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Alternative Power Report

By *Guy Youngs*, Forecast & Adoption Lead



Tesla Breaks Ground for Diner with Theater and Supercharger



*Guy
Youngs*

Tesla has broken ground on the site of its planned futuristic diner with a drive-in theatre and Supercharger station. This project has been in the works for several years. In 2018, Elon Musk said that Tesla planned to open an “old school drive-in, (with) roller skates & rock restaurant at one of the new Tesla Supercharger locations in Los Angeles.”

A few months later, Tesla applied for building permits for “a restaurant and Supercharger station” at a location in Santa Monica. However, the project stalled for a long time, apparently due to local regulations. Nevertheless, Tesla still moved forward with a Supercharger at the location, but it had to move the diner project to Hollywood. Last year, Tesla filed the construction plans with the city, giving us the first look at what the automaker intends to build.

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

PSR Analysis: Last year we ran an article about Tesla working to improve the charging experience and they even opened a swimming pool for use while drivers charge their vehicles. Now, Tesla is creating a charging destination, and this is blurring the lines – is it a restaurant with charging facilities or a charging location with added facilities? Either way it should improve the experience of charging your car.

Lithium Deposit In Extinct Nevada Volcano Could Be World's Largest

The Chinese were way ahead of the rest of the world when it came to recognising the value of lithium. While most nations slept, China was busy identifying lithium deposits around the world and either buying them or negotiating deals with those who may not have fully appreciated lithium's value.

It incentivized others to seek alternatives. New companies sprang up to extract lithium from salt brine, especially in the Salton Sea area of California. But these are years away from being able to supply America's and the world's needs.

On Aug. 30, 2023, three researchers published a paper in the journal *Science Advances* in which they reported the discovery of what may be the largest lithium deposit known to exist anywhere in the world--inside an extinct volcano in Nevada near the Oregon border.

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

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Alternative Power Report

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It is believed that 20 to 40 million (some say 120 million) tons of lithium metal lie within a volcanic crater formed around 16 million years ago.

PSR Analysis: It is believed that 20 to 40 million (some say 120 million) tons of lithium metal lie within a volcanic crater formed around 16 million years ago. Either way, that's more than the deposits found beneath a Bolivian salt flat, which up until now has been considered the largest in the world. With mining potentially to start in 2026 this is a real game changer and could significantly reduce the price of lithium, and hence EVs.

Both Battery and Hydrogen Fuel Cars Needed

When discussions take place about Alternative power systems, (hydrogen fuel cells or battery electric engines), experts often fall into one camp or the other.

Proponents of each technology have been vocal in spotlighting the benefits they have to provide. Often, they will compare battery electric to hydrogen fuel cell performances, particularly when it comes to vehicles. However, experts are now coming to the conclusion that it's not really a matter of deciding which technology will win out and which will disappear. Instead, each form of clean power will find its place, as each has strengths in specific areas. The main points of debate are Efficiency, Infrastructure and Environmental impact.

Source: *Hydrogen Fuel News* [Read The Article](#)

PSR Analysis: It's good to see that experts are finally agreeing that both technologies will play a part – the conclusion is that each has its own strength – EV's for small to medium applications and FCEV for heavy duty application such as heavy trucks, trains and ships, and we can expect to see them each dominating in their own areas.

EU May Impose Tariffs on Chinese EVs

In her annual State of The EU address on Sept. 13, 2023, European Commission President Ursula von der Leyen suggested that Chinese manufacturers are dumping Chinese EVs on EU customers that are priced below what domestic manufacturers charge.

She suggested that the root cause of the problem is the heavy subsidies provided to Chinese automakers by the central government — subsidies that allow them to sell Chinese EVs at artificially low prices to the detriment of domestic companies. If so, she warned the EU would consider imposing new tariffs on Chinese cars to level the playing field.

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

PSR Analysis: This is a complex issue with some industry experts luke warm about this. On one side we have cheap EVs, so that's a win for the environment, but on the other we may have state subsidies creating an unfair competition. At this stage all we can do is wait for the result of the investigation. **PSR**

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Global Report



*Jim
Downey*

Global Economy Seeing Modest Growth with Positive Outlook

By Jim Downey, Vice President-Global Data Products

SUMMARY. Many factors are pointing to modest growth in Q3 2023. This should lead to total production globally growing at +2.4% in 2023 vs 2022 (it was 2.6% in Q2 2023), and the outlook for the next few years remains positive with growth accelerating from 2025. Apart from Russia and Ukraine, the main countries to show a decline are South Korea, Slovakia, Netherlands. However, the segment picture shows some differences.

