

### In This Issue

*NA: COVID-19 Webinar  
Scheduled with HDMA*

*NA: Vertical Integration Key for  
EVs*

*NA: New Class of Hybrids*

*NA: COVID-19 Cuts Profits at  
HOG and PII*

*NA: DataPoint: PWC*

*Europe: ARGO Tractors Resumes  
Operations*

*Brazil: Commercial Vehicle  
Production Slides*

*Japan: Fuel Cell Joint  
Development Advances*

*Korea: Hyundai and Kia Expand  
EV Models*

*Southeast Asia: COVID-19 Stalls  
China Belt & Road Initiative*

*India: COVID-19 Lockdown*

*Russia: April New Car Sales Drop*

*Russia: Automakers To Receive  
Support*

*Russia: KAMAZ Driverless Trucks  
Tested*

*Russia: Electric GAZelle LCV  
Launched in Germany*

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 [Click Here To Go To Page 1](#)

## North America Report

### COVID-19 Webinar Scheduled

Power Systems Research will work with the Heavy Duty Manufacturers Association (HDMA.org) to present a one-hour webinar examining the impact of COVID-19 on the industrial segments of Agricultural and Construction in North America.

The webinar will be presented Wednesday, June 17. Watch [hdma.org](http://hdma.org) and [powersys.com](http://powersys.com) for details. **PSR**

### Vertical Integration is Key for Competitive Battery Vehicles

By *Tyler Wiegert*, Project Manager and Power Generation Analyst



*Tyler  
Wiegert*

R&D World magazine recently examined the global market for lithium-ion batteries and concluded that there could very well be a shortage in the next decade. They projected that recent investments will ensure supply keeps ahead of demand for at least the next two years, but that the demand for lithium in 2030 will be 2.3x higher than the global output in 2019, and investments may not be happening at the pace needed to meet it. The main bottleneck is that it takes 5-10 years to bring a new lithium or cobalt mine online, but their low prices right now remove some of the incentive to make those investments.

In the absence or shortage of those investments, control of current resources will play a critical role in the production costs of lithium-powered equipment, including on-highway vehicles. In this area, as in many others, Tesla appears to be a leader. The electric car maker has made a number of moves recently to pursue vertical integration, including, most recently, signing a supply deal with Hanwha for battery production equipment. But they are also making moves to secure ownership of the raw materials needed for battery production.

Last year, they joined a mining consortium with Volkswagen and Daimler in Indonesia to ensure a steady supply of cobalt and lithium. This allows them to factor raw materials into the production cost of their cars as the production cost of the raw materials, rather than the market price of those raw materials.

The reason all of this is important is because lithium-ion batteries make up such a sizable percentage of the production cost of battery-powered vehicles, and the raw materials make up 79% of the cost of the battery. If the cost of the raw materials swings upward, as it did when the production cost of lithium nearly quadrupled between 2014 and 2018 and the cost of cobalt more than doubled between 2017 and 2018, electric vehicles can rapidly cross the line from affordable to unaffordable and back again. Ownership of mines gives electric vehicle manufacturers stability and predictability.

**“Keeping Battery Prices Low May Require EV Makers to Get into Mining”**

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[↑ Click Here To Go To Page 1](#)

## North America Report

Continued from page 2

*We are entering a time when “hybrid” includes drive systems that are primarily renewable-based and supplemented by an additional renewable system.*

### “Could There Be a Lithium-Ion Battery Shortage?”

**PSR Analysis:** As we at Power Systems Research try to accurately forecast the markets for battery-powered vehicles and equipment in our OE Link™ Production database over the next 10 years, it is going to be impossible to predict when the cost of automobile batteries will fall (and stay) below the combustion-parity price of \$100/kWh without paying close attention to the availability and ownership of battery raw materials. Our team of dedicated analysts around the globe and our specialists in both the on- and off-highway worlds are continuously tracking product announcement and market shifts to deliver added value for our clients who are trying to keep ahead of these changes. **PSR**

### A New Class of Hybrids

*By Tyler Wiegert, Project Manager and Power Generation Analyst*

The word “hybrid” in the power generation universe has generally been understood to mean a fossil-fuel engine supplemented by something else, usually a renewable. Then the word grew to include vehicles and equipment that ran primarily on battery but could then switch to a smaller engine that would recharge the battery while it ran. Now we are entering a time when “hybrid” includes drive systems that are primarily renewable-based and supplemented by an additional renewable system.

In this sphere, alternative power has primarily meant batteries and hydrogen fuel cells, and one of the major impediments to wide adoption has always been range. When I get into my Toyota Corolla on a full tank, the display tells me I have about 400 miles to go before I’m empty. While the Tesla Model S is rapidly approaching that range (currently reaching about 370), it costs about 4 times as much as a new Corolla. The BMW i3 Rex, itself not exactly a Main Street car, has a range of only 126 miles, which can be extended to 200 miles with use of its combustion engine.

