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Alternative Power

By *Guy Youngs*, Forecast & Adoption Lead

A ‘Failed Experiment’? Biofuels Under Spotlight



*Guy
Youngs*

Unlike America, Europe is struggling to find sources of oil that are either not in Russia nor the Middle East. As a result the European Union has been advised to look again at Biofuels.

On March 31, EU ministers met to discuss the global shortage of around 11million barrels of oil per day. At the meeting, European Commissioner Dan Jørgensen urged nations to outline measures to reduce the use of oil and gas, particularly in transportation.

The effective closure of the Strait of Hormuz has caused panic within Europe. As a result, the EU has been advised to consider biofuels as an alternative to fossil fuels.

The EU’s Renewable Energy Directive requires member states to achieve a 29% share of renewable energy in transport by 2030, including a sub-target for renewable hydrogen and advanced biofuels of 5.5%.t

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

PSR Analysis: The real question is can biofuels actually replace fossil fuels? While it is possible to grow high energy crops on some poor-quality land, it is generally viewed that biofuels are a niche option at best. **PSR**

US Battery Recycler Lands \$1.1B Metals Refining Deal

In Tokyo, at the first Indo-Pacific Energy Security Ministerial and Business Forum, Nth Cycle (a critical metals refining company) signed a massive US\$1.1 billion, 10 year, agreement to provide recycled battery metals.

Refining battery metals in the US and Europe has been difficult to scale up because the more traditional refineries often require billions of dollars in upfront investment, take a long time to get all the necessary permits and require huge amounts of material in order to be profitable.

Nth Cycle says that its process is different and can be operated without the constraints of traditional refineries and is profitable at much smaller scales.

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

PSR Analysis: The world of battery recycling is developing at a fast rate but the real significance of this is the scale – despite being profitable at smaller scales, this deal is for thousands of tons of material. **PSR**

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Alternative Power

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In the UK, petrol is up around 30% and diesel is up around 50%. In the USA, average gas prices were up by 33% in early April.

When Fossil Fuel Supplies Falter, Interest In Renewables Increases

This article reviews how China is helping Cuba shift its dependence from oil to renewable energy, by a series of massive solar parks (92 in total) with a combined output of 2,000 MW (or roughly Cuba's entire current thermal generation from burning fossil fuels).

China has also committed to installing 10,000 photovoltaic systems for isolated homes and critical facilities. China is also investing in Cuba's wind farms.

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

PSR Analysis: What makes this article interesting is one factor –President Trump has blocked Cuba's access to cheap Venezuelan oil, and he has forced them to consider alternative sources of power. This comes just at the time when the US has attacked Iran and Iran has forced oil prices to grow dramatically. It turns out that while President Trump has pulled the USA back from renewables, he may just have given renewable and EVs the biggest growth boost it has ever had. **PSR**

Oil Crisis Makes Drivers Reconsider Electric

The US-Israeli attack on Iran, and Iran's retaliation has caused a massive rise in the costs of petrol and diesel. In the UK, petrol is up around 30% and diesel is up around 50%. In the USA, average gas prices were up by 33% in early April.

There seems to be a never ending cycle of oil-related problems. In 2008, supply, demand and speculation caused a massive price hike. In 2022, Russia invaded Ukraine causing another oil price hike. And now, the US-Israeli attack on Iran has driven yet another price hike. The fundamental problem is that transportation remains totally dependent on oil, and oil prices are set by a very volatile global market.

This whole problem has encouraged motorists to do the math, and the result is staggering. Motorists simply cannot afford not to buy an EV as their next vehicle. This article goes into the math behind this.

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

PSR Analysis: EVs cut across this problem, and it doesn't impact them because electric prices are set nationally not by a very volatile global market and they are a fraction of gas prices. Electric prices are also a way out of oil dependence. **PSR**

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DATAPOINT: *North America Aerators Production* **6,200**

By Carol Turner, Senior Analyst, Global Operations

6,200 units is the estimate by Power Systems Research of the number of Aerators expected to be produced in North America during 2026.

Aerators are machines that have tines for soil penetration. The process involves perforating the soil with small holes to allow air, water and nutrients to penetrate the grass roots.

Engine-powered aerators are used to combat soil compaction in lawns and turf by creating holes (plugs or spikes) that allow air, water, and nutrients to penetrate deep down to the grass roots, leading to healthier, stronger growth, better drainage, and reduced thatch, essential for heavily trafficked areas or tough soils. These powerful machines make it feasible to aerate large areas efficiently, delivering benefits that surpass manual methods for serious lawn care or professional use.