Several drivers are influencing the global economic picture.

- Fuel prices eased earlier this year, recently they have grown slightly and are no longer showing signs of easing. This remains a serious issue.
- Supply chains remain constrained and show no signs of improving.
- The war in Ukraine shows no sign of a speedy conclusion, despite recent successes by Ukraine.
- Ukrainian exports of wheat, other grains and fertilizer have declined massively following Russia's ending on the Grain Deal. Alternative routes (overland, and via the Danube) simply don't have the necessary capacity.
- Inflation is easing, but it continues to be a major concern for central banks as they consider raising their interest rates. This will pose a risk to economic growth in all regions. Inflation and price increases are putting OEMs in a difficult situation.
- Risk of recession continues in the background for several countries, notably China, USA and Germany, and this could drag other countries into recession.
- Covid is still lingering with global deaths now at over 6.9 million, and a new variant has the medical world concerned.
- Latent demand for machinery keeps building, which is a positive sign.

On a segment basis globally here is a summary of what we see. For details on the Global Economic Outlook and other forecasts, contact your account manager or call us at +1.651.905.8400.

AGRICULTURAL. The Agricultural sector is showing mixed signs with an overall decline in 2023 (-3.7% - previously 4.4% in Q2 2023) but with growth from 2024. The average growth rate to 2028 is +1.7%. The USA is expected to decline in 2024 but remains positive for the other forecast years.

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Global Report

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CONSTRUCTION. The global construction equipment sector is expected to decline by -4.8% in 2023 (-2.8% in the previous quarter) and is expected to bounce back slowly in 2024 and for the rest of the forecast period. The USA (-3.5%) is expected to decline in 2023 and also in 2024 (-3.0%) before returning to positive growth.

INDUSTRIAL. The Industrial Segment is expected to continue to show positive growth throughout the forecast period with 2023 and 2024 growing at 1.5% (1.6% in Q2 2023) and 1.1% (2.2% in Q2 2023), respectively. The USA is the largest manufacturer in this segment, and it is expected to grow every year during the forecast period except for 2024 where it is forecast to decline by -2.1%.

LAWN & GARDEN. This segment is expected to show growth is expected to remain positive in 2023 but to decline in 2024 before recovering throughout the forecast period. The average growth during the forecast period is expected to be +2.7%. The USA is the largest producer for this sector with almost half of the total volume, so a fall in 2024 (-1.9%), contributes significantly to the 2024 market decline.

LIGHT COMMERCIAL VEHICLES. This segment is expected to remain positive throughout the forecast period with growth of between 2.0% and 5.0%. The top three countries show growth throughout the forecast period with China averaging +4.3%, USA +2.6% and Mexico +3.7%.

MARINE AUXILIARY/MARINE PROPULSION. After strong recoveries in 2021 and 2022, these Marine segments are expected to show modest growth from 0.6% to 1.9% during the years out to 2028.

MEDIUM & HEAVY VEHICLES. This segment is expected to grow in 2023 (+3.7%) but for the remaining years growth is a bit erratic as it ranges from -3.4% (in 2024) to +5.1%. The world's largest producing country (China) remains strongly positive during the forecast period with growth ranging from 3.0% to 7.9%.

PASSENGER CARS/MINIVANS & SUVs. These segments were heavily affected by the pandemic, but despite this situation, growth in 2023 is expected to be +2.9%, and remains positive for most the rest of the forecast period with growth ranging from 1.5% to 4.7%.

POWER GENERATION. Power generation is expected to grow strongly during the forecast period with growth ranging from +2.3% to +5.1%.

RAILWAY. Global railway production is expected to grow strongly throughout the forecast period with an average growth rate of +6.0%.

RECREATIONAL PRODUCTS. This segment follows consumer products and includes items such as motorcycles, ATVs, scooters, personal watercraft, and snowmobiles. Now with higher inflation and rising costs 2023 market's growth is slowing to +2.0% (+3.0% in Q2 2023). The key factors to better performance in

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Global Report

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Motorcycle purists either love them or hate them, but electric motorcycles are fast becoming a popular reality.

recreational products are affordable personal transportation, significant demand for these products, the impact of electrification and higher consumer spending with more disposable income.