Things are even worse in the medium and heavy truck segment. A diesel semi is more often limited by drivable hours than fuel, because they can achieve ranges of 1000-2000 miles. By comparison, Tesla’s Semi has 300- and 500-mile options. Daimler and Volvo Group’s battery semis can only go 250 miles.

That is why developments in range extenders are so important. On the battery-battery side, Tesla researchers published work earlier this month on hybrid lithium-ion/lithium metal cells. Essentially, lithium metal batteries have a much higher energy density, but degrade quickly. Lithium-ion batteries have a much greater longevity but cannot achieve the same energy density. In this hybrid design, the battery would be run in a lithium-ion mode on trips up to a certain distance (their research suggests about 300km, because only 1% of daily trips are longer than 325km), but could switch to a lithium metal mode when trips pass that point. In this way, they hope to retain the longevity of the lithium-ion battery, while being able to access the higher energy density of a lithium metal battery.

Battery-hydrogen hybrid systems may offer even greater ranges. The Nikola One by Nikola Motor Company is expected to go into production next year. At its

[↑ Click Here To Go To Page 1](#)

## North America Report

Continued from page 3



announcement in 2016, it was supposed to achieve 800-1200 miles, although that now reads 500-750 on Nikola's website. But even that revised estimate is greater than the pure-battery range of Tesla's Semi.

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

**Source:** *Motor Authority* [Read The Article](#)

**Source:** *Motor Authority* [Read The Article](#)

**PSR Analysis:** Neither of these developments should be considered the end of on-highway combustion engines. The battery research from Tesla is not ready to be commercialized, and an additional 20% in range does not bring any but Tesla's most elite vehicles to parity with combustion-powered passenger vehicles.

Also, even though it is improving rapidly, the infrastructure does not yet exist for mass adoption of battery-only vehicles. But as limited as the recharging infrastructure is for battery-powered vehicles, the refueling infrastructure for hydrogen-powered vehicles is relatively nonexistent. While hydrogen fuel-cells may be the more viable power source, they are behind batteries in both marketing and development.

But major OEMs are getting heavily involved in these technologies. Daimler and Volvo Group see hydrogen fuel cells as more viable for interstate shipping than pure-battery systems, and announced a partnership last month where Daimler would contribute its existing technology, and Volvo Group would add \$652 million.

Toyota and Kenworth have also partnered to create a fuel cell truck, and Hyundai is working on their own. The involvement of such well-established OEMs should make it clear that these technologies are not a fad. They are always getting closer to viability, consumer sentiment is always becoming more open to this change, and these OEMs don't want to get left behind while Tesla and Nikola seize the future. **PSR**

## COVID-19 Cuts Results at Harley-Davidson, Polaris

By *Michael Aistrup*, Senior Analyst

### Harley-Davidson Q1 2020 Sales Plunge 15.5%



*Michael  
Aistrup*

Harley-Davidson said US sales were up 6.6% in the quarter before the pandemic ground the economy to a halt in mid-March. But sales wound up plunging 15.5% in America compared to a year ago and 20.7% internationally. Overall revenue slipped 8% from last year's first quarter.

Harley-Davidson's share in the U.S. heavyweight motorcycle market share was down 2.2 percentage points, to 48.9% and the company's share of the heavyweight motorcycle market in Europe was 7.6% in the first quarter.

[↑ Click Here To Go To Page 1](#)

## North America Report

Continued from page 4

*In response to the Covid-19 crisis, Harley-Davidson has reduced planned capital spending, frozen hiring, temporarily reduced salaries, eliminated merit increases for employees in 2020*

In response to the Covid-19 crisis, Harley has reduced planned capital spending, frozen hiring, temporarily reduced salaries, eliminated merit increases for employees in 2020 and changed the timing of new product launches in order to preserve \$250 million in 2020.

The company has also suspended share repurchases and the board of directors voted to slash Harley's dividend to 2 cents per share for Q2 2020. That's down from the first quarter dividend of 38 cents a share.

Investors seemed to like what they saw in the Harley earnings report: The company's shares finished the day up 15%.

For the quarter, Harley-Davidson posted earnings of \$69.7 million compared with \$127.9 million in the same period a year ago.

The new program "...will focus more on the markets and products that can drive performance in terms of profitability and growth" according to Jochen Zeitz, acting president and CEO of Harley-Davidson.

Some key elements of the plan include:

### Enhance core strengths and better balance expansion

- Return focus to the strength of brand and company, starting with dealers, customers, stronghold products and committed employees globally.
- Re-evaluate strategies to reach new riders and build ridership.

### Prioritize the markets that matter

- Narrow focus and invest in the markets, products and customer segments that offer the most profit and potential. This includes building on Harley-Davidson's strong position in the U.S.
- Establish a simplified market coverage model and take cost out of the process.

### Reset product launches and product lineup

Continue to be guided by the voice of customers and dealers to optimize value and profit delivery.

- Simplify and retime launches to reflect the new reality, align with the start of riding season and better suit the capacity of the company and dealers.
- Expand profitable iconic motorcycles to excite existing customers. Remain committed to Adventure Touring, Streetfighter and advancing electric motorcycles.

