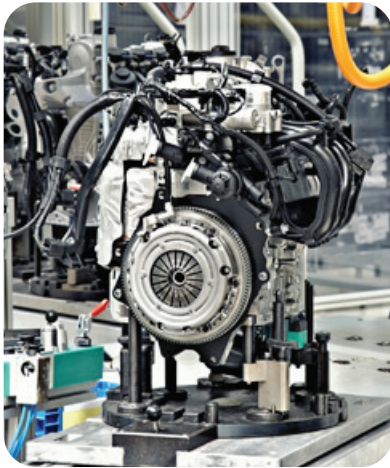
PSR Analysis. While demand for medium and heavy commercial trucks declined in 2024 primarily due to high financing rates, production of military cargo trucks appears to have increased significantly last year as the military had higher demand for replacement vehicles from URAL and KAMAZ. This year, demand is expected to be significantly lower.

As the article points out, lower cargo demand and a generally slower economy will result in lower vehicle sales. MHCV production in 2025 is expected to decline sharply from 2024 as a result of a decline in cargo truck demand and high warehouse stocks of imported Chinese trucks.

What is interesting is the increased imports from Chinese truck OEMs and how that has somewhat reshaped the Russian commercial vehicle landscape. The Chinese OEMs more than replaced the Western European OEMs in Russia during the past few years. In terms of unit sales for heavy trucks, seven of the top 10 OEMs were Chinese. See the sales chart from Avtostat. **PSR**

№.	Марка	2024	2023	Изм., %	Доля 2024, %	Доля 2023, %
1	SITRAK	19 409	23 817	-18,5	19,03	18,95
2	KAMAZ	17 254	25 808	-33,1	16,91	20,54
3	SHACMAN	15 729	20 758	-24,2	15,42	16,52
4	FAW	11 605	15 774	-26,4	11,38	12,55
5	DONGFENG	8 260	4 135	99,8	8,10	3,29
6	HOWO	5 950	6 755	-11,9	5,83	5,38
7	MAZ	5 309	6 228	-14,8	5,20	4,96
8	URAL	2 828	3 066	-7,8	2,77	2,44
9	SANY	2 484	1 400	77,4	2,44	1,11
10	FOTON	2 378	5 505	-56,8	2,33	4,38
Всего по России		102 007	125 669	-18,8	100,00	100,00

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Europe Report

By *Natasa Mulahalilovic*, Marine Pleasure Boat Analyst-Europe

Rolls-Royce Power Systems Reports Record 2024 Results



*Natasa
Mulahalilovic*

Rolls-Royce Power Systems achieved record 2024 performance, with revenue rising 11% to US\$5.56 billion (€5.05 billion), surpassing the US\$5.5 billion (€5 billion) mark for the first time. Adjusted operating profit jumped 40% to US\$728.2 million (€662 million), boosting return on sales to 13.1% (up from 10.4% in 2023).

CEO Dr. Joerg Stratmann credited the results to a focused strategy in energy, government, marine, battery storage, and services. "We've grown our market share in mtu products and see strong future potential," he said. The division recorded US\$6.60 billion (€6 billion) in orders, signaling a positive outlook for 2025.

Key growth areas include backup power systems, up 25% overall and 46% in data centers, as well as government business, which grew 17% due to strong demand in land and maritime sectors.

Profit growth was driven by strong demand in power generation, especially data centers, and is also a result of strict and improved cost efficiency.

Looking ahead, the company is heavily investing in future technologies, including a next-generation mtu 1600 and 2000 Series engines and hydrogen-based solutions. Facility expansions are underway in Mankato, Minnesota (U.S.) and Friedrichshafen (Germany) to support growing global demand. **PSR**

South America/Brazil Report

By *Fabio Ferraresi*, Director Business Development South America



*Fabio
Ferraresi*

Deere Projects Brazil To Surpass Europe in Ag Machinery Sales

Deere & Company estimates that Brazil will become its second-largest global market within the next five to ten years, surpassing Europe in sales of tractors, harvesters, and other agricultural equipment.

The forecast is based on the expansion of Brazilian agricultural production, particularly soybeans, corn, and sugarcane. According to Cristiano Correia, Vice President of Production Systems for Latin America, "no other region

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South America Report

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Deere projects a 27% increase in Brazil's planted grain area by 2035 and expects corn-based ethanol production to double during the same period.

shows a compound growth rate in grain production comparable to Brazil's over the next decade.”