ALTERNATIVE POWER. After growth of +8.0% in 2022 (+7.6%), Battery Electric is expected to grow at between +6.7% in 2023 and then on between +10.2% and +11.9%. ICE applications on the other hand are growing much slower with +1.7% in 2023 and from then on growth rates are between +0.9% and +2.8%. Battery Electric is expected to grow from 13.5% of the market in 2023 to 20.2% by 2028, while during the same period ICEs are expected to decline from 84.2% of the market to 75.8% in 2028. **PSR**



Michael
Aistrup

E-Motorcycle Product Report

By *Michael Aistrup, Senior Analyst*

Motorcycle purists either love them or hate them, but electric motorcycles are fast becoming a popular reality. From daily commuters to off-roading to track racing, we've seen all kinds of electric bikes hit the road over the past couple of years. There's an increasing array of e-bikes catering to riders of all shapes, sizes, and kinds coming to market.

Here is a small sample of some of the leading OEMs and their electric motorcycle products.

Can-AM/BRP. The first Can-Am motorcycles are expected to hit the road before the end of 2024. The Canadian Can-AM team is testing bikes in all possible usage conditions, and early feedback from test riders is that two new models deliver a powerful and smooth riding experience. The models include the **Can-Am Origin** dual-sport and **Can-Am Pulse** street bike, both slated to launch in mid-2024. Both models are still undergoing testing while construction is underway for a new plant in Querétaro, Mexico, which will produce the electric bikes.

Energica. Energica claims that the **Ego** is "the world's most powerful and advanced electric motorcycle." The Ego, which has been available since 2015 has an aggressive sport bike riding position, and produces a claimed 169 hp and 164 foot-pounds of torque. Energica claims the Ego can do 0 to 60 mph in 2.8 seconds and has a mileage range of 160 miles. The Energica Ego's MSRP is \$25,600.

Zero Motorcycles. Zero has made adjustments to the riding ergonomics so its bike is more comfortable and upright. Zero has put a more emphasis on street rider concerns, such as a 60-minute fast charge time and a claimed range of 187 city miles. The SR/S still brings good performance numbers, with 140 foot-pounds of torque and a claimed 110 horsepower. The Zero **SR/S** has an MSRP of \$23,995.

Harley Davidson. LiveWire is Harley Davidson's dedicated EV brand. The follow-up to the original Harley Davidson LiveWire is the **LiveWire S2 Del Mar**. Lighter and

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Global Report

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cheaper than the original, it's the first bike produced since LiveWire was set up as an independent operation.

The S2 Del has had such rave reviews, that the 100-limit **Launch Edition** sold out in 18 minutes in the US. The bike's famous electric torque provides a very nimble 0-62mph in less than four seconds. Powered by an 10.5kWh battery with a 59.6 kW electric motor, the S2 Del Mar sports innovative architecture--the battery forms part of the bike's overall structure, saving some 50 kilos. The aim is to get 100 miles out-and-about in town and for an everyday commuter, this bike has been branded 'the goldilocks' of electric bikes.

KTM E-Duke. The already popular **KTM Duke** core model is being duplicated for electric power. Expected to be based on sibling brand **Husqvarna's E-Pilen**, the two bikes are being built on the same platform but will sport differences. The KTM E-Duke is expected to use a 5.5.kWh fixed battery pack, as opposed to the removable one on the E-Pilen. Both bikes, however, will have a similar frame and swingarm and the same 10kW motor - enough to get about town and recharge quickly. The electric KTM street bike has no set launch date, though there are rumors of an autumn release.

Kawasaki Z EV. Expected to make its debut later this year, the **Kawasaki Z EV** is part of a duo, making up Kawasaki's new zero-emission range, which also includes a Kawasaki Ninja EV. The electric motor is expected to have between 10-20kW output and uses familiar road bike suspension, akin to the Ninja 650. The Z EV, however, will be a smaller electric bike. While details are sparse, the Z EV displays Kawasaki's signature styling.

Triumph TE-1. Now in the final phase of testing, the **Triumph TE-1** has all the specs to make it a commercial success. The TE-1 has 100 miles of range and charges 0 to 80% in 20 minutes. That speedy recharging window is useful, as Triumph claims it'll do 0-100mph in 6.2 seconds. Triumph is aiming to develop the TE-1's performance to match the **Speed Triple 1200**. That's why the TE-1 pushes 175bhp, at a peak torque of 109Nm. There'll be refined electronics, such as traction control and front wheel lift control.