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 32% of total units produced, Doosan Bobcat – Wisconsin leads in production of Sod Cutters in the United States (NA). In second position is Billy Goat with 28%; third, Schiller Grounds Care with 17.5%.

Exports: Up to 10% worldwide.

Trends. In 2025, production of Aerators in North America decreased nearly 3%. However, production is expected to gain 4% in 2026. The gain is attributed to healthy lawn needs that include parks, residential, commercial/professional landscaping and sport fields. Expect production to increase by 10% by 2035. **PSR**

Global Report

By Chris Fisher, Senior Commercial Vehicle Analyst

2026 Global Medium/Heavy Truck Production Increases Seen

Global medium and heavy truck production is expected to increase in most important regions this year, but China's MH truck segment probably will see a major structural change. Overall production in South America is expected to be flat, although Argentina is likely to post a gain of almost 10%.

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Global Report

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Medium and heavy truck production in North America is expected to increase by 9.4% this year compared with low 2025 production.

North America. Medium and heavy truck production in North America is expected to increase by 9.4% this year compared with low 2025 production. While class 8 truck production is expected to increase by 11.3% this year as order rates for class 8 trucks improved strongly from December – March.



Chris
Fisher

Improvement in freight rates and freight demand along with tightening truck capacity and some level of truck pre-buy ahead of the 2027 GHG emission regulations is expected to drive increased truck production this year. However, a protracted conflict in the Middle East would put significant downside pressure on truck demand primarily due to higher fuel cost, supply chain disruptions and an overall concern about the state of the economy moving forward throughout the year.

Europe. Medium and heavy truck production in Europe is expected to increase by 6% this year compared to 2025. After very low truck demand during the past few years, it does appear that demand may have bottomed out and has started to improve this year. Truck demand in Western Europe is expected to improve this year as the fleets will need to replace their older trucks purchased in 2022 and 2023.

With regard to the conflict in the Middle East, if this conflict is relatively short lived (a month or two), it will probably have minimal impact on the European and global economy. However, if this conflict were to drag on and oil tankers could not pass through the Strait of Hormuz, this would impact Europe with higher energy prices and supply chain disruptions. Just the thought of an economic slowdown would likely give the fleets pause on capital investment.

South Asia. After a strong level of vehicle replacement during the past few years, commercial vehicle production is expected to increase by 3.1% this year compared with 2025. In India, truck and freight capacity has mostly rebalanced and MHCV production is expected to increase by 3% this year compared with 2025. Demand is expected to grow in the mid-term owing to a strong macroeconomic environment, healthy fleet utilization levels, Government capex on infrastructure projects, and stable freight demand.

South America. Medium and heavy commercial vehicle production is expected to be flat this year compared with 2025. Production in Argentina is expected to increase by 9.6% as the economy is improving and inflation is down significantly from a year ago. MHCV production in Brazil is expected to be flat this year while vehicle production in Columbia is forecasted to increase by 5% this year.

Japan/Korea. Medium and heavy commercial vehicle production in Japan and South Korea is expected to increase by 2.1% in 2026 over last year. Commercial vehicle production is expected to increase by 2.1% in Japan and increase by 2.6% in South Korea this year.

In Japan, infrastructure spending and the continued need for the fleets to replace older trucks will be the primary reasons for increased truck demand this year. For

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both Japan and South Korea, the trade tariff uncertainty will place pressure on the OEMs in their various export markets throughout the year.

Greater China. In 2026, China's heavy-duty truck industry total sales are expected to remain in a high range of 1.1 million to 1.16 million units, showing a trend of "slight total growth but drastic structural change." Domestic sales, supported by the concentrated replacement of China V emission standard models and the continuation of the "trade-in" policy, are projected to be approximately 700,000 to 790,000 units, while the export market will become a key growth pole, contributing an estimated 300,000 to 340,000 units. **PSR**

Europe Report

By *Emiliano Marzoli*, Manager of European Operations

Volvo Moves into Big Electric Equipment

Volvo Construction Equipment has officially transitioned the A30 Electric and A40



*Emiliano
Marzoli*

Electric articulated haulers into serial production at its Braås site in Sweden. Originally unveiled as prototypes at bauma 2025, these machines represent the largest electric articulated haulers currently available on the global market, boasting payloads of 29 and 39 tons, respectively.

Designed for high-utilization environments like large-scale infrastructure projects and mining, the haulers offer up to six hours of operation on a single charge, depending on the application. The first production units are scheduled for delivery to customers in the United Kingdom and Norway this month.

This move solidifies Volvo's commitment to lead the heavy-duty transition, moving beyond compact machines into the most energy-intensive segments of the construction industry.