### Build the Parts & Accessories and General Merchandise businesses

Develop a comprehensive strategy across P&A and GM businesses that focuses on assortment and distribution opportunities, maximizes channels, improves

[↑ Click Here To Go To Page 1](#)

## North America Report

Continued from page 5



e-commerce capabilities and grows revenue and margins for both the company and dealers.

- Align P&A and GM strategies with motorcycle strategy for a holistic presentation to the market.

### **Adjust and align the organizational structure, cost structure and operating model**

- Create a framework including an organization that is more focused, profitable and nimble; a cost structure that is adjusted to the new realities of the market post crisis; and an operating model designed to increase empowerment and accountability.
- Establish commercially led central and new regional structures to gain a deeper understanding of customers and to return focus to dealers and selling.
- Elevate the role of Motorcycle Management and sharpen marketing strategy and execution to enable a bigger impact with an improved go-to-market process.

**Harley-Davidson Analysis:** Approximately 70% of Harley's total revenue comes from NA, which has been hurt the most by the outbreak. Lower consumer spending and consumption would lead to lower demand for motorbikes, affecting Harley's revenues. Expect the second and third quarter results to continue this trend of lower consumer spending. If there isn't clear evidence of the containment of the virus or a vaccination in 2021, expect a continued decrease in earnings for Harley-Davidson.

Harley continues to struggle in the marketplace as demand for its expensive motorcycles has seen declines year over year. Along with being too expensive, Harley has to deal with the greying of the company's core customer base, a decline in interest from younger consumers, and increased competition from other domestic and international motorcycles.


### **Polaris Off-Road Sales Climb**

Polaris reported Q1 2020 that off-road vehicle retail sales were up +15% in April. This was a surprise given the state of the economy, but given current economic concerns, do not expect this surge in sales to be sustainable especially with the full impact of the pandemic still uncertain with consumer discretionary companies, like Polaris.

Polaris reported higher motorcycle sales, but off-road vehicles, snowmobiles, utility vehicles, boats, and aftermarket parts all declined in the first quarter.

Polaris's biggest segment is the combined off-road vehicles and snowmobile business, which accounts for almost 60% of total revenue and 69% of gross profit. It witnessed a 5% drop in sales and a 16% decline in gross profits. Off-road vehicles sales were down 7% year over year, while snowmobiles tumbled 54%.

Overall sales were down 6%: Q1 2020 saw \$1,405.2 million in sales this year, compared to \$1,495.7 million in 2019.

 [Click Here To Go To Page 1](#)

## North America Report

Continued from page 6

*Polaris revenue is almost certainly going to get worse before getting better, especially given the dynamic nature of the COVID-19 pandemic and the resulting unprecedented economic uncertainty.*

The results were not surprising, considering big-ticket purchases would be a secondary consideration during a pandemic. It also gave Polaris the opportunity to exit from some segments of the boating market. Polaris said it was discontinuing production of cruisers and fishing boats, which virtually eliminates all of the business of Larson Boats. Polaris said it would focus solely on the pontoon and deck boat business that it acquired when it bought Boat Holdings two years ago.

A breakdown of results by Polaris segments:

- Off-Road Vehicles/Snowmobiles: \$823.7M (-5%)
- Motorcycles: \$126.6M (+7%)
  - Both Indian Motorcycles and the three-wheeled Slingshot saw gains
- Global adjacent markets: \$98.3M (-6%)
- Aftermarket: \$202.1M (-8%)
- Boats: \$154.5M (-16%)

Polaris saw a \$0.78 per share profit a year ago turn into a \$0.09 per share loss this time out. Management is preparing for an extended downturn for the balance of 2020, and maybe even into next year. Polaris's investors will need patience until the market for consumer discretionary purchases are popular again.

**Polaris Analysis:** Polaris revenue is almost certainly going to get worse before getting better, especially given the dynamic nature of the COVID-19 pandemic and the resulting unprecedented economic uncertainty.

As consumers stretch to cover basic day-to-day expenses like food, housing and health care, those consumers are extremely unlikely to splurge on a luxury purchase from Polaris or any other manufacturer. As a leader in the industry consumers are more than likely to return to Polaris before they return to other off-road manufacturers. It could be a long time until those customers are back in the showroom with a checkbook in hand. **PSR**

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## DataPoint: NA Personal Watercraft (PWC)

**88,300**

By *Carol Turner*, Senior Analyst, Global Operations

The 88,300 units is the estimate by Power Research of the number of Personal Watercraft (PWC) to be produced in North America (Canada, Mexico and the United States) in 2020.

This 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.

[Click Here To Go To Page 1](#)

## Data Point

Continued from page 7



**Market Share:** With combined plant total of 56.5% Yamaha leads in production of PWC in North America. In second position is Bombardier with 37.5%; third, is Kawasaki with 8%.

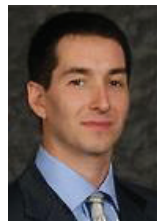
**Exports:** Up to 30% worldwide.