The introduction of charging station ecosystems, declining battery costs, and the development of battery management technologies by major market players is contributing to the electric motorcycle industry growth. Additionally, the inclusion of telematics, cellular connectivity, and improvement in aerodynamic characteristics of vehicles, are creating new opportunities for electric motorcycle industry development. **PSR**

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Production climbed sharply in 2022, increasing by 24,686 units, or 14.6%, from 2021. We expect production to climb in 2023 as well, growing by about 3,725 units or 2%.

DATAPOINT: North America Scooters / Minibikes / Mopeds

197,500

By Carol Turner, Senior Analyst, Global Operations

197,500 units is the estimate by Power Systems Research of the number of Scooters/Minibikes/Mopeds expected to be produced in North America in 2023.

Scooters/Minibikes/Mopeds are motorized 2-wheeled vehicles used primarily for recreational.

Production climbed sharply in 2022, increasing by 24,686 units, or 14.6%, from 2021. We expect production to climb in 2023 as well, growing by about 3,725 units or 2%.

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.

Market Share: With 58% of total units produced, Honda leads in production of Scooters in NA. In second position is Italika with 42%. Third is US-based Go-Ped with 225 units.

Applications:

- Honda manufactures scooters that include models Cruising 125, DIO110, Elite Series, ADV150, PCX150, Ruckus & Metropolitan. NAVI (motorcycle crossover) produced at the Tapukara plant in Rajasthan.
- Italika manufactures a complete line up of scooters (motoneta) for industry related needs.
- Go-Ped manufactures a variety of gas scooters (12 models plus 2 electric).

Trends: In 2022, production of Scooters in NA increased 14.6%. It is expected that production will gain nearly 2% in 2023. Despite Honda having record lows in 2020, production at Honda has rallied in subsequent years, as it has at Italika. Honda reported 2020 sales of only 47,851 units, down more than 5 million units or 24% from 2019, but rallied in 2021 to post scooter sales of 90,128 units.

Increased demand for efficient and eco-friendly models will boost the electric scooter market along with the threat of rising gas prices. Not only are scooters convenient and offer independence, but they also provide faster commutes as opposed to using other modes of transportation; electric models are also extremely popular. Expect production of scooters to increase 15% by 2025.

Battery Electric.

2021: 3622
2022: 4056
2023: 4039

Bell Custom Cycles 13 *
Go-Ped Werx 56
Z Electric Vehicle 3987 *

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DataPoint Report

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2022: * Exclusively electric

In 2022, production of Electric Scooters in NA increased nearly 12% over 2021. Production is expected to be flat in 2023. **PSR**

Europe Report

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

2023 Cannes Yachting Festival Sets Records



*Natasa
Mulahalilovic*

The 46th Cannes Yachting Festival was the largest one ever, hosting 610 exhibitors and 705 boats. The Cannes Yachting Festival remains the largest and the most visited European pleasure boat show organized on the water.

The show's organizers said the event has never hosted that many motor and sailing, mono and multi hulls, outboard boats, ribs and semi-rigid boats, tenders, electric, hydro-foiling, and other types of boats.

The show ran Sept. 12-17, offering six days of meetings and exchange with boat builders, engine and equipment manufacturers, designers and architects and other professionals from the pleasure marine industry.

The event hosted by a beautiful Mediterranean Cannes attracted 55,000 visitors coming from more than 130 worldwide countries. As usual, it was organized in two locations in the city, Vieux Port and Port Conto des Cannes. Motorboats and yachts in all sizes and with all propulsion types were displayed at the Vieux Port and sailing yachts and catamarans at the Port Canto des Cannes.

The Vieux Port, including Palais des Festival, hosted 540 motor boats and yachts this year. Brands with a long international presence have taken place into the event, as Azimut-Bennetti Group, Ferretti Group, San Lorenzo Group, Princess Yachts, Fairline, Sunseeker, Pershing, Sirena Yachts, Arcadia, Galeon, Cranchi, Marex, Windy, etc. More than 70 yachts over 22 meters have had the highest level of visits.

The "Green Route" grouped all motorboat builders and technologically advanced companies moving to carbon free recreational boating. Representatives of Power Systems Research met with manufacturers such as Candela, Edorado, Elvene, Cosmopolitan Yachts, Sunreef and others to learn more about how the industry is converting to electrification.