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

PSR Analysis. The serial production of 40-ton electric haulers is a "proof of concept" for the entire European construction sector. For years, the industry argued that electrification was only viable for small excavators or urban projects; Volvo has now shattered that ceiling.

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Europe Report

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April 2026 marks a pivotal month for KTM as it completes its transition under the Bajaj Mobility AG umbrella.

For competitors like Komatsu and Caterpillar, the pressure is now on to move their European fleets toward serial production rather than limited pilot programs. For fleet operators, the "total cost of ownership" (TCO) equation is shifting; while the upfront cost remains high, the reduction in fuel costs and maintenance for such high-utilization machines makes them increasingly attractive.

This is particularly relevant given the Industrial Accelerator Act's focus on green procurement, as public infrastructure projects in Scandinavia and the UK are now likely to mandate zero-emission machinery of this scale. PSR

KTM Completes Strategic Realignment and Leap into Premium EVs

April 2026 marks a pivotal month for KTM as it completes its transition under the Bajaj Mobility AG umbrella. Following a challenging 2025, the company launched the 2026/27 Freeride E, its most advanced electric off-road motorcycle to date. Produced at the expanded E-mobility Hub in Mattighofen, the new model features a 5.5 kWh MX50 battery and a 26 hp motor, representing a major leap in power-to-weight ratio for the brand.

Simultaneously, KTM's corporate structure shifted as Stephan Reiff (formerly of BMW Motorrad) officially assumed the role of Chief Commercial Officer on April 1. On the community front, KTM confirmed that the 2026 KTM Europe Adventure Rally in Gubbio, Italy, has reached near-capacity registrations.

These developments signal a move away from the "overproduction" issues of 2025 toward a leaner, premium-focused strategy centered on Austrian-made electric innovation and high-margin "Orange Family" events.

Sources: [Bajaj Read The Article](#), [AutoEvolution Read The Article](#), [KTM Read The Article](#)

PSR Analysis. The stabilization of KTM through Bajaj's \$642.72 million USD (€550 million) refinancing and the Mattighofen hub expansion is a critical "rescue story" for the European motorcycle industry. By localizing the production of high-performance electric components like the Freeride E's drivetrain in Austria, KTM is positioning itself to benefit from the EU Industrial Accelerator Act's "Made in EU" incentives.

For the broader industry, KTM's aggressive pivot to a "premium-core" strategy—divesting from bicycles and non-core sports cars—highlights a trend of consolidation among European motorcycle manufacturers facing pressure from Asian imports.

The successful registration of the Adventure Rally also underscores the rising importance of "experiential retail"; for players like BMW and Triumph, the message is clear: survival in the 2026 market depends as much on building a gated community of riders as it does on the technical specs of the bikes.

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The integration of Indian financial capital with Austrian engineering creates a formidable competitor. KTM now possesses the scale of Bajaj Auto for global sourcing and the high-end R&D capability of Mattighofen for the European premium market. This "hybrid" model allows KTM to weather economic volatility better than it did as a standalone entity in 2024.

As the Freeride E hits dealerships this month, it serves as a laboratory for the next generation of electric street bikes. If KTM can successfully migrate this technology to a "Duke E" or "SMC E" platform by 2027, it will likely dominate the urban European motorcycle segment, particularly as cities tighten noise and emission regulations. For your newsletter, the key takeaway is that KTM has successfully "right-sized" and is now the leading European edge for electric off-road technology.

PSR

South America/Brazil Report

By *Fabio Ferraresi*, Managing Director - South America

Tax Decision on Buses Is Reversed



*Fabio
Ferraresi*

The Brazilian federal government reversed the decision to resume the application of taxes affecting school buses acquired under the Caminho da Escola program, administered by the Fundo Nacional de Desenvolvimento da Educação (FNDE). The discussion involved the potential reintroduction of tax charges impacting the cost structure of buses supplied through the public procurement framework, particularly related to federal and state taxation such as IPI and ICMS, as well as uncertainty regarding the treatment of PIS/Cofins.


The clarification of tax exemption conditions allowed the release of a new tender round that had been temporarily delayed due to pricing uncertainty. The Caminho da Escola program represents an important institutional demand channel for domestic bus manufacturers and body builders, particularly for configurations adapted to rural transport conditions. The expected procurement volumes support the renewal of school transportation fleets and help maintain baseline demand levels in a segment that has been affected by constrained financing conditions and slower private sector investment dynamics.