**Trends:** In 2019, production of PWC in North America increased 1.2% over 2018. Production is expected to remain flat, with a slight decrease of 3% in 2020 over 2019. Sales of these recreational vehicles depend on disposable income and leisure time. Industry revenue dropped during the recession and is still low; over the next five years continued disposable income growth will bring revenue back to its prerecession level. Expect the production of Personal Watercraft to gain up to 5% by 2025. **PSR**

## Europe Report

### COVID-19 Update: ARGO Tractors Resumes Manufacturing

By *Emiliano Marzoli*, Senior Business Development Manager-Europe

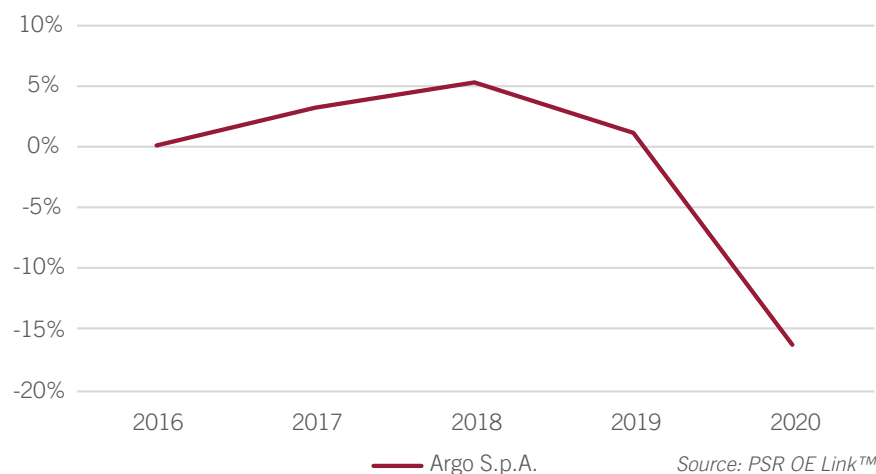


*Emiliano Marzoli*

Production has resumed in ARGO Tractors plants after being shut down for almost two months. Different measures were put in place in order to comply with government health regulations. In April ARGO started to sanitize the factories and prepare to resume operations. Protection equipment is distributed to workers who must keep social distancing and whose temperature is registered at the entrance of the factories.

**Source:** *Argo Tractors* [Read The Article](#)

### Production Volumes % Growth





↑ Click Here To Go To Page 1

**PSR Analysis:** The prolonged halt in production and the continuous uncertainty related to the development of the coronavirus pandemic had a significant impact on the global agricultural industry and on ARGO tractor volumes. Despite that, with the re-opening of the production lines the Italian OEM was able to address the orderbook received before the start of the lockdown, and at the same time, collect new orders.

According to our forecast, we expect production to be down 16% this year. However, this performance might turn a bit less bitter if the current pandemic evolution does not result in a second wave of lockdowns in the coming months.

**PSR**

## Brazil/South America Report

By *Carlos Briganti*, Managing Director - SA

### Brazilian Production and Sales of Commercial Vehicles Won't Recover Until 2021

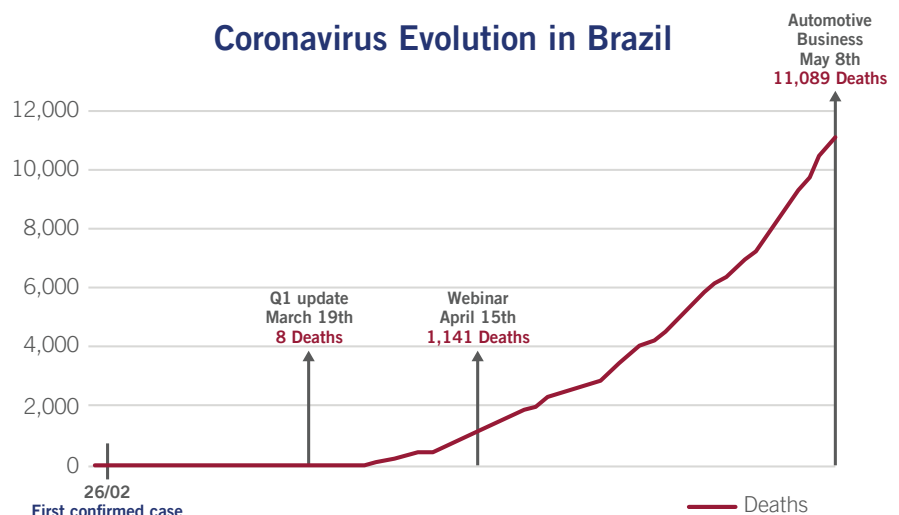


*Carlos  
Briganti*

#### Slump Caused by COVID-19 Will Last into 2021, Automotive Business – April 2020 – English version

Power Systems Research analyzes markets of trucks, buses, agricultural and construction machines. The overall slump in production and sales of heavy commercial vehicles (trucks and buses) as well as for agricultural and construction machines should last throughout this year; these segments won't recover until 2021.