Marine propulsion engine and power generation manufacturers, hybrid, electric/battery, alternative fuel solutions developers, such as MAN, Yanmar, FPT Industries, Rolls-Royce MTU, ZF Aftermarket, e-Motion, CmC Marine, Volvo Penta, Fischer Panda, Bellmarine, EPTechnologies, Vulkan, Integrel presented their latest innovations and shared with us their views on the marine pleasure market trends.

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Eurpoe Report

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About 115 sailing boats and catamarans built by Oyster, Southern Yachts, Ice Yachts, Elan, Fountaine Pajot, Dufour, Beneteau Group, Swan, Bali, Catana, Bavaria, Hanse Yachts, Lagoon, Sunreef, Windelo and many others were displayed at Port Canto. Thirty yachts had their world premieres. The most interest was shown in boats driven by sun (solar panels), wind (sails, eoliennes), and water (hydrogeneration), supported by an appropriate pure electric or electric/hybrid drive.

The presence of numerous hydro-foiling/electric boats and on-going projects was surprising. In size up to 10 meters and driven by electric engines, hydro-foiling boats are specifically designed to be equally performant and sustainable. They are becoming more popular among the younger generation of boaters since they offer a unique, fast, and clean water experience. **PSR**

Brazil/South America Report

By Fabio Ferraresi, Director Business Development South America

Brazil To Become Hub for EV Bus Chassis Production



*Fabio
Ferraresi*

Mercedes is exhibiting its electric bus chassis e0500U at Busworld in Brussels targeting other markets where the body is assembled over the bus chassis. Traditionally, the exports of Mercedes from Brazil are over 50% of the total production and it targets to expand this percentage with the new BEV, that has WEG drives, BorgWarner batteries assembled in Brazil with imported battery supplies.

Source: *Valor Economico* [Read The Article](#)

PSR Analysis: While the push from São Paulo city to buy only BEV buses in the near future jeopardizes current chassis manufacturers business, it boos the development of BEV chassis and allow exports to other countries. Mercedes runs against the clock to compete with players like BYD and Higher with BEV chassis already developed. **PSR**

Brazil's School Bus Program Postponed

Initially scheduled to begin Sept. 12, 2023, the auction of the federal program "Caminhos da Escola" was postponed indefinitely. A new date has not been set. The new stage, which provides for the purchase of 163,000 buses was eagerly awaited by chassis and body manufacturers, would have been delayed until 2024 because of the time needed for the production.

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South America Report

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The Azure A12 BR electric bus, from China's TEVX Higer, has started operating in the South Zone of São Paulo. The vehicle has been put into use by Transwolff and will be in operation for two weeks.

The reason is technical: according to the bidding notice published at the end of last month, important chassis manufacturers as Volvo and Mercedes would be excluded from the bidding process due to new certification demanded.

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

PSR Analysis: While the actual sales and registration will become effective only in 2024, part of the chassis will be produced in 2023. The volume will impact positively bus production and therefore the MHV market in Brazil. However, the program depends on the government to overcome bureaucracy and slowness to move with the long-awaited program. **PSR**

Higer Azure Electric Bus Debuts in São Paulo

The Azure A12 BR electric bus, from China's TEVX Higer, has started operating in the South Zone of São Paulo. The vehicle has been put into use by Transwolff and will be in operation for two weeks. According to the company, the 12-meter-long vehicle was made especially for the Brazilian market. It has a low floor and a suspension "kneeling" system. This feature provides more safety, comfort, and ease when boarding and disembarking passengers.

The bus has wide aisles and an access ramp at the central door. Thus, there is more accessibility for people with special needs related to reduced mobility.

The bus has a range of 270 km and the capacity to carry up to 85 passengers. Its recharge time is four hours. With more than 9,000 units in circulation in 138 countries, the Azure A12 BR is undergoing its second set of tests in São Paulo and will soon arrive in the city.

In addition to São Paulo, the city of Cascavel, in Paraná, also has buses from the Chinese company TEVX Higer in its fleet. In May, the city signed a contract for the acquisition of 15 vehicles. It was the first contract in Brazil for the purchase of electric buses of this brand, with a contract of R\$ 43 Million, about US\$ 9 Million.