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

PSR Analysis. The release of a new tender round under the Caminho da Escola program reinforces the relevance of institutional procurement as a stabilizing demand mechanism for the Brazilian bus industry. In a context of weaker early-year market performance and still restrictive financing conditions, the program

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contributes to mitigating cyclical volatility by sustaining baseline production volumes. However, the timing of contract awards and production ramp-up suggests that a significant portion of the impact should materialize in 2027 rather than fully in 2026. From an industry perspective, the program improves short-term visibility for OEMs and bodybuilders while partially offsetting the slowdown in private fleet renewal, although its structural impact remains limited by fiscal constraints and dependence on public budget allocation cycles. **PSR**

Indian Preet Enters Brazil With Tractor Manufacturing Plant

Preet, an Indian agricultural machinery manufacture, has announced plans to establish a tractor production facility in Brazil, in a move to strengthen its presence in the South American agricultural equipment market. The project involves local assembly operations designed to increase market proximity, reduce logistics costs and improve competitiveness in segments typically dominated by established global OEMs. The investment reflects a strategy to expand the company's manufacturing footprint in regions with strong demand for agricultural mechanization, particularly in medium-horsepower tractor categories. Localization is expected to support supply chain development and facilitate access to financing mechanisms tied to local production requirements.

Source: *Click Petróleo e Gás* [Read The Article](#)

PSR Analysis. The Indian manufacturer is positioning itself to compete in Brazil's large and structurally important agricultural machinery market, recognizing that local production is a key requirement for competitiveness. Domestic manufacturing improves cost structure, enables access to subsidized financing programs linked to local content, and strengthens brand perception as a committed local player rather than an importer. Beyond pricing advantages, the strategy supports dealer network expansion and increases credibility among farmers, a critical factor in a market characterized by strong brand loyalty and long equipment replacement cycles. PSR

Selic Interest Rate Cut Has Limited Impact in Auto Market

The initial reduction in Brazil's benchmark interest rate (Selic) is expected to have limited short-term impact on the automotive sector, according to industry assessments. Despite the start of a monetary easing cycle, financing conditions remain restrictive, with credit costs still elevated compared to historical averages.

Automakers and dealers indicate that a more significant recovery in vehicle demand will depend on a sustained downward trajectory in interest rates, improving affordability for both retail customers and fleet buyers. The current macroeconomic environment continues to constrain replacement cycles, particularly in higher-value segments such as heavy-duty vehicles and agricultural machinery, where financing plays a central role in purchase decisions.

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

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PSR Analysis. The initial Selic reduction represents an important directional signal, but its isolated effect is insufficient to materially stimulate vehicle demand in the short term. The current environment suggests gradual recovery rather than an immediate rebound, with investment decisions remaining sensitive to credit availability and expectations regarding future rate trajectory. Sustained monetary easing will be required to support stronger fleet renewal dynamics and improve demand visibility across segments. It reinforces our forecast for the year on the on-road segments. **PSR**

VWCO Tests B100 Soybean Biodiesel in Engines

Volkswagen Caminhões e Ônibus (VWCO) is conducting tests using B100 soybean-based biodiesel in heavy-duty diesel engines as part of its efforts to evaluate lower-carbon fuel alternatives compatible with existing internal combustion engine (ICE) platforms. The tests aim to assess engine performance, durability and emissions behavior using 100% biodiesel without fossil diesel blending.

The initiative aligns with Brazil's strong biodiesel production base and leverages the country's agricultural capacity as a potential pathway for transport decarbonization without requiring immediate large-scale electrification. The evaluation includes technical validation of fuel system components, combustion characteristics and operational reliability under commercial vehicle duty cycles.

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

PSR Analysis. B100 testing aligns with the agricultural sector's push to expand domestic biodiesel consumption and supports energy security by reducing exposure to oil price volatility amid geopolitical tensions. OEMs appear to be revising their historically cautious stance toward biodiesel durability impacts, developing technical solutions to enable higher blend compatibility. However, biodiesel still faces cost competitiveness challenges relative to petroleum diesel, which may limit large-scale adoption without regulatory incentives or pricing parity mechanisms. **PSR**

GAC Plans Vehicle Production in Brazil

Chinese automaker GAC has announced plans to establish vehicle production in Brazil as part of its strategy to expand its presence in Latin America. The initiative involves local manufacturing operations aimed at improving cost competitiveness, mitigating import tariffs and enabling greater alignment with local regulatory and market requirements. The company has been advancing its global expansion strategy with a portfolio that includes internal combustion engine (ICE), hybrid and battery electric vehicle (BEV) powertrains. Local production is expected to support supply chain development and improve access to financing mechanisms tied to domestic manufacturing, while strengthening the brand's positioning in one of the region's largest automotive markets.

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

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South America Report

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The new plant will be used to conduct test runs of marine hydrogen engines and to reorganize and strengthen production capabilities, including those of existing plants.