#### Coronavirus Evolution in Brazil



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## Far East: Japan Report

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

### Joint Development of Fuel Cell Trucks Advances



*Akihiro  
Komuro*

The development of fuel cell vehicles (FCVs) that use hydrogen as a fuel for heavy-duty trucks is accelerating. Since the start of 2020, major manufacturers such as Hino, Isuzu, and Daimler have been announcing cooperation with other companies one after another. In April, Daimler and Volvo announced that they would establish a 50-50 joint venture to develop and mass produce fuel cell heavy-duty trucks. The main industry movements are shown in the table below.

OEM	Actions related to FCVs
Isuzu	Joint research with Honda on heavy-duty trucks.
Hino	Joint development of heavy-duty truck with Toyota. Prototype to be made by 2020.
Mitsubishi Fuso	Plans to mass produce fuel cell truck by the late 2020s. Small truck concept model: The Vision F-CELL has already been unveiled at the Tokyo Motor Show 2019.
Daimler	Establishes a 50-50 joint venture company with Volvo to develop and mass produce fuel cell trucks.
Toyota	Formed a partnership with Beijing Automotive Group for FCV. Also Partnering with Paccar-owned Kenworth Truck to jointly develop fuel cell truck.

Behind the acceleration of this development is the fact that FCVs are more effective than those of EVs. Unlike a passenger car, a truck needs to have a large cargo space. In order for EV to run long distances, it needs to install a lot of batteries. But the battery takes up space and reduces the amount of luggage it can carry. EVs also take a long time to charge.

One reason for this collaboration among OEMs in FCV development is to keep development costs down and reach mass production sooner, while investment in next-generation technology development is high.

However, there are many issues that need to be addressed before FCVs are widely accepted. FCVs are complex in structure, and even passenger car models are expensive. There are only about 100 hydrogen fueling stations in Japan, much less than the estimated 8,000 quick chargers for EVs.

There also is an urgent need for cooperation among manufacturers to boost the development of infrastructure for actual use.

**Source: *The Nikkei*** (The original article was partially revised by the author.)

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[↑ Click Here To Go To Page 1](#)

## Far East Report

Continued from page 10

*No matter how much environmental advantage FCVs have, if the cost is not right, they will not be accepted quickly.*

**PSR Analysis:** There are many negative opinions about FCV development. Critics question the safety of managing hydrogen and argue that FCV development costs, the price of the vehicle itself, and the cost of infrastructure development are too high. CO2 emissions during hydrogen production process are also an issue. And in the big picture, they are right.

No matter how much environmental advantage FCVs have, if the cost is not right, they will not be accepted quickly. From an environmental standpoint, FCVs are overwhelmingly superior because they only release water when driving. However, the investment in the development of FCVs is an extremely long term that will take several decades to recover.

While the corona disaster has caused a sharp decline in the performance of many companies, the companies need to be financially strong in order to pursue such long-term profits. It is possible that some manufacturers will slow down their development investment or give it up. Against this background, knowledge sharing and specific joint research and development among multiple companies will continue to be promoted in FCV development in the future. **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

### 燃料電池トラックを共同開発 投資額抑え実用化急ぐ

大型トラックで水素を燃料とする燃料電池車 (FCV) の開発が加速している。2020年に入ってから日野やいすゞ、ダイムラーなど大手メーカーが続々と他社との協力を発表している。4月には世界大手、ダイムラーとボルボが折半出資で燃料電池の大型トラックを開発量産する合弁会社を設立すると発表した。主な発表済みの協業は以下の通り。

OEM	開発状況
いすゞ	ホンダと大型トラックで共同研究
日野	トヨタと大型トラックの共同開発。2020年中に試作車を作成予定
三菱ふそう	20年代後半までにFCVを量産。小型トラックのコンセプトモデルを19年にモーターショー展示
ダイムラー	ボルボと折半出資でFCVトラックを開発・量産する合弁会社を設立へ
トヨタ	北京汽車集団とFCVで提携。2019年に米トラックメーカーと提携し共同開発、貨物輸送に活用

開発加速の背景には、FCVの強みがEVに比べ有効なことがある。トラックは乗用車と異なり広い荷室スペースを確保する必要がある。EVで長距離を走るためには多くのバッテリーを搭載する必要があるが、バッテリーが場所を取る分運べる荷物の量が減ってしまう。充電にも時間がかかる。他社との協業は自動運転や環境対応など次世代技術にむけた投資がかさむなか、開発費を抑え早期の量産化を目指すためだ。

だがFCVの普及には課題もある。仕組みが複雑でコストが高く、乗用車モデルでも

[↑ Click Here To Go To Page 1](#)

## Far East Report

Continued from page 11



高額だ。また水素燃料ステーションは全国で100カ所超しかなく、EV用急速充電器の約8千カ所と比べて少ない。技術開発での協力で開発コストを抑えるだけでなく、実際の利用に向けたインフラ整備でもメーカー間協力による後押しが急がれる。