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

PSR Analysis: Higer is another OEM looking to supply vehicles to bus operators in São Paulo city, which is expected to buy 2,400 BEV bus for 2024, but it will face well-established competition from Mercedes and BYD. **PSR**

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Far East: Japan Report

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



*Akihiro
Komuro*

Komatsu says it will launch the PC05E-1 electric micro excavator, jointly developed with Honda, in the Japanese market in October. In the domestic construction equipment market, where the electrification market has not yet been developed, Komatsu plans to quickly create a market to achieve carbon neutrality by 2050 by introducing a variety of models.

The machine is an expanded version of the PC01E-1 electric micro excavator, which was introduced to the domestic market in March 2022. The current "PC05-1" micro excavator, which is widely used for small civil engineering and construction work as well as gas, electric and plumbing sites, has been electrified by installing the Honda Mobile Power Pack e: or electric power unit (eGX) as a power source, like the "PC01E-1". Komatsu aims to achieve electrification by FY2023.

Komatsu has set FY2023 as the first year for introducing electrified construction equipment to the market, and the release of the "PC05E-1" electric micro excavator is the third phase of this plan.

Source: Komatsu News Release

PSR Analysis: As Komatsu noted in its official press release, the market for electric construction equipment has not been developed in Japan. However, Komatsu intends to lead development of the market by introducing a model ahead of competitors.

The sales target is 50 units per year in Japan, most of which will probably be sold to rental companies, but this is a realistic goal. One of the features of this model is the use of Honda's replaceable battery pack. This battery pack has already been developed by Honda for electric motorcycles, and although it has a small capacity, it has excellent portability, and its adoption should have had the advantage of reducing development costs. **PSR**

極東 > 日本レポート:

小室 明大 – 極東及び東南アジア リサーチアナリスト

コマツ、Hondaと共同開発した電動マイクロショベル「PC05E-1」を10月より国内で発売

コマツはHondaと共同開発した電動マイクロショベル「PC05E-1」を10月より国内市場で発売すると発表した。電動化市場がまだ形成されていない国内

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Far East Report

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の建設機械市場において、多様な機種を導入し顧客のニーズに応えることで2050年のカーボンニュートラル実現へ向けた早期の市場形成を目指す。当該機は、2022年3月より国内市場に導入している電動マイクロショベル「PC01E-1」の系列拡大機種だ。小規模な土木・建築工事やガス・電気・配管工事などの現場で利用されることの多い現行のマイクロショベル「PC05-1」に、「PC01E-1」と同様に動力源としてHonda Mobile Power Pack e:や電動パワーユニット(eGX)を搭載することで電動化を実現している。

コマツは2023年度を電動化建機の市場導入元年と位置付けており、今回の電動マイクロショベル「PC05E-1」の発売はその第三弾となる。

参考: コマツニュースリリース (一部筆者により元記事内容を改編しました)

PSR 分析: 建機の電動化については、コマツが公式のニュースリリースでも触れている通り、国内にはまだ市場は形成されていない。だがこうしたモデルを他メーカーに先行して市場に投入することで先行者として市場を開拓しようという意図は明らかだ。販売目標は国内50台/年ということで、おそらく多くがレンタル会社に向けた販売になると思うが、現実的な目標値だと評価できる。特徴としてはやはりホンダの交換式バッテリーパックを採用している点だ。これはすでにHondaが電動二輪向けに開発したものであり、容量こそ小さいが、可搬性に優れており、これを採用することで開発コストを抑えられるというメリットもあったはずだ。 **PSR**

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Southeast Asia: Malaysia Report

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

Malaysia's Proton Considers Building EV Plant in Thailand

Malaysian state-owned carmaker Proton is considering building an EV plant in Thailand, according to reports from Thailand government officials. The Thai government has long focused on promoting related industries.

At a joint press conference with the Prime Minister of Malaysia, where he is visiting, the Thai Prime Minister said, "I hope we can confirm clear steps to invite the plant and proceed quickly," and indicated that he plans to work out the details with the parties involved soon. The amount of investment and production capacity were not disclosed.

Proton was established in 1983 as a national policy to revive Malaysia's automotive industry. Currently, the company is rushing to switch to EVs after receiving an investment from Geely, a private Chinese automotive giant.

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Southeast Asia Report

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It is well known that many countries in Southeast Asia have positioned the automotive industry as a pillar of their manufacturing industries and have attracted foreign investment, many of which have come from Japan.