PSR Analysis. GAC's localization is in line with the structural shift in Brazil's automotive market, with Chinese OEMs targeting the core profitability segments through aggressive pricing, high equipment levels and local CKD production. The company's ambitious target of 50,000 vehicles per year signals intent to rapidly gain scale and directly pressure the traditional margin pool concentrated in compact and midsize SUVs. As ADAS, connectivity and electrification become baseline features, competition shifts toward cost efficiency and speed of portfolio adaptation. In a low-growth market, incumbents face simultaneous pressure on pricing and higher content requirements, reinforcing structural margin compression. **PSR**

Far East: Japan Report

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

Yanmar To Build Plant for Marine Hydrogen Engines



*Akihiro
Komuro*

Yanmar Power Solutions is advancing the development of engines that are compatible with next-generation fuels. In anticipation of future increased production volumes of marine and land-based engines, the company has acquired a site in Amagasaki City, Hyogo Prefecture.

The new plant will be used to conduct test runs of marine hydrogen engines and to reorganize and strengthen production capabilities, including those of existing plants. The new plant is scheduled to begin operations about March 2029.

In the marine industry, there are ongoing efforts to develop and commercialize decarbonization technologies with the aim of achieving carbon neutrality by 2050. Leveraging its expertise in engine development and production, Yanmar Power Solutions plans to develop powertrains compatible with next-generation fuels, including hydrogen, methanol and ammonia, and establish production systems to support them.

Source: Yanmar Official Release

PSR Analysis: I believe that Yanmar's latest move indicates a shift in efforts to decarbonize marine engines from the "technology development" phase to the "production system establishment" phase. Although alternative fuels, such as hydrogen and ammonia, have largely remained in the demonstration or conceptual stage, the decision to construct a dedicated factory is a step toward future commercialization. In the marine sector, in particular, there are many large-scale applications for which electrification is not a realistic alternative. It is becoming increasingly clear that the primary approach will be to switch fuels while retaining the engines themselves.

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This move will likely entail more than just a technological shift; it will also require a restructuring of the supply chain. Widespread adoption of hydrogen engines requires an ecosystem involving multiple players, including fuel supply infrastructure, ship operators, and port facilities, and cannot be achieved by engine manufacturers alone.

While moves such as this, where manufacturers take the lead in establishing production systems, can be viewed as part of their positioning strategy with an eye toward future market launches, actual demand formation depends heavily on progress on the fuel supply side. Thus, decarbonization in the marine engine sector is shifting from "product competition" to "industry competition linked to infrastructure." **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

ヤンマーが舶用水素エンジンの新工場建設を発表

ヤンマーパワーソリューションは次世代燃料対応エンジンの開発を進めている。今後の船用および陸用エンジンの生産量増加を見据え、兵庫県尼崎市の事業用地を取得した。

建設する新工場では、舶用水素エンジンの試運転などを行い、既存工場を含めた生産体制の再編と能力強化を図る計画だ。新工場は2029年3月頃の操業開始を予定。

船用業界では、2050年のカーボンニュートラル実現に向け、脱炭素関連技術の開発、実用化を目指した取組みが進められている。ヤンマーパワーソリューションでは、エンジン開発や生産のノウハウを生かし、水素の他、メタノール、アンモニアといった次世代燃料に対応できるパワートレインの開発と生産体制の構築を進めていく。

参考: ヤンマー公式リリース (一部筆者により元記事内容を改編しました)

PSR 分析: 今回のヤンマーの動きは、船用エンジンの脱炭素対応が「技術開発」から「生産体制構築」の段階に移行し始めていることを示していると感じる。これまで水素やアンモニアといった代替燃料は、主に実証やコンセプトレベルに留まるケースが多かったが、専用工場の整備に踏み込んだ点は、将来的な市場化を前提とした動きと見るべきだろう。特に船用分野では、電動化による代替が現実的でない大型用途が多く、エンジンそのものを維持しながら燃料を転換する方向が軸になる構造が明確になりつつある。

一方で、この動きは単なる技術転換ではなく、サプライチェーンの再構築を伴う可能性が高い。水素エンジンの普及は、エンジンメーカー単独では成立せず、燃料供給インフラ、船舶オペレーター、港湾設備など複数のプレイヤーを巻き

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Japan Report

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HD Construction Equipment has introduced South Korea's first safety management certification system for high-voltage systems.