The Illinois-based company is holding its first Investor Day in Brazil in over a decade in 2025, gathering around 40 investors from North America, Europe, and Asia.

Deere projects a 27% increase in Brazil's planted grain area by 2035 and expects corn-based ethanol production to double during the same period.

While overall sales in South America are expected to remain stable in fiscal year 2025, the company forecasts over 10% growth in shipments from its factories to dealerships in the same timeframe, according to Correia.

Source: *Bloomberg* [Read The Article](#)

PSR Analysis: In recent years, equipment sales in Brazil have been affected by declining commodity prices, which reduced farmers' purchasing power and led to lower inventory levels at dealerships. This created pent demand for fleet renewals and capacity increases. Commodities price should recover in the medium term and growth of Agricultural Equipment in Brazil for the medium-long term is in line with our forecast. **PSR**

2025 Brazil Trailer Production Declines

According to data from the National Association of Road Implement Manufacturers (Anfir), the trailer industry registered a 2.4% decline in registrations during the January–May 2025 period, totaling 60,495 units compared to 62,001 units in the same period of 2024.

The most significant contraction occurred in the heavy-duty segment—trailers and semi-trailers—which registered 30,304 units, reflecting an 18% year-over-year decrease.

The year-end projection for the heavy segment is 70,000 to 74,000 units, a 18% decline relative to 2024 volumes.

Source: *Automotive Business* [Read The Article](#)

PSR Analysis: The main causes for the reduction are persistent high interest rates and the recent increase in the IOF (Tax on Financial Operations), which continue to restrict investment capacity and generate uncertainty among freight operators. Freight operators are postponing investment on fleet renewals. This is the same that is occurring with MHV Trucks. **PSR**

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Far East: Japan Report

By *Akihiro Komuro*, Research Analyst, Far East and Southeast Asia



*Akihiro
Komuro*

What Will Happen with Merger of Hino and Mitsubishi Fuso?

Hino Motors and Mitsubishi Fuso Truck and Bus Corporation have reached a final agreement to merge their operations in April 2026, but what will this mean? A basic agreement was initially reached in 2023, but the decision was delayed due to irregularities in Hino's engine performance certifications. The merger will finally move forward following Hino's settlement with U.S. authorities.

The commercial vehicle industry has undergone rapid changes over the past two years of stalled negotiations, so both companies will need to quickly demonstrate the benefits of the merger to make up for lost time. The biggest change is the tightening of environmental regulations.

In May 2024, the European Union (EU) strengthened CO₂ emission regulations for large trucks. By 2030, emissions must be reduced by 45% compared to 2019 levels. This is an increase from the previous target of 30%. By 2040, emissions must be reduced by 90%, a very strict requirement.

To meet these regulations, electrification and the use of hydrogen fuel will be considered. Hino Motors and Mitsubishi Fuso have been developing technologies with the support of their parent companies, Toyota Motor Corporation and Daimler Trucks, respectively. However, they must now quickly leverage each other's expertise.

Autonomous driving is also a key challenge for next-generation technology. Competition to develop this technology is intensifying worldwide, and Japanese companies must avoid falling behind.

There is a serious shortage of drivers in Japan, so early practical application is necessary. While ensuring safety is a prerequisite, we hope that national and local governments will cooperate in implementing this technology.

Japan's commercial vehicle manufacturing industry has long been dominated by four companies. In 2021, Isuzu Motors acquired UD Trucks, consolidating the number of companies to two. However, on a global scale, the rapid growth of Chinese manufacturers stands out. Even when combined, the sales figures of Hino and Fuso only rank 10th in the world.

The contraction of the domestic market is inevitable, so Hino and Fuso must seek growth opportunities overseas. Compared to Isuzu, which has a strong foothold in Thailand, Hino and Fuso are lagging, making overseas expansion an urgent priority. Facing numerous challenges, the newly merged company can no longer afford to pause.

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Japan Report

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Source: The Nikkei

PSR Analysis: The primary objective of the merger between Hino and Mitsubishi Fuso likely is expanding their market share. For either company to act alone, addressing the regulations mentioned in the article would be extremely challenging. The merger aims to maximize synergies, reduce costs in procurement and production, and maximize profits. Although specific details have not been announced, the merger will likely extend beyond standardizing unit parts to include standardizing platforms.