**出典:** 日経産業新聞 (一部筆者により元記事内容を改編しました)

**PSR 分析:** FCV開発には否定的な意見も多い。水素を管理することへの安全性を疑問視する意見や、開発費・車両本体の価格・インフラ整備、それぞれにかかるコストが高すぎる、などの意見だ。水素生産時の二酸化炭素排出も課題だ。そして、大局的にはそれは正しい。いかなる環境優位性を持っていてもコストが合わなければ普及は難しい。確かに、環境性能の観点から見ればFCVは走行時に水しか出さないため圧倒的に優れているが、FCVの開発投資はコスト回収までに数十年単位を要する極めて長期的な投資である。コロナ禍で各社の業績が急降下する中、そうした「遠い利益」を求めするには企業に財務的な体力が必要だ。開発投資を減速させたり、撤退するメーカーが出てくる可能性もある。このような背景もあり、今後もFCV開発においては複数間の企業による知見共有や具体的な共同研究開発が促進されていこう。 **PSR**

## Far East: South Korea Report

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

### Hyundai and Kia Expand EV Models

According to the Hyundai Motor Group, both Hyundai and Kia plan to offer 44 eco-car models by 2025, more than half of which will be dedicated to EVs (23 models). Hyundai revealed in its 2025 strategy announced at the end of last year that it would increase EV and FCV sales to 560,000 and 110,000 units respectively. Kia has set a goal of selling 500,000 EVs and 1 million eco-cars by 2026, with 11 EV models available across all vehicle classes by 2025.

**Source:** Yonhap News Agency

**PSR Analysis:** At present, both vehicle production and exports fell significantly in April due to the impact of COVID-19. In April, production fell 22.2% YOY and exports fell 44.3% YOY. But when we look at eco-cars, exports and domestic sales increased by 11.5% and 28.3% respectively.

Even during the predicament caused by the new coronavirus, the eco-car ratio is showing an increasing trend. Exports of EVs jumped 94.6% to a record 9,761 units. Of course, the entire South Korean auto industry is badly hurt by the ongoing corona shock. However, even against this huge drop, Korean-branded eco-cars, including EVs, may be beginning to gain international recognition. Growth in external demand for these eco-cars will be a prerequisite for the recovery of Korean automobile production in the future. **PSR**

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 [Click Here To Go To Page 1](#)

## Far East Report

Continued from page 12

## 現代・起亜自EVのリーディングカンパニー目指しモデル拡充

現代自動車グループによると、現代と起亜の両社は2025年までに環境対応車（エコカー）44車種を取り揃え、うち半分以上の23車種をEV専用モデルとする計画だ。現代は昨年末に発表した2025戦略で、EVとFCVの販売をそれぞれ56万台、11万台に増やすと明らかにした。起亜は、2025年には全ての車級にわたってEV11車種を取り揃え、2026年にEV50万台、エコカー100万台の販売を達成するという目標を掲げた。

**出典:** 聯合ニュース

**PSR 分析:** 足元ではCOVID-19の影響で4月の自動車生産と輸出がともに大きく減少した。4月は生産が前年同月比22.2%、輸出は同44.3%減少した。だがエコカーに注目すると、輸出が11.5%、国内販売が28.3%それぞれ増加し、新型コロナウイルスによる苦境の中でも増加傾向を示している。特にEVの輸出は94.6%急増の9,761台で、過去最高を記録した。もちろん韓国の自動車産業全体はコロナショックで、現在進行形で大きく傷ついている。だが、そのようななかでも、EVをはじめ韓国ブランドのエコカーは国際的に支持されはじまっているのかもしれない。今後韓国の自動車生産が回復するためには、これらのエコカーの外需が伸長することが必要条件となるだろう。 **PSR**

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## Southeast Asia Report

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

### COVID-19 Stalls China's Belt and Road Initiative

Southeast Asia's infrastructure development has begun to stall. China, which has been supporting the project, has been unable to proceed with its Belt and Road initiative for a broad economic zone due to restrictions on movement caused by the new coronavirus.

Southeast Asian countries also are prioritizing infection control and curbing the funds and human resources they invest in development. A major delay in the construction of infrastructure, which is the foundation of growth, could force foreign investors to reconsider their investment plans.

In **Indonesia**, work on a high-speed railway (about 140 kilometers) linking the capital Jakarta with the major city of Bandung was recently halted. The project is financed by a Chinese bank, and the state-owned company is involved in the construction. The opening is expected to be postponed from the scheduled 2021.

The **Thai** government has extended the deadline for negotiations with the Chinese government on a construction contract for a high-speed rail line to China via **Laos** from the previous May to October. The target is a major section of about 250 kilometers between Bangkok, the capital of Thailand, and Nakhon Ratchasima, a major city in the northeast.

[↑ Click Here To Go To Page 1](#)

## Southeast Asia Report

Continued from page 13

*According to Chinese media, the impact of COVID-19 on the Belt and Road initiative will be limited. However, China's first priority will be to rebuild its own economy.*

According to the Chinese Ministry of Commerce, the value of new contracts for construction work undertaken by Chinese companies in 57 countries along the Belt and Road initiative totaled \$26.2 billion in January-March, down 14% YOY.