込んだエコシステム形成が前提となる。今回のようにメーカー側が先行して生産体制を整備する動きは、将来の市場立ち上がりを見据えたポジショニングの一環と考えられるが、実際の需要形成は燃料供給側の進展に大きく依存する構造にある。この意味で、船用エンジン分野の脱炭素は「製品競争」だけでなく、「インフラと連動した産業競争」に移行しつつあると言える。PSR

Far East: South Korea Report

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



*Akihiro
Komuro*

HD Construction Introduces Electric Safety Training System

In response to the growing adoption of electric construction equipment, HD Construction Equipment has introduced South Korea's first safety management certification system for high-voltage systems. The system is designed to educate specialists in maintaining and inspecting high-voltage batteries and electrical systems in electric excavators and other machinery.

Recognizing that the expansion of electric construction equipment requires addressing safety risks that differ from those of conventional diesel machines, the company has developed educational programs and a certification system. Certified individuals receive specialized training in handling high-voltage equipment, troubleshooting, and maintenance operations.

The company positions this initiative as part of the infrastructure development required for the expansion of the electric construction equipment market. HD Construction Equipment plans to continue fostering relevant talent and strengthening its service infrastructure.

Source: HD Construction Equipment

PSR Analysis: I think this initiative shows that South Korean construction equipment manufacturers are starting to see electrification as more than just product development. They view it as an "operation-oriented industrial infrastructure" that includes service systems and workforce development.

Electric construction machinery requires high-voltage batteries and electrical systems, so it demands different maintenance skills than conventional diesel machines. Against this backdrop, manufacturers' move to establish a certification system reflects their intention to establish electrification in the market as a total solution that includes operation and maintenance, not as a standalone product.

In this regard, South Korean manufacturers' approach appears to differ from that of their European and American counterparts. In Europe and the United States,

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South Korea Report

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service systems based on existing dealer networks are well-established, and efforts regarding electric construction machinery proceed as an extension of these frameworks.

In contrast, Korean manufacturers are proactively establishing certification systems and training programs to address the new risks associated with electrification. This proactive approach effectively mitigates operational uncertainties during the initial stages of electrification, potentially providing a competitive advantage, especially in regions with underdeveloped service infrastructure. **PSR**

極東 > 韓国レポート:

小室 明大 – 極東及び東南アジア リサーチアナリスト

HD建設機械、建設機械向け高電圧・安全管理認定制度を導入

HD Construction Equipmentは、電動建機の普及に対応するため、韓国で初となる高電圧システムに関する安全管理資格制度を導入した。この制度は、電動ショベルなどに搭載される高電圧バッテリーや電気システムの整備・点検に対応できる専門人材の育成を目的としている。

同社は、電動建機の拡大に伴い、従来のディーゼル機とは異なる安全リスクへの対応が不可欠であると判断し、教育プログラムおよび認証制度の整備を進めてきた。資格取得者は、高電圧機器の取り扱いや故障対応、保守作業に関する専門的なトレーニングを受ける。

今回の取り組みは、電動建機の市場拡大に向けたインフラ整備の一環と位置付けられており、同社は今後も関連人材の育成とサービス体制の強化を進める方針としている。

参考:HD Construction Equipment (一部筆者により元記事内容を改編しました)

PSR 分析: 今回の取り組みは、韓国の建機メーカーが電動化を単なる製品開発ではなく、サービス体制や人材育成まで含めた「運用前提の産業基盤」として捉え始めていることを示していると感じる。電動建機では高電圧バッテリーや電装系の対応が不可欠となるため、従来のディーゼル機とは異なる整備スキルが求められる。こうした中で、メーカー主導で資格制度まで整備する動きは、電動化を製品単体ではなく、運用・保守を含めたトータルソリューションとして市場に定着させようとする意図が表れている。

この点で、韓国メーカーのアプローチは欧米メーカーとは異なる進め方を取っているように見える。欧米では、既存のディーラー網を基盤としたサービス体制が確立されており、電動建機についてもその延長線上で対応が進められている。一方で韓国メーカーは、電動化に伴う新たなリスクに対応するため、メーカー主導で資格制度や教育体制を早期に整備する動きが見られる。こうしたアプローチは、電動化初期における運用面の不確実性を抑えるという意味で有効であり、特にサービスインフラが未成熟な地域では競争上の強みとして作用する可能性がある。 **PSR**

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Amid rising demand during the dry season and the risk of power plant outages, concerns are mounting in the Philippines over tight electricity supplies.

Philippines Report

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

Power Shortages Boost Reliance on Generators



*Akihiro
Komuro*

Amid rising demand during the dry season and the risk of power plant outages, concerns are mounting in the Philippines over tight electricity supplies. The Energy Regulatory Commission (ERC) has noted that prices on the Wholesale Electricity Supply Market (WESM) could increase by approximately 4 pesos per kWh.

This increase is due to a combination of factors, including high temperatures, the shutdown of some power plants, and rising fuel costs.