The Thai government is working to attract EV factories by offering subsidies of up to 150,000 baht (about \$4,100) for EVs priced at 2 million baht (about \$55,000) or less, with local production starting in 2024.

Chinese manufacturers have a large presence in the Thai EV industry: BYD accounts for 30% of EV sales in Thailand and plans to build an EV plant in the eastern province of Rayong; SAIC Motor and GWM also plan local production.

Source: The Nikkei

PSR Analysis: It is well known that many countries in Southeast Asia have positioned the automotive industry as a pillar of their manufacturing industries and have attracted foreign investment, many of which have come from Japan. The proportion of Japanese cars is still very high in some countries and regions. Europe and the U.S. have taken a step back to observe Southeast Asia, considering the time and cost required to establish a local supply chain and sales network.

However, some have expressed concern about China's aggressive investment in such markets. They see Southeast Asia as having to choose between the liberal economies of Japan and the United States and the control-oriented economy of China.

But the reality is not so simple. Southeast Asian countries have strong feelings about their own brands, such as Vietnam's VINFAST. They can be a symbol of economic development. Proton has had its ups and downs, but it has been successful and has maintained a certain market share in Malaysia, and if it can successfully adapt to the EV shift, there is a good chance that Proton will have success in Thailand, the kingdom of the automotive industry in Southeast Asia. **PSR**

東南アジア > マレーシアレポート:

小室 明大 – 極東及び東南アジア リサーチアナリスト

マレーシア・プロトン、タイにEV工場建設を検討

タイの首相はマレーシアの国民車メーカー、プロトンがタイでEV工場の建設を検討していることを明らかにした。タイ政府はかねて関連産業の育成に力を入れている。

タイの首相は訪問先のマレーシアの首相との共同記者会見で、「工場誘致の明確なステップを確認し、迅速に進められるよう期待している」と述べ、近く関係者らと詳細を詰める方針を示した。投資額や生産能力などは明らかにしていない。

プロトンはマレーシアの自動車産業を興すために国策として1983年に設立された。現在は中国の民営自動車大手のGeelyから出資を受けて、EVへのシフトを急いでいる。

タイ政府は2024年からの現地生産を条件に、価格が200万バーツ（約55,000ド

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Southeast Asia Report

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ル) 以下のEVに最大15万パーツ(約4,100ドル)の補助金を支給するなど、EV工場の誘致に取り組んでいる。

タイのEV産業では中国メーカーの存在感が大きい。BYDがタイのEV販売台数で3割を占め、東部ラヨーン県にEV工場の建設を計画する。SAIC MotorやGWMも現地生産を予定している。

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: 東南アジアの多くの国では自動車産業を自国の製造業の柱と位置づけ、外資からの投資を募ってきたことは周知の事実だが、そうした投資の多くは日本からのものが多かった。一部の国や地域における日本車のシェアは今でも非常に高い。欧州や米国は位置的にも遠く、現地のサプライチェーンの構築や販売を含めたネットワークを構築するための時間とコストの観点から、一歩引いて観察してきた様相だ。だがそうした市場に中国が進出して積極的な投資を行っていることに対して、懸念を表す意見もある。東南アジアは日本や米国の自由主義国と中国の統制主義のどちらを取るのか、と問われている、というような見方だ。だが、現実はそのようなシンプルなものではない。ベトナムのVINFASTが好例のように、東南アジア各国は自国ブランドに対して強い思いがある。経済発展の象徴となり得るからだ。プロトンは浮き沈みを繰り返しながらも成功し、マレーシアでは一定のシェアを保っている。EVシフトの波にうまく適応できれば、プロトンが東南アジアにおける自動車産業王国であるタイで一定の成功を収める可能性は充分にある。 **PSR**

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China Report

By *Jack Hao*, Senior Research Manager - China

FAW Jiefang, CATL Launch New Energy Venture



Jack Hao

FAW Jiefang and CATL have set up a joint venture company, Jiefang (Jilin) New Energy Technology Co., Ltd., to do business in the new energy segment. The company is wholly-owned by Jiefang shidai New Energy Technology Co., Ltd., which is a joint venture between FAW and CATL with each party holding 50% of the JV's shares.

The JV was established to sell new energy vehicles, batteries, battery parts, and electric vehicle charging equipment charging stations; Information system integration services; and Intelligent control system integration. It also will manufacture power transmission and distribution and control equipment.