**Source:** *The Nikkei*

**PSR Analysis:** China's presence in Southeast Asia's infrastructure development projects is significant. Airports, ports, railroads, paved roads, power plants, water and sewerage. These developments will be the foundation for foreign manufacturers to enter the market. Their development will help the industrial growth of Southeast Asia. This scenario could change significantly.

According to Chinese media, the impact of COVID-19 on the Belt and Road initiative will be limited. However, China's first priority will be to rebuild its own economy. These construction stops have an immediate effect on many fronts, including loss of local labor opportunities, reduced demand for equipment rentals and leases, and reduced demand for materials. If the effects of the virus persist, the strategies of foreign companies already operating in the region will be greatly affected. **PSR**

## 東南アジア > 東南アジア全体レポート:

小室 明大 – 極東及び東南アジア リサーチアナリスト

### 一帯一路、コロナで停滞 東南アでインフラ整備鈍る

東南アジアのインフラ整備が滞り始めた。支援してきた中国が新型コロナウイルスによる移動の制限で、広域経済圏構想「一帯一路」関連の事業を推進できない。東南アジア各国も感染対策を優先し、整備に投じる資金や人材を抑制する。成長の基盤であるインフラの建設が大きく遅れば、日本を含む外資は投資計画の再考を迫られかねない。


インドネシアでは首都ジャカルタと主要都市バンドンを結ぶ高速鉄道（約140キロメートル）の工事が最近、中断された。中国の銀行が融資し、国有企業が工事に関わる事業だ。開業は予定の2021年から延期される見通しだ。

タイ政府はラオス経由で中国に至る高速鉄道の工事契約について、中国政府側との交渉期限を従来の5月から10月に延期した。対象はタイの首都バンコクと東北部の主要都市ナコンラチャシマを結ぶ約250キロメートルの主要区間だ。

中国商務省によると、同国企業が一帯一路に沿った57カ国で請け負う工事の新規契約額は1～3月が計262億ドル（約2兆9千億円）で、前年同期比14%減だった。

**出典:** 日経新聞

**PSR 分析:** 東南アジアのインフラ整備事業における中国の存在感は大きい。空港、港湾、鉄道、舗装された道路、発電所、上下水道。これらの整備が外資製造業の進出基盤となる。その結果、東南アジアの産業は成長していく。このシナリオが大きく変わる可能性がある。中国系メディアによると、一帯一路への新型コロナの

 [Click Here To Go To Page 1](#)

## **Southeast Asia Report**

*Continued from page 14*



影響は限定的だとしている。だが、中国はまず自国国内の経済立て直しを最優先にするだろう。これらの工事のストップは、現地の労働機会の損失、機器レンタルやリースの需要減、材料需要の減少など、多方面に波及する。今後ウイルスの影響が長引けば、現地に既に進出している外資の戦略にも大きな影響が出るだろう。

**PSR**

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## **India Report**

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

### **Impact of COVID-19 Lockdown on Engine-Driven Applications**



*Aditya  
Kondejkar*

Even before the COVID-19 crisis, the Indian automotive sector was facing a severe downturn, but the problems were amplified by the Covid-19 pandemic and the lockdowns across India and the rest of the world. The situation was compounded because India was transitioning from BS-IV to the BS-VI era.

These are challenging times for the Indian automotive sector because of slow economic growth, negative consumer sentiment, axle load norms, a liquidity crunch, low capacity utilization and potential bankruptcies. The current lockdown has severely affected the entire ecosystem of engine driven applications in India.

For the first time, automobile OEMs reported zero domestic sales and very limited exports in April. According to the Society of Indian Automobile Manufacturers (SIAM), the industry is losing more than \$300 million per day.

#### **Resumption of Operating Activities**

Since the entire automotive value chain – suppliers, manufacturers, and distributors--is not opening at full capacity, resumption of operating activities remains a hurdle for the automotive OEMs despite the government's permission to start operations in a phased manner in select geographies. Today, operating an uninterrupted supply chain is the biggest hurdle for OEMs. At the same time, dealerships have not resumed operations, production in isolation means increased inventory and limited working capital

Many OEMs claim that the production of new vehicles is last on their list. With the resumption of operations, OEMs will focus on reducing spare parts in the after-market, delivering finished goods inventory to dealerships, audits and maintenance activities.

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[↑ Click Here To Go To Page 1](#)

## India Report

Continued from page 15

*Evolving business operating activities, including working from home and virtual meetings, might result in people driving fewer kilometers in their vehicles on average, thus downgrading their budget.*

### Impact on Business Models

Once we complete this phase, customer priorities will change, and it will be more towards individual cleanliness, hygiene, and health during travel. Following the pandemic, we expect customers' inclination will be more towards personal mobility. Shared mobility will take a toll on the short term. But with an aversion to higher discretionary spending like buying new vehicles and subdued sentiments, demand for used cars will rise significantly in the next 3 – 6 months. Service-based models such as pay-as-you-go and lease rentals may also see uptake from Indian consumers.