Regarding electrification, electric vehicle (EV) trucks face various challenges, such as operating range and weight. However, fuel cell (FC) technology offers a more viable solution to these issues. Toyota already has a proven track record in developing fuel cell (FC) systems. And Isuzu, a rival to Hino and Mitsubishi Fuso in the truck and bus sector, announced in May 2023 that it had selected Honda as its partner for developing and supplying fuel cell systems. To compete with rivals like Isuzu, Hino and Mitsubishi Fuso may find it advantageous to adopt Toyota's fuel cell systems to shorten development timelines. I believe the integration will include such collaboration possibilities. **PSR**

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小室 明大 – 極東及び東南アジア リサーチアナリスト

日野と三菱ふそうの統合で何が起ころ?


日野自動車と三菱ふそうトラック・バスが2026年4月に経営統合することで最終合意した。2023年に基本合意していながら、日野自によるエンジン性能の認証不正の影響で決着が延びていた。同社が米当局と和解したことなどにより統合へ動き出す。

交渉が停滞したこの2年間で、商用車を取り巻く状況は急速に変化した。対応の遅れを挽回するため、両社は迅速に統合効果を示すことが求められる。最大の変化は環境規制の厳格化だ。欧州連合 (EU) は2024年5月、大型トラックに対するCO2の排出規制を強化することを決めた。2030年には2019年と比べて排出量を45%減らす必要がある。従来の30%から引き上げ、2040年には90%減と厳しい条件を突きつけた。

規制を達成するためには、電動化に加え、水素燃料の活用なども検討対象となるだろう。日野自と三菱ふそうはそれぞれの親会社であるトヨタ自動車とダイムラートラックの協力を得て開発を進めてきたが、早急に両社の蓄積を相互活用しなければならない。

次世代技術では自動運転も課題にあげられる。世界中で開発競争が進んでおり、日本勢が出遅れることは避けたい。

日本ではドライバー不足が深刻化しており、早期の実用化が求められている。

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Japan Report

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安全性の確保が大前提となるが、国や自治体と協力して社会実装を進めてもらいたい。

日本の商用車メーカーは長らく4社体制が続いてきた。2021年にはいすゞ自動車がUDトラックスを買収しており、今回の統合で2社に集約される。ただ、世界に目を向ければ中国勢の躍進が際立つ。日野とふそうの販売台数を合算しても世界では10位にとどまる。

国内市場の縮小は不可避で、日野とふそうは海外に成長機会を求める必要がある。タイに強い基盤を持ついすゞと比べても出遅れており、海外展開は急務といえる。課題が山積する統合新会社にもはや立ち止まる余裕はない。

参考: 日経 (一部筆者により元記事内容を改編しました)

PSR 分析: 日野と三菱ふそうの統合の最大の狙いはシェア拡大になるだろう。記事内にある規制へ対応するためには単独では非常に厳しい。統合で得られるシナジーを最大限利用して調達・生産面でのコストを下げ、利益の最大化を図ることを目指すものと考えられる。具体的には発表されていないが、ユニット部品の共通化に留まらず、プラットフォームの共通化まで狙っているのではないだろうか。

電動化については、EVトラックは運行距離や重量などさまざまな課題がある。だがFCであればそうした課題をより解決する道筋をつけやすい。そしてトヨタはFCシステムをすでに開発した実績がある。トラック・バス分野で日野や三菱ふそうのライバルであるいすゞは、2023年5月に、燃料電池システムの開発と供給のパートナーにホンダを選んだと発表した。日野と三菱ふそうがこうしたライバルに対抗するためには、トヨタのFCシステムを採用することが時間の短縮に繋がる。そうした協業の可能性も見据えた統合になるだろう、と私は考える。**PSR**

Indonesia Report

By Akihiro Komuro, Research Analyst, Far East and Southeast Asia

South Korea's LG Energy Withdraws Expansion Plans



*Akihiro
Komuro*

LG Energy Solution, a major company in South Korea, has withdrawn its investment plan for a materials factory. The company cited a slowdown in the electric vehicle (EV) market and a diminishing competitive advantage in Indonesia, where nickel is widely produced, as reasons for the decision.

Battery production involves processes from material manufacturing to productization, and the withdrawn plans included the construction of a nickel smelter for the main

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Indonesia Report

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According to the Indonesian government, China's Huayou Holding Group will take over the plan, and LG Energy's decision to withdraw is attributed to the slowdown in the EV market.

cathode material, as well as the production of cathode precursors and other materials.