These conditions are also causing instability in the power supply at the regional level. For instance, Boracay's supply capacity has not kept pace with the surge in electricity demand fueled by the tourism recovery, prompting the use of generators in some areas. Although transmission operators aim to avoid power outages through future infrastructure improvements, reliance on backup power sources continues to some extent.

Overall, the Philippine power system is in a precarious state, caught between rising demand and supply constraints. This environment creates a structure that drives up electricity costs and encourages the use of alternative power sources, such as generators.

Source: BusinessMirror, The Manila Times

PSR Analysis: What is noteworthy about this news is not the existence of the generators themselves, but rather, the manifestation of power shortages as price increases, which directly influence demand-side behavior. Generators have been used during supply shortages in the past. However, the confirmation of their use at the same time as the projected rise in WESM prices indicates that we have entered a phase where both electricity costs and supply risks are recognized simultaneously.

Of particular importance is the fact that the grid's supply capacity is insufficient to handle even relatively predictable factors, such as the recovery of tourism demand coinciding with dry-season demand.

Under these circumstances, demand-side actors may increasingly take proactive steps to supplement their power supply, rather than passively receiving electricity based on costs and supply conditions. Though still limited in scope, in an environment where electricity price fluctuations and supply concerns occur simultaneously, this can be interpreted as a sign that generators' role is expanding from "emergency use" to "part of supply-demand adjustment." **PSR**

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Philippines Report

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東南アジア > フィリピンレポート:

小室 明大 – 極東及び東南アジア リサーチアナリスト

フィリピンの電力逼迫と発電機依存の拡大

フィリピンでは、乾季に伴う電力需要の増加と発電設備の停止リスクを背景に、電力供給の逼迫が懸念されている。エネルギー規制委員会 (ERC) は、卸電力市場 (WESM) 価格が1kWhあたり最大で約4ペソ上昇する可能性がある」と指摘しており、これは高温による需要増加に加え、一部発電所の稼働停止や燃料コストの上昇が重なっているためである。

こうした状況の中、電力供給の不安定さは地域レベルでも顕在化している。例えばボラカイでは、観光需要の回復に伴う電力需要の増加に対し、供給能力が十分に追いついておらず、一部では発電機の利用によって需要を補っているケースが見られる。送電事業者は今後のインフラ整備により停電の回避を目指しているものの、現時点ではバックアップ電源への依存が一定程度続いている。

全体として、フィリピンの電力システムは需要増加と供給制約の間で不安定な状態にあり、こうした環境が電力コストの上昇や発電機など代替電源の利用を後押しする構造となっている。

Source: BusinessMirror, The Manila Times

PSR 分析: 今回のニュースで注目すべきは、発電機の存在そのものではなく、電力逼迫が価格上昇という形で顕在化し、それが需要側の行動に直接影響を与えている点にあると感じる。従来も供給不足時に発電機が利用されるケースは存在していたが、今回のようにWESM価格の上昇見通しと同時に、実際の現場で発電機利用が確認されている点は、電力コストと供給リスクが同時に意識される局面に入っていることを示している。

特に重要なのは、観光需要の回復と乾季需要の重なりといった比較的予測可能な要因に対しても、系統側の供給余力が十分でない点である。このような状況では、需要側が電力を受動的に受け取るのではなく、コストや供給状況に応じて自ら電源を補完する動きが強まる可能性がある。今回の事例はまだ限定的ではあるものの、電力価格の変動と供給不安が同時に発生する環境では、発電機の役割が「非常用」から「需給調整の一部」へと拡張していく兆しと捉えることもできる。PSR

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China Report

By *Jack Hao*, Senior Research Manager - China

Zhangxue Demonstrates Strength of "Made in China"



*Jack
Hao*

China's Zhangxue Motorcycles team emerged as a dark horse in the 2026 FIM Super-bike World Championship (WSBK) Portuguese Round last month with its independently developed 820RR-RS race machine clinching back-to-back victories in both World SSP class races, dominating the field by 3.685 seconds.

This triumph marked the first-ever championship title for a Chinese motorcycle brand in this premier competition and also shattered the 29-year monopoly held by European, American, and Japanese manufacturers since the class's inception in 1997.

Observers noted that this outcome demonstrates the rapid growth and technological breakthroughs of China's motorcycle industry.

Some industry insiders believe that this breakthrough shattered the long-standing monopoly of European, American, and Japanese brands in this competition, and also signals that China's motorcycle industry now can compete head-to-head with the world's premier brands.

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

PSR Analysis. The Zhangxue Motorcycles' championship victory at the 2026 WSBK Portuguese Round carries a profound impact for China's motorcycle industry. In the domestic market, this triumph has thoroughly shattered the longstanding "low-end OEM" stereotype, proving the technical credibility of high-end Chinese motorcycles through a commanding 3.685-second victory over century-old marques such as Ducati and Yamaha.