Evolving business operating activities, including working from home and virtual meetings, might result in people driving fewer kilometers in their vehicles on average, thus downgrading their budget. Also, it will make way for new business models - Online/ digital vehicle sales are likely to gain traction as customers would incline towards contactless modes of buying. Recently, many OEMs launched online sales channels to connect with customers indicating new ways of doing business digitally.

On the other side of the value chain, ancillary manufacturers are anticipated to face considerable operational and financial hurdles. Owing to domestic as well as global issues, Indian automotive suppliers will face several challenges. Lower domestic sales will lead to lower capacity utilization, reduced revenues, and reduced profit margins

The sourcing practices are also likely to be impacted - many OEMs and tier 1 suppliers will evaluate to source more parts locally. This risk-mitigation measure is anticipated to boost the local auto components industry and to avoid the adverse impact of the overdependence on other countries. **PSR**

## Russia Report

By *Maxim Sakov*, Market Consultant, Russia

### Russia New Car Sales Drop 70% in April



*Maxim  
Sakov*

New car sales plummeted by 102,000 vehicles in April, the largest monthly car sales drop in history in Russian, according to the Association of European Business.

During April, Russia introduced strict quarantine measures because of the coronavirus, causing car sales to fall by 102,089 units, or 72.4%.

After strong sales in March, dealers have had to suspend or restrict their activity.



 [Click Here To Go To Page 1](#)

“Black April” has dealt a strong blow to dealer cash liquidity, and seriously affected stability during middle-term period. The dealers are preparing to restart their business in May; however, they don’t expect significant sales growth.

AutoVAZ , the largest Russian car manufacturer, reported sales declined by three times in April over March.

Some analysts forecast car sales in Russia will drop 20%-50% in 2020.

**Read More.**

**PSR Analysis:** Most of the machine makers (at least large ones) will be working this April. Mercedes-Benz and Fuso truck production resumed April 13. Chetra and ChTZ returned April 6. It seems that most have no problem with parts supply, and that they expect to sell their product. A catastrophic scenario is not likely.

## Putin: 12 Automakers Will Receive Privileged Credits

Twelve automakers in Russia are counting on privileged credits for working capital support of backbone enterprises during the COVID struggle.

Under the program, a company must have revenue of US\$300 million (20 billion rubles) and employ more than 1000 people. A special bank product has been designed for such companies. The bank interest on this credit will be subsidized within the base interest rate of Russian Central Bank, and half of the credit will be warranted by the Ministry of Finances. **Read The Article**

**PSR Analysis:** Currently, some OEMs have suspended operations because there are no sales. AutoVAZ has not worked since April 29. It’s planning to resume work in late May. State support measures ensure that the Russian automotive industry will keep afloat even with the sharp fall in sales. So, no bankruptcy of automakers is expected. In the worst situation, the weakest enterprises will be nationalized.

## Russian Driverless KAMAZ Trucks Tested in the Arctic

KAMAZ driverless trucks have been tested in the Eastern-Messoyakh oilfield in the Nenetsky region. The vehicles were driven 2,500 kilometers without accidents.

The joint project of Gazpromneft and KAMAZ was put together with support of region authorities in difficult climate conditions beyond the Polar Circle. The main target of tests was to determine the efficiency of driverless trucks, which would increase safety of cargo transportation and optimize supplies to territories with difficult access.

During the tests, the driverless trucks showed high potential to move on pre-set routes with high accuracy, to exchange information via duplicated communication systems, to recognize obstacles and forecast movements on actual environment. The control on trucks movement around the oilfield and winter roads via Gydan tundra were conducted from dispatcher’s center in the oilfield.

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[↑ Click Here To Go To Page 1](#)

## Russia Report

Continued from page 17

*According to the project's participants, the main advantage of driverless vehicles is the unlimited ability to work.*

According to the project's participants, the main advantage of driverless vehicles is the unlimited ability to work. Autonomous vehicles do not get tired and do not make mistakes even in low temperatures, snowstorms and poor visibility. Compared to conventional trucks, driverless ones are 50% safer and allow reduced costs of transportation by 10-15%. [Read The Article](#)

**PSR Analysis:** The prospective of using driverless trucks in low-populated regions is even closer than a mass implementation of autonomous cars in megapolises.

## Assembly of Electric GAZelle LCV Started in Germany

The sales of electric version of GAZelle Next LCV have begun in Germany. Stuttgart company EFA-S is modifying Russian vehicles. The assembly started this year. German company purchases LCVs in Russia without transmission, engine and fuel system. Then in Stuttgart they install electric motor and battery.

Currently, four versions of the electric vehicle are available – a side truck, a wagon, a 2-cabin wagon and a mini-bus. All LCVs are powered by a 110 kWt electric motor and can reach a speed of 88 km/hour. [Read The Article](#)

**PSR Analysis:** GAZelle is the flagship model of Russian OEM GAZ Group, the largest LCV maker in Russia. It's an interesting example of international co-operation. **PSR**

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