Announced in 2022 in collaboration with an Indonesian state-owned enterprise, the plan had an estimated total investment of \$7.7 billion. According to the Indonesian government, China's Huayou Holding Group will take over the plan, and LG Energy's decision to withdraw is attributed to the slowdown in the EV market. LG Energy's revenue for the fiscal year ended December 2024 decreased by 24% year-over-year to 25.62 trillion won (approximately 2.7 trillion yen), while operating profit plummeted by 73% to 575 billion won.

LG Energy operates a battery factory in Indonesia in partnership with Hyundai Motor Company of South Korea. However, Hyundai, LG Energy's main customer, is facing intense price competition from Chinese companies, such as BYD. This has led to sluggish battery sales.

Hyundai Motor's market share plummeted from 44% in 2023 to 6% in 2024. LG Energy is now exporting 98% of the batteries produced in 2024 — equivalent to approximately 93,000 electric vehicles (EVs) — to countries such as South Korea and India, as securing EV demand in Indonesia has proven difficult.

At the end of its April earnings conference, the company's chief financial officer stated that it would "streamline operations to prepare for the risk of a downturn in demand." The company also revealed that it would reduce its capital investment for 2025 by more than 30% from the previous year.

Regarding ongoing projects, the company said it would "adjust the scale and speed of expansion." The battery factory that operates jointly with Hyundai Motor plans to invest \$2 billion to increase production capacity, but the outlook is uncertain.

Plans for a battery factory being developed by China's CATL in Indonesia are also uncertain.

The company plans to invest \$1.18 billion with the state-owned Indonesia Battery Corporation (IBC) to build a factory with an annual production capacity of 15 gigawatt hours. Investment in half of the annual production capacity is already underway as the first phase.

CATL emphasizes that "there are no major changes to the plan at this stage." However, in late April, an official from Indonesia's Ministry of Investment and Downstream Industries stated that the production scale could be cut in half due to factors such as the slowdown in the EV market.

He also stated that the scale and speed of ongoing projects would be adjusted. There are plans to invest \$2 billion at the battery factory jointly operated with Hyundai Motor to increase production capacity, but the outlook is uncertain.

Plans for a battery factory under construction by China's CATL in Indonesia are also facing uncertainty.

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Various companies are also revising their investment plans due to changes in the raw materials used for EV batteries.

CATL plans to invest \$1.18 billion with the state-owned holding company Indonesia Battery Corporation (IBC) to build a factory with an annual production capacity of 15 gigawatt hours. Investment in half of the annual production capacity is underway in the first phase.

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Various companies are also revising their investment plans due to changes in the raw materials used for EV batteries. According to the International Energy Agency (IEA), the proportion of EVs sold worldwide equipped with nickel-based NMC batteries will drop to 50% by 2024. Meanwhile, the share of nickel-free LFP batteries will rise to 50%. Many of the Chinese companies that dominate the Southeast Asian EV market are adopting cheaper LFP batteries, and most EVs in Indonesia are equipped with them.

Battery companies have established factories in Indonesia because the country accounts for 60% of the world's nickel ore production and was expected to become one of Southeast Asia's leading EV industry hubs. However, as trends in battery raw materials change, the advantages of establishing factories in this "nickel-rich" country are diminishing.

Demand for NMC batteries is strong in the U.S. and Europe. Amid the Trump administration's 25% tariffs on automobiles and parts, LG Energy is planning to increase battery production in the region.


Source: The Nikkei

PSR Analysis: As of the end of 2024, LFP (lithium iron phosphate) batteries accounted for 60% of EV battery packs in the Chinese market, where they are rapidly gaining popularity. Although adoption outside of China remains limited, nickel-free batteries are expected to gain further traction in the global market. Demand for the diversification of mineral supply chains in Europe and the U.S. is creating headwinds for batteries that rely on nickel and cobalt.

According to various reports, nickel-free batteries are expected to account for over half of the global market by around 2030. Currently, the battery industry is the most heavily invested sector, with rapid progress in development, including in human resources.