Core technologies reflected in this championship—particularly the independently developed 819cc inline-three engines will drive technical advancement in medium-to-large displacement. Domestic manufacturers now can move from price wars and aim at capturing space in the 300-800cc mid-to-high-end market. Racing success will narrow the technical gap with international brands and attract young talent.

Zhangxue's victory marks an important inflection point in China's globalization strategy. The racing achievement provides a key technical endorsement for "Made in China," significantly lowering barriers in developed markets and enabling Chinese brands to enter high-value markets as "technical competitors" rather than "cost-effective alternatives."

In Southeast Asia, Latin America, the Middle East and other markets, Chinese manufacturers will be able to establish differentiated advantages through

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China Power

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Zhangxue's championship represents a brand victory and signals that "Made in China" has entered a new development stage in global high-end consumer goods markets

performance credentials, shifting away from low-price strategies. At a deeper level, this signifies global industrial discourse power reconstruction: China is transitioning from "world's factory" to innovation hub capable of original technology output, resonating with breakthroughs in electric vehicles and humanoid robots to collectively reshape "Made in China's" global image. China is positioned to become a critical node in global racing-grade supply chains and participate in international standard formulation.

These shifting dynamics may pressure Japanese giants such as Honda and Yamaha, forcing technology transfer or pricing adjustments, while potentially prompting European brands to respond through cooperation or acquisition.

Looking ahead five years, domestic market share for Chinese medium-to-large displacement models is expected to surge from 35% to over 50%, while export structure will shift from predominantly sub-125cc products to having 300-800cc mid-to-high-end products account for over 30%.

Zhangxue's championship represents a brand victory and signals that "Made in China" has entered a new development stage in global high-end consumer goods markets. **PSR**

India Report

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

Ashok Leyland Takes Major Step Toward EV Leadership



*Aditya
Kondejkar*

Ashok Leyland's move to develop and assemble its own battery packs marks one of its most strategically significant announcements in recent years. As India transitions toward a cleaner, multi-fuel commercial mobility ecosystem, this decision places the company at the center of the country's electric commercial vehicle (ECV) transformation. The implications extend across technology, cost structure, competitive positioning, and long-term industry dominance.

At the core, battery packs account for 35–45% of an electric vehicle's total cost, making them the single most influential factor in pricing and margins. By internalizing battery pack development, Ashok Leyland is aiming to break its dependence on third-party suppliers, reduce bill-of-materials cost, and secure tighter control over the EV value chain. This is crucial as global cell prices fluctuate and supply chains remain vulnerable to geopolitical shifts. In-house pack assembly gives the company cost stability, greater design flexibility, and freedom to optimize packs specifically for Indian duty cycles—ranging from stop-and-go urban e-buses to long-haul e-LCVs and future heavy-duty platforms.

Source: *Ashok Leyland* [Read The Article](#)

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India Report

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The timing of this move is equally important. India's e-bus demand is set to surge under government-led procurement models, while private fleet operators in logistics, e-commerce, and urban distribution are accelerating their shift to electric vehicles to reduce total cost of ownership.

With the ability to design and customize battery packs, Ashok Leyland can deliver superior range, enhanced thermal management, and higher safety standards—key parameters that fleet buyers evaluate while choosing OEM partners. This directly strengthens the company's position against emerging EV-focused rivals as well as traditional competitors who are still dependent on external battery suppliers.

Furthermore, battery pack capability aligns with Ashok Leyland's broader multi-fuel road map. The commercial vehicle market is evolving into a portfolio of fuels—CNG, LNG, electric, hydrogen ICE, and eventually hydrogen fuel cells. Among these, electrification will dominate the urban and medium-duty segments due to regulatory push, operational viability, and falling battery costs. Owning battery pack manufacturing ensures Ashok Leyland is structurally ready for this shift, while also enabling cross-application synergies for future hydrogen fuel-cell vehicles, which too require battery-buffering systems.

This decision also future-proofs supply-chain resilience. As global OEMs increasingly localize components in India to meet Production Linked Incentive (PLI) norms and reduce import dependence, Ashok Leyland's move places it ahead of the localization curve. It enhances long-term scalability, protects margins, and positions the company as a technology-integrated OEM rather than a traditional vehicle assembler.

In summary, Ashok Leyland's entry into battery pack manufacturing is far more than an operational development—it is a forward-looking strategic investment that strengthens technological depth, enhances cost competitiveness, and secures leadership in India's fast-evolving electric CV landscape. **PSR**

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Russia Report

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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