In August 2022, CATL reached a strategic cooperation agreement with FAW Jiefang, proposing to invest 500 million yuan to establish a subsidiary for

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China Report

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cooperation. CATL's battery business mainly focuses on the passenger car market, and the cooperation between the two sides marks the beginning of CATL's in-depth launch into the new energy commercial vehicle market.

In June, Yutong Heavy Truck signed a five-year strategic cooperation agreement with CATL. The two sides will focus on the heavy truck mainline power exchange market, with the goal of "jointly building a brand with electric vehicles".

In August, CATL and Shaanxi Automobile Group signed a 10-year strategic cooperation agreement, where the two sides will conduct comprehensive cooperation in product research and development, technological innovation, resource allocation, market promotion, and after-sales service.

Commercial vehicles are a huge and diversified market, and the electrification of commercial vehicles is one of the important trends in the global automotive industry transformation. In recent years, the new energy commercial vehicle market has performed outstandingly, showing a good situation of both market size and development quality improvement. The industry predicts that by 2030, the penetration rate of new energy scenarios for commercial vehicles in China will reach over 30%.

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

PSR Analysis. The acceleration of electrification in areas such as urban logistics and distribution, environmental sanitation, waste soil, and concrete mixing transport vehicles in China has pushed traditional commercial vehicle companies to accelerate their electrification launches.

At the same time, the acceleration of electrification by new energy companies such as Sany, XCMG, and Yutong has brought new challenges to traditional commercial vehicle enterprises.

Since 2017, the cooperation between CATL and automotive companies has increased, and we've seen several joint ventures set up within this group. Today, CATL holds 50% of the domestic battery market.

Currently, the cost of power batteries accounts for 40% -60% of the total cost of an automobile. Consequently, car OEMs are working hard to develop alternative solutions. They are trying to develop batteries themselves, while also actively seeking alternative battery suppliers.

A second important strategy in the development of CATL is its launching of battery replacement products as part of its expansion into the commercial vehicle market.

Compared to the passenger car market, electrification in the commercial vehicle market is low, but electrification will continue to accelerate in the future. China's commercial vehicle companies will continue to expand electrification and this process will be accompanied by accelerated industry integration. **PSR**

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Sonalika Group is planning to spend approximately \$100 million to set up a manufacturing facility for the production of tractors aimed at the international export market.

India Report

By *Aditya Kondejkar*, Research Analyst – South Asia Operations.

Sonalika Group Plans \$100 Million for Export Facility



*Aditya
Kondejkar*

Sonalika Group is planning to spend approximately \$100 million to set up a manufacturing facility for the production of tractors aimed at the international export market. Production will be used to developing products tailored to meet customer requirements in Latin America, Europe, United States, Oceania and South Asia

"We are looking at investing \$100 million to set up a dedicated facility for exports. The new unit will have total installed capacity of 100,000 units and will be commissioned within the next two years," according to Gaurav Saxena, director and CEO of the company's International Tractors Ltd., operation.

One-third of the group's revenue is attributed to exports, and the organization aims to be among the world's top three tractor brands by 2030, considering the global sale of 1.5 million tractors. Presently, ITL exports 35,000 units and has set a target to reach 100,000 units within the next seven years.

In light of the current reliance on fossil fuels to operate their tractors, ITL is actively engaged in the development of alternative fuels to power agricultural equipment. The company is in the process of creating a series of agricultural equipment that will be fueled by electricity, hydrogen, and alternative energy sources.

Source: *Entrepreneur/India* [Read The Article](#)

PSR Analysis. We believe The company's move to establish India as an export hub is driven by three primary factors:

- 1. Stringent Emission Norms:** India's adoption of rigorous emission standards in line with global benchmarks allows the company to manufacture products that seamlessly meet international requirements. This enhances the company's competitiveness on the global stage by minimizing the need for costly customizations.
- 2. Economies of Scale:** Centralizing manufacturing operations in India offers the company the advantage of economies of scale. This approach leads to cost savings due to increased production volumes and more efficient resource allocation, ultimately boosting profitability.
- 3. Optimal Resource Utilization:** Concentrating operations in India enables the efficient deployment of resources, such as skilled labor, supply chain networks, and production facilities. The standardization of processes and products promotes resource sharing, reducing redundancy and waste.

By capitalizing on these factors, the company is strategically positioning itself to excel in the global marketplace while simultaneously championing environmental sustainability through strict emission norm adherence. **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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