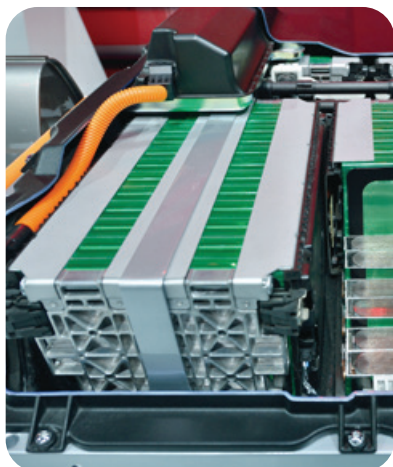
Indonesia produces about 60% of the world's nickel and has tightened export restrictions, designating nickel a strategic material to foster domestic industries. However, achieving this goal appears challenging. **PSR**

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東南アジア > インドネシアレポート:

小室 明大 – 極東及び東南アジア リサーチアナリスト

インドネシアEV電池、投資減速の兆し 韓国LGエネが計画撤回

韓国大手LGエネルギーソリューションは材料工場への投資計画を撤回した。EV市場の減速に加え、インドネシアで多く産出されるニッケルを使わないタイプの電池が広まるなか、同国の生産拠点としての優位性は薄れている。各社は欧米などへ投資する可能性がある。

LGエネは4月下旬、インドネシアでEV電池の材料開発の計画を撤回するとの声明を出した。電池の生産には材料の製造から製品化までの工程がある。同社が今回取り下げたのは、主要素材の正極材に使われるニッケルの製錬所を設けるだけでなく、正極材のもととなる前駆体などの材料を製造する計画だ。インドネシアの国営企業と組んだ計画案を2022年に公表。投資額は総額77億ドル（約1兆800億円）を見込んでいた。

同国政府によると、計画そのものは中国の華友控股集团が引き継ぐものの、LGエネが撤退を決めた背景にはEV市場の減速がある。LGエネの24年12月期売上高は前の期比24%減の25兆6200億ウォン（約2兆7000億円）、営業利益は73%減の5750億ウォンに落ち込んだ。

LGエネはインドネシアで韓国の現代自動車と共同で電池工場を運営している。だが主要顧客である現代自がBYDなど中国勢からの価格攻勢を受け、電池販売が振るわない。

現代自のシェアは23年の44%から24年は6%に急落。LGエネは同国でのEV需要が得られにくくなり、24年に生産した約9万3000台のEVに相当する電池のうち、98%分を韓国やインドなど国外に輸出する状況になっている。


同社の最高財務責任者は4月末の決算発表会で「需要の下振れリスクに備えた業務の効率化を進める」と語った。25年に予定する設備投資額を前年比30%以上減らすことを明らかにした。

進行中のプロジェクトについても「拡大規模やスピードを調整する」と述べた。現代自と共同運営する電池工場では、20億ドルを投じて生産能力を高める計画があるが、暗雲が漂う。

中国のCATLがインドネシアで建設を進める電池工場の計画も、順調に進展するかどうかが見通せない状況にある。

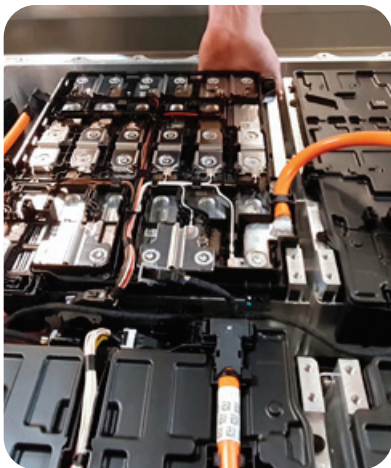
同社は国営持ち株会社インドネシア・バッテリー・コーポレーション（IBC）と共同で総額11億8000万ドルを投じ、年産能力15ギガワット時の工場を建設する計画を持つ。このうち半分の年産能力への投資については第1期として動き出している。

CATLは「現時点で計画の大きな変更はない」と強調する。ただインドネシアの投資・下流化省幹部は4月下旬、EV市場の減速などを理由に、生産規模が最終的な計画から半減する可能性があると言った。

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各社による投資計画の見直しは、EV電池に使われる原料が変化していることも背景にある。国際エネルギー機関 (IEA) によると、24年には世界で販売されたEVのうち、ニッケルを使ったNMC電池を搭載する車両の割合は50%まで低下した。一方、ニッケルを使わないLFP電池は50%に上昇した。東南アジアのEV市場を席巻する中国勢の多くは安価なLFP電池を採用する。インドネシアではEVの大半がLFP電池を搭載する。

これまで電池各社が同国に工場を構えてきたのは、同国がニッケル鉱石で世界採掘量の6割を占め、東南アジア有数のEV産業集積地になるとみられていたからだ。ただ電池原料のトレンドが変わりつつあるなか、各社が「ニッケル大国」の同国に工場を構える利点が小さくなっている。

NMC電池の需要は米国や欧州が大きい。トランプ米政権が自動車や部品に25%の関税を課すなか、LGエネは北米8カ所の生産拠点を中心に電池を増産する計画だ。ハンガリーで電池工場を建設中のCATLはインドネシア以外での投資を優先する可能性がある。

参考: 日経 (一部筆者により元記事内容を改編しました)

PSR 分析: LFP (リン酸鉄リチウム) 電池は中国市場で急速に普及し、2024年末時点でEV/バッテリーパックの6割を占めている。中国以外の地域での採用は限定的だが、今後はグローバル市場でもニッケルフリー化が一段と進行する見込みだ。欧米の鉱物サプライチェーンの多様化への要求によって、ニッケルやコバルトに依存するバッテリーへの逆風がある。さまざまなレポートを分析すると、概ね2030年頃にはニッケルフリー電池はグローバル市場での過半数を占めるものと予測されている。電池の世界は現在最も多くの投資が行われており、人的資源も含めて開発が進められている。

インドネシアは世界のニッケルの約60%を生産しており、同国はニッケルの輸出規制を強化して戦略物資とすることで国内の産業育成を目指してきたが、どうやら思惑通りに進めることは難しい情勢だ。 **PSR**

China Report

By Jack Hao, Senior Research Manager - China

Yuchai, XCMG Sign Mutual Development Agreement



Jack
Hao

Yuchai and XCMG have signed an agreement to jointly build and share new channels for overseas development and embark on a new chapter of cooperation in the Eurasian region.

The agreement stipulates that Yuchai and XCMG will establish Yuchai Service Stations and Yuchai Service Training Centers in the Eurasian region to provide technical training and corresponding technical support for XCMG's local dealers and customers. Yuchai also authorizes XCMG as its spare parts

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China Report

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dealer in the Eurasian region. In addition, the two parties will jointly carry out the Blue Ocean Action brand promotion activities in the Eurasian market to enhance their international brand influence.

It is reported that XCMG, which sells construction machinery and tractors equipped with Yuchai engines in the Eurasian region, is one of Yuchai's core OEMs in the area. After the signing of this strategic agreement, the two sides will further deepen their cooperation and promote the high-quality development of their overseas expansion strategies.

Source: *HCZYW* [Read The Article](#)

PSR Analysis: In 2024, both Yuchai International and XCMG Construction Machinery achieved remarkable growth in their overseas market revenues. Yuchai International's total revenue reached \$2.665 billion USD (19.134 billion yuan) by December 31, 2024, with a year-on-year increase of 6.02%, and its net profit attributable to shareholders grew by 13.15% to \$44.98 million USD (323 million yuan). The company's overseas market revenue surged by over 42%, with products exported to more than 180 countries and regions.

Notably, a power generation project in the Middle East, involving 153 generator sets, marked the largest single overseas export order for power generation that year. Additionally, the joint venture between Yuchai International and MTU sold approximately 700 diesel generator sets in 2024, successfully turning the business around from losses to profits.

XCMG Construction Machinery also saw robust overseas performance, with an overseas market revenue of \$5.81 billion US dollars (41.687 billion yuan) in 2024, representing a year-on-year increase of 12.00% and accounting for 45.48% of its total annual operating revenue. In the first quarter of 2025, this revenue continued to grow, reaching \$3.049 billion USD (21.9 billion yuan), up by 4.8% year-on-year.

To drive this growth, XCMG has focused on in-depth localization operations, establishing an integrated global development model that includes export trade, greenfield investments, cross-border mergers and acquisitions, and global R&D.

The company has also emphasized the development and promotion of high-end and new energy products, with revenues from these segments growing by more than 10% and 26.76% year-on-year, respectively. XCMG's products are exported to over 190 countries and regions, covering more than 95% of the Belt and Road countries and regions, supported by a global network of over 40 subsidiaries and 2,000 service and spare parts outlets.

Building on these successes, Yuchai and XCMG have signed an International Strategic Cooperation Agreement to further expand their global presence. This partnership will combine Yuchai's strengths in power solutions and XCMG's extensive global network and localization capabilities, aiming to enhance market share and drive sustainable growth in international markets. **PSR**

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Russia Report

By *Maxim Sakov*, Market Consultant, Russia Operations

Editor's Note: Power Systems Research has paused all research and business development activities in Russia. We maintained an important presence in Russia from 2013-2022 to bring important updates to our clients about the powered equipment markets within Russia. We are continuing to monitor the current situation and hope to again establish this presence when the conflict with Ukraine is resolved. Please contact us at info@powersys.com if you have questions regarding business conditions in Russia. Thank you. **PSR